UIA 2014 DURBAN PROGRAMME PARTNERS AND GUEST EDITORS

The UIA 2014 Programme Partners have been instrumental in expanding the scope of the UIA 2014 Congress. These partnerships aim to use the event as a platform for furthering conversations around the Congress themes and pertinent built environment issues. They have therefore been initiated with a particular focus on enhancing and supporting the academic aspects of the Congress. These collaborations have been planned to fit seamlessly into the main UIA 2014 event and the synergy between the event and the Programme Partners has been crucial to the development of the Congress Programme and Content.

The Programme Partners have also acted as advisors to the General Reporter and editors for the various sections of the Abstract and Proceedings Books. The coordinators in these partnerships are listed as follows:

Angus Donald Campbell
Senior Lecturer in Industrial Design, Faculty of Arts, Design and Architecture, University of Johannesburg

Anna Rubbo
Research Scholar, Center for Sustainable Urban Development, Columbia University

Ariane Janse van Rensburg
Senior lecturer, School of Architecture and Planning, University of the Witwatersrand, Johannesburg

Geoff Abbott
Research Architect, Built Environment Unit, Council for Scientific and Industrial Research

Happy Ratna Santosa
Professor in Architecture, Head of the Laboratory of Housing and Human Settlements, Institut Teknologi Sepuluh Nopember, Indonesia

Jennifer Van Den Bussche
Project Manager, Global Studio and Director, Sticky Situations

Jia Beisi
Associate Professor of Architecture, University of Hong Kong

Martha Kohen
Professor, School of Architecture, University of Florida

Nancy Clark
Associate Professor and Head of Graduate Programs, School of Architecture, University of Florida

Naudé Malan
Senior Lecturer, Development Studies, University of Johannesburg

Peta de Jager
Research Group Leader, Architectural Engineering Research Group, Built Environment Unit, Council for Scientific and Industrial Research

Rodney Harber
Principal, Rodney Harber and Associates

Shin Murakami
Professor, Department of Human Environment, Sugiyama Jogakuen University, Japan

Stephen Kendall
Emeritus Professor of Architecture, Ball State University

Tarig Toffa
Executive Manager, Social Housing Focus Trust (SHiFT) and Lecturer, Faculty of Arts, Design and Architecture, University of Johannesburg

Terence Fenn
Lecturer, Multimedia, Faculty of Arts, Design and Architecture, University of Johannesburg

Yusuf Patel
Executive Director, Basil Read and President, South African Planning Institute (SAPI)
UIA 2014 DURBAN SAIA-APPOINTED SCIENTIFIC COMMITTEE: CORE MEMBERS AND ADVISORS

Amira Osman, Associate Professor; Architecture, University of Johannesburg and UIA General Reporter is a National Research Foundation (NRF) rated researcher and SACAP-registered Professional Architect. As the UIA 2014 General Reporter; she heads the Scientific Committee which has a core team appointed by the South African Institute of Architects (SAIA), that acted as advisors in the academic process:

Mokena Makeka, Director, Makeka Design Lab, Founder of The Museum of Design Innovation Leadership & Art, South Africa (MoDILA) and Adjunct Professor, GSAPP Columbia University New York and Resident Equity Scholar; School of Architecture and Planning, University of the Witwatersrand.

Hilton Judin, Architect and Curator, Cohen & Judin Architects and Adjunct Professor, School of Architecture & Planning, University of the Witwatersrand, Curator; blank_architecture apartheid and after.

Mphethi Morojele, Owner and Founder, MMA Design Studio, Johannesburg and Lecturer, University of Witwatersrand and Curator, South African exhibition, International Architecture Exhibition of the Venice Biennale and at the RIBA, past President of the Gauteng Institute of Architects.

UIA 2014 DURBAN GENERAL REPORTER-APPOINTED SCIENTIFIC COMMITTEE: MEMBERS AND EDITORS

The UIA 2014 Durban General Reporter has appointed three people to the UIA 2014 Scientific Committee, two of whom are the editors of the Scientific Committee publications:

Gerhard Bruyns is Assistant Professor of Environment and Interior Design, School of Design, Hong Kong Polytechnic University and Executive Team member of the International Forum on Urbanism (IFOU), Scientific Board Member of the African Studies Centre, Leiden and collaborator with CP, Arquitectura, Urbanismo, Investigacion. He was previously at the Faculty of Architecture, Delft University of Technology's [TU Delft].

Clinton Aigbavboa, Department of Construction Management and Quantity Surveying, University of Johannesburg, holds a masters' degree in Construction Management and a PhD degree in Engineering Management. He is a well published researcher. He is currently the editor of the Journal of Construction Project Management and Innovation.

UIA 2014 DURBAN SCIENTIFIC COMMITTEE

Ahmed Vawda, Andrew Maki, Bridget Horner, Eric Noir, Geci Karuri-Sebina, George Kunihiro (UIA Region IV); Janina Masojada, Jean Bosco Todjiniou (UIA Region V), João, Belo Rodeia, Jonathan Edkins, Karel Bakker, Linda Mampuru, Luciano Lazzari (UIA Region I), Moleleki Frank Ledimo, Noeleen Murray, Phil Mashabane, Rodney Harber, Roger Schluntz (UIA Region III), Zeynep Ahunbay (UIA Region II)

UIA 2014 ORGANISATION COMMITTEE


UIA 2014 DURBAN SCIENTIFIC PROGRAMME SUPPORT

The UIA 2014 General Reporter was supported by Gill Slaughter, Kerry Fermani (both from Turners Conferencing) and Nomfundo Nxumalo, Nikita Andrews (both appointed assistance to the General Reporter). They were instrumental to the success of the process.
UIA 2014 DURBAN BOOK OF ABSTRACTS
and academic paper session programme

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UIA 2014 DURBAN BOOK OF ABSTRACTS AND ACADEMIC PAPER SESSION PROGRAMME

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DECLARATION

All the abstracts in this book were double-blind, peer-reviewed by the UIA 2014 Panel of Reviewers. This process entailed detailed reading of the abstracts, reporting of comments to authors, modification of abstracts by the authors, editing by the UIA 2014 Editors as well as the UIA 2014 Programme Partners. All abstracts were copy edited. In some cases, the authors of submitted abstracts (those that were accepted by the reviewers) were further invited to submit full papers for consideration for the UIA 2014 Durban Proceedings Book. It is only the full papers in the UIA 2014 Durban Proceedings Book that have successfully been accepted through the two-tiered, double-blind, peer-reviewed process. The abstract book is therefore a compilation of abstracts submitted that were deemed worthy of acknowledgement and presentation at the event. It is important to read the section on Categories of Participation at UIA 2014 Durban to better understand this process.
TABLE OF CONTENTS

UIA 2014 Durban Programme Partners and Guest Editors ................................. 4
UIA 2014 Durban Saia-Appointed Scientific Committee: Core Members and Advisors 5
UIA 2014 Durban General Reporter-Appointed Scientific Committee: Members And Editors 5
UIA 2014 Durban Scientific Committee .......................................................... 5
UIA 2014 Durban Organisation Committee ...................................................... 5
UIA 2014 Durban Scientific Programme Support ............................................. 5

Forward from the President of the South African Institute of Architects (SACAP) ............... 8
A word from the Editors ................................................................................... 9
An introduction to the UIA 2014 Book of Abstracts and Academic Paper Sessions Programme: How to use this Book .................................................. 10
The Peer Review Process .............................................................................. 11
UIA 2014 Categories of Participation for Authors and Presenters ......................... 12
UIA 2014 Durban Panel of Reviewers .............................................................. 13

ABSTRACTS .................................................................................................. 25

Part 1: Resilience ......................................................................................... 26
Part 2: Ecology ............................................................................................ 47
Part 3: Values ............................................................................................... 70
Part 4: Architecture Education Forum ........................................................... 97
Part 5: CIB W104 Open Building Implementation ............................................. 104
Part 6: CIB W110 Informal Settlements and Affordable Housing ......................... 135
Part 7: Design Society Development (DSD) .................................................... 157
Part 8: Global Studio ..................................................................................... 180
Part 9: South African Planning Institute (SAPI) ................................................ 195
Part 10: The Public Health Group (UIA – PHG) .................................................. 212
Part 11: The Social Housing Focus Trust (SHiFT) ................................................ 228
Part 12: Urban Waterways ............................................................................. 243

AUTHORS INDEX ..................................................................................... 251

Sponsors ....................................................................................................... 277
Supporters & Media Partners ........................................................................ 278
FORWARD FROM THE PRESIDENT OF THE SOUTH AFRICAN INSTITUTE OF ARCHITECTS (SACAP)

The UIA 2014 book of abstracts is a compilation of critical thinking, critical debate and critical dialogue which pushes the definition of otherwhere beyond the historical limits of architectural thinking, architectural practice and the making of architecture. The relevance and impact of our “creations” and the associated methods of production raises questions of ethical social practise. A diverse range of papers brings together other thinking, other disciplines and other communities. These multicultural critical conversations will certainly change the way we perceive ourselves and our purpose in society. The interdisciplinary nature that characterises the papers push against “silo” thinking and domains of surveillance as, indeed, architecture belongs to all that experience it and not just those that create it.

The impact of the various discourses has profound effect on hegemonic institutions and in this regard the definition of professionalism and professional practice has to be rethought and reconsidered in order to embrace otherwhere. The strategic missions, objectives and goals of regulatory bodies that govern the built environment and education would need to take serious cognisance of this critical discourse and rethink their purpose and values. The architectural profession therefore cannot segregate and disregard all those who are not architects and this challenge to embrace diversity is posited as being vital to a sustainable profession moving ahead in a rapidly transforming global context.

This book of abstracts is a legacy in itself, however, the implementation of thoughts and writings in practice is vital to the ongoing legacy of otherwhere.

I thank all the authors for their invaluable insight and creative input in pushing the boundaries of architectural practice. To the readers of this book of abstracts, I sincerely hope that you find the inspiration and the motivation to make a difference in society and in this way promote the ethos of otherwhere as we move forward together.

Yashaen Luckan
President of the South African Council for the Architectural Profession (SACAP)
A WORD FROM THE EDITORS

The response to the first and second calls for the UIA 2014 Scientific Paper Process was overwhelming. We received a total of 554 abstract submissions and, once we launched the call for full paper submissions based on the outcome of the abstract review process, we received 270 draft full papers. This means that we have completed a total of 1108 abstract reviews and 540 full paper reviews. This mammoth task would simply not have been possible without the commitment, professionalism and support of the UIA 2014 Panel of Reviewers, 87 academics and professionals, who volunteered their services to ensure the success of the process. We would like to salute them!

We acknowledge the UIA 2014 Durban Programme Partners and the important role they have played in making sure that what we deliver is relevant and of a good quality. And we also acknowledge the financial support we have received from the South African Council for the Architectural Profession (SACAP).

All abstracts have been double blind, peer-reviewed. Authors of accepted abstracts were invited to submit full papers, which were also being double, blind, peer-reviewed. This is to comply with the requirements for subsidy and accreditation by the South African Department of Higher Education of South Africa. This process demands a rigorous peer review process by no less than two acknowledged experts in the field is to be followed for all abstracts and papers submitted.

In this book, we present you with the UIA 2014 DURBAN BOOK OF ABSTRACTS. All abstracts were double-blind, peer-reviewed. This process entailed detailed reading of the abstracts, reporting of comments to authors, modification of abstracts by the authors, editing by the UIA 2014 Editors as well as the UIA 2014 Programme Partners. All abstracts were copy edited. In some cases, the authors of submitted abstracts (those that were accepted by the reviewers) were further invited to submit full papers for consideration for the UIA 2014 DURBAN PROCEEDINGS BOOK. It is only the full papers in the UIA 2014 Durban Proceedings Book (digitally available to registered delegates) that have successfully been accepted through the complete two-tiered, double-blind, peer-reviewed process.

The abstract book before you is therefore a compilation of abstracts submitted that were deemed worthy of acknowledgement and presentation at the event. It is important to read the below section on CATEGORIES OF PARTICIPATION AT UIA 2014 DURBAN to better understand this process.

The book sections are based on the UIA 2014 Durban sub-themes of RESILIENCE, ECOLOGY and VALUES as well as the themes of the 9 Programme Partners. The authors selected the themes and Programme Partners as part of their submission process. The General Reporter and her assistants, in consultation with the Editors and the Programme Partners may have made some adjustments to accommodate topics in their appropriate slots. However, the categories were mostly as the authors initially selected.

This book must be considered as a part of the whole set of UIA 2014 PUBLICATIONS, printed and digital. The book is also presents the programme for the academic papers and is therefore the perfect companion to the Congress delegate to plan for the 3 main days of the event when the academic paper sessions will be delivered in multiple venues in parallel sessions.

We hope you find value and inspiration in what UIA 2014 Durban has to offer you.

UIA 2014 EDITORS
AMIRA OSMAN, GERHARD BRUYNs, CLINTON AIGBAVBOA
AN INTRODUCTION TO THE UIA 2014 BOOK OF ABSTRACTS AND ACADEMIC PAPER SESSIONS PROGRAMME: HOW TO USE THIS BOOK

This Abstract Book needs to be read in conjunction with the UIA 2014 Durban Programme Book, the UIA 2014 Durban Otherwhere Guide and the UIA 2014 Durban Exhibitor’s Guide as well as the digital publications, the UIA 2014 Proceedings Book and the UIA 2014 International Student Competition Book.

The Congress Venue is the Inkosi Albert Luthuli International Convention Centre (ICC) in Durban and the Congress activities will be delivered in 38 venues. This Convention Centre complex includes the Durban Exhibition Centre (DEC) and Walnut Road that separates it from the ICC and which will be closed during the event. Walnut Road will be “occupied” by students and various other programmes. It will also have a Mussallah (prayer space) for our Muslim delegates, some traders from Warwick and other architectural and artist interventions. Please refer to the end of the Programme Book to find some basic and important information for delegates.

The UIA 2014 Durban Congress Programme contains over 300 sessions which are categorised as follows: Main Programme, Student Programme and Activities, Parallel Workshop, Parallel Meetings and Presentations, Parallel Academic Sessions, Cultural and Social Activities and Special Meetings. These categories are available on the online programme module. Delegates may use the available filters to search for events by category or date, venue or theme/programme partner.
THE PEER REVIEW PROCESS

Because of the need to maintain and assure the quality of the abstract book and conference proceedings, and to comply with the requirements for subsidy of the South African Department of Higher Education, a rigorous two-stage peer review process by no less than two acknowledged experts in the field was followed. In this context, each abstract received was twice blind reviewed in terms of:

- Relevance to conference theme and objectives;
- Originality of material;
- Academic rigour;
- Contribution to knowledge, and
- Research methodology.

Authors whose abstracts were accepted after the stage one review process was completed were provided with anonymous reviewers' comments and requested to submit their full papers noting and addressing these comments. Evidence was required relative to the action taken by authors regarding the comments received. These resubmitted papers were twice blind reviewed again in terms of:

- Relevance to conference theme and objectives;
- Originality of material;
- Academic rigour;
- Contribution to knowledge;
- Research methodology and robustness of analysis of findings;
- Empirical research findings, and
- Critical current literature review.

Authors whose papers were accepted after this second review were provided with additional anonymous reviewers' comments and requested to submit their revised full papers. These final papers were only included in the conference presentation programme and the conference proceedings after evidence was provided that all comments were appropriately responded to, having been double peer-reviewed for publication. At no stage was any member of the Scientific and Technical Committee or the editor of the proceedings involved in the review process related to their own authored or co-authored papers.

The role of the editor was to ensure that the final papers incorporated the reviewers' comments and arrange the papers into the final sequence as captured on the Table of Contents, printed and digital documents. Of the 554 abstracts originally received, only 270 papers were accepted for inclusion in the proceedings, representing a rejection rate of 51%. To be eligible for inclusion these papers were required to receive a minimum score of 3 out of 5 allocated by the peer reviewers during the final review process. Where there were conflicts between the grades and comments by the 2 assigned reviewers, the General Reporter was assisted by the two Editors and made the final decision as to what got included in the abstract and in the proceedings books.
UIA 2014 CATEGORIES OF PARTICIPATION FOR AUTHORS AND PRESENTERS

There were various identified categories of participation for authors at UIA 2014 Durban.

These are as follows:

a) ABSTRACT PUBLICATION AND PRESENTATION. This group of participants were notified of acceptance of their abstracts. The abstract is published in the BOOK OF ABSTRACTS and a time slot is provided in the OFFICIAL CONGRESS PROGRAMME for presentation in a thematically relevant parallel scientific presentation stream. All authors that failed to submit a full paper, but where the topic was considered relevant to the Congress theme, were automatically considered for this option based on the outcome of the abstract review process. Where a full paper was submitted, but not accepted for publication in the proceedings, the abstract was also automatically considered for this option.

b) FULL PAPER PUBLICATION AND PRESENTATION. This group of participants submitted full papers for review and the papers will have been deemed competent for inclusion in both the BOOK OF ABSTRACTS as well as the CONGRESS PROCEEDINGS (digital publication only). The author, in this case, was also allocated a time slot in the OFFICIAL CONGRESS PROGRAMME.

c) SPECIAL PRESENTATIONS. There are a number of special sessions within specialised FOCUS AREAS. In some cases the authors/presenters were advised by the UIA 2014 General Reporter to present within these special sessions. The requirements and publication options were discussed on a case-by-case basis. Some full papers were considered important and/or significant but did not meet the requirements for the proceedings document. These are published in a special section of the proceedings book and clearly distinguished from the section with the accredited, double-blind, peer-reviewed papers.

All submitted and published abstracts and papers had to adhere to a prescribed format provided through a document titled: UIA 2014 INSTRUCTIONS FOR AUTHORS.
UIA 2014 DURBAN PANEL OF REVIEWERS

Zeynep Ahunbay
Zeynep Ahunbay studied architecture at Istanbul Technical University (1965-1970). She is a professor at the Faculty of Architecture ITU since 1988; lecturing on conservation techniques for historic buildings and sites, traditional building types, reuse of historic buildings, conservation of World Heritage sites; conducts studios on conservation design. She has publications on the conservation of cultural heritage, Cultural Heritage of Turkey, Istanbul and Ottoman Architecture.

Karel Bakker
Prof Karel Bakker (PhD) is currently the head of Architecture at the University of Pretoria. He is involved in the pedagogy of Design, History of historic African Environments, Heritage in many formats of undergraduate and post graduate levels, as well as in the international arena. He has published widely and performed at many international academic events.

John Bello
I graduated from Ahmadu Bello University in 1979 with an MSc (Architecture) and obtained my practice license in 1982, with the registration nos F530. My practice is called Project Design Associate (PDA), registered in 1992. I have concentrated my practice on design of buildings and infrastructural facilities for higher education.

Jhono Bennett
Jhono Bennett obtained a Master’s Degree in Architecture with Design distinction from the University of Pretoria, South Africa (2011). He completed his undergraduate education in Architecture at the University of Kwa-Zulu Natal with a supplemented semester abroad at the Carlton University, Ottawa, Canada. Jhono currently works at the University of Johannesburg as a part-time lecturer and Independent Researcher while managing the operations of 1:1 – Agency of Engagement

Roberto Bologna
Professor Roberto is Director of the master’s degree in Architecture at the University of Florence. He has reviewed countless papers for the “International Journal of Resilience and the Built Environment and Disaster”.

Ruzica Bozovic Stamenovic
Associate professor Ruzica Bozovic Stamenovic, Ph.D. is an award winning architect, researcher and educator concurrently teaching at University of Belgrade and National University of Singapore (2000-2012). She is also Faculty Fellow of Center for Health Systems and Design, Texas A&M University and lecturing internationally on health driven design. The theory of Human Ecology, health-space and their interconnectivity is at the core of her teaching and research interests.

Christina Breed
Ida Breed is registered as a Professional Landscape Architect (SACLAP, 2006). She has practiced in many spheres of landscape architecture in the past decade. Her research includes urban ethnography and urban ecology with focus on contextual environmental and cultural suitability in design applications.

Gerhard Bruyns
Gerhard Bruyns is Assistant Professor of Architecture and Post Graduate design instructor at the Faculty of Architecture, TU Delft. He holds a both design related PhD and MSc degrees from the Delft University of Technology. He has lectured at a number of Architecture Schools [Visiting Professor at DIA] and has acted as a jury member at various universities in South Africa, Chile, Asia and the United States.
Angus Donald Campbell
Angus Donald Campbell is a qualified industrial and product designer with over a decade of university lecturing, research and freelance design experience. His research and design interests focus on design and technology for sustainable development within the South African context and are evidenced through multiple publications, conference papers and postgraduate student supervision. His Masters in Industrial Design (2003) was focused on African style in product design and foregrounded his current trans disciplinary Doctorate in Development Studies exploring innovation and adaptation of technology by small-scale urban farmers in Johannesburg.

Marianne de Klerk
Marianne de Klerk is an architect and urban designer who has worked for seventeen years on a wide range of projects in South Africa, the United States, and Asia. She brings a multidisciplinary approach to her practice with projects ranging from regional and urban revitalisation initiatives to individual buildings and infrastructure orientated urban redevelopment strategies. Her designs endeavour to balance the development, restoration and protection of Sensitive environmental sites, brownfields and cultural landscapes.

Romanda Del Nord
Since 1991 he has been head of TESIS, an inter-university research center on systems and technologies for healthcare architecture, that gathers the University of Florence and of 'La Sapienza' University in Rome. He works with the Department of Education, University and Research to define standards and models used in determining the building needs for schools and universities. He was head of research for the project ‘Design criteria for the humanization of hospital facilities', on behalf of the Department of Health

Chrisna Du Plessis
Chrisna du Plessis is Associate Professor at the Department of Construction Economics, University of Pretoria where she is currently leading a research programme on resilient and regenerative cities and lecturing on sustainable construction. She is also currently Theme Coordinator for the International Council on Research and Innovation (CIB) Priority Theme Sustainable Construction. Her research interests focus at both a theoretical and technological level on the principles and guiding frameworks for the practices of sustainable construction and human settlement development as informed by urban sustainability science.

Louis Du Plessis
Louis studied both undergraduate and postgraduate degrees in Architecture at the University of KwaZulu Natal, where amongst other achievements; he received top honors in the post-graduate course of Ecological Resource Management. Subsequent to graduating with an M. Arch in 2008, Louis has been working in private practice in Durban for a firm focusing on community, social housing and governmental projects. While working in private practice, he has been lecturing architecture part time at his alma mater since 2009, focusing on the undergraduate design studio and History of Architecture.

Abbas Elmualim
Dr Elmualim is a senior lecturer and coordinates the work of the Sustainable Design and FM Informatics Research Group within the School in addition to the FM Research Group that he co-established six years ago conducting research in various socio-technical aspects of digital technology and sustainability within an FM context. Dr Elmualim research work has been widely published in various journals (30 papers) and has presented at various national and international conferences (more than 70 papers).

His current research focuses on the development of integrative approaches to design, construction and facilities management with particular interest in sustainability and digital technologies viewed from a broad socio-technical systems perspective and seek to combine engineering research methodologies with those derived from the social sciences.
Fidelis Emuze
Fidelis is presently a Senior Lecturer in the Department of Built Environment at the Central University of Technology, Free State. His qualifications include a National Diploma in Civil Engineering, a Higher National Diploma in Civil Engineering, and an MSc in the Built Environment with specialisation in Construction Management as well as a PhD in Construction Management. Fidelis has published widely in Journals and presented papers at conferences in Africa, Europe, South America, Asia and Australasia.

Tiziana Ferrante
Architect, PhD and Professor of Architectural Technology of the “Sapienza” University of Rome, conducts teaching and research activities for the “Planning, Design, Architectural Technology” Department. Since 1991 has been carrying out studies, research and experimentation in the field of planning and design of healthcare and social inclusion facilities, subject of numerous papers and publications. Speaker at national and international conferences; consultant on institutional committees for the evaluation of projects, collaborated in the development of guidelines and technical standards.

Martin Fiset
Martin Fiset is an architect with over forty years of experience in health care facilities planning and design. He has worked as a consultant, design architect and project manager on numerous projects across Canada, the United States and abroad. Mr. Fiset holds a Bachelor of Architecture degree from the Université de Montréal and a Master of Architecture degree in Health Facilities Design from Texas A&M University

Avi Friedman
Dr. Avi Friedman received his Bachelor’s degree in Architecture and Town Planning from the Israel Institute of Technology, his Master's Degree from McGill University, and his Doctorate from the University of Montréal. Avi is known for his housing innovation and in particular for the Grow Home and Next Home designs. He is the author of 14 books and was a syndicated columnist for the CanWest Chain of daily newspapers. In the year 2000 he was selected by Wallpaper magazine as 1 of 10 people from around the world “most likely to change the way we live.”

Tony Fry
Tony Fry is a design theorist, award winning designer and Professor of Design Futures, Griffith University, Brisbane working in Australia and internationally. Tony is the author of ten books and is currently completing a book on ‘The Future of Cities in the Age of a Changing Climate’. He is also director of sustainability consultancy Team D/E/S, was the founding director of the EcoDesign Foundation, Sydney (1991-2001) and as such worked for government and the private sector.

Rob Geraedts
Prof. Rob Geraedts is co-founder and member of the international CIB Working Group W104 Open Building Implementation since 1996 and Associate Professor of Design & Construction Management in the Faculty of Architecture at the Delft University of Technology, The Netherlands. His research field is Open Building: the flexibility or adaptability of the product (buildings), the flexibility of the process (design & construction), and the transformation of vacant buildings into new functions, to meet the continuously changing user demands.

Suzette Grace
Suzette Grace holds qualifications in architecture, business leadership, politics and philosophy. She’s also taught architecture at UJ for 3 decades.
Rodney Harber
Professor Rodney Harber graduated from the University of Natal in 1965 and after five years in practice began teaching in the School of Architecture, Planning and Housing at the University of Natal (now University of Kwa Zulu Natal). He taught in all three disciplines during his thirty six years before retiring as Associate Professor. Rodney is a registered Urban and Regional Planner and Heritage Practitioner and heads a busy multi-disciplinary practice focusing on developmental work all along the eastern seaboard of KZN. Rodney runs a small bustling practice from home as an extension of his commitment to teaching, with students from South Africa, Malawi, Mauritius, U.S.A., U.K., Germany, Norway, Sweden and Denmark passing through at times.

Pieter Herthogs
He studies the influence of adaptable buildings and infrastructure on the evolution of urban neighbourhoods and sustainable urban projects. He is developing assessment methods, tools and design guidelines to complement his theoretical framework on urban scale adaptability. As a teaching assistant at the BruFace English Master in Architectural Engineering (VUB), Pieter Herthogs lectures on the design of transformable structures and parametric design, and advises master dissertation students.

Bridgette Horner
Bridget Horner is an architect and Director of Space Syntax South Africa; she is also a lecturer in the Architectural Post Graduate Programme at the University of Kwa-Zulu Natal. Bridget's expertise lies in evidence based analysis and strategic design advice empowering public and private agencies with the tools to evaluate project proposals and participate in the development of the design process.

Antje Ilberg
Antje Ilberg is an urban planner and architect with research, planning, and implementation experience at national, municipal, and grassroots levels in Sub-Saharan Africa and in the Near East. She has expert knowledge of the legal and administrative dimensions of physical planning and land management, and of informal urbanization in Africa. Since 2013, she has been with Ministry of Infrastructure, Rwanda. Urban Planning and Housing Development Expert and Adviser to Minister

Beisi Jia
He is the joint coordinator of W104-Open Building Implementation in International Council for Research and Innovation in Building and Construction (CIB). Besides design studio, he is teaching in courses History of Chinese Architecture and Housing in Urban development in his school. He is supervisor of MPhil and Ph.D. students. His students have won more than 30 national and international student design competition, including 1998/99 Dupont Benedictus Awards, and in exhibitions, such as UIA XXII World Congress of Architecture 2005.

Hilton Judin
Hilton Judin is an architect and curator working in Johannesburg. He developed the exhibition and research projects [setting apart] and blank___Architecture, apartheid and after. In practice as Cohen&Judin he worked on the Nelson Mandela Museum in Qunu and the Living Landscape in Clanwilliam.

Geci Karuri-Sebina
Geci Karuri-Sebina joined the South African Cities Network in 2011 as Executive Manager. Ms. Sebina holds Masters degrees in Urban Planning and in Architecture & Urban Design, both from the University of California Los Angeles (UCLA). She has worked with numerous organizations including South Africa’s Council for Scientific & Industrial Research (CSIR), Human Science Research Council (HSRC), and the Advanced Policy Institute of the then- UCLA School of Public Policy and Social Research in Los Angeles, California.
Tom Sanya
Tom Sanya is a Senior Lecturer in sustainable design at the University of Cape Town's School of Architecture, Planning and Geomatics. His main research area is building sustainability and contextuality. Using a transdisciplinary approach, he teamwork with different academics, practitioners, government actors, civil society, small- and medium- scale enterprises and members of the general public in the search for and reflection upon (innovative) solutions for long term building sustainability and contextuality.

Emeritus Johan Silas
Johan Silas, prof. (retired since 2006) born in Samarinda, in 1936. As one of the founder of the School of Architecture in Surabaya Indonesia (1965) and is still teaching for graduate and post graduate students. Awarded with among others The Aga Khan Award for Architecture (1986), Chevalier dans l’ordres des Arts et Lettres (1989), Matsushita Prize (1991), Satyalencana (from the government of Indonesia 1993), The Habitat Scroll of Honour (2005), etc.

Melinda Silverman
Melinda Silverman is an architect, urban designer and urban strategist interested in settlement issues in cities of "the global south". She has worked for city, provincial and national government in South Africa on urban issues including sustainable human settlements, informality, low income housing, and land management practices that impact on the absorption of the poor in urban areas. She currently teaches urban design and urban policy studies at the University of Johannesburg.

Preeti Onkar Sing

Gerald Steyn
Gerald Steyn is Research Professor at the Department of Architecture of the Tshwane University of Technology. He holds BArch and MArch degrees from the University of the Free State and a PhD from the University of Pretoria.

Ken Stucke
Ken Stucke is a practicing architect registered with the South African Council for Architects. For more than twenty years, he has focused his architectural work on green architecture and sustainable development, and now practices full time in this idiom. Ken has been asked to be part of several expert critique panels and workshops, asked to review design proposals or establish project briefs.

Philippa Tumubweinee
Philippa Tumubweinee is a senior Lecturer at the Department of Architecture at the University of the Free State [UFS] South Africa, a co-Founder and Director of IZUBA INafrica and a Doctoral student at the University of the Free State, South Africa. She has also serving on the Board of Directors for: VEGA: School of Graphic Design and Advertising iMPAC: The Moving Images Festival and the 40 000 Bubbles Club After completing her M.Arch. Prof Degree in 2006 with a notable distinction in Construction, Philippa Tumubweinee was introduced to Academia while teaching at the dept. of Architecture, University of Pretoria as an assistant Studio Master in the First Year Studio from where she progressed on to join the dept. of Architecture, University of Johannesburg [UJ] South Africa.

Andre van Graan
Andre holds a PhD in architecture from the University of Cape Town and currently heads the architecture program at the Cape Peninsula University of Technology. He lectures in the History and Theory of design at undergraduate level as well as lecturing at post-graduate level in research methodologies and supervising masters and doctoral students. In addition to his academic work he is also the Immediate Past President of the Cape Institute for Architecture was well as serving on the National Board of the South African Institute of Architecture. He is a member of the South African branch of Docomomo, a past chairman of the Vernacular Architecture Society of South Africa and the convener of the Cape Institute for Architecture’s Heritage Committee.
Robert van Kats
Robert van Kats (DASUDA /BKVV), chairman, architect, urban designer architect ing. Robert van Kats has studied architecture and urbanism at the Academy of Architecture Amsterdam. The office acts on the business, governmental, NGO and private market both national and international with the a specific focus on the African market specialised in sustainable architecture, urban planning, master planning and building related energy concepts. BKVV follow an integral approach that leads to low energy and sustainable projects.

Christo Vosloo
Qualified with BArch degree from the University of Pretoria in 1981. Completed research based March degree from the University of Cape Town and MBA from Nelson Mandela Metropolitan University. In practice since 1983 and academia since 1984 ( whilst practicing part time till 2006)

Macharia Waruingi
I am physician and healthcare executive presently holding various positions in healthcare business, academia and research. I am a Research Faculty Fellow of the Center for Health Systems & Design at the College of Architecture, Texas A&M University in College Station, Texas. I have extensive experience in advanced academic instruction in medicine, health administration and global health. I have expertise in design, development and implementation of world-class health delivery systems in the United States and frontier markets in Africa and Middle East.

David Week
Dr David Week is Executive Director of Assai Consult an international aid consultancy specialising in social infrastructure. For the first seven years of his career, David founded and co-managed a social enterprise in Papua New Guinea which developed an architecture that was modern extensions of traditional building knowledge. Since 2002, David has been an adviser to World Bank and AusAID funded large scale social infrastructure projects, including post disaster reconstruction projects in Aceh and Timor Leste.

Debbie Whelan
My architectural experience is focused on community development and heritage. I locally, I have been active in trying to promote the heritage of Edendale by instituting community projects intended to reserve earthen buildings constructed in the 1860’s. I have written a number of publications on heritage related issues.

Eric Charles Wright
Eric is a practicing architect and lecturer. He coordinates the 3rd year architecture program at the University of Johannesburg and runs the 1st and 3rd year design studios. The philosophy and approach employed in teaching investigates the changing nature of Johannesburg as a city, landscape and people. In his practice, in partnership with Claudia Morgado, Boom Architects work explore these urban-land-people focused concepts with a critical underpinning – the relevance of contemporary architectural and urban paradigms

Carlos Zeballos
Peruvian architect, he got an MSc in Peru in urban environmental planning and another MSc in Argentina in sustainability. Subsequently he got PhD at Kyoto University, Japan in urban and landscape design. He worked for 5 years as a Post PhD Senior Researcher at the Research Institute for Humanity and Nature in Japan. Since 2013 he has launched a Laboratory of Urban and Landscape Design at the Far Eastern Federal University in Vladivostok, Russia

Peta de Jager
Peta de Jager is a registered professional architect with a masters’ degree in applied ethics. She is currently research group leader in the building science and technology competence area for the built environment unit at the Council for Scientific and Industrial Research in Pretoria. The research group undertakes research and development projects which are related to building performance, architectural engineering in social infrastructure, primarily health-care and education buildings in the Southern African region.
Jacques Laubscher
Jacques Laubscher obtained his Bachelor’s degree in Architecture and Master’s degree in Urban & Regional Planning at the University of the Free State. Dr. Laubscher is currently appointed as an Associate Professor at the Tshwane University of Technology, where he coordinates and teaches the 5th year design and technology. Since 2001, he is practicing under the name Studio Jacques Laubscher, focusing mostly on the adaptive re-use of existing buildings.

Anna Rubbo
Anna Rubbo, LFAIA, B.Arch (Melbourne), D. Arch (Michigan) joined CSUD at Columbia University in 2012. A member of the Millennium Project Task Force on Improving the Lives of Slum Dwellers (2002-04) she went on to found the Global Studio, an action research project to help urban professionals work more effectively with the urban poor. Rubbo is project director for the traveling exhibition, People Building Better Cities shown in eight countries and 11 cities in 2013.

Preeti Onkar Singh
Preeti Onkar Singh graduated with a Bachelors of Architecture, and has a Masters in Urban Development and Planning and PhD in Architecture and planning. His professional Professional Background is: Consultant for various Architectural and Planning projects for the last 16 years and his Research background is Sustainable Architecture, Urban Renewal & Redevelopment and Quality of life.

Fani Vavili-Tsinika
Professor Fani Vavili-Tsinika graduated from the School of Architecture, Aristotle University of Thessaloniki, with a Master of Arts in Health Facility Planning, Metropolitan University of London and a Ph.D. from the School of Architecture, Faculty of Technology A.U.Th. She is practicing and teaching architectural design. Her work includes health care facilities planning & design and has published many articles, research results and other publications.

Sam Moshaver
Sam Moshaver is a registered architect in province of Ontario, and currently a PhD candidate in Department of Environmental Design in University of Montreal. My research interests are in housing, flexibility and building systems. He has participated in many conferences on the issues of housing, and open building, inclusionary zoning, and housing systems.

Roger Riewe
Born 22.07.1959 in Bielefeld, Germany, grew up in Cape Town, South Africa, studied architecture at the RWTH Aachen, Germany, graduated 1986, founded Riegler Riewe Architects in Graz, Katowice and Berlin (www.rieglerriewe.co.zt) with projects in Austria, Germany, Switzerland, Poland, Croatia, Italy, Vietnam and Korea. The work has been published extensively. He has taught as guest as guest professor in Houston, Barcelona, Prague, Calgary and Aachen and is since 2001 a full professor at TU Graz, being head of the institute of Architecture Technology IAT and of the research lab IAT|Lab.

Gavin McLachlan
Holds the following qualifications: Bachelor of Building (1972 UPE), Bachelor of Architecture (1974 UPE), M Sc (Town and Regional Planning) (1979 UPta). Is a registered architect and town planner. Experienced a wide range of architectural and planning work and projects prior to joining the academic staff of the then UPE (now the NMMU).

Alexander Oppor
Oppor completed a master's degree in architecture at the University of the Arts in Berlin in 2001. In 2006 he moved to Johannesburg where he works as educator, writer, artist, architect and designer. He is the director of the Architectural master’s programme at the University of Johannesburg’s Faculty of Art, Design and Architecture, a context in which, since 2007, he has developed an immersive mode of teaching-and-learning premised on “‘folding’ the [architectural] studio into the field'.
Julian Raxworthy
Dr Julian Raxworthy is a Lecturer in the Master of Landscape Architecture program in the School of Architecture, Planning and Geomatics, at the University of Cape Town. He was the co-author of Sunburnt: Landscape architecture in Australia, and co-editor of The Mesh Book: Landscape/Infrastructure. His PhD thesis with the University of Queensland was entitled Novelty in the Entropic Landscape: Landscape architecture, gardening and change.

Stephan Kendall
Dr. Stephen Kendall’s career in architectural practice, research and education spans more than 35 years. He is a registered architect w/a PhD from MIT. His research in open building encompasses new design methods and logistics, and new technology needed to make buildings more adaptable, easier to customize to meet changing preferences and thus more sustainable.

Taibat Lawanson
Taibat Lawanson is a senior lecturer and coordinator of postgraduate programs at the Department of Urban and Regional Planning, University of Lagos, Nigeria. She holds a PhD in Urban and Regional Planning; and is a 2013 World Social Science Fellow. Her research over the years has focused around poverty and informality, environmental health and governance dynamics in the Lagos Metropolis; and more currently Africa’s emerging urbanism, urban livability and urban inequalities.

Yashaen Luckan
Yashaen Luckan is an academic and practicing architect. He holds a Btech Degree (DUT), and a Master of Architecture Degree from UKZN where he is presently a PhD Candidate. Yashaen serves on professional bodies such as the South African Council for the Architectural Profession (SACAP), where he is a member of the Validation Panel and the Heads of Schools committee, and the Council on Higher Education (CHE) where he serves as evaluator of applications for new academic programs.

Andrew Makin
Formed designworkshop: sa with Janina Masojada in 1997. Regular writer on the City as an important enabler of an optimized South African economy culture and society. Current projects are a village for 1000 orphans, many of HIV Aids; Community Centers and Sports facilities in two historically black townships; a hotel and apartments; a range of private residential houses; and a 25 story office building in Sandton, Johannesburg’s Corporate business district

Jako (Jakobus Immanuel) Olivier
After graduating in Law at the University of the Free State, Jako successfully completed his degree in Architecture at the same university. He is currently the program director for and lecturer at the Department of Architecture, UFS. His research interests are architectural design, architectural theory and higher education.

Happy Ratna Santosa
Happy Ratna Santosa is lecturer/professor in the department of Architecture, ITS, Indonesia since 1976 and head Laboratory for Housing and Human Settlements ITS. She is lecturer in Architectural Design, Human Settlement and the Environment, Sustainable Development, Human Settlement in Urban Development and Research Methodology. He is also supervisors for under graduate final Project Design, thesis for Master and PhD student’s dissertation.

Luciano Lazzari
Luciano Lazzari was born in Trieste, Italy and grew up in Cape Town, South Africa, where he began his studies in architecture at UCT. He qualified at the Polytechnic of Central London, taking the RIBA Part III exam in 1977. After working in London, he moved back to Trieste and set up a joint architectural office in partnership with Paolo Zelco in 1981. The office has carried out a lot of residential development and health care buildings and more recently the office has become involved in urban renewal. He is currently serving as President of the Architects’ Council of Europe after his election for a two year mandate. From 2005 till today, he has been a jury member for various national and international competitions and is a member of the Scientific Committee for the UIA 2014 Congress in Durban.
Denise Morado Nascimento
Denise has a degree in Architecture and Urbanism, MA in Architecture and Ph.D. in Information Science. She is a Professor at the School of Architecture at Universidade Federal de Minas Gerais, coordinator of the research group PRAXIS (Social practices in urban space) and researcher of CPNq.

Abimbola Olukemi Windapo
Dr Abimbola Olukemi Windapo is a Senior Lecturer at the Dept. of Construction Economics and Management, University of Cape Town. Abimbola’s career spans 26 years after graduating from the University of Ife with a BSc (Hons.) degree in Building. She has both MSc and PhD degrees in Construction Management and Building respectively. She has practiced in, written, lectured and researched on housing and construction studies; building materials; and construction industry, company and project performance. She is a member of the South African Council of Project and Construction Management Professions.

Roger Schluntz
Schluntz received his Master of Architecture degree from the University of California, Berkeley. A Fellow of the American Institute of Architects and NCARB certified, he is licensed to practice architecture in New Mexico and Nebraska. In a consulting capacity with public agencies and universities nationwide, Schluntz has served as the Professional Adviser for over twenty-five major design competitions. One of the first group of those serving on the National Register of Peer Professionals for the US General Services Administration, he has been involved with the selection of architects and the design review of major public buildings for over three decades.

Kevin Bingham
Kevin Bingham is a Professional Architect and a director at FGG Architects Inc, based in Durban. He holds a National Higher Diploma in Architecture, a Bachelor of Architecture degree, a Master of Architecture Degree by research, is currently reading for a PhD in Architecture and is a Fogarty Research Fellow (USA). Kevin is the current president of the KZN Institute for Architecture (2012 – ) and is a member of the South African Institute of Architects National Board. He serves on numerous education advisory boards, trusts and sporting committees.

Fanuel Motsepe
Having lectured at the University of the Witwatersrand Johannesburg for 4 years, Fanuel practices as an architect and urban designer. Fanuel established Motsepe Architects Research Unit and Practice Unit Learning Apprenticeship (MARU a PULA) cc, which is equipped with a library, a computer lab, an audio-visual room, and a model-making studio. MARU a PULA engages local and international researchers and publishes research findings.

Claudia Morgado
Claudia (M Arch prof WITS 2007) is a practicing architect and part-time lecturer at the University of Johannesburg, working in the 1st and 3rd year design studios. In 2009 Claudia formed BOOM Architects in partnership with Eric Wright. Their work explores urban and people focused concepts with a critical underpinning – the relevance of contemporary architectural urban approaches, and a focus on systems that gain value over time with lasting benefits to those it impacts. Both partners at BOOM are co-founders of the (in)formalStudio, in collaboration with 26’10 south Architects, Thorsten Deckler and Anne Graupner, and have implemented the Marlboro South course held in 2012. (in)formalStudio is a multidisciplinary platform which pools resources and skills on in-situ teaching, research and actual projects located in complex urban conditions.

Stephen Adams
Stephen Adams is a British Trained architect, with experience of developmental and disaster relief work in Lesotho, Swaziland, Kenya, Aceh Indonesia and Haiti. Recently, he has been teaching at the Polytechnic of Namibia as studio leader in the new school of Architecture and is the external moderator/examiner for TUT Pretoria, University of Johannesburg and University of Pretoria. He has also practiced in London and Oxford.
Magdalena Cloete
Magdalena Cloete qualified with a B.Arch from UOFS in 1998. In 2012 she joined the University of KwaZulu Natal where she lectures History and Theory of Architecture as well as Architectural Design and Technology in the 3rd year BAS programme. Magdalena’s research relates to the role of Theory in the making of architecture and the relation between Architecture and People. She is a Professional Architect and co-founder of an architectural Company XO consultancy.

Tsinikas Nikos

Joanne Lees
Joanne Lees qualified as an Architect in 1990. She has over 20 years' experience as an architect, development manager, housing and urban development specialist, for (mainly local) government, NGO’s, Social Housing Associations, and the private sector. She has been a principal of Lees + Short Associated Architects for 18 years. Her experience has underlined the importance of integration across sectors, and of socio-economic concerns in the quest for sustainable cities and settlements.

Hannah le Roux
Hannah le Roux teaches, practices, curates and writes about architecture. Her current research, lived modernism, is being developed for a PhD candidate in the Faculty of Architecture and Art of KU Leuven. This project is based on the observation of change in time of modernist spaces, grounded in the 1950’s model township, KwaThema, the 1950’s to 70’s fabric of Johannesburg’s inner city and tropical architecture in West Africa. Her writing appears in Domus, uncube, the Journal of Architecture, Architectural Record and others.

Krishna Kumar Dhote
Working as Professor in Department of Architecture and Planning, involved in research and consultancy projects of urban renewal, social impact assessment and issues of housing for poor and presently guiding more than five number of doctoral candidates.

Chris Adendorff
Professor Chris Adendorff is an entrepreneur and academic who since 1985 built a substantial family business. He holds a double doctorate in commerce as well as future studies. He has a passion for future studies and the management of family businesses. His particular interest is in planning, governance and turnaround strategies. He lectures on future studies, entrepreneurship, construction management and research methodology. Professor Adendorff has since written various books and published extensively in international journals.

Nancy Clark
Nancy Clark is founder and Director of Global Lab research consortium, a cross-disciplinary research initiative with the University of Florida focused on the study of emergent global trajectories in architectural practice, building technology, and urban policy making. She is Co-Founding member of the Consortium for Hydro-Generated Urbanism (CHU) which proposes new paradigms for the evolution of water-based settlements. Ms. Clark is currently the Assistant Director at the University Of Florida in charge of Graduate Programs at the University Of Florida School Of Architecture and serves as the Coordinator of the G|SoA Ivan Smith Endowment, a program dedicated to the advancement of graduate education.
Nhlamulo Ngobeni
Nhlamulo Ngobeni graduated with a master’s degree in architecture from the University of Johannesburg, under the supervision of Amira Osman. In his master’s dissertation, he looked at Kliptown informal settlement in Soweto, Johannesburg. He unpacked the area in search for design informants which were processed to feed his architectural proposal. He was recently invited by an artist to study a neighborhood and give advice which will be used to establish where the artist could install public art sculptures.

Clinton Aigbavboa
Clinton Aigbavboa holds a masters’ degree in Construction Management and a PhD degree in Engineering Management respectively; with sustainable human(e) development being the theme of his researches. He recently completed a short learning programme in good governance in Africa from the Thabo Mbeki Africa Leadership Institute in the University of South Africa (UNISA). He is permanently employed at the University of Johannesburg’s Department of Construction Management and Quantity Surveying where he lectures at both the undergraduate and postgraduate levels. He is the programme coordinator for the 2nd year level and facilitates an academic excellent/development programme to high schools in Krugersdorp-West Rand, through an NGO based in Krugersdorp. His research interest is in the economics of infrastructure development, sustainable human development, building information modelling, climate change and adequate housing development, green job creation, leadership in low-income housing, building post occupancy evaluations, construction industry development, informal housing and infrastructure development and national economics. He has published articles in reputed journals and presented research findings locally and internationally. He is currently the editor of the Journal of Construction Project Management and Innovation.

Phil Astley
Phil Astley, UCL Bartlett School of Construction & Project Management, London, is involved in a number of cross-disciplinary research and health enterprise projects. He has developed briefing for medical respite care for the informally housed and single homeless with TB and HIV for London Pathway. He is involved with African Prisons Project and UCL Population Health. In 2014 he is working with the Aformal territories Studio, University of Johannesburg on briefing for healthcare systems in informal contexts.

Budoor Bukhari
An architectural and urban designer and urban development planning researcher, Budoor is a graduate of the Building & Urban Design in Development (BUDD) program at the Development Planning Unit, The Bartlett, University College London. She is a LEED Accredited Professional and an Estidama Pearl Qualified Professional, and has recently joined CH2M Hill as Urban Designer. With a background in architectural and urban design, Budoor’s educational and professional journey thus far have stimulated a keen interest in the role and potential of community-based and participatory approaches to urban development planning and design.

Amanda Breytenbach
Amanda Breytenbach, has been involved in Interior Design Education for over 18 years and have also participated, over the past 12 years, in the development of the Interior Design profession. Apart from her participation in the Interior Design profession and education, she has also actively participated in including sustainable design issues within the education curriculum. She is currently Vice Dean at the Faculty of Art, Design and Architecture at the University of Johannesburg.

Gabriella Carolini
Gabriella Y. Carolini is the Ford Career Development Assistant Professor in the Department of Urban Studies and Planning at the Massachusetts Institute of Technology (MIT). Gabriella has studied and been an affiliated researcher in universities in Brazil, France, Mozambique, and the UK. She earned her doctoral degree in urban planning from Columbia University, where she also held a National Science Foundation IGERT fellowship in international development and globalization. She is also currently the co-chair of the Global Planning Educators’ Interest Group within the American Collegiate Schools of Planning.
Nicola Darke
Nicola Darke holds a Masters in Conservation of the Built Environment from the University of Cape Town and currently heads the school of architecture at the Nelson Mandela Metropolitan University. In addition to her academic work she is also a Past President of the Eastern Cape Institute of Architects and a past member of the National Board of the South African Institute of Architects. Furthermore, Ms Darke is a member of the Provincial Heritage Resources Authority BELCOM and the convener of the Eastern Cape Institute for Architects Heritage Committee.

Noëleen Murray-Cooke
Noëleen Murray is an architect and academic. She is currently a Senior Lecturer at the University of the Western Cape (UWC) where she teaches courses in urban geography and is convener of the Masters and PhD Programmes. She is the lead researcher for the project Cities in Transition. She serves as a member of the board of the Lwandle Migrant Labour Museum. Her research, writing and creative work considers spaces as diverse as the migrant labour compound, the suburban shopping centre, housing developments and most recently the shaping of the UWC campus.

Yusuf Patel
Yusuf Patel studied Financial Economics at the University of London, Development Planning and Quantity Surveying at WITS. He is a professional planner and a development specialist. He has a wide range of experience including Integrated Development Planning, Infrastructure Investment, Affordable Housing and Community Development. He is Executive Director at Basil Read and President of SAPI.

Finzi Saidi
Finzi Saidi is an architect and landscape architect. He completed his PhD at the University of Pretoria in 2004 on Architectural Education. He is currently the Head of the Architecture Department at the Faculty of Arts, Design and Architecture, University of Johannesburg.

Tariq Toffa
Tariq Toffa, Executive Manager at SHiFT, lectures in the University of Johannesburg’s architecture department, and writes for writes for www.Urb.im on social and urban topics. He completed his professional architectural studies at UCT, an architectural research Masters at WITS, and studied religious and constitutional law at UKZN.

Boban Varghese
Boban Varghese is an architect, industrial designer and an educator, with three decades of experience as a design studio leader. He has embraced a ‘locally grounded-globally conscious’ ideology in creating a contextually driven design in his teaching career. His studio based teaching is shaped by the experiences and exposure gained from working and teaching in India, Japan and South Africa. His academic and research pursuits are broadly categorized into sustainable architectural developments, architectural education for a changing world, bamboo as a material for economic activation, housing solutions in underdeveloped communities and media and branding in design engagements. He is currently the head of the department of architecture at the Nelson Mandela Metropolitan University, Port Elizabeth, South Africa.

Sibusiso Sithole
Sibusiso is a qualified Candidate Architect from the University of KwaZulu Natal. He has a wide and varied mix of experience gained from working with a number of acclaimed architects from locally and abroad. With experience in design concept development, working drawings, presentation, documentation, digital and physical model realization. He joined Architects Collaborative in 2012 where he is involved on a wide range interesting and ground breaking projects and now is a full time lecturer at the University of KwaZulu Natal while reading for his Doctorate Degree whilst still maintaining a strong working relationship with Architects Collaborative.
The first UIA 2014 sub-theme is RESILIENCE, which is explored through several focus areas:

EMERGENCE, POVERTY ALLEVIATION, SPATIAL and GEO-POLITICAL ECONOMIES. Resilience is defined as life strategies developed by communities as well as critical interventions that contribute to poverty alleviation. Concepts of resilience also emphasise the important role of government and government investment towards the re-configuring of the spatial economy to the benefit of all. While some of these subjects delve into South African problems and solutions, their significance finds voice within all forms of architecture and development practice globally.

This sub-theme allows for inter-disciplinary debates on the roles of all space and place makers in spatial transformation, with an understanding that innovation exists at the interface of different disciplines. A specific focus area will be SUSTAINABLE HUMAN(E) SETTLEMENTS: social and technical considerations in the development of new visions for practice in the built environment.
PARALLEL ACADEMIC SESSIONS  
MONDAY 4TH AUGUST 2014 | Hall 1 B ICC

MONDAY 4TH AUGUST 11.00-11.20 | Hall 1 B ICC

THE LYT GREEN SCHOOLS CONCEPT: A RAPID DEPLOYMENT SCHOOL FOR REMOTE AND RURAL AREAS

Matthew Friedland  
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Abstract

The Green Schools system was developed from 2011 to 2012 to address the huge backlog of schools in South Africa, particularly in the rural areas, remote from normal infrastructure nodes. A team of seven architects developed a worked-out solution for the rapid deployment of a school in South Africa.

The system includes a resilient overarching design, including urban design principles, architectural concept and a palette of technologies that, taken together, is flexible and modular as well as easy and quick to build. Comparisons with prefabricated systems are favourable in terms of both quality and cost. The schools are capable of being completely “off-grid” and ecologically sustainable and are easily integrated into and supplement daily community activities. The system integrates social, environmental and economic aspects of school design in an efficient way while including local stakeholders in development and tailored design solutions.

Keywords: sustainable, rapid-deployment, rural, school, off-grid

MONDAY 4TH AUGUST 11.20-11.40 | Hall 1 B ICC

WHAT IF YOU DISCOVER A ROMAN THEATRE UNDERNEATH LATE OTTOMAN DWELLINGS?

Şeyda Güvenç Duran  
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Abstract

What if you discover a Roman theatre, during the excavation of foundations of a modern building, underneath late Ottoman dwellings?

Antalya is a Mediterranean city in the south coast of Turkey. Kaleici is the urban site in the core of the city. Beginning from the 3rd century BC, the city was inhabited and settlement was continuous after then. Antalya became part of the Roman Republic in 133 BC, was a major city in the Byzantine Empire. The city and the surrounding region were conquered by the Seljuk Turks in the early 13th century. The city was occupied by the Italians from the end of the First World War until the founding of the Turkish Republic in 1923.

Large scale development beginning in the 1970s transformed Antalya from a pastoral town into one of Turkey’s largest metropolitan areas. Much of this has been due to tourism. A Conservation Plan of Kaleici, including archaeological and urban sites, was held firstly in 1974 and finally registered in 1990. The main purpose of the plan was to conserve late Ottoman dwellings and monuments besides Roman ruins above the ground.
During the excavation of foundations of a new building in 2011, some parts of the Roman Theatre have appeared. Then the Antalya Council for the Conservation of Cultural and Natural Properties decided to expropriate the land. The objection of the owner to the ministry stated that the building is possibly near the ruins in order to conserve the theatre.

The main problem started here, because the Conservation Plan suggests building copies of late Ottoman buildings in order to homogenize the land. But the architect insisted on designing a modern building to unhide the Roman theatre.

The paper discusses consistency and harmony of the urban and historical site is possible even with diversity and resilience of architectural design.

**Keywords:** resilience, Kaleiçi, conservation, urban archaeology, new construction, historical site, Roman theatre.

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**Monday 4th August 11.40-12.00 | Hall 1 B ICC**

**(OTHER)CHITECTURE; BODY AS NEW SPATIAL SCALE FOR RECONSTRUCTION OF RESILIENT-URBAN-SPACE AGAINST NEOLIBERAL URBAN POLICIES**

**Murat Cetin**  
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**Abstract**

The paper addresses the question of resilience through an ‘other’ type of architecture (of ‘others’). Here, the notion of resilience is defined as life strategies developed by communities as well as critical interventions that oppose government investments towards a re-configuring of the spatial economy to the benefit of a specific section of society instead of all urban actors. In a political context of socio-economic segregation and polarization rather than poverty alleviation, attempts of suppressed urban actors to address highly specific developmental problems, to establish new relationships with a living planet, humility and, most importantly, to establish a sense of respect through diversity is analysed from a spatial perspective.

The study attempts to show that architecture and urbanism can be considered as spatial dimensions of an ideological war of different interest groups in cities. This struggle manifests itself as the polarisation between corporate sector and public. Specific governments that use planning as a means of capitalist control over urban (public) space contribute to such polarisation.

Having discussed the major protests (in world history) and their body-spatial dimensions from the perspective of strategic game theories, the paper will address the issue of the “resilience of cities” in the framework of public reaction to neo-liberal urban policies of government through manipulation of public space via various guerrilla war tactics of (other) architecture; micro-urbanism in urban-leftovers, third spaces, queer-spaces, reclamation of landfills, and ephemeral architecture particularly at body scale. This study is an endeavour to reveal the underlying nature of “others’ architecture” with specific reference to public protests for resistance against the ‘Taksim Pedestrianization Project 2013’ which includes conversion of a public green park into a private shopping mall by demolishing Gezi Park next to Taksim Square in Istanbul. The paper attempts to re-assess professional values, develop methods and techniques for professional engagement and interrogates the ethics associated with architectural and design practice.

**Keywords:** urban policy, spatial strategy, architecture, micro-urbanism, public realm
THE STOWAWAYS: DWELLING OTHERWHERE

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Dave Southwood
Photographer, Cape Town, South Africa, hello@davesouthwood.com

Abstract

In 1935 the South African Railways and Harbours began to build the Duncan Docks pushing the ‘shoreline’ of Cape Town nearly a kilometre back into Table Bay. The resulting ‘Foreshore’ accrued a palimpsest of urban designs – each building on the previous – with traffic flow and the ambition for a monumental civic axis the key recurring ideas. The result, ‘concluded’ in the 1970s, is the elevated and ‘lost’ highways effectively cutting the city off from the very water’s edge and the idea of a maritime ‘gateway to Africa’ that had been a key initiating trope in the early ambitions for the urban designs. The unintended consequences of the engineered technocratic elevated highways can be termed ‘the shadow of design’.

Today, the Stowaways sit day-long marooned on an island between bridges dreaming of the ships that pass, so close but separated by a river of traffic and an impassable barrier. From the safety of the river bank they plan new routes and passages, new escapes to strange lands across the seas, or back to Tanzania to start the trip again. Just beneath them, beneath the meniscus of made up earth, lies the surface of the sea that they dream of, the smooth space of Deleuzian nomads. Theirs is a place of dwelling otherwhere. Through a juxtaposition of text and Dave Southwood’s narratives and photographs, this paper seeks to test the limits of Heidegger’s notion of ‘dwelling’ as evidenced through the inhabitation of the places in and around the Foreshore bridges – the Stowaways, by dwelling otherwhere, are found to be exemplary subjects of Heidegger’s Building Dwelling Thinking. Further interpretations of Heidegger’s ideas of bridge and dwelling puts the Stowaways not only in the shadow of design but also as architecture’s other – a returning ghost at the heart of the originating ambitions of the Foreshore design.

Keywords: Heidegger, dwelling, bridge, Cape Town Foreshore, Stowaways, shadow of design, haunting.

RENEGADE ARCHITECTURE: THE PRACTICE OF FREEDOM

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Abstract

This presentation makes a case for an urgent praxis of critical spatial literacy (CSL), especially for African women. It does so by providing an analysis of fifteen Asante women’s negotiation of the politics of urban space; hence, demonstrating how they critically read the postmodern world in order to make a place within it. Basically, the presentation discusses key findings that reveal contemporary Asante women’s critical perceptions and responses to the significant socio-spatial effects of akwantu, anibuei ne sikasem (travel, ‘civilization,’ and money matters). The presentation also shows how the utilization of CSL as a theoretical framework for researching Asante women’s lives means that we cannot take the women’s everyday practices for granted, as they assert ownership over the contemporary spaces that change dynamic ‘traditional’ ways of living. Instead, a dialogue is necessary to discuss the consequences and implications of the transformative power of contemporary space—such as Accra’s urbanity—on African women’s subjectivities. In doing so, an analysis is made of how the continued
dismantling of traditional notions of spatiality affect conceptions of identity, and social practices, as women pit against the racial, gender, and class-based terms of Western capitalist architectural designs and ideologies for contemporary living.

The presentation also elaborates on how this study is the development of a feminist, ‘renegade’ architectural project; in that, as feminist practice, it acknowledges and comprehends transnational cultural flows (linked to the movement of capitalist social relations) so as to understand the material conditions that structure women’s lives in different locations. This is in order to plan effective opposition to the capitalist economic and cultural hegemonies that are taking new global forms, and revealing themselves in gendered spatial relations. This presentation describes this important feminist pedagogical process of spatial literacy, which is further presented in the book, Spatial Literacy: Contemporary Asante Women’s Place-making.

Keywords: migration, mobility, urbanization, globalization, critical spatial literacy, Asante women

MONDAY 4TH AUGUST 12.40-13.00 | Hall 1 B ICC

NEO-TERRORISM AND RESILIENCE OF URBAN INFRASTRUCTURE IN AFRICA: AN APPRAISAL OF CURRENT RESPONSES TO SECURITY CHALLENGES IN VOLATILE NIGERIAN CITIES AND IMPLICATIONS FOR ARCHITECTURAL PEDAGOGY

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Abstract

Like in many African countries, ethnic, religious and political conflicts are common in Nigeria and they sometimes lead to the destruction of lives and property. The parties to these conflicts are usually identifiable, the triggers are known, the government acts as an arbiter to prevent or reduce these conflicts, and it attempts to assist victims and to prevent recurrence using its institutions and agencies. Terrorism is however new to Nigeria, and the Boko Haram neo-terrorist group targets government and its institutions, or the organised private sector, thereby turning the government from an arbiter into a party to the conflict. With largely anonymous leaders and amorphous membership, no clear geographical battle lines and devastating attacks against soft targets, the response of the government and the organised private sector has been indiscriminately reactive. The impact on the urban infrastructure has been devastating. Major roads adjacent security buildings have been blocked, car parks are cordoned off; emergency exits are blocked, and access for fire trucks is obstructed by barriers. Communities are now defined by ethnicity and religion, making nonsense of communal facilities and the Central Business District (CBD) concept. Even routing and transportation is affected.

This challenge to modern urban design theory and architectural pedagogy makes it necessary to re-examine the definition of the model Nigerian city and the model institutional building with a view to enhancing the security parameters. This will reduce the need for their transformation to meet security challenges, thereby maintaining their planned efficiency. This paper documents the transformation of urban infrastructure in selected Nigerian cities including Abuja, Jos, Kaduna and Kano in response to recent security challenges. An attempt is made to propose more proactive urban planning and architectural responses, and to suggest changes to urban and architectural design models to enhance their resilience in the challenging security circumstances.

Keywords: architecture, neo-terrorism, Nigeria, pedagogy, resilience of urban infrastructure.
FATHER OF THE COMMUNITY 'BAREFOOT' ARCHITECTURE PROJECT

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Abstract

Community ‘Barefoot’ architecture began with the early work of Rod Hackney (referred to as Rod henceforth), who has spent his professional career improving slum communities with self-help methods. This paper traces the process and the growth of the Community Architecture way of working, highlighting the role of the professional architect as an enabler assisting the residents’ in up-grading run-down slum communities. To be successful, it is important that the architect takes up residence and lives and works within housing slum areas. These slum-upgrading methods were acknowledged by the Union of International Architects (UIA) in 1981. The Sir Robert Mathew Prize citation stated that the, “work represents an extremely innovative approach to Community Architecture. Here, as a member of the community, the architect assumes the role of organizer and teacher, helping people to improve their own living environment. The technology transfer is part of a process in community design and reconstruction.”


The community ‘Barefoot’ architecture project has spanned over almost half a century. This submission chronicles Rod’s involvement in the project.

Keyword: community architecture, Rod Hackney, barefoot.

PLANNING FOR PERMANENT EMERGENCY

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Abstract

Due to its geographical situation, the State of Veracruz in Southern Mexico is highly susceptible to flooding and other hazards. This paper will show how the planning system in Mexico has not yet been able to deliver safer communities in post-emergency scenarios. It is necessary that local authorities should not have the liberty to change the land uses among its territory indiscriminately. Private developers who breach these regulations should be punished and the damage restored. A strong social participation system is also considered important in order to build resilience and awareness among communities, and further prevent damages due to future climate-related disasters.

Keywords: planning, resilience, emergency, Mexico.
FOUR SUITABLE DESIGN STRATEGIES FOR ENCLOSED HOUSING IN CHINA – CASE OF SHANGHAI

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Abstract

In the past 36 years, row-by-row housing (especially high rises) with high F.A.R. (Floor Area Ratio) has gradually become the main type in the development of almost all Chinese cities. Nowadays, this kind of housing has brought about such negative impacts as monotonous city image, closed or separated city space and etc. Therefore, as one new-rising and useful type, enclosed housing has been coming up around China recently. This paper will firstly discuss enclosed housing's four inherent disadvantages such as: facing to different directions, blocking sunlight, blocking ventilation, peeping at each other. Secondly, combined with some model analysis, four suitable design strategies will be put forward which are: rotating the plan, breaking the plan, making the housing higher or lower, mixing the function. Finally, the popularity and the acceptance of enclosed housing will be improved through the above strategies.

Keywords: enclosed housing, row-by-row housing, suitable design strategy, Shanghai.

BE(A)WARE: RESILIENCE IS ABOUT SO MUCH MORE THAN POVERTY ALLEVIATION

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Abstract

Within rapidly urbanising South Africa, ‘resilience’ risks are turning into another development ‘trend’ and losing credibility. Its application and usefulness could be misunderstood and it stands at an equal risk of manipulation as sustainability has been. Narrow resilience definitions that are limited to bounce back responses frequently substitute the full and rich scope of resilience theory, resulting in doubtful suggestions that resilience is a life strategy for poverty alleviation in communities or in the reconfiguration of government investment in the spatial economy. Well-established resilience theory and the inherent potential that lies in its holistic translation into complex city systems, appears to be undervalued.

This paper builds awareness of the developmental potential that resilience thinking can unlock within the built environment; a means of proactively studying urban areas to engage policy and intervene in its design to foster conditions for life to thrive. Here, resilience indicates the strength of a system and is an emergent property thereof, not a normative principle. If used as a normative principle, then negative conditions like poverty (which can be highly resilient), are strengthened rather than collapsed, in other words, ‘resilience as the goal’ could perpetuate poverty. Once the drivers of resilience in a focal area are recognised then engaging with design, implementation and management becomes enriched. This paper further argues that an urban resilience perspective provides an integrative and contextual approach for enhancing the positive properties of different city systems to build their overall general resilience; a framework to develop capacity for general resilience in the city is explored.
through narrative examples. Potentially, resilience could inform the process to create sustainable human(e) settlements, if founded on a holistic understanding of its theory as applied to processes in the city system.

**Key words:** sustainable, urban resilience, living city systems, South Africa.

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**MONDAY 4TH AUGUST 15.20-15.40 | Hall 1 B ICC**

**REIMAGINING AN ‘OTHER’ AUSTRALIA: AN ENQUIRY INTO THE FUTURE OF AUSTRALIAN URBANISM**

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**Abstract**

Currently the world is experiencing the greatest surge of urbanisation in human history. Fifty per cent of the world’s population currently live in cities and this is expected to increase to seventy-five per cent by 2050 (Bolleyer and Weller 2012). In Australia, it is estimated an additional 39 million people will need to be accommodated in urban centres by 2101 (Bolleyer and Weller 2012). This increased urbanisation, paired with changing climatic conditions, has prompted wide discussion about the resilience of Australian cities. There is concern that current city plans are inadequate to maintain the livability of Australian cities and there is a necessity to develop strategies to manage the social, economic, political, climatic and geographical pressures that are threatening the urban environment. This paper considers two possible futures for Australian Urbanism. The first future, titled ‘Australia’s Identity Crisis’, is based on current literature and paints a bleak future for Australian cities. This discussion suggests that we are becoming aware of the dire consequences facing Australia’s urban condition; despite this awareness, current city plans remain grossly inadequate. It highlights that if Australian cities are to meet the changing future, the urban infrastructure will need to be reconceived, reconfigured and retrofitted.

The urgency for reimagining Australian cities has emerged as a common theme within the national, architectural dialogue and has been debated on a number of platforms including; published work, competitions and international exhibitions. This paper is an extension of this ongoing dialogue and urges investment in creative design solutions that can be used to retrofit the urban fabric, ensuring the cities that are built embody this ‘other’ vision for Australia’s future. The second future titled ‘Reimagining an ‘Other’ Australia’ is an extension of this discussion, drawing together the views of six eminent architects who suggest strategies for reshaping this anticipated future.

**Keywords:** Australia, urbanisation, resilience, future cities.
MINI HOUSE: A RESILIENT STRATEGY IN RAPID URBAN DEVELOPMENT

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Abstract

Mini House is a new type of housing from 15* to 50* aimed at young people for temporary living. It is a resilient strategy and has much value in solving the issues of rapid urban development. Firstly, it alleviates the problem that large population and limited land conflict fiercely by making full advantage of urban land and space to organize multi-functions. Secondly, the total price for a Mini House is much lower than a normal house, so buying a Mini House is not a heavy burden for young generation. It can also be a form of investment by young people.

As Chinese society enters its transition period, architects and land agents in China have made great efforts to put forward the Mini House. This paper will choose several cases of Mini House in China. These cases target young people as transitional products. This paper will do a survey and analysis of their space characteristics, unique design methods and feedback from proprietors. Moreover, this paper will summarize the flexible design strategies of Mini House and discuss how it obtains maximum function in minimum space.

Through case studies, the paper reveals that Mini House, which utilizes integrated interior design, flexible furniture, public facilities and property management to fulfill comfortable, fashionable and convenient feeling in limited space, has value in relieving the contradiction between people and land in the rapid urban development. This paper is subsidized by NSFC (National Natural Science Foundation of China No.51278337).

Keywords: Mini House, resilient, design strategies, minimum space, and maximum function.
ARCHITECTURE AND THE DESIGN OF SUSTAINABLE COMMUNITIES

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Abstract

The human habitat or the built environment is faced with numerous challenges - rapid and uncontrolled developments, spatial congestion, growing inequalities of access and outcome of urban opportunities, inadequate and failing infrastructures and services; all of these problems persist, albeit to varying degrees across global cities, they are more pronounced in cities of the developing world. While numerous examples of the various efforts and initiatives undertaken to mitigate these problems across global cities abound, a common limitation exists, the little attention paid to the role of communities in creating and enhancing sustainability attributes and prosperities of cities. In other words, a sense of ‘Communities’ is designed out of many cities, and which this is increasingly being recognized as a critical stumbling block to sustainable growth and prosperities of cities, it brings to the fore, the pivotal role of architecture in delivering 21st century cities of sustainable communities.

It is widely acknowledged that poor Architectural Designs impoverish the built environment, and has adverse impacts on quality of life, denying residents a sense of place, perpetuating loss of identity, resulting in fragmented communities that are inherently unsustainable. In contrast, designing to the ethos of sustainable communities generates ‘good architectural design’ that enables social capital formation, creating not only the opportunities for stakeholders to participate in urban decision making process, but also to take ownership of urban growth and development initiatives - adding value to the built environment. This paper, through the use of critical literature review and theoretical framework, argues that despite the glaring role and significance of architecture in sustainable community development, few architects are taking up the challenges, which is detrimental to the creation of 21st century sustainable cities – where growth is tailored to the carrying capacities of cities, and urban inequalities bridged. This paper brings to the fore, the critical role of the architectural profession in sustainable communities’ development, and highlights the need for the profession to champion this course, if it is to retain its premier position at the helm of the procurement process.

Keywords: architecture, sustainable communities, development design, architectural profession.
THE DESIGN PROFESSION REVISITED: ADAPTING OUR PRACTICE IN POST-CRISIS CITIES

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Abstract

Any large-scale urban crisis can test the resilience of a city’s built environment. Such crises may be triggered by natural disasters such as earthquakes and tsunamis. To mitigate the devastating impacts of such crises, architects and other design professionals can work towards reducing societal vulnerabilities in our cities. This paper poses the question, “how can design professionals engage with communities in post-disaster contexts?”

Disasters can expose and amplify a community’s existing vulnerability, as much as it can engender an environment for alternative visions and strategies for the human settlements. The recent trend in the development of urban settlements in post-crisis cities has been a shift from what had been, for the past 80-years, exclusively professional-led, expert-centred approaches driven by efficiency, to ones that are more community-centred. In depth, semi-structured interviews were undertaken with some 50 disaster experts on the ground, who serve as active agents of post-disaster assistance. The research compares how the expert-centred approaches and community centred approaches are implemented in practice. The study has found that the advantages of the community-centred approach far outweigh the short-term advantages gained by the expert-centred approach.

Committed professionals and governments have both contributed significantly to assuaging the effects of urban disasters through increased knowledge, technological advancements, and improved management strategies. Yet the process of how they engage with local stakeholders is far from democratic, and professional services are still largely inaccessible to the public. This paper illustrates, through recent case studies, how architects can play a key role as agents of rebuilding in the top-down, expert-centred projects but equally as champions of the bottom-up, community-centred initiatives.

Keywords: disaster resilience, role of architects, community engagement, design equity, social resilience.

DISTRESS ROAD TOURS: BUILDING EMPATHY ONE CONVERSATION AT A TIME

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Abstract

The Rust Belt is a place of extremes. There is too much crime and too little neighborhood organization. High drop out rates lead to low incomes. Poor access to health care exists alongside easy access to low nutrition foods. While differences occur, these conditions can be compared to the informality and poverty typically associated with Africa, Latin America, and Asia. What is most relevant is that people living difficult lives remain, whether in Johannesburg, Buenos Aires, Mumbai … or Detroit.

As educators, we feel a responsibility to connect our students with those who stay. We do this because the students have little awareness of our most determined citizens. We do this to build empathy in our young people. And we do this one conversation at a time in order to humanize our profession.
We explore realities and potentials in multiple venues. Two six-day road trips were conducted—the Midwest Distress Tour (2006) and Distress Too Tour (2008). Along the way, urban pioneers introduced themselves: Grace (Detroit), Antoine (Indianapolis), Michael (Camden), Brian and Rhonda (Flint), Myra (East St. Louis), Hunter (Youngstown), Louis (Pittsburgh), and Violet (Philadelphia). A ‘Fourth World’ seminar considers disparities that were, are, and always will be present for the ‘other’. To better focus our colleagues in the department of architecture, we recently authored an undergraduate minor and a graduate certificate program in social and environmental justice. And one of us constructed the first permanent structure in the U.S. to be authorized with a building permit and built almost exclusively with pallets—a material system inspired by self-builders worldwide.

As we offer these journeys for consideration, we stand by our efforts to open the economic foundation of the architecture profession to broader social and cultural influences, as we reveal more meaningful work for our students.

**Keywords:** Empathy, Rust Belt, post-industrial, [r]evolution, abandonment.

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**TUESDAY 5TH AUGUST 12.20-12:40 | Hall 1 B ICC**

**THE ARCHITECTURE OF ENGAGEMENT: DESIGN AS A CATALYST FOR CULTURAL CHANGE**

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**Abstract**

This paper challenges the largely site-specific and quantitative interpretation of sustainability that persists in the Canadian design and construction industry, and proposes instead a broader set of parameters that we believe can harness the potential of the built environment to promote and support essential cultural change (CaGBC 2003; Buchanan 2011; Vallance, Perkins & Dixon 2011). After more than two decades in which the quantitative approach has failed to deliver either international consensus or any measurable mitigation of climate change, we believe that sustainable design must now go beyond technological fixes, and embrace a fundamental rethinking of our relationship with the biosphere and with one another. Thus we advocate that the design of the built environment must engage in more holistic ways of thinking that have emerged in disciplines such as philosophy, psychology, economics and social sciences, among others (Canada, Environment Canada 2012; Esbjörn–Hargens 2010; Louv 2008; Jackson 2009; Wilkinson & Pickett 2010). As a framework we have taken the philosophy of integral theory proposed by Ken Wilber, which advocates a problem solving methodology that reflects both objective and subjective realities (Esbjörn–Hargens 2010). In architecture this requires us to go beyond quantitative technical and material solutions and consider social, cultural, psychological and other qualitative implications of design (Buchanan 2012). Based on a review of completed projects from across Canada, we conclude that sustainability must embrace the concept of an interrelated and interdependent ‘system of systems’ - a civic ecology that includes natural, social, economic and technical synergies, and operates at a variety of scales, beyond the physical boundaries of each project.

**Keywords:** Civic ecology, integral theory, social sustainability, cultural change.
TUESDAY 5TH AUGUST 14.00-14.20 | Hall 1 B ICC

CAN SHOPPING MALLS IMPROVE RESILIENCE OF CITY CENTRES? RELATIONS BETWEEN SHOPPING MALLS AND URBAN SPACE

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Abstract

Shopping malls have a very high aesthetic, economic, and sociological impact on their surroundings. They change habits of citizens, and the structure of trade and services may create dysfunction of cities. Appropriate identification of evolving spatial relations between shopping malls and their environment allows for relevant programming of the objects prior to their realization and subsequent functioning in the urban space. The main aim of my research is to determine the conditions which must be met for proper functioning of shopping malls without causing damage in complex urban structures. In the interdisciplinary research conducted on selected shopping malls in the Silesia region, I used a complex methodology, including chosen research tools from several disciplines. The expected results of the research will allow the location of shopping malls in urban areas without causing any negative effects, enabling further functioning of a widely considered, more resilient urban space.

Keywords: shopping mall, spatial relations, resilience, urban space, city centre.

TUESDAY 5TH AUGUST 14.20-14.40 | Hall 1 B ICC

THE POWER OF COMMUNION: MAPPING AND DOCUMENTING THE SPATIAL INFLUENCES OF “OCCUPY GEZI” IN ISTANBUL

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Abstract

The city, being a common ground for its citizens, may become a restricted area for occupying rights. Political power controls public space and changes its definition from being an open and accessible social ground for citizens to a custodial area. As a result, citizens start to lose their rights in public spaces. During the “Occupy Gezi” movement, generated as a sudden and spontaneous intervention in Istanbul against the interference of the government in public spaces, citizens resisted for their rights to think, to talk, to decide and to live freely.

During this resistance period, the public spaces of Istanbul, previously not used effectively, were turned into common areas for the insurgents to talk, to share, and even to live in. The transformation of these rarely used spaces formed a spatial communion with collective kitchens, vegetable gardens, kindergartens, open libraries, free pharmacies, voluntary infirmaries and an extensive camping area in Gezi Park. Spreading from Istanbul to all over Turkey, parks turned into discussion councils (park forums) and formed a spatial collective act, which had a well-functioning organizational cycle.

Analyzing this organically and spontaneously formed system, by mapping the spatial transformation of the public spaces into vivid common spaces, helped to get an insight into the hidden attractive forces that united citizens with a common ideal. Interviewing some of the citizens, who took an active
role during the period, gave deeper information about the aura of the bodily experiences of this collective act. Uniting in common thoughts and using common spaces for collective activities makes the city an interactive ground, which unites all kinds of people from different points of view.

**Keywords**: public space, common space, collective act, urban intervention, bodily experience.

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**TUESDAY 5TH AUGUST 14.40-15.00 | Hall 1 B ICC**

**THE USE, ABUSE AND RE-USE OF THE DISCOURSE OF SUSTAINABILITY AND GREEN REALITY IN MEXICO**

**Raul Lopez Ramirez**  
*Architect, CEO of Proyecta diseno, Mexico.*

**Abstract**

Are there different types or levels of sustainability?  
Is articulated transport (BRT) really sustainable?  
Does the use of technologies such as solar powered water heaters and photovoltaic cells constructions become sustainable?

These and many other questions led me to investigate the “Green Reality in Mexico” and after studying some examples and the different systems involved in Sustainable Building Assessment I have concluded that in my country, except for the methods of LEED Certification, all other interventions which are called “Green” are not really green, as both the private sector and mainly the public sector have done nothing but abuse the “Discourse of Sustainability”, and so every day we hear that buildings and public actions are green, when in fact they are only green in colour. Some of the actions that the Government of Mexico initiated in recent years that have served as foundation for this research are:

Hipotéca Verde (green housing) and DUIS (Integrated Sustainable Urban Developments) where instead of promoting sustainable development, it promotes the purchase of “Green” products which are lacking in energy efficiency and the model of housing continues to be the same for many years and is being built in any climate zone. Many Escuelas Sustentables (Sustainable Schools) where green products are also integrated, are built in areas at risk such as watersheds using contaminated and unsustainable materials, in addition to using the same model of design for all climates in the country. Another example is the construction of Ciudad del Conocimiento (City of Knowledge), which is currently being built in cities across the country. Apart from not using sustainable construction methods, they are located far from city centers.

The construction and operation of elevated urban highways and peripheral Motorways have seriously affected the environment, instead of implementing sustainable mass transportation systems.

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**TUESDAY 5TH AUGUST 15.00-15.20 | Hall 1 B ICC**

**‘URBAN PASTORAL’: THE TENTATIVE PLAN OF AN URBAN MOBILITY RESIDENCE MODEL**

**Ou Xiong quan**  
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**Abstract**

In the beginning of the formation of human society, we had a nomadic way of life. With the advances in productivity and technology, the life of human beings gradually formed fixed points, forming the
city and the countryside. The development of modern society makes the connections between people closer, the traditional physical distance barrier is no longer a problem. But with the rapid expansion of urban population, per capita living space and resources become more and more nervous. At the same time, the liquidity between people in different places is also more and more frequent. So we assume there will be a living model named ‘Mobility Residence’ in the future, personal houses will no longer be real estate, they will flow between different places with human like mobile phones, pads, cars and so on. These houses are mobile, highly integrated, intelligent, reusable, resilient, and ecological. In the 20th century, during the 1950s to 60s, the Archigram proposed the famous ‘insert city’ concept, each living housing units are free to insert in a giant structure of the building structure, and easy to transport and install. French architect Yona Friedman proposed the concept of mobile architecture. Referring to the residents’ mobility, that is, gives the new freedom of choice to the occupants. These theories failed to be put it into reality. Now all of this is possible. In this paper, on the basis of the predecessors, we propose a tentative plan for an urban mobility residence model. The government provides land and standard supporting services, markets provide the commercialization of residential units, and through the standardization of convenient transportation and installation, form ecological and intelligent mobile residences.

Keywords: urban liquidity, mobile buildings, mobility residence, resilience, ecology.

TUESDAY 5TH AUGUST 15.20-15.40 | Hall 1 B ICC

(BROTHERS AND) SISTERS DOING IT FOR THEMSELVES: TURNING SOUTH AFRICA’S TOWNSHIPS INTO MORE RESILIENT NEIGHBOURHOODS

Melinda Silverman
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Abstract

In the 1950s, the Apartheid government embarked on a massive low-cost housing programme to accommodate working-class Africans. This programme culminated in the ubiquitous ‘Bantu Township’ located at some distance from the economically active white centre. These suburban areas functioned effectively as residential dormitories, characterised by mono-functional land-use, low residential densities, and a relentless monotony, brought about by the endless repetition of standardized, freestanding, four-roomed houses. Architectural critics viewed townships as inherently negative and unsustainable neighbourhoods. Over the past six decades, however, the character of the townships has changed significantly, through the interventions of township residents themselves. Townships have become increasingly lively and diverse places; residential densities have increased; and new land-uses have been introduced. This paper seeks to illustrate these processes of change, through on-site interviews with township residents and through detailed mappings of township space. The paper distinguishes between the changes that took place during the period of Apartheid, and the changes that have taken place since the advent of democracy.

During Apartheid, many residents resorted to surreptitious means to build additional rooms at the back of their then-rental plots. This increased residential densities in these sprawling suburban areas, but also changed the spatiality of the plot, creating enclosed outdoor rooms for socialising and play. Although the process of backyard additions has continued since then (and has, in fact, accelerated), the advent of democracy brought additional changes. Since 1994, the changes wrought by local residents were more overt and generally took place in the front of the plot with residents adding home businesses along the street edge of their now-freehold properties, injecting much needed non-residential functions into the neighbourhood, and creating active street edges.

The paper will argue that through the active agency of township residents, these once dysfunctional neighbourhoods are becoming increasingly sustainable, resilient places.

Keywords: backyard rooms, apartheid townships, agency.
ASSESSING THE RESILIENCE OF WINDHOEK – ON THE ROAD TO RE-DEFINING SUSTAINABILITY

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Abstract

As architects we are constantly searching for new technologies and updated practises to create 'Sustainable' buildings. Despite continuous efforts to minimise our impact on the environment and to reverse the effects of climate change, our fast-changing world requires an updated definition of ‘Sustainability’. The prospects of future generations are no longer dependant only on our ability to successfully balance our ecosystems; social, natural & economic; but how adaptable we are to inevitable change.

This “ability of a social or ecological system to absorb disturbances while retaining the same basic structure and ways of functioning, the capacity for self-organisation, and the capacity to adapt to stress and change” is referred to as Resilience by Surjan et al (2011, p. 19). It has become increasingly important for societies to constantly evaluate their impact on the environment. A truly sustainable society would learn from such evaluations, adapt successfully and remain resilient for many generations to come.

The study investigates the capital of Namibia; one of the most arid countries in sub-Saharan Africa and the youngest independent state on the continent. It considers all the main systems and their relationships and shows how a dynamic ecosystem like a city might be assessed for resilience.

The study will show that resilience requires a shift in our perceptions and eventually depends largely on our ability to learn from the current state of our cities. The study will also show how valuable resilience assessment can be in re-defining our understanding of sustainability.

Keywords: sustainability, resilience, urban landscapes, systemic thinking, self-organisation.
ADOPTING VERNACULAR STRATEGIES IN SOUTH AFRICA

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**Abstract**

A cultural revolution which saw the emancipation of the majority of South Africans took place 20 years ago. This revolution was similar to the French revolution of 1789 where democracy brought about change both physically in the built environment as well as subconsciously. The South African subconscious revolution was articulated by Cheikh Anta Diop (1996) in a concept termed African Renaissance. The 1994 South African revolution gave rise to new architectural explorations and new building typologies that had to endure a ‘trial and error’ phase. During this phase, plausible principles were formed that would provide the necessary rigor for many of the harsh environments that we are faced with in South Africa. Many of the lessons to be learned are vernacular in essence formulated by the inhabitants of these environments. Maudlin (2010) provides an interpretation of vernacular architecture as being outside architecture, seen as the “other”, both marginal and subordinate, in relation to authorship and aesthetics. He claims vernacular architecture is the architectural language of the people. It indicates that we can learn from areas that are poverty stricken and shows an incredible resilience to maintain themselves. What urban design principles can we identify that are established through the vernacular in poor communities?

Thaba Nchu is a small town 60km from Bloemfontein in the Free State, South Africa with primarily Tswana and Sotho inhabitants. Its history and establishment showcases cross-cultural allegiances and humanitarianism. During the apartheid era it formed part of a homeland set outside South Africa and formed part of Bophuthatswana. As a result, it exhibits a large area of rural settlements on former trust lands. The sporadic development of the informal settlements incorporates many of the new town and building typologies associated with the 1994 revolution. Through the analysis of the history of Thaba Nchu, the authors aim to identify the governing systems and political influences associated with the town’s formation and development. Through historical research as well as quantitative and qualitative analysis, we can learn from the development patterns and spatial development frameworks that resulted from the town of Thaba Nchu. Before any informed poverty alleviation strategies can be implemented, it is imperative to learn from the vernacular and to understand the principles used to sustain itself in this harsh environment.

A comparison can be drawn between modernism associated with pre 1994 apartheid systems, and the Baroque era associated with the aristocratic rule of pre French Revolution. Both revolutions involved the emancipation of the disadvantaged majority group through democracy. But, Modernism was already firmly established prior to the 1994 revolution and this begs the question, does South Africa fully understand the transition from autocracy to democracy in terms of the shift from modernism to the African renaissance?

The principles related to resourcefulness, resilience and sustainability could provide insights into development strategies in harsh environments.

**Keywords:** resilience, Thaba Nchu, vernacular strategies, modernism, African renaissance.
WEDNESDAY 6TH AUGUST 11.20-11.40 | Hall 1 B ICC

SPATIAL JUSTICE AS A TOOL FOR SUSTAINABLE REFORM IN KHARTOUM METROPOLITAN AREA

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Abstract

Khartoum, the national capital of Sudan, has undergone during the last three decades an unorganized rapid urbanisation due to dramatic population growth, resulting spatially in unchecked sprawl. Indeed, spatial practices in the last two decades led to a deepening of the problem by creating more unjust spaces and furthering segregation. This study aims to shed light on the concept and dimensions of spatial justice, and its role in achieving sustainable intensified urban form. The specific objectives are: to identify the factors which determined how the spatial pattern is produced in Khartoum, and to invent solutions as well as equitable and sustainable interventions.

Khartoum Structure Plan (KSP 2008-2033) proposed an Urban Development Framework based on halting horizontal expansion of the capital, and accommodating future urban growth through an intensification process within the consolidated urban area (MEFIT 2009). But (nevertheless) the process of transforming the sprawling city into a compact one is very complicated and raises many questions, and the major question is, how can urban intensification be controlled and managed in a way that supports sustainability and reduces spatial injustice? A premise of this study is that achieving spatial justice by carrying out the intensification process in Khartoum would be an effective tool to promote sustainable development and reduce spatial injustice. This study adopts a multidisciplinary approach to analyzing and evaluating the existing situation, and formulating relevant solutions. To encourage debate, and to spark interest in spatial justice and sustainability issues, the study presented a proposal aimed at providing practical solutions to avoid uneven development patterns, which can exacerbate spatial injustice, and to change or reconsider the spatial pattern to be fairer.

Keywords: spatial injustices, sprawl, intensification, urban form, sustainability.

WEDNESDAY 6TH AUGUST 11.40-12.00 | Hall 1 B ICC

RESPONSIVE ARCHITECTURE: AN ARCHITECTURAL THEORY FOR MAKING PLACES TO ALLOW MAN TO DWELL

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Abstract

The making of meaningful architecture requires a specifically defined theoretical framework. The paper will firstly establish an understanding of what the primary objective of architecture is. The study relates to a humanistic approach to architecture as considered in architectural theory relating to the post-modern paradigm. Secondly the paper aims to develop an appropriate theoretical framework for the making of an architecture based on its primary objective.

Methodology: Literature study of phenomenology and perceptual theory as it relates to architecture and conceptualised as place and experience of architecture. Key references will be: Rasmussen 1959; Menin 2003; Pallasmaa 2005; Norberg-Schulz1980, 1985; Hertzberger 2008; Frampton 1983. The paper will conclude firstly that we can define the primary purpose of architecture as: ‘The process of creating places for man to dwell’. Secondly the literature review leads to a theoretical framework that
is defined as Responsive Architecture. The responsiveness is twofold, referring both to man + context in the broadest and detailed sense.

“Few seem to appreciate the depth of design endeavour and understanding that it takes to create pleasure from constructed places. Our expectations are too low, the economic and programmatic goals are mismatched to cost in use and an understanding of the absolute importance of architectural, urban and landscape design as the framework for social interaction …” (Menin 2003).

The theory of a responsive architecture can provide the potential to understand the complexity of making architecture within the complexities provided by the urban environments of South African contexts.

Keywords: responsive, architecture, theory, place, dwell.

WEDNESDAY 6TH AUGUST 12.00-12.20 | Hall 1 B ICC

REFURBISH CITIES RESILIENTLY WITH LOCAL ARCHITECTURAL TRADITION AND WISDOM CONSERVED – TAKE TWO CASES IN SHANGHAI AS EXAMPLES

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Abstract

China, both the beneficiary and victim of modern architecture, is now switching roles from blindly abandoning the old for the new to prudently reconciling them. Shanghai, as China’s top world city, has seen a series of refurbishments since the Nineteenth Century, especially during the recent three decades. Apart from the world experimental field of skyscrapers in Pudong District, the destiny of the old town, specifically the Lilong housing community, the most typical traditional residential form of Shanghai, has already reached its crucial turning point, whether massively demolished or indiscriminately conserved or there may be a more appropriate and resilient way. Those different strategies adopted by the government in different areas can be regarded as trials, the results of which may shed some light on the solutions to other developing regions encountering similar situations. This article will analyse and compare two major cases of Lilong transformation in Shanghai, Xintiandi Area and North Sichuan Road Area. The former one is an intensive renovation of the community while the other one mainly conserves the bulk of the area. Through this research of analysis and comparison of aspects like human habit and psychology, building aesthetic functions, economy, it can be expected to generalise basic rules concerning possible relationships among functions, grades, intensity of transformation and project success, etc. As city refurbishment continues, the successful methods with local architectural wisdom can become potential references for similar dilemmas in the future.

Keywords: conservation, architectural heritage, Shanghai.
SPATIAL STRUCTURE AND CHANGING PATTERNS OF USE IN THE URBAN CONFIGURATIONS OF FOUR EASTERN CAPE COLONIAL TOWNS

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Abstract

The Eastern Cape urban settlements of Port Elizabeth, Grahamstown, Uitenhage and Cradock all exhibit similar morphological characteristics. That is, they are all colonial towns that developed around a traditional core which was the centre of civic, communal and commercial public life and accordingly they all share a traditional spatial syntax and physical character. The spaces of the original ‘main’ streets of each settlement have, physically, remained for the most part intact while the urban areas developed around them and expanded through the twentieth century and into the twenty-first (under the influence of both, modernist and apartheid planning principles and general socio-economic trends). Yet, a more circumspect approach reveals that, in contrast to their relative structural stasis, these ‘main’ streets have been appropriated in significantly different ways since their foundation. With a view to exploring how the dynamic expansion of the above four settlements has impacted upon the nature and use of these original centres, this paper presents findings based on empirical observations of the areas studied, processed using concepts developed within the ambit of space syntax theory.

The findings suggest that while centredness has changed (by virtue of their changed situations in their overall spatial configurations), and while the particular ways in which they have been used has changed (as a result of changing socio-economic patterns), they have remained vitally important public places and activity centres – and so, in a sense, have remained unchanged. Many South African towns and cities share the morphological characteristics of these settlements with the consequence that understanding such spatial evolution might contribute towards developing relevant strategies for future urban design interventions.

Keywords: centredness, configuration, stasis, change, use.

A PLACE UNDER THE SUN FOR EVERYONE: FORMAL AND NON-FORMAL SPACE PRACTICES

Marlene Wagner
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Abstract

The showcase-housing project and field of research, the Housing Development Cosmo City in Johannesburg, is aimed at satisfying the constitutional right to adequate housing for all South Africans and simultaneously addressing the integration and interaction between different income classes.

In the study – A place under the sun, we learn to read spatial configuration and the behavioural patterns assigned to them in an unfamiliar cultural context and milieu. Focus of the research was put on strategies of occupation and integration in the satellite-town and its inhabitants resettled from the informal settlement Zevenfontein and Riverbend.

The acquisition of a basic vocabulary of formal and non-formal interventions in the built environment - Levels of Alteration, Separation, Security and Service in private and public space - serve the purpose of identifying recurring patterns, which can be categorized into typologies by correlating interpretation of size, form and function.
The translation into graphical description and the placing of spatial interventions and generated typologies of attractors in Google Earth, enables the analysis in different scale and time.

The three-dimensional information on morphology, different dynamics of the housing area, relations, connection, array and dependency of occupancy serve identification of potential or challenging spaces of development and spatial trends in the settlement.

The produced knowledge creates a polylog for integration of non-formal infrastructure, income strategies and spatial needs in considerations of requirements from government, developers and contractors.

This serves the development of semi-formal regulations (zoning, building) as responsive strategies of design and planning for continuously modifying systems.

**Keywords:** human settlements, visual research, semi-formal zoning and building regulations
PARALLEL ACADEMIC SESSIONS
PART 2: ECOLOGY

MONDAY 4TH AUGUST 2014

ECOLOGY encompasses a number of focus areas, which include: TIME, EVOLUTION, SYSTEMS, PROCESSES and ENVIRONMENTAL CONCERNS. This sub-theme acknowledges the role of the architect in a bigger, interconnected, and systemic network – thus encouraging a long-term design perspective. The consideration of the 4th – temporal – dimension of TIME as part and parcel of the design and decision-making process is crucial to the future practice of architecture. Evolution is intrinsically linked to the concept of time as it considers processes of architectural production which acknowledge people and place – and aims to intervene in the built environment by understanding the built environment as an ecosystem requiring sensitivity to help maintain existing systems in relative states of balance.

This sub-theme will allow for a focus on SUSTAINABILITY, ENERGY-EFFICIENT DESIGN and GREEN BUILDING. It also allows for a focus area on sustainable architecture under conditions of change and concepts of Open Building.
A POLITICAL ECOLOGY ANALYSIS OF RESILIENT URBAN SYSTEMS: THE CASE STUDY OF DONDO, MOZAMBIQUE

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Abstract

In the neighbourhoods of Dondo, Mozambique, the urban environment materialises by means of social spatial production, i.e., the appropriation of the pre-existing natural environment by society in order to construct its habitat and fulfill its needs in a lasting, balanced manner. This is so precisely because ‘human participation in nature’s processes is the natural condition of human existence’ (Schmidt 1971, p. 79). Facing the effects of marginalisation in the dualistic city, the external space that surrounds the house – the ‘Outdoor Domestic Space’ – is strategically adapted to integrate both farming and businesses, shaping a green and ruralised pattern of urbanisation. Nevertheless, its current development is constrained by poverty and social spatial segregation. Assuming that there is an innate relationship between humanity in nature in the sense that its balance is a precondition for survival, where communities decide their production of space, industrialisation marks the beginning of a strong rupture with the traditions of both ‘democracy’ and ‘ecology’. Research findings suggest that it is possible for societies to reassert collaborative practices and self-organisation by relearning from scratch and merging it with modernized knowledge.

This paper examines the background underpinning the dialectical relationship between the human habitat and nature, based on real practices from the case study. The historical analysis of Mozambique, extending from the pre-colonial times to today’s post-colonial city, provides knowledge for understanding the way self-organisation of space materialises the ecodevelopment paradigm at the margins of the dualistic city. Local notions of ‘house’, ‘urban’ and ‘rural’ and their adaptation over time under continued oppression is analysed under a political ecology perspective. This is fundamental in determining how, faced with disruptive factors such as foreign oppression, land alienation and spatial segregation, the spatial resilience and self-reliance of the Mozambican population generated today’s decentralised pattern of space use, giving rise to a green form of urbanisation.

Keywords: political ecology, spontaneous urban systems, dualistic city, urban resilience, Mozambique
SUGARCANE(AIR)FIELDS: THE EFFECTS OF THE AEROTROPOLIS ON THE EVOLUTION OF PLACE

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Abstract

Instant urbanism – a description applicable to the proposed new urban form of the 21st-century future city, termed the ‘aerotropolis’. Encompassing strategic performance-based development that is established in infrastructure planning, airport cities are commercially propagated to generate economic growth via the catalytic development of surrounding regions. But to what effect?

Synonymous with homotopia, as implied by the sprouting of non-places across the globe, the aerotropolis is associated with globalisation, supermodernity and mobility. Whilst the current age of mobility is characterised by speed, networking and power; it also entails the interconnectedness of experiences in a time-space continuum, and infers a range of cultural, social and historical aspects, rich with physical and psychological configurations. In order to probe the aforementioned implications, the investigation will be conducted in and around the site of the Dube Tradeport – an aerotropolis located on a greenfield site on the north coast of KwaZulu-Natal, South Africa. The north coast is characterised by an abundant topographical and cultural landscape, manifest in material and symbolic geographies. The region is a vague space in a state of flux and tension, as intensified by the introduction of the aerotropolis, which may exacerbate global networks of flow, accelerated patterns of growth, and instant impact in the region’s development; and/or offer opportunities for the creation of place that countersacts alienation, and encourages the pursuit of meaning via experience, association and belonging; and/or present an inbetween condition – an encounter with otherness. Drawing on post-structuralism and phenomenology, the framework of psychogeography will be engaged in order to interrogate the ecological and psychological impacts of the aerotropolis on the evolution of the region. The term ‘evolution’ will be interpreted in relation to the continuum of time and identity; thereby focusing the study on aspects of perception, imagination and memory.

Keywords: aerotropolis, cultural landscape, memory, mobilities, psychogeography, situationist international.

DESIGN WITH NATURE: THE PRACTICE AND THEORY OF TWO CHINESE ARCHITECTS FROM THE 8TH CENTURY

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Abstract

Searching for a better way to create a living environment in nature has been one of the primary tasks for architects and urban planners over the last few decades, especially as a result of rapidly urban sprawl and the ruthless destruction to nature. Architects and urban planners have reached the consensus that such efforts should be made not only on a technical level but also on a conceptual level. In ancient China, however, a tradition of designing with nature had existed for thousands of years. With deep respect, understanding, and conformance to nature, ancient Chinese believed that they should arrange, repair and improve the natural environment in an active but abstemious way, in order to achieve an ideal living environment. Following this concept, a complete system of theory and methodology gradually developed. The intellectual architects, in particular, pioneered the
practical and theoretical developments in designing with nature in ancient China. Those in the Tang dynasty played an especially important role, in terms of both the amount of practice and profundity of theoretical thinking. Among them, Yuan Jie and Liu Zongyuan were particularly outstanding. As prefectural governors, they were in charge of city planning, as well as discovering and designing local landscapes. As architects and artists, they created their own habitation following the ideal of living environments. As theorists, they also explored relevant theories and methods. In Yongzhou area, these intellectual architects attempted to search for a mode of planning and design in specific areas with rich and beautiful landscape. This practice not only set up a paradigm for the later intellectual architects in that region, but also left behind a legacy in the history of planning and design in ancient China. Their ideas and theories deserve further study and inheritance by Chinese architects, and will inspire more architects worldwide facing the same man-nature issues.

Keywords: design with nature, intellectual architects, Liu Zongyuan, Yuan Jie, Yongzhou

MONDAY 4TH AUGUST 12.00-12.20 | Hall 1 A ICC

EVOLUTION OF CHOICE OF OPTIMAL EXTERNAL FINISHES AND ROOFING FOR SCHOOL BUILDINGS: A STUDY OF SELECTED NIGERIAN UNIVERSITIES

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Abstract

This study analysed the evolution of choice of optimal external finishes and roofing in Nigerian universities. The study traced the evolution of Nigerian architecture through the historical style and traditional architecture, to the colonial, modern and late modern styles; and the postmodern trend. The paper further documented the characteristics of the architecture found in Nigerian universities, and the evolution of choice of external finishes and roofing in these universities. It highlighted the challenges faced by architects over time, and the responses, innovations and failures in the quest to optimise choice of finishes and roofing. The field studies covered representative buildings, such as senate buildings, lecture theatres, auditoria and faculty buildings; and these were analysed in several representative universities. A comparative analysis of these universities revealed certain trends that gave a national perspective to the problem of sub-optimization of choice of external finishes and roofing in the universities, irrespective of age, ownership structure or specialization. The study recommended better adaptation to climate, the use of materials that age without decaying, use of organic and sustainable materials, lifecycle approach to estimating cost of finishes, and increased use of high-energy materials for cladding.

Keywords: architecture, external finishes, Nigeria, school buildings, university buildings.
DESIGN METHODOLOGIES IN INFORMAL TERRITORIES

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Abstract

Today megacities in developing countries feature the world’s highest rates of population growth, which causes modernization islands to stand next to large-scale informal urban settlements. In these informal territories, a deep concentration of poverty and social problems coexist with social and economic dynamics, creative initiatives and a sense of urbanity. Taking into account that currently one-third of the world’s population live in slums and distant outskirts, and that the poor constitute the world’s fastest growing group, it is vital that new intervention strategies are investigated based on the understanding of the informal territory. Thus, this whole new universe requires new research methods, new vocabularies, new concepts, and more dynamic design strategies to intervene in those areas with more flexible approaches, considering multiple futures, diverse types of urban design and different programs, rather than stable or permanent configurations. As our case study, we elected Heliopolis, a prime-location area in Sao Paulo, Brazil, undergoing constant (trans) formation and where most of the territory is still self-constructed. The intervention possibilities, which may trigger a chain reaction of improvements, range from possible solutions to the urgent housing issue to meeting the needs of leisure and interaction of the community. Most of all, they are supposed to involve joint work between professionals and the community as in a combined and creative building blocks activity.

Keywords: megacities; informal territories; design methodologies

ARCHITECTURE, OBESITY, BICYCLES AND THE CHANGING ECOLOGY OF PHYSICAL ACTIVITY IN LARGE CITIES

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Abstract

Large cities worldwide have instituted municipal bike share systems to encourage other means of public transit and to catalyze enhanced physical activity for its public health benefits. Cities as diverse as Lima and London, New York and Paris, have carved out dedicated bicycles lanes from congested roadways, allowing for the design of transportation alternatives. The role of design in each of these and other cities is of keen importance. Urban centers in Europe, Asia, North America and South America have joined several cities in Sub-Saharan Africa in exploring ways of reducing carbon emissions by diminishing reliance on motor vehicles.

The design of shared bicycle systems brings together a multidisciplinary team of architects, designers, landscape architects, urban designers and transportation planners, joined by graphic and cultural identity professionals. Public sector and private firm colleagues have collaborated on strategy, phasing and implementation.

The question of appropriate time of deployment has loomed large in roll-out in cities on five continents. The geometry, topography and cultural values of each city where bike lanes and shared bikes have been introduced also relates to the design thinking inherent in trans-sectorial analysis. In some cities, advertising value and related graphic identity have added an additional factor of complexity. In others, the logistics of making sure that bicycles are where they need to be at certain peak periods of
the day has engendered design challenges. What each city has in common is the connection of design and public health - how a change in the way people move in the course of daily life helps reduce the global epidemic of a sedentary lifestyle. In the presentation, six cities will be analyzed, and the role of architects and design professionals specifically addressed. How the architecture of shared bikes gives differential identity to these cities will similarly be assessed.

**Keywords:** design, bicycles, health, cities, exercise

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**MONDAY 4TH AUGUST 14.00-14.20 | Hall 1 A ICC**

**EXPERIMENTS IN URBAN RE-USE, REGENERATION, CULTURE AND ARCHITECTURE IN THE RAVENNA DOCKLANDS. THE TSN - TIRO A SEGNO NAZIONALE**

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**Abstract**

The National Shooting Range (TSN) was founded by Giuseppe Garibaldi in 1812, one year after the unification of Italy. The headquarters for the Ravenna branch was built in 1892. Unfortunately the construction of new buildings for the TSN in the 1970s led to the abandonment of the historical site, causing it to fall into disrepair. The architecture of the shooting range is unique in the post-industrial docklands landscape and its imposing concrete structures form a fundamental part of Italy’s built heritage. ‘Experiments in Urban Re-Use’ is a project that shares the TSN’s desire to revitalise the site. The design process opens the space to discovery by the community, combining architecture, culture and sustainability, utilising temporary events to achieve permanent improvements in the site’s infrastructure. This paper describes the methodology of temporary re-use, the experiments to-date, the sustainability concept and the design of an off-grid, zero carbon prototype building that has the potential for duplication in other dis-used areas.

The project began in 2012 on the 150th anniversary of the TSN. Each ‘Experiment’ serves the dual purpose of designing a fun event while taking a concrete step towards restoring the complex. The long-term aims are threefold: firstly to renovate the buildings, then to build a sustainable prototype with a co-working space and finally to establish a creative cultural quarter. The project is part of Ravenna’s bid to be European City of Culture 2019 and the experiments harness the commitment and passion of volunteers from cultural organisations and the wider community. The architects involved have founded a non-profit cultural association, Meme Exchange, to promote sustainable urban regeneration and the recovery of disused spaces.

**Keywords:** temporary re-use, experimentation, sustainability, culture, off-grid
THE ROLE OF THE ARCHITECT IN THE SYSTEMIC NETWORK OF THE METROPOLISES PERENNIAL TRENDS

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Abstract

The challenge of the future lies in being able to work on a new definition of the local, embedded in globality. Local attachment is a necessity in the teaching of architecture, and contributes greatly to education. It is essential to establish territorial attachment with a strong capacity to form and designate a specific place, and indeed to build a habitable and inhabited environment. The place then becomes a strategic developmental commitment. These research and education measures based on locality enable us to explore other new, urban mechanisms, for we do not refer to locality as an end in itself, but rather as a starting point to embed it in a larger, indeed, global territorial framework. This then ties in with what Saskia Sassen identifies as the Global City, since the place’s dynamics lead this territory and city not to withdraw into themselves, but rather to open up and connect with the world. Architect training and education must thus be aimed at acquiring skills which enable comprehension and an intelligent grasp of the territory. By researching a new definition of locality, we refute the construction of simple, disembodied architectural objects with no influence over their environments. Unlike the classic city, this new territorial mechanism is not embedded in one single place, but instead exists through a multitude of interconnected locations.

Keywords: Locality, reliance, intersection of spheres, experimentation, global

THE SKIN OF BRAZILIAN MODERN ARCHITECTURE: ENVELOPE SOLUTIONS IN THE LIGHT OF CONCEPTS OF BIOCLIMATIC ARCHITECTURE

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Abstract

The period of Brazilian architecture between the 1930s and 60s has always been internationally recognized as one of the most important in the architectural history of the country by the Brazilian Academy. This period, known as modern architecture, has been evaluated in relation to the treatment of environmental issues and solutions for passive conditioning developed by Brazilian architects of the time. The influence of colonial architecture, which has been studied in the treatment of the envelope of buildings, is presented as the greatest contribution from that historical period for the development of modern architecture at a national and international level.

Keywords: modern Brazilian architecture, sustainable architecture, bioclimatic architecture.
MONDAY 4TH AUGUST 15.00-15.20 | Hall 1 A ICC

STUDY ON LOW-TECH ENERGY SAVING STRATEGIES IN SHANGHAI’S RESIDENTIAL DESIGN

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Abstract

The high energy consumption and resource usage of residences in the construction process and use phase poses a huge challenge to the city’s resource capacity and living environment. At present, Shanghai is promoting the construction of ecological residences, pushing forward an intensive residential design pattern which features energy saving, high-efficiency and cyclic utilization. This paper concentrates on low-tech energy saving strategies used in residential design. By analyzing several cases in Shanghai that apply ecological considerations to their residential design process the paper summarizes existing practices of Shanghai in the field of energy saving residential design. From three individual aspects of site layout, internal planning and building envelope, the paper concludes the fundamental elements requiring consideration in the design process and addresses the importance of affordability and appropriateness. On the basis of existing practice experiences, the paper seeks to summarize several instructional strategies that are of low cost and easy to promote, thus making contributions to the popularization of energy saving residence. This paper is subsidized by the National Natural Science Foundation of China (No.51278337).

Keywords: residential design, energy saving, low-tech

MONDAY 4TH AUGUST 15.20-15.40 | Hall 1 A ICC

ECOLOGICAL RENOVATION STRATEGIES OF WORKERS’ NEW VILLAGE HOUSING IN SHANGHAI

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Abstract

From the 1950s to 1990s, approximately 324 new villages were built in Shanghai, a total of 45 million square meters. After a long period of service, these old public houses presented quite a number of pressing problems, which resulted in the desperate need for renovation. Shanghai started renovating new village housing in recent years, during which process many difficulties and challenges were encountered, typically known as the source and distribution of capital. However, problems in the social and environmental aspects are equally severe but easy to be neglected. For example, the difficulty in coordinating residents and the conflict of interest among different entities and the energy consumption problems of renewed housing. This paper analyzes the current situation of new village housing and the practice experience of existing renovation projects carried out in Shanghai from three aspects of optimization of architectural form, perfection of housing function and improvement of envelope structures. In summary of existing renovation experience, several ecological renovation strategies are concluded for reference to future renovation practice.

Keywords: ecological renovation, old public houses, new village housing
Abstract

With the development of globalization in the world economy, communication and contact amongst countries and regions become closer. A growing number of crossings have been built between countries and regions, That is, ‘the boundary space’. How to create a good environment of the boundary space, enhance the crossing's operation efficiency and sustainable development of port space, is the aim and discussion of architects around the world. Many Asian cities have made a positive and pragmatic practice, also accumulated many successful experiences. Hong Kong is an international ‘Grand Pier’, its economic status in Asia is obvious to people. With the development of the economy, Hong Kong crossing has been unable to meet the development trend of the existing. So the Hong Kong-Zhu hai-Macao Bridge• Hong Kong Boundary Crossing Facilities International Design Ideas Competition was held in Hong Kong in 2010. Aimed at making plans for Hong Kong, the competition revealed many prospective and sustainable design concepts, analysis of representative concept, proposed appropriate design of future exploratory perspectives and ideas for China, to expand the vision of sustainable development design ideas in boundary space.

Keywords: globalization, boundary space, Hong Kong Boundary Crossing Facilities International Design Ideas Competition, sustainable development.
PARALLEL ACADEMIC SESSIONS
TUESDAY 5TH AUGUST 2014 | Hall 1 A ICC

TUESDAY 5TH AUGUST 11.00-11.20 | Hall 1 A ICC
OPPORTUNISTIC LANDSCAPES: CASE ANALYSIS OF THE CITY OF HAZIRA, INDIA

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Abstract

In recent years, attention has been drawn to alternatives to top down approach of urban design and city planning which is found to be irrelevant with respect to the complex and continuously evolving nature of cities. India is going through a stage of rapid urbanisation wherein there is need for a context specific approach. Existing approach influenced by the ideas from the west do not respond to the political, economic, cultural complexities of Indian cities. There is a need for an opportunistic approach which adopts the indigenous strategies while also taking into account the existing circumstances.

Keywords: opportunism, Jugaad, actor-network theory, landscape urbanism, India

TUESDAY 5TH AUGUST 11.20-11.40 | Hall 1 A ICC
ANALYSIS OF SETTLEMENT PATTERN AND THE DYNAMICS OF HYDRO ENVIRONMENTAL IMBALANCE – DELHI AS A CASE STUDY

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Abstract

River Yamuna has been catering to human settlements & sprawl since ancient ages having major impact on Delhi’s environment & local ecology by virtue of its hydrological characteristics. Over the time fluctuation in water quality range within the channel as well as through their aquifer system within the premises of active plains has been experienced owing to urbanization & population factor.

The aim is to understand the course of its active basin from tajewala till Allahabad covering the following areas under its stretch. Upper basin stretch have normal course with no major impacts of urbanization with good quality of water Delhi stretch have high industrial impact & urbanization factor leading to reduced water quality & water pollution in river basin Lower basin comprises of Yamuna stretch at itawa & Chambal having its own water sheds, it has a self-cleaning mechanism which reduces the industrial impact.

The idea of study is to understand the impact of urbanization & other activities on the ongoing/existing settlements in Delhi, with respect to factors affecting the hydro environmental imbalance. Leading to several issues including deteriorating water quality, water unavailability, depletion of ground water table, water pollution, rise in temperature levels, urban heat island effect etc. With special emphasis
on river stretch crossing Delhi area owning to the maximum urbanization impact experienced here.

The analysis is carried out to assess the following factors from ecological point of view:

- Environment temperature, humidity, wind direction, wind velocity, vegetation cover, soil quality, Yamuna discharge/supply etc.
- Settlements population, water requirement, ground water quality, settlements pattern.

Further water conservation & management strategies including root zone system, common effluent treatment plant, etc are proposed to enhance the quality of built environment existing adjacent to river basin. And geophysical technique for water management, land use & sustainable development within the study region are also incorporated.

**Keywords:** Urbanization, Human Settlement, Geophysical Technique, Ground Water Quality, Water Pollution

**TUESDAY 5TH AUGUST 11.40-12.00 | Hall 1 A ICC**

**INFLUENCE OF DESIGN ON THE THERMAL ENVIRONMENT OF PUBLIC TRANSPORT TRANSIT FACILITIES**

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**Abstract**

Rural urban migration is a phenomenon which is experienced in many developing countries; the result is an increase in populations across urban centers, which further translates into overpopulation. In Mombasa, Kenya, there is a growing concern over comfort in particular thermal comfort due to the lack of response to hot and humid climatic conditions in the design of transit facilities. The objective was to investigate thermal environment conditions in transit facilities. Field surveys were carried out to investigate the thermal environment conditions of ferry transit facilities. The study was conducted for two days at two terminals, mainly the Island and the Mainland terminal at the Likoni area of Mombasa in the month of July 2012. The study consisted of two methods, namely, thermal environment measurement and thermal comfort questionnaire. Wind and thermal inertia measurements were taken and a total of 100 questionnaires were administered, 50 per terminal. The study found that there was approximately 70% dissatisfaction rate in thermal comfort at the mainland transit facility and a 20% dissatisfaction rate in the island transit facility. Poor ventilation levels were also observed in the mainland transit facility. It was recommended that solar passive cooling techniques be used to cool the thermal environment.

**Keywords:** Urban centers, public transport, thermal environment, congestion, passive cooling
POLICIES THAT SECURE A SUSTAINABLE ARCHITECTURE

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Abstract

The focus on sustainability is created out of fear that the earth’s resources will be depleted to a level that will affect the future generation due to technological advancement that has led to greenhouse gases, leaving the earth nothing to offer the future generations but high levels of greenhouse gases. The theme of Rio +20 is to secure renewed political commitment for sustainable development, assess the progress to date and the remaining gaps in the implementation of the outcomes of the major summits on sustainable development, and address new and emerging challenges.

The theme focuses on a green economy in the context of sustainable development, poverty eradication and the institutional framework. Across the world, policies are being implemented to ensure that there is a regeneration of resources. Technological advancement being a continuous process can however be executed in such a way that takes the environment into consideration and leaves a low carbon footprint. Nigeria, however, is lagging behind in its commitment to sustainable development due to the poor implementation of policies. This research with the aid of literature reviews aims to communicate the need for an evaluation of the current policies that govern sustainability in Nigeria and educate the legislators and general public on the need for a sustainable Nigeria.

This can be done by: development of specific implementation Plan with targets and timelines, establishing a specific monitoring and evaluation plan to ensure effective implementation, establishing a structure that will be responsible for data gathering and analysis, translation to statistical data that could be used for planning, measurement, review and adjustments and further actions, creating cooperation mechanisms, partnership arrangements or other implementation tools to achieve a sustainable Nigeria. This in turn will help secure a green and habitable earth for the future generations.

Key words: Policy, governance, sustainability, greenhouse gases, architecture

IF WE WERE LIKE ANTS... SCIENCE FICTION FOR ARCHITECTS: URBAN FORM IMAGINED AS A NATURAL, ORGANICALLY EVOLVING ECOSYSTEM

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Abstract

In any ecosystem, a species will prosper where there are favourable conditions to meet its needs. Complex human urban development can be re-imagined; driven not by abstract legal or political concepts, but by the same ecological principles of matching needs with conditions. Each land use can be considered as an individual species in an “urban ecosystem”.

It is possible to imagine these “species” developing when and where they would naturally be suited, just as happens in natural ecosystems. Their positioning could be based on their inter-relations and inherent environmental needs. Urban development could be arranged according to the society’s needs at the time and according to the laws of natural systems and the resources available.
Different land uses require different natural features, housing may need heating, factories may need ventilation and pollution control, offices may need access to human transport systems. Different topographies and environmental features make these aspects easier or harder to achieve. By understanding the opportunities presented by different topographies and matching these to the land uses, a new urban form could evolve.

We can imagine development being arranged according to watersheds, solar access, topography, and microclimate, and the opportunities that these factors present. In this way, the flow of energy, water, resources, waste and cultural ideas and identities can all be re-imagined to inform the urban form.

**Form Follows Flow**

Transport of materials and humans can be viewed in much the same way as nutrient cycles that we find in natural systems. By understanding the cyclical nature of these nutrient flows, can we develop a transport system that is inherently more efficient and resilient than current practices? Nature’s complex and inter-related systems may be used to assist us create a new understanding and even a new system of energy and resources flow in our cities.

I propose to re-imagine the development of Johannesburg as an example of resource (gold) driven development; like a tree that falls in the forest and becomes a resource base for a host of life systems that develop to harvest that resource. Although a re-imagining exercise, it may reveal clues and understanding that could influence the design of cities in the future.

**Keywords:** urban, Johannesburg, ecosystem, resources, form follows flow, resilience

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**TUESDAY 5TH AUGUST 14.00-14.20 | Hall 1 A ICC**

**ARCHITECTURE AS THE ART OF CARE: A HEIDEGGARIAN AUGMENTATION OF CHRISTIAN NORBERG-SCHULZ’S ART OF PLACE**

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**Abstract**

The theoretical contribution of the Norwegian architect, Christian Norberg-Schulz (1926-2000), is often presented as the most comprehensive architectural interpretation of the work of German philosopher, Martin Heidegger (1889-1976). Inspired by Heidegger’s understanding of existence as ‘being-in-the-world’, Norberg-Schulz formulated an approach to architecture which can be summarized as the ‘art of place’. His ultimate aim, expressed in the closing pages of Architecture: Presence, Language, Place (2000), was to explain how the ‘art of place’ (designated by the Norwegian term, stedskunst) could become the ‘art of living’ (livskunst). This paper will argue that there is a fundamental difference between Heidegger’s philosophy and Norberg-Schulz’s interpretation. The most general assumption underpinning Norberg-Schulz’s approach is that life takes place between earth and sky.

But, in Being and Time (1927), Heidegger discussed a more fundamental fact which characterizes Dasein’s ‘betweenness’: being between birth and death. It is the temporal nature of existence which mediates Dasein’s interaction within the Heideggarian ‘fourfold’. Dasein can only make things as a ‘mortal’. Heidegger understood the ‘ecstatic’ nature of this temporal reality by referring to the way Dasein ‘is’ being-in-the-world: as care (Sorge). Care makes Dasein’s temporal existence meaningful.

In contrast, Norberg-Schulz, following his mentor Sigfried Giedion (1888-1968), understood time as ‘continuity and change’. He therefore neglected the ecstatic nature of Dasein’s care. While Norberg-Schulz admirably interpreted the place-bound nature of our spatiality, he effectively overlooked the basis of Heideggarian temporality. This paper will present the ‘art of care’ as the missing (temporal)
link between stedskunst and livskunst. Care is the poetic measure-taking which draws place and life into contiguity. Furthermore, in terms of the ‘ethical’ implications of care (which Heidegger later developed in terms of ‘safeguarding’), this paper will propose that the art of care opens the way towards authentic (true to life) sustainable architecture.

**Keywords**: care, change, Christian Norberg-Schulz, continuity, Martin Heidegger

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**TUESDAY 5TH AUGUST 14.20-14.40 | Hall 1 A ICC**

**SUSTAINABILITY THROUGH A BIOMIMETIC APPROACH - THE CASE OF ADDIS ABABA**

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**Abstract**

The city of Addis Ababa is currently characterised by a rapid transition to modernity, initiated by the Grand Transformation Plan of the Government of the Federal Republic of Ethiopia and a high economic growth rate. A wide range of challenges have to be met in this phase of change. The paper proposes a framework for the application of a biomimetic strategy for sustainable development in the urban context. Biomimetics is increasingly accepted as an innovation method, and beyond technical innovation it can enhance sustainable design by insights into strategies of life and organisms. Main themes in the urban development of Addis Ababa are discussed with biomimetic strategies and concepts proposing alternatives and solutions to the current situation. Housing, as one of the most important issues in current city planning, is given a special focus.

**Keywords**: biomimetics, sustainable development, innovation, architectural design

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**TUESDAY 5TH AUGUST 14.40-15.00 | Hall 1 A ICC**

**RESEARCH ON NATURAL VENTILATION OF VERNACULAR DWELLINGS IN JIANGNAN WATER TOWNS**

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**Abstract**

Vernacular architecture (especially dwellings in this paper) is often designed with special regional characters through long-term evolution in order to adapt to local climate. This research aims to explore the design strategies/issues that can improve the natural ventilation of vernacular dwellings
in Jiangnan water towns (i.e. located in the south of the lower reaches of the Yangtze River, including the southern part of the Yangtze Delta), using Suzhou as example. The research team conducted surveys on typical vernacular dwellings. Then, based on on-site tests and computer aided simulation, it is found from this research that there are some key issues that may have impacts on the natural ventilation of vernacular dwellings in this region, including site selection, building layout, courtyard design, water systems and landscape. It is expected that an integrated design strategy with the above concerns in mind would support future designs of vernacular dwellings in Jiangnan water towns.

Keywords: Jiangnan water towns, vernacular dwellings, natural ventilation

TUESDAY 5TH AUGUST 15.00-15.20 | Hall 1 A ICC

BETWEEN RURAL AND URBAN, SOCIALLY ACTIVE ECOSYSTEMS

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Abstract

The urbanisation process which is transforming Sub Saharan Africa will increase in the following decades. Rwanda is no exception to this, and can in fact be considered a paradigmatic laboratory of accelerated modernisation. Building upon work conducted in the country as a core component of our practice at ASA studio, the paper investigates how to implement the interrelation of global and national issues into the development of community facilities, analytically describing the process of research, design and implementation of Early Childhood and Family Development (ECD&F) centres. ECD&F centres are building types for which there is great need, particularly in developing countries, with relatively little experience. As any other modification of the environment, bearing such strong social significance, they need to be carefully integrated with the physical and cultural landscape of a place. In Rwanda, every hill is not only a topographical entity, but a social space. Therefore, the mode of occupation and use of land, both historically and today, does not depend solely on the specific geographical and environmental features of a site, but reflects the organization of society. Placing ECD&F centres in conspicuous and safe positions, where children are brought by their family, also holds a strong symbolic value. On the one hand, it conveys the idea that the facilities are important buildings in the landscape. On the other, it posits child stimulation as something that touches and concerns the entire community. Nine variations on a prototype have been built following two main typologies: a circular and an S-shaped plan, inserted in rural villages across the country. From flat terrains, to very sloped sites, they engage with their surroundings as a means of addressing the interface between the natural and socioeconomic environment at a community level and, ultimately, being interventions that pursue a wider social effect, to become active ecosystems.

Keywords: community facilities, early childhood and family development, social space, Rwanda
BUILDING AND THE BEASTS

Miss Tessa Jane Brunette
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Abstract

Should we care about biodiversity enough to change how we build and live in cities? Biodiversity is both misunderstood and grossly undervalued. As a result, it is seldom considered in the design of buildings or urban areas. The aim of this research is two-fold; first, to argue that efforts to increase biodiversity in urban areas have the potential to enhance the provision of urban ecosystem services and, in turn, human wellbeing. Secondly, to argue that re-establishing a closer relationship with nature could cultivate significant and broad cultural and environmental impacts. A review of literature related to biodiversity, building envelopes and potential drivers of biodiversity integration identified two fundamental gaps. Research and practice are not linked, and building envelopes are not considered holistically when designing for biodiversity or integrated planting. The thesis moves on to address these gaps through a three-part sequential study that begins with an examination of building envelope characteristics within urban microclimates and opportunities for habitat creation. These findings guide a subsequent study of habitat requirements from an ecological perspective, and attempt to match these with building design as currently practiced. These are then tested against risks and perception in order to identify how these could be mediated and design approaches adapted to incorporate biodiversity, from which a series of design principles are established. The outcome is a synthesis of research and practice that identifies methods of increasing biodiversity through design. A key conclusion is that biodiversity needs to be considered as part of the design process at every stage and scale. Greater interrogation and understanding of biodiversity is required to drive a shift in current building practices. Finally, this thesis argues that biodiversity can be integrated at different intensities, provided there is a holistic understanding of how building envelopes fit into their wider environments.

Keywords: biodiversity, urban ecology, building envelope design, façade engineering, living walls, green roofs, habitat creation, wellbeing

DETERMINING THE CURRENT CO₂ EMISSION STATUS OF THE S.A. BUILT ENVIRONMENT

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Abstract

This paper presents a desk review of the current CO₂ emission status of the South African built environment. Using available data that depict the extent of buildings in the human habitat in square metres, a weighting factor is applied to arrive at a minimum and maximum emission status for different sectors contributing to the South African built environment for the period 2000 – 2011. The data contained in this article represents the first baseline for the respective categories of the South African built environment. It could serve as the basis for future studies investigating the actual resource consumption of the human habitat that impact on future emission targets and the regulation of the CO₂ emission of buildings in South Africa.

Keywords: South African built environment, CO₂ emissions, Emission factor per square metre, embodied and operational energy, resource efficiency
A KNOWLEDGE MODEL TO IMPLEMENT HOME WORKING IN MULT-TENANT HOUSING

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Abstract

Many people work from home nowadays; in fact, more than 15% of Canada’s workforce works from home. More than 40% of Canada’s workforce reported to work occasionally from home, although not necessarily on paid basis. These people need to have a dwelling that can accommodate both living and working conditions in it, and therefore the floor plan layout must differ from the traditional floor plan layout. This problem does not exist in single detached homes as detached housing typically has a large floor area and a basement. Basements offer additional space that can accommodate emerging activities with a different entity than traditional spaces such as working from home. In this paper a knowledge model is proposed to implement a space for working from home. This knowledge model occurs by two parties; the designer (architect) and the occupant (user). Firstly, the study reveals some related theories that deal with the issue of change in housing, such as scenario-buffered designing and theory of levels. These theories enabled to theoretically create a base to implement a space for working from home conditions. Secondly, the study uses systems approach as the main method where systems approach is deductively extrapolating the criteria and solutions, for both the designer and the user; by also enabling both of them to contemplate working from home. The focus of this study is to propose provisions for designers to include a space for ‘working from home’ living. The outcomes are design and construction guidelines for both parties, which has been discussed in this paper.

Keywords: multi-tenant housing, knowledge model, systems approach theory, working from home

SUSTAINABILITY CONSIDERATIONS IN THE USE OF STAINLESS STEELS IN ARCHITECTURE

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Abstract

Stainless steels have been widely used in architecture for many years, with stainless steel cladding/roofing on the Chrysler Building, built in 1930 in New York, being one of the first high profile uses of the material in an architectural application. Over and above their primary property of corrosion resistance, much of the traditional usage of stainless steels in the architectural sector has related to the material’s aesthetic appeal, enhanced by the wide range of grades and finishes that are increasingly available. However, with the increasing focus on issues such as resource utilisation and climate change, sustainability has also become a significant component of the decision making process in the architectural industry, such considerations extending to materials of construction for differing applications. This paper will cover an introduction to stainless steels (with specific reference to grades and finishes applicable to the architectural industry), followed by a review of relevant sustainability
and ecological factors applicable to stainless steels, including but not restricted to - durability/longevity, recyclability, restoration/reuse possibilities, structural advantages and emission/run-off benefits. Case studies demonstrating some of the points raised will be included.

**Keywords:** stainless steels, construction, architectural applications

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**WEDNESDAY 6TH AUGUST 11.40-12.00 | Hall 1 A ICC**

**CORRELATION AMONG DISTRICT COLOUR COMPOSITION, ENVIRONMENTAL RECOGNITION, AND BEHAVIOURAL CHARACTERISTICS IN CITYSCAPES**

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**Abstract**

This study aimed to examine local environmental alteration or environmental elements as a whole by conducting a field study focusing on the colour composition of city blocks that comprise the cityscape.

The study considered the effect of physical elements and mental state or condition on landscape formation, including recognising landscapes. Likewise, analysis was conducted regarding the recognition of landscape composition from an individual or group perspective.

The survey was conducted in the Shibuya and Ginza areas. Shibuya was surveyed in 2003 and 2012, whereas Ginza was examined in 2000 and 2012. The relationship between the city block's colour composition and recognition or action characteristics was examined and then visualised as a colour recognition 3D model of an urban townscape of the respective areas between the stated years.

Data on the status of elements were obtained via questionnaire survey, whereas for the physical elements, the colour composition of city blocks was used for measurement.

This study adopted quantitative and cluster analyses. Results reveal certain changes. In Ginza, an expanse of the recognition of hue is seen in 2000; specific hue is more evident in 2012. The relationship between hue G and action characteristics changed between 2000 and 2012. In Shibuya, the change is opposite that of Ginza. Recognition of hue is more expansive in 2012 than in 2003. In Ginza and Shibuya, the recognition of hue R is high.

Based on the above, action characteristics and colour recognition are clearly related.

**Keywords:** environmental recognition, colour composition, behavioural characteristics, cityscapes.
HUMAN LABOUR, GREEN RETURN

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Abstract

Increasingly, ecological based gardening and land management methods are being used around the world, such as permaculture. One such method, the focus of this essay, is called the “Ecocathedral Process”, and comprises stacking recycled masonry to create microclimates that are conducive to the growth of spontaneous vegetation. While this method was developed in the Netherlands, like other gardening methodologies such as permaculture which comes from Australia, it is generally assumed that such techniques should be universally applicable, since they are based on universal ecological principles that can flex according to local situations and milieus. This paper examines the Ecocathedral method in the context of South Africa, and Cape Town in particular, to determine how it would and ultimately would not work, in terms of four key areas of the method: ecology, labour, materials and land. In so doing it discusses issues and opportunities that apply to other community based ecological methods that seek to operate in South Africa. From this discussion it then proposes a modification of the method to suit this different context.

Keywords: building, community project, ecology, ecological urbanism, Ecocathedral.

THE HISTORICAL ITALIAN CITY CAN BE CONSIDERED “OTHERWHERE”

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Abstract

Shaped in centuries of history, the Italian city has today a great architectural and social value due to the harmony of its urban spaces and the intense well-being derived from the intermingling of residence, culture and facilities. A perfect integration, shaped and perfected on a human scale around the needs of man. A system that has always been able to respond to the aggression caused by the misuse of technology and sociality, benefiting from the careful use of that same technology but in a well-balanced way. A humanity that is guaranteed in the careful reasoning of its development and the maintaining of equilibrium gradually renewed in modernity. An urban expansion guided by the values of its origins; in the renewal of the suburbs, which for their very nature start off in decay, with new green areas and sports facilities, squares and roads, cultural, social, welfare and residential areas.

The result is the expulsion of distortion and the introduction of equilibrium dictated by a civil awareness that this system generates over time. This quality guarantees maximum integration among all social components, reducing tensions that may take root, producing an adaptable, sustainable and long-lasting ecosystem. Time in this process gains dimension and shapes wisdom and humanity, because it encloses the fullest values and motivations of human beings.

The model stimulates interests, indulges the course of life and integration without frenzy, controlling contradictions and satisfying the rhythms imposed by the speed of evolution and exchange. It is a happy and natural incubator for the first age (0-18 year-olds), an acknowledged and privileged system for the third age (the over 60s).

Keywords: historical Italian city, model, individual equilibrium, well-being.
WEDNESDAY 6TH AUGUST 12.40-13.00 | Hall 1 A ICC

CITIZEN PARTICIPATION: THE CASE OF ISRAEL PROJECT RENEWAL

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Abstract

Project Renewal made citizen participation in decision-making its central principle, the core of all the activities performed at the neighbourhood level. The paper describes the concept of citizen participation in disadvantaged areas, how it developed in practice, its organizational changes and its new model in Project renewal neighbourhoods in Israel. In addition, it considers which factors contribute to or impede the development of citizen participation and the lessons learned during its 35 years of existence. The citizen participation concept as implemented in Project Renewal indicates significant transformation changes of influence to the present stage when it is an integral part of a decision making process. The implementation of resident participation policy enabled inhabitants in disadvantaged neighbourhoods in Israel to have their voices heard and to be part of an influential neighbourhood body of stakeholders working to build and manage a sustainable community.

Keywords: citizen (residents) participation, local steering committees, democracy shock, neighbourhood self-management, decentralization, democratization, social and political mobility.

WEDNESDAY 6TH AUGUST 14.00-14.20 | Hall 1 A ICC

THE NATURAL SYSTEMS ENVIRONMENTAL DESIGN AS FUTURE FOR HUMAN SETTLEMENTS

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Abstract

The purpose of this reflection is to improve the quality of life in developing countries. Projects today have to instill new values, new relationships on the planet, and a sense of respect through diversity. Buildings should fit into the space between atoms and stars to the scale and quality that meet the individual requirements of residents everywhere and a better quality of life and respect for every form of life in the community. Nature within the urban fabric is to maintain proper humidity, and to improve the health and well-being of inhabitants. Natural building materials such as wood, glass and clay are more resilient in the environment and easily recyclable. The use of renewable materials reduces the need for storage and disposal of waste, including hazardous chemicals.

To use more sustainable energy for the operation, only organic sources, such as sun, wind, waves and energy of the human body should be used. Production of green energy instead of fossil fuels improves the quality of air, water and life. The transformation of energy from the heat of the human body can get the light needed to study and work. Knowledge of the construction of houses affects the ability of self-construction of the available natural materials, which significantly affects the reduction of construction costs and increases the competitiveness of local builders. There is a need for further future implementation of this idea in the design, architecture and urban planning to create a dream city where everyone is healthy, fit and happy while performing the duties of everyday life. Communities can develop a life strategy, successful interventions, which contribute to poverty reduction and affect the governors and their investments towards a more flexible, ecological and spatially valuable space for the benefit of all.

Keywords: resilient settlements, natural materials, body energy, quality of life.
ANALYSIS OF THE RELATIONSHIP BETWEEN BUILDING ORIENTATION AND ENERGY CONSUMPTION IN DHAKA CITY

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Abstract

Sustainability is always a major concern in architecture and in urban design where energy is a vital consideration in contemporary discussion. To achieve sustainability, ‘orientation’ of site or built form is always an essential issue. Interior lighting and ventilation depend on the orientation of a facade of the particular space. It is preferable to ensure daylight and ventilation in any architectural design. But in city context, the desired size and position of the plot is not usually found. In fact the road pattern always causes different oriented plots for buildings. In Dhaka city, mostly the small residential plots arranged side by side which can only take the advantage of front road except the corner plots. So, in this context the building orientation is very important for ensuring natural light and ventilation. For example, the south oriented building facade may allow more wind flow whereas west oriented facades may allow more heat; though it depends on the architectural design of the building, front road width and spacing between the structures.

Dhaka is large compact city with a unique morphology consisting of both organic and grid pattern development. The very conventional grid iron pattern of small blocks and the organic growth in old Dhaka made the city architecture so rigid which resulted in a typical approach to orientation of the buildings for providing natural lighting and ventilation. And these all limit the scope of environmentally responsive architecture which leads to a great demand for energy supply.

One of the major issue of energy consumption is the urban climate like solar radiation, air temperature, wind flow, relative humidity etc. Energy consumption also depends on urban people’s life style and their financial solvency. The unplanned and uncontrolled development of Dhaka city leads to a high demand for energy. But it is not always possible to support this high level of demand which causes lack of energy and continuous load shedding. Use of regular electricity in residences, commercial space and industries always keep the production in back log. For this reason, Dhaka city should have proper policies and planning for the more efficient use of this limited energy. In this context it is essential to design energy efficient cities and practice of passive architecture to ensure the maximum use of natural resources like light, wind, solar radiation etc.

The objective of this research is to identify the relationship between building orientation and energy consumption in Dhaka city. This research will be based on a field study. The grid pattern areas will be only considered for choosing the samples. The different oriented buildings like, east facing, west facing, north facing, south facing etc will be chosen to analyze the relationship between energy consumption rate and climatic feature with the help of one year energy consumption data and climate data.

Keywords: Dhaka, energy consumption, building orientation.
WEDNESDAY 6TH AUGUST 14.40-15.00 | Hall 1 A ICC

DUBAI UTOPIA

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Abstract

How could we describe the architectural follies of Dubai? Simple examples of a kitsch fast-food architecture or utopia that becomes reality?

Analysing the history of architecture and modern town planning, we realize that very often in the past, radical and utopian visions of the city have been proposed within a change in worldview.

For example, cities like Las Vegas and Dubai, developed without certain historical urban references and raised from a tabula rasa, characterizing our imagination.

But finally, can we define the Herron’s Walking City, the City of Marine by Kikutane or even ‘spatial visions’ of Archigram as so far from the urban follies of Dubai?

What would we say today about Corbu’s vision if the Obus plan for Algiers was built? Perhaps, Dubai has to pay a pledge for its cockiness, for being able to transform a utopia into reality, which has happened a few times in the history of architecture. Of course, the limit between utopia and exaggeration can be weak sometimes, but basically Dubai is not ‘just a city’ created out of nothing, but one of the greatest sociological experiments of history, where a society has been built up to address the international stage in a few years, following a ‘real utopia’.

**Keywords**: utopia, vision, migration, Dubai.

WEDNESDAY 6TH AUGUST 15.00-15.20 | Hall 1 A ICC

AUTONOMY AND DEPENDENCY: THE DESIGN OF COHOUSING AS A MEANINGFUL APPROACH TO SUSTAINABLE LIVING

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Abstract

Sustainable living may be defined as a lifestyle that could, hypothetically, be sustained without exhausting any natural resources, and the concept can be applied to individuals or societies. Sustainable living is a sub-division of sustainability where the prerequisites of a modern, industrialised society are left unexercised by choice for a variety of reasons. There is some overlap between the movements concerning the practices and motives involved.

We now live in a world with highly developed technology and undoubtedly, society derives great benefits from this development. However, despite its value, warnings abound about the dangers of the overuse of such technologies. Therefore, in order to address the bad consequences brought by the overuse of technology, emphasis on sustainable living becomes the main issue that we should consider today.
This essay explains sustainable living in terms of autonomy and dependency by analysing two case studies of cohousing projects in the UK: the Hockerton Housing Project and the Springhill Cohousing Community. Through a comparison between a series of sustainable design features of the two cases, we can see by using nearly the same core technology, how autonomy and dependency are achieved in sustainable living and how they help in leading us to a sustainable future.

**Keywords:** autonomy, dependency, sustainable living, cohousing.

**TWENTY COMMON ECOLOGICAL TECHNOLOGIES OF CONTEMPORARY CHINESE BUILDINGS**

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**Abstract**

In the past thirty years, the construction and use of a large number of buildings have consumed enormous natural resources and caused certain damage to the environment of China. In recent years, both the government and architects are trying to find eco-technology strategies that could reduce environmental disruption and have made unremitting efforts to achieve this. Through research and investigation, this paper summarizes 20 ecological technology strategies commonly used in modern Chinese buildings, most of which are low-cost methods. Through combination, these strategies can form a system that could achieve sound environmental protection and energy-saving effects. Hopefully, this paper will provide a reference for policymakers, managerial personnel and designers, and also provide ideas for energy saving and emission reduction.

**Keywords:** eco-technology, environment, energy saving, Chinese buildings
PARALLEL ACADEMIC SESSIONS
PART 3: VALUES

MONDAY 4TH AUGUST 2014

VALUES is the third and final sub-theme for UIA 2014 Durban. Here, focus areas include OTHER notions
of ARCHITECTURAL PRACTICE and EDUCATION. UIA 2014 will explore African practices, related to
global practices, as a way to address highly specific developmental problems, question traditional in
relation to novel values, establish new relationships to a living planet, and, most importantly, establish a
sense of respect through diversity and humility.

These debates are meant to re-assess professional values, develop methods and techniques for
professional engagement, and interrogate the ethics associated with architectural and design practice.

There will also be a particular focus on engaging with INFORMALITY AND URBAN POVERTY THROUGH
DESIGN EDUCATION AND PRACTICE.
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Abstract

Our world is becoming a world of global imbalances with larger visible fractures. An urban, mobile, old/rich –young/poor world. Global issues, food security, disasters, illnesses are becoming borderless and connectivity is accelerating mobility. The traditional headquarters of power, states and government are losing grounds in favour of new centres and groupings of power- Emerging nations, civil societies and virtual networks and alliances. Cities compete to attract talent and investment. The western world is challenged in its values, its structure with the creation of a multipolar world. Constant flow of information and all kinds of networks, loss of power of nations with increasing social inequalities contribute to loss of values and references.

Five mutations are observed as global trends that will impact on architecture and cities: Geopolitics, Economy and globalization, Genetics, Digital Revolution and Ecology. The paper focuses on three consequences namely, Mobility, Identity and Culture and Cities and lifestyle.

- **Mobility:**  
  People - Ideas – Goods. The movement of people (immigrants, expatriates, tourists, retired, climate refugees) and their influence on cities in terms of housing, infrastructure and identity. The issue of transport of people and goods and their close relationship with global energy management. And finally the mobility of knowledge and its impact on identity culture and values.

- **Identity and Culture:**  
  Culture is becoming a service industry on its own. Cities are using culture, entertainment as an economic driver in every form including, art, market, cinema, and architecture (Abu Dhabi, Baku, Bilbao…). The constant real-time flow of ideas are developing a two-way traffic challenging western standards and values as universal references. Cultural identities compete to become universal. Globalised is localized and vice-versa.

- **Life:**  
  New technologies are challenging distance breaking down old work-live-play barriers and proposing e-activities all the way. The change in the family structure and its incidence on the city. The space-time relationship will no longer be the same. The urban fabric can now be connected in a virtual e-way permitting shopping, working, entertainment, education, health care without physical mobility. However on the other hand all these connections leave people more and more isolated.

In the end, intuitively we feel that too much technology may not lead to happiness. We need more intuition and less data. It seems that three factors are essential for a liveable city – social engagement, open mind diversity and beauty! The unsaid objective of it all is Cities for Life, a better life. A city we would be proud of. I am one of those, an urban optimist!

**Keywords:** globalisation, trends, cities, mobility, identity.
STUDY ON THE COMPOSITION OF LAYOUT PLANNING AND ENVIRONMENTAL COGNITION IN THE COLLECTIVE HOUSING AT MAKUHARI BAYTOWN

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Abstract

This study adopts one of the modern city theories followed in the design of a housing complex on an urban scale, with the aim of alleviating the shortage of houses. A plan was created to make the centre of a complex at Makuhari Baytown multi-storeyed and standardised.

Experts argue that an efficient urban and architectural planning method for the new living environment, namely, collective housing, has not been created. However, the supply of high-rise residential settlements has been generalized, despite the known negative effects associated with urban verticalization.

In the planning of collective housing, an effective technique must consider secular changes, including the relevance of the surroundings and living environment. To construct productive planning methods for the increase of high-rise housing, in-depth research is needed. This research was conducted at Makuhari Baytown, a model of super high-rise urban housing. The research employed a questionnaire survey, as well as aggregative analysis theory to determine the aggregate curve. A multivariate analysis was performed based on the various data from environmental recognition. Local residents’ individual cognitive characteristics were grasped by classification. From the above research, the attributions of environmental cognition and life territory were determined, particularly those regarding the floors of residents of super high-rise towers. These findings enabled the appropriate attribution of data for the living-together-in-a-concentrated-community project.

Keywords: environmental recognition, cognitive area, collective housing, Makuhari Baytown, living environment.
MONDAY 4TH AUGUST 11.40-12.00 | MR 22DEF ICC

SCOPE AND LIMITATIONS OF INNOVATION AND COLLABORATION IN INTEGRATED DESIGN (ID) FOR ARCHITECTURE

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Abstract

Design professionals in the built environment have been criticised for their lack of innovation, notably when compared with other major industry sectors such as aerospace, technology and automobile. The fragmented nature of design is identified as a significant barrier to innovation and collaboration. Increasing attention toward sustainability, however, has led architects and other professionals to implement alternative design methods, such as Integrated Design (ID), aimed at integrating otherwise fragmented outputs and processes.

ID is a participatory process that brings together interdisciplinary experts and key stakeholders during intensive work sessions in order to enhance both collaboration and innovation. Yet, while the need for ID has been sufficiently established in the literature, its limitations have been insufficiently explored.

The case study of a Canadian project (certified LEED-Platinum), which attempted to be an innovative example of sustainable development, helps us examine the contingency factors that constrain innovation and collaboration.

The empirical data, which includes an extensive documentation of the ID process and nine interviews with key project stakeholders, illustrates the effects of:

1. stakeholders’ perceptions of the risks associated with innovation;
2. stakeholders’ collective engagement with common values; and
3. waste in the design process, defined as activities unnecessary for task completion and value generation. From a theoretical point of view, these results highlight the nuanced merits of ID and the importance of adopting a stakeholder definition of value. From a practical point of view, they bring into light the way in which practitioners can improve stakeholder interaction.

Keywords: Integrated design, innovation, collaboration, waste in design process, architecture projects.
ARE YOU MY TYPE? NEW EFFORTS IN THE ACCESSIBILITY OF ARCHITECTURE AT EARLY AGES

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Abstract

Creative engagements at early ages, particularly the ones related to the access of architecture for children and young people, are becoming very popular in the modern debate. Countries like Finland, Germany and the UK have been pioneers in these engagements and have become sine qua non models for quality practices and excellence. However, giving a future to similar practices in the developing context is not a straightforward task. It demands that architects and educators become creative and explore new routes for regaining attraction in subjectivity. Contesting such specific scenarios, this paper argues that the future of establishing built environment awareness at an early age is based on the potential of architecture to assess value beyond any collective aesthetic or technological reductionism. With this in mind, what are the effects and responses of introducing architecture in this context? Are these significant enough to assess built environment awareness?

Since 2011, OOperai has supported the production and exchange of lived-images with the scope of introducing value and heightening awareness of children's built environments with a methodology called 'Type'. 'Type' roots its architectural and methodological structure in subjectivities that make evident the fact that the assessment of built environment awareness at early ages is a collaborative process. Three specific projects from the OOperai Foundation – each involving children from different countries, local leaders and architects – are woven together with the 'Type' methodology, stating new significant challenges and concepts for promoting space/place awareness at early ages.

OOperai challenges the current dominant discourses in built environment awareness at an early age and provokes a revaluation of the social role of the architect in his or her immediate society. However, how significant are these new routes and possibilities? Are these the product of new methodologies, or do they come from the context in which society embeds them?

Keywords: OOperai, children, built environment awareness, Panamá, type.

THE STRATEGY ADJUSTMENT AND OPTIMIZATION FOR THE EXISTING PROBLEMS OF INDUSTRIAL HERITAGE RENOVATION – A CASE STUDY OF CHANGSHA BINJIANG NEW CITY

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Abstract

Taking Binjiang New Town, Changsha as an example, this paper reviewed the course of Changsha Chengxi Industrial Zone and the background of urban renewal development. Through the analysis of the reuse practice of industrial buildings, it pointed out many problems in the practice at the present stage: the lack of element association has caused insufficient local vitality, waste of space resources, inadequate social security; the ecological and cultural environment urgently needs to be improved; then it further brought forward the overall strategy of multi-element association renewal from three
layers: synthesized goal construction, multi-level planning combination, architectural design under composite resource value, and it explicated the view of seeking organic renewal of industrial heritage and the harmonious development of new town construction.

Keywords: new town construction, reuse of industrial heritage, multi-element association renewal, Changsha Binjiang New Town.

MONDAY 4TH AUGUST 12.40-13.00 | MR 22DEF ICC

GLOBAL BIOETHICS AND RESPONSIBILITIES OF ARCHITECTS IN THE VALUE CONTEXT

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Abstract

“Not all what is technically possible is morally right, and that some control of our intervention on nature, environment and on human beings, is needed, the future of life and of mankind is at stake” has become the main idea of Global Bioethics. This idea leads us to obvious suggestions that architects’ intervention on the environment should be based on sustainable development principles - this is the responsibility of architects towards present and future generations and also concerns the other issues of Global Bioethics. If we address different international instruments such as the Copenhagen Declaration ‘Sustainable by design’, UIA, which introduces sustainable development strategies by design as a universal architectural concept, it is obvious that architects should make the best decision on certain interventions only after serious professional consideration and moral judgment. Also, the Universal Declaration of Bioethics and Human Rights (UNESCO) states “Due regard is to be given to the interconnection between human beings and other forms of life, to the role of human beings in the protection of the environment, the biosphere and biodiversity” and in addition, the Declaration on the Responsibilities of the Present Generations Towards Future Generations, (UNESCO) article 4 - preservation of life on the earth, we can suggest, that ethical issues in the global context should be an important component of architects study curriculum. Taking into account all the above mentioned, we can identify architects responsibilities in depth. In our opinion, one of them is to strive for increasing respect for the highest value of mankind, life. Increasing respect for life at the same time represents the main goal of Global Bioethics.

Keywords: bioethics, sustainable development, ethical issues, architects responsibility.

MONDAY 4TH AUGUST 14.00-14.20 | MR 22DEF ICC

EMBRACING THE ‘OTHERWHERE': CLIMBING OUT OF THE BLACK BOX OF THE ARCHITECTURAL PROFESSION

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Abstract

As architects we are trained to be free thinkers. This training however, often happens in a world physically and symbolically removed from reality. This self referential ‘Black Box’ of architectural training has been criticised by many. How ideology is preferred above reality, utopia above the everyday, order above disorder and how architects are trained to deny the contingencies and dependencies brought about through time, are all aspects that contribute to this ontological and epistemological concern.
Part one of this paper will elaborate on these points and outline how contemporary architectural training mechanisms contribute to these problems.

Part two will propose a possible strategy in response. It will indicate how students enter architecture school with inherent topistic, or platial knowledge, making reference to perceptual schemata developed from infancy onwards. It will point out how architecture is a discipline that is fundamentally based in the philosophical realm of phenomenology, implying that the world and body is part and parcel. It will disregard ocularcentric seductive imagery and the age old duality of thinking versus feeling, and instead stress the merit of the necessary reciprocity of both. It will recognise that we do not live separately in material worlds and mental worlds but that these experiential dimensions are fully intertwined.

Part three will show how theoretical insight into this endeavour can be sought through the notion of place. Place being a phenomenological term that refers to the meaning and significance that people, as embodied beings, attach to space. It will indicate how students may draw on their own topistic knowledge through perception, association, imagination and memory.

By drawing on place, reality or the ‘otherwhere’ it will suggest alternative modes of interpretation and representation to defy what Karsten Harries calls architecture’s ‘the terror of time’.

**Keywords**: architectural theory, phenomenology, the lifeworld, place.

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**MONDAY 4TH AUGUST 14.20-14.40 | MR 22DEF ICC**

**THE VALUES OF LOW-BUILDING-COVERAGE CONTROL IN THE URBAN DEVELOPMENT OF SHANGHAI**

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**Abstract**

In the 80s, the city of Shanghai started new control policies for low-coverage residential development to deal with the high demands of housing and the rise of sanitary issues. At the same time the concept of an accessory green ratio was introduced for all new constructions in order to increase green areas in the city. These two regulations led to a boom of high-rise housing construction during the 1990s and 2000s. Thus the high-rise and park-size gardens in residential blocks became increasingly important components of the Shanghai urban landscape during the last thirty years.

This paper examines the transformation of these low-coverage development oriented policies and the related evolutions of housing design from the 80s to the 2000s in Shanghai. This work tries to reveal the logic and value of these regulations and their influence on the urban form.

The conclusion points out the problems related to low-coverage practice in the perspective of sustainable development for the future of Shanghai.

**Keywords**: value, low-coverage, high-rise housing, accessory green, Shanghai.
**MONDAY 4TH AUGUST 14.40-15.00 | MR 22DEF ICC**

**DIVERSITY AND MULTICULTURALISM – RESEARCH AND DESIGN FOR BAFATÁ UPON THE 90TH ANNIVERSARY OF AMÍLCAR CABRAL’S BIRTH**

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**Abstract**

This paper aims to present the results of research made by a group of students in the city of Bafatá, in Guinea-Bissau. This work was launched for the commemorations of the African independence leader Amílcar Cabral’s birth (1924-1973) in that city on the Geba riverbank, ninety years ago. The research was carried out by students finalizing their Integrated Masters in Architecture at ISCTE-Lisbon University Institute, with the main goal being the recognition of urban changes in Bafatá and the design of an ephemeral structure with the purpose of preserving and showing Cabral’s life and thoughts.

Bafatá’s centre is strongly marked by the Portuguese colonial presence, visible in the urban design, and in the several layers of architecture of the city. It is around the boulevard axis, in a Northeast/Southwest direction, the main entrance into town with the river Geba, that the block layout was organized (the hospital, the school, the governor’s house, the church, the post-office, the neo-Arab municipal market, and a badly damaged small pool complex from the 60s, are the most remarkable buildings). The house, where supposedly Amílcar Cabral was born, is integrated in this nucleus.

Nowadays, the atmosphere of the formal city contrasts with a huge and informal periphery surrounding this nuclear settlement. The difference between these two realities is very sharp, as the city centre of Bafatá remains sparsely populated and depressed, while the housing and main commercial activities unfold in the periphery.

The discourse of multiculturalism and ethnic unity enunciated by Amílcar Cabral since the early 50s - particularly meaningful in this period of political instability in Guinea-Bissau - was taken as a fundamental argument for the territorial development of Bafatá in the students’ designs.

**Keywords:** Bafatá, Amílcar Cabral, diversity, multiculturalism.

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**MONDAY 4TH AUGUST 15.00-15.20 | MR 22DEF ICC**

**RE-DISCOVERING THE AFRICAN PHILOSOPHY OF THE ARCHITECTURE THROUGH THE OTHER/OTHER’S LENS: EUROPEAN-BASED CONSIDERATIONS**

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**Abstract**

The Western definitions of the ‘smart cities’ are concentrated around three main elements. The first approach describes the smart city as the organized body, using the new technologies in the manner to increase the efficiency of the infrastructure and communication interconnectivity (Azkuna 2012).
Another approach emphasizes the role of the sensors, mobile devices, to create digital dimension of the city (Schaffers 2012). Yet another approach presents the city as the area consisting of populations implementing activities and effectively acting institutions in terms of knowledge creation, developed broadband infrastructure and on-line tools for knowledge management and solving problems that arise for the first time, as the key to the assessment of the intelligence (Komninos 2008). The main thesis of the paper is that the process of incorporation of the Western-based smart cities concepts into developing African cities can be dangerous for their identities, if not preceded by an epistemological reflection upon African cultures. From the perspective of a European philosopher and architect, the African cultural memory, emphasizing the interconnectivity of beings and environments, is the crucial element of African systems of perception. It is applied and visible in the contemporary architecture in the landscape, but its lack describes the architecture of the cities. The adaptation of the OTHER (technologically grounded) concept into the African context demands primarily exploring HERE the original philosophy of architecture (theoretical, practical). This philosophy would act as a medium connecting the contemporaneity with cultural resources and the new technologies with existing urban and architectural tissues. The thesis and some re-discovered through the OTHER/OTHER’S lens propositions for African architectural philosophy will be illustrated by examples of the architecture of Namibia, Burkina Faso and South Africa.

Keywords: architectural philosophy, design theory, design philosophy, Ubuntu theory, technology, African architecture, African legacy, sensorial anthropology.

MONDAY 4TH AUGUST 15.20-15.40 | MR 22DEF ICC

HISTORIC SECRETS OF SZCZECIN’S MYSTERIOUS ISLANDS

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Abstract

The aim is to bring attention to the problem of lack of planning or planning cursory waters, depicting elements of cultural values in cities and urbanisms to draw attention to the aquatic environment. The studies were performed using such methods as qualitative research, literature studies, observation of the study area, the preparation and analysis of historical and contemporary maps and comparative studies. Paying attention to the risk of destroying unique monuments located in closed port areas, the lack of inventory and registry entries monuments and the lack of documented cultural heritage in maritime coastal cities. Szczecin’s delta contains: century 5,5km long, 10m deep Mielerński Canal built and functioned as docks for U-Boats, the oldest floating dock (1880), the Gryfia Island with German Oderwerke (1903) located in Oder river delta and functioned as a shipyard for ships and U-Boats with some docks below water level, the wreck of a concrete tanker (1941).

Only sketchy information on the internet informed about the existence of a particular tradition of the island territory. There is a lack of information boards, directions and maps describing the heritage area of the islands and waters of Szczecin. There are limited publications on the subject without special attention to cultural values (shipwrecks, bridges, floating docks, historic ships, historic shipyards or factories). Some of these monuments can be demolished at any time and are outside the protection of conservation.

In conclusion, water areas should be carefully analyzed and designed in terms of planning, valuable objects should be included in the registers of monuments and protected by law, education should take account of and promote respect for the traditions and culture associated with the waters, and the authorities should consciously safeguard the rich culture of the city water.

Keywords: heritage, urban waters, protection, port, island, natural environment, historic.
LEADING THE NEXT GENERATION OF SOCIALLY RESPONSIBLE ARCHITECTS AND DESIGNERS

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Abstract

Architects and designers are seeking more meaningful and creative outlets through which they can utilise their skills to create a more just and sustainable world. New standards of education and practice are emerging, and a shift in priorities is beginning to reveal itself in an attempt to address the world’s most pressing problems. With urbanisation taking place at a faster rate than expected, it is important to address the needs of entire communities as well as break away from the traditional practice of architecture which can under-emphasise the social component of design. Embedded within this is a call for inclusive design – design that is reflective of the unique qualities of individual communities but also meets the needs of multi-dimensional populations. Although there is an increase in social impact programmes geared toward architects and designers, there is still a shortage of options available in universities for individuals to get involved in projects that make a difference.

When students are given the opportunity to apply their skills to bring families out of poverty, provide children with better access to schools and education, or deliver solutions that improve access to water, food, and sanitation, they are able to contribute to important causes as well as see the direct benefits of their efforts. It is through these opportunities that we are seeing real change – change that can be measured and studied objectively.

By introducing these experiences early on in one’s creative journey and in the form of curriculum-based research, we can begin to develop a platform – a standard and type of education reform – for integrating community-based solutions. It is important to facilitate the theoretical application of knowledge with dynamic and experiential learning opportunities beyond a traditional classroom setting. What unfolds from these efforts is the opportunity for students and professionals to engage in a relevant and global discussion while leveraging their collaborative efforts to become significant agents of change.

Keywords: socially responsible, inclusive design, architecture, values.
AN OPPORTUNITY TO DESIGN A SOCIALLY RESPONSIBLE LANDSCAPE FOR RURAL COMMUNITIES: THE NDUMO CASE STUDY

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Abstract

This particular settlement in Northern KwaZulu-Natal (KZN) is a Pilot Project for a KZN Regeneration Programme that will see substantial development of infrastructure and social facilities. The project vision is to create a sustainable rural town that will serve the needs of its community through job creation, housing and social services. A key objective of this regeneration project is to ensure that public sector investment is built to last and will also co-opt private sector investment that will stimulate much needed local socio-economic development. A key challenge is to integrate the existing settlement within a new Master Plan with all the new infrastructure and facilities in such a way that embeds sustainability and resilience in all facets.

In this context, sustainability and resilience can be achieved by applying Permaculture design principles which embrace Yeomans Keyline Scale of Permanence. The broader Permaculture design principles delineate land use zones and site-specific design strategies, whilst the Keyline system prioritizes the design sequence, namely, rainwater harvesting, road access, forest belts, development boundaries and soil fertility. This design will support a sustainable agrarian base economy as the backbone for a resilient local economy. The design outcome is a sustainable framework for a design continuum that seamlessly integrates landscape design to urban design to architectural design. This sustainable framework will harness the Natural Capital of the landscape to best fit the form and function of the Built Capital which, in turn, facilitates the development of Human Capital and Social Capital.

This paper proposes the application of Permaculture design principles to initially design the ideal and holistic Permaculture Layout, which is then superimposed upon the current Master Plan to identify areas for redesign / retrofit, and to test the merits of any proposed development against sustainability and resilience criteria, thereby adding value to the design process.

Keywords: permaculture design, Yeomans Keyline scale of permanence, rainwater harvesting, socially responsible landscapes, food security, job creation, the Four Capitals.
ARCHITECTURE REFLECTS THE CULTURAL SPIRIT——ON THE APPLICATION OF LINKAGE THEORY TO ARCHITECTURE DESIGN IN HISTORICAL DISTRICT

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Abstract

The “Linkage theory” is an important concept to urban design in terms of establishing the relationship among important places, building up the order of the urban space, and integrating city context. By taking into consideration Chinese traditions of “Image Preference”, as well as working on the “Linkage theory”, this article proposes its application in a particular architecture design – Culture and Recreation Center of Jingsheng, Lingshi County, Shanxi Province, in the hope of providing a new way to design buildings in historical districts.

Keywords: historic districts, linkage theory, images with artistic conception, Jingsheng town, culture and recreation center.

NATIONAL STANDARDISED BUILDING INFORMATION SYSTEM

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Abstract

Current realities: “Incomplete, missing or outdated documents and paper copies”.

Commercial property owners often have incomplete, missing or outdated documents of their vacant land or existing buildings (plans, drawings, certificates, etc.). In order to achieve both compliance and efficiency, property owners require some form of a reliable documentation and e-filing system.

Future State: “National standardised building information system”.

The Land and Building Audit System (LBAS) solution has come into existence out of the need to make property records easily accessible and retrievable to all relevant stakeholders as and when required.

Keywords: National standardised building information system, property owners, building records, compliance and efficiency.
Abstract

As a custodian of real property assets worth over $7.3 billion, the Real Property Branch of Public Works and Government Services Canada (PWGSC) recognizes through the analysis of its buildings’ whole-of-life costs that good design remains the best prerequisite for achieving best value for Canadians. Even so, good design is not always a given – it must be valued, championed and pursued - especially in large organizations with finite resources who are sometimes burdened with the irreconcilable expectation to always do more with less.

Within the aforementioned context, it is not surprising that the common lenses through which real property solutions are judged in PWGSC are heavily weighted towards the quantitative measures of scope, schedule and capital cost. Although these are useful quantitative criteria for assessing the performance of real property solutions, a number of research studies indicate that good design / high quality outcomes rarely emerge when relying on these quantitative criteria alone. A balance of qualitative and quantitative measures is required to ensure a high quality real property portfolio that offers the greatest benefit to Canadians. Consequently, a novel innovative quality management initiative known as the Stewardship Excellence Protocol (the Protocol) was developed to delineate what constitutes good design and how quality real property solutions are measured in PWGSC.

The Protocol is a quality management tool created to promote good design and sustainability of efficient, effective and economically-viable real property solutions for Canada. It signifies a paradigm shift to ensure the benefits of good design are celebrated in Government of Canada’s built assets. Accordingly, the Protocol needs to be communicated to relevant stakeholders in a creative and unconventional manner. As the saying goes, “If you always do what you’ve always done, you’ll always get what you’ve always gotten.” This paper demonstrates how the Protocol draws inspiration from the arts and nature – using metaphors and anecdotes to explain what good design constitutes, while offering a clear set of principles to guide the organization in delivering and managing high quality built assets.

Keywords: good-design, real-property-solutions, stewardship excellence protocol, high quality built assets.
RETURNING TO THE RATIONAL ORIGINAL POINT: THE ANALYSIS OF CHINESE AUTHENTIC CONTEMPORARY ARCHITECTURAL DESIGN

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Abstract

With the progress of urbanization, the issues related to Chinese contemporary architectural design were being valued in academic circles. This paper concentrated on critical thinking about the essential reason of irrational phenomena and aimed to define the authenticity of the original points for Chinese architecture. First, the paper described internationalization, revitalization and symbolization as the three types of irrational architectural phenomena in China.

Second, five imbalance contradictions—globalization vs indigenization, tradition vs innovation, unification vs diversification, visualization vs implication and architecture vs environment—were described as the causes of irrationality in Chinese contemporary architectural design and practice. Third, the paper addressed culture, history and environmental issues as the starting points in rational design and innovation, with sustainability as the authentic goal of building design. A dynamic model, including a continuing and changing process, was set up to outline a methodology for rational design in China. Then, the author provided an overview of the critical thoughts for rational Chinese architecture and presented a number of avant-garde architects’ works to extend the conception of authenticity.

The findings generally showed that the authenticity of architecture was not limited in utility, strength, aesthetic effect or economy. The place, time and technology were also the constituent elements for authenticity.

Finally, the conclusion was drawn that architects should return to the original point: authenticity to evoke history and culture. The paper also demonstrated that innovation and sustainability based on tradition could be the driving force for the development of Chinese contemporary architecture. Lastly, the author noted that the findings about the Chinese phenomena can be a reference for other countries in the process of urbanization.

Keywords: rational, contemporary architecture, authenticity, identity.
PARALLEL ACADEMIC SESSIONS
WEDNESDAY 6TH AUGUST 2014 | Hall 3 C ICC

WEDNESDAY 6TH AUGUST 11.00-11.20 | Hall 3 C ICC

DESIGNING LIKE YOU GIVE A DAMN - ABOUT WHAT EXACTLY? EXPLORING THE ETHICS OF 'HUMANITARIAN' ARCHITECTURE

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Abstract

A leitmotiv that architects have an essential role within solving world problems has become common rhetoric. However, recent discourse surrounding the ethics of designing on behalf of the disenfranchised has begun to highlight the egalitarian criticism that 'humanitarian' architecture might in fact be holding back the 'developing' that 'developing' countries need to do. In 2010, Bruce Nussbaum wrote an article entitled 'Is humanitarian design the new imperialism: Does our desire to help do more harm than good?', setting off a critical on-line debate questioning the role and ethical responsibilities of western designers within international development. This contention bought to the forefront important polemic questions around the controversies of 'humanitarian' architecture and disclosed weaknesses in the (lack of) understanding of the long-term impacts of 'architectural-aid'. Regardless, the debate was seemingly (dis)missed by important players within the architectural and humanitarian development fields. As a result, critical questions have been left unanswered, unintended consequences of good intentions continue to go unchecked, and the true emancipatory potential of architecture as a transformative agent in poverty reduction and development remains undefined and itself susceptible to become party to new imperial subversions. Driven by the introduction of a Third way - Emancipatory Architecting - proposed as a potential solution to the 'moral dilemma' found in current international expanded practice, and, as an analytical tool for probing the socio-political workings inscribed in glocal (global-local) do-good design. This paper begins to explore the ideological and ethical dimensions of the architectural 'humanitarian' movement. Providing a background to the sectors, the subsequent problems facing current 'architecture-as-aid', and the potentials of an altered, or alternative egalitarian praxis.

Keywords: humanitarian architecture, architecture as aid, post-development theory, subaltern studies, architectural ethics, post-humanitarian geographies, new architectural colonialism, emancipatory architectures.

WEDNESDAY 6TH AUGUST 11.20-11.40 | Hall 3 C ICC

WHAT LAWYERS THINK, WHAT CLIENTS THINK, WHAT CONTRACTORS THINK AND WHAT ARCHITECTS THINK OF ARCHITECTS

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Abstract

Over the past half century, the ability of the profession to work as an architect has been undermined by building professionals, contractors, clients and their advisers. Significantly, such attacks have gained traction through the manner in which architects as a profession have responded to issues of ability to deliver projects on time and on cost.
Such allegations, though largely illusionary, have gained traction to a point where the architect’s traditional role is seen as illusionary (RICS Building Surveying Journal 2014, @25) with the ‘true’ architectural role having a limited existence of “… a cosm sense of single point control for smaller projects...”. Governments, developers, builders and industry professionals have determined to exclude designers from roles that are seen as not design, with the various function that are not seen as architectural design being taken over by “…specifiers, architectural technicians and the growth of integrated construction products...”. Such views have been reflected by the legal profession and clients in their approach and the way they use the profession.

The profession is seen by many to be subjective and defensive in its responses in a world that seeks objectivity and a scientific view of the world. As a result, we have allowed ourselves to be subjugated to accepting new methods of procurement, unnecessary regulation, and risk allocation to avoid the failures of the profession. The perceptions of our posture have contributed to the profession where our role is increasingly the practice of design, not architecture, and, the gradual deskilling and loss of methodology that many in the profession have suffered.

This paper will assess the nature and impacts on architecture of the failure of our communications with those with whom we partner through the eyes and experiences of an architect and lawyer.

**Keywords:** architecture, legal profession, architectural design.

**WEDNESDAY 6TH AUGUST 11.40-12.00 | Hall 3 C ICC**

**MOBILE LOITERING: A RESPONSE TO PUBLIC SPACE NEEDS IN NIGER’S HIGHLY GENDERED URBAN CONTEXT**

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**Abstract**

By their very nature, city streets provide an opportunity to create a life ‘in-between’ the more strongly defined entities of home, school, office, and markets. In this space, one can easily appear to be on the way to somewhere, but never actually be on the way to anywhere. The act of ‘mobile loitering’ is a tactic that is commonly employed by young girls in Niger’s capital of Niamey, in order to socialize with one another. In the context of a Muslim city situated in a predominantly Muslim (albeit secular) country, women’s presence in the public realm—for purposes other than running errands, conducting business or going to school—is easily questioned by society. In their free time, young girls often pay social calls to each other, using their itinerary as a journey through which they can see and be seen, interact with acquaintances, while enjoying relative privacy through movement.

This paper proposes a new type of public space that is uniquely adapted to the cultural norms of the city of Niamey, Niger’s capital. It outlines a proposal for an activity circuit that links major public spaces currently used by the youth of the city, while adding program components along a defined route to augment them. The design proposal shapes neighborhood streets to give girls destinations and justifications for being outside, offering them a right to a city that is becoming increasingly less accessible, within a society that is growing increasingly more conservative.

**Keywords:** public space, gender, city streets, Niger, Niamey, subversive actions, subversive urban design, Islam and women, informality, right to the city.
(IN)FORMALSTUDIO – TRANSFORMING THEORY THROUGH PRACTICE

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Abstract

The presentation discusses the INFORMAL STUDIO: MARLBORO SOUTH developed in 2012 by 26'10 south Architects at the University of Johannesburg and in partnership with the Goethe-Institut. It presents an extreme zoom-in into one condition of informality as a site of learning in Johannesburg. Marlboro South, a former apartheid buffer strip has, over the past two decades, been transformed into a hybrid city consisting of squatted warehouses and factories next to formal industry and businesses. The studio allowed for students and lecturers to engage with residents; non-governmental and community based organisations on issues affecting the area. Socio-spatial relationships and diverse land-uses documented through the studio informed proposals for the resettlement of evicted households and the re-use of two donated warehouses. These outputs eventually made it into the presidency and resulted in a direct mandate to the City to develop residential models suited to the demographic of Marlboro South.

Whilst the South African state has embarked on a programme of upgrading informal settlements, local communities are mobilising towards the improvement of their own environments. A unique opportunity exists in South Africa for design professionals to be involved in developing new forms of participative practice in support of communities. The presentation illustrates, through the case of Marlboro South, the challenges and opportunities inherent in a process-orientated working method developed on the ground. It discusses the potential for the transformation of architectural education and practice through real world engagements across extreme social and economic divides.

The exhibition INFORMAL STUDIO: MARLBORO SOUTH will be displayed at the UIA 2014 congress. It documents the studio through film, graphic and written narratives, as well as models and drawings.

Keywords: education, participative planning, informal settlements.

‘JOHANNESBURG IN PRACTICE’ or ‘FROM TEA PARTY TO INFORMAL GOLF ESTATE’

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Abstract

The presentation charts some key moments and modes of practice exploring the conflicted and damaged terrain of post-apartheid Johannesburg in search of meaningful architectural engagement. Over the past ten years 26’10 south Architects have embraced the depth and breadth of architectural practice; using an architect’s eye and hand to come to terms with disparate briefs and clients in the townships, informal settlements, inner city and suburbs of an ‘African City’ aspiring to be ‘World-class’. A city with its faults visibly displayed, yet with answers remaining confounding and elusive.

We posit that the disparate realities of Johannesburg provide a fertile test-bed for a mode of practice which is diverse, collaborative, inclusive, opportunistic and above all driven by a desire to understand the role of design in the multiplicity bred under a segregated state and further entrenched by a post ‘94 capitalist and nationalist agenda. Johannesburg is not timeless or precious. Its contingent nature displays a directness, inventiveness and self-reliance which provide powerful stimuli re-directing the
practice of architecture and urbanism into a realm of lightness and responsiveness. To this effect we have allowed Johannesburg to positively influence and challenge our view of architecture both in the local and global context by pursuing opportunities to engage in human relationships with a range of people and communities broadening the understanding of architecture beyond academic and technical notions. The presentation highlights some key failures, revelations, productive disasters, epic struggles and small triumphs encountered in a range of projects. Amongst the projects discussed the commission of a subsidised housing scheme in Soweto as well as a three-year appointment in Diepsloot, one of South Africa’s most dynamic post-Apartheid settlements is used to outline the potentials and limits of architectural practice against the formal and informal systems encountered.

Keywords: formal, informal, architectural practice, Johannesburg.

WEDNESDAY 6TH AUGUST 14.00-14.20 | Hall 3 C ICC

STUDY ON BASIC CHARACTERISTICS OF LIVING SPACE IN ELDERLY INSTITUTIONS - TAKE THE INSTITUTIONAL ELDERLY FACILITIES IN DALIAN AS EXAMPLES

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Abstract

The living environment of the elderly cannot be ignored in building a harmonious community, of which the elderly community’s building in our country hardly started and research lacks experience. This paper aims to discuss environmental characteristics of living space of the elderly community from the elderly’s living environment, behaviour and other aspects of life. This article is based on the survey of urban and rural elderly facilities in the north of China to understand the basic condition of elderly facilities, space characteristics, using status, living methods and demand of old people. Elaborate the type of basic characteristics of elderly facilities. Sunshine home community located in Dalian Lvshunkou, is near World Peace Park and Dalian Jiaotong University, as well as some commercial facilities, not yet in use. According to the actual research situation, the case is not an obvious gathering of tourism resources. Through questionnaires and interviews, the elderly mainly has six kinds of activities, entertainment, reception, sleeping, eating, labour and washing as shown. Because of the distance problems and traffic inconvenience, it is relatively difficult to obtain complementary resources of the city, and it affects medical care and staying out intercourse of the elderly. Therefore, studies of the elderly community have a real and urgent significance. According to the problems existing in the present situation, take the elderly’s behaviour and their own attributes into perspective, and offer a referential proposal for building elderly facilities in order to meet life need of the elderly. Provide the scientific basis and perfect technical reference for the development and construction of elderly facilities.

Keywords: elderly institution, facilities, spatial element, behaviour style.
WEDNESDAY 6TH AUGUST 14.20-14.40 | Hall 3 C ICC

CONSTRUCTING THE COMMON IN DEHEISHE CAMP, PALESTINE

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Abstract

The research speculates the notion of ‘the common’ in contraposition to the dominant categories of ‘public’ and ‘private’ in Palestine, where the idea of the public is particularly toxic due to existing political conflicts. The fundamental question here is whether it is possible to think and practice a political collective beyond the frame of state and consequently from a spatial perspective. In the investigations, we start exploring the ‘common’ from the conditions that exist today.

In a refugee camp, for example, the common is the absence of private property, but also the shared history of displacement and imagined future of a return.

The project investigates the role of architecture in a context of conflict, a context mainly approached from a political point of view that nevertheless in reality has very concrete spatial implications.

Under the patronage of UNRWA Camp Improvement Program, the research studio contributed to the design and realization of the Deheishe Center, in the Deheishe Refugee Camp in the West Bank.

In the present conditions, this Center is the attempt to re-establish a political dimension and, most importantly, it aims at being formally different from all the other more than 20 highly international NGOs that are present within the borders of the camp, not only in terms of the program but essentially in its’ architectural form.

The building in this case gains extreme importance for being the very physical representation of a political act. Which would be the architectural form that could truly represent the refugees? The tradition of public spaces as a place of performance makes one think that it should be a plaza. But paradoxically for the refugees whatever is completely open is not public. Therefore in order to be public it has to be closed and it has to be protected.

Keywords: refugee camp, Palestine, architecture, construction, common.

WEDNESDAY 6TH AUGUST 14.40-15.00 | Hall 3 C ICC

PROMOTING TECHNO-DIVERSITY FOR SELF RELIANT AND SUSTAINABLE DEVELOPMENT: A GANDHIAN THOUGHT

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Abstract

The basic unit of community developed over the ages is fast disappearing owing to mass urbanization, migration, globalization, and modern caste/creed less society. Their indigenous techniques along with network of local artisans, craftsmen and technicians, are also fast diminishing, owing to rapid industrialization and advent of new ‘imperialists’ called MNCs [Multi-National Companies]. In this day and age of ‘global warming’ and ‘climate change’, and the final lap of the ‘modern age’ of human history, it is of enormous relevance to retrospect and introspect, as to where the world at large has gone wrong in this quest for economic pursuit and technological development and progress.
Gandhi advocated the creation of self-contained, self-reliant and self-sustained smaller communities, instead of urban ghettos. The developing nations and especially India would need to look deeply inwards and draw meaning from the foresight and words of wisdom from Mahatma [or the Great Soul] Gandhi and his views of ‘Swaraj’ [or complete freedom and self-reliance] and its total relevance for ‘sustainability’.

‘Techno diversity’ is the terminology used for a flexible, and broad approach to selectively adapt, integrate and blend the old and the new technologies that are suitably appropriate and relevant for laying the strong foundation for growth and development of the next era; the ‘sustainable age’ in the history of mankind.

Every ethnic group has developed its own unique ways of survival against hardships of nature, many times known only to them. Indigenous techniques are like folk music and dance. The art is transferred from one generation to the other without any effort and formal training.

This paper investigates and advocates the preservation and promotion of such indigenous technologies as a tool of self-reliance for developing communities. The paper may be viewed as a tribute to Gandhian thoughts and ideas.

Keywords: self-reliance, technological imperialism, indigenous, sustainability, industrialization.

INVESTIGATION ON WOMEN’S SPACE IN MASJID ARCHITECTURE: CASE STUDY OF SELECTED MASJIDS IN MALAYSIA

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Abstract

Muslim women’s participation in masjid, a place where the community congregates interacts and a place for education, is allowed but non-compulsory in Islam. In Malaysia, women as part of the community frequented the masjid for different activities on a daily basis. Therefore, their presence and needs should form an integral part of the masjid space planning and design provisions. However, from observations and personal experience, the design of masjids is frequently gender insensitive as there is no definite guideline on space provision for women. This paper examines the issues on space planning of masjid in relation to the requirements for women. The objectives of this paper are; (i) to investigate how spaces and requirements for women in the masjid are derived from the original sources of Islam (Quran and Hadith); and (ii) how its essence has been applied in masjid in Malaysia. Qualitative methods, namely analytical analysis of layout and observation were adopted for this research due to its exploratory nature. Data collected are analysed through comparative method to derive trends on planning and design on selected traditional and contemporary masjid in Malaysia. Findings indicate that in general the design of the masjid is gender insensitive towards women such as obscured access; temporal nature of prayer space; location of ablution area away from the prayer area; and inaccessibility for the disabled and elderly women.

Keywords: masjid, women, space, architecture.
Abstract

Osun State of Nigeria has a population density of 379 people per square kilometre and a high concentration of traditional towns and cities. The State Government has since 2010 embarked on urban regeneration programs including O’ renewal and structure plans (2013-2032). The former proposes a development plan for one kilometre radius from the Aafin (the king’s palace and town-centre) of nine selected cities while the latter focuses on regional plans covering 20-25 km radius of those cities. The paradigm shift in both aims at development planning that is ‘inclusive, participatory and one to be undertaken at the local level’. The focus of this paper therefore is the review of the public participation initiative, tagged city consultations and the question of perception and participation.

The procedures of the town meetings were recorded (in audio and video formats) and summary reports were presented by the Technical Consultants to the State Government. These reports were consulted and one of nine city consultations held in nine selected cities between Tuesday 9th July and Wednesday 24th July 2013 was attended. However, reviewed literature confirms interconnectedness of perception with participation while a broad review of urban development programs in Nigeria shows that public participation has been largely missing, misunderstood or misapplied. Depth of perception of stakeholders with diverse backgrounds could not be ascertained in the case study and organized, non-political, non-religious and non-ethical groups formed solely to collaborate with government agencies for community development based on their felt-need (known as Development Community Associations) were omitted in the list of stakeholders despite their suitability as social networks. The paper recommends Development Community Associations as units of interrogation and innovativeness in enlightenment and urban education for sustainability and humanization of emerging urbanscapes.

Keywords: public perception, participation, urban regeneration, development community associations, Osun State.

Abstract

Reviewing Otherwhere practices which obliquely reference architecture as the means to suggest responsive and appropriate models for implementation in Africa; reconsidering the architect’s professional role by reconnecting the concept, narrative, and design of architecture with broader participation in its development and construction; rediscovering the social role and values of architecture by embedding the architect-constructor in the communities they serve; Lewis Mumford’s theory of regionalism as an alternative approach to development, supported by - but not determined by - contemporary technologies; an ethos of terrain, climate, culture, and constructional intimacy; case studies extending these values in Australia, Bangladesh, and Colombia; the Bush Owner Builder in Hope Vale, Queensland; mentored self-build technologies of pisé and composite bamboo for
education and training buildings in Rudrapur, Bangladesh; the Metrocable initiative in the favelas of Medellin and Bogota, Colombia; rediscovering Bogota’s lost waterways, redefining the modern urban promenade.

Concluding that globalised practice in support of multi-national commerce is not the healthiest strategy for the creation of good and great architecture; advocating that the architect-constructor has been a viable and creative model from medieval times, and should remain so in the 21st century; proposing that the architect-constructor must be occupationally embedded in the communities he or she serves, and as fundamentally as if they were a baker or doctor; agreeing that the constructional means for realising a contemporary architecture may/must also reconnect with the tectonic and material techniques of the pre-Modern era; finally, proposing that solutions to informality do not lie solely with low and intermediate technologies, but in eclectic reference to whatever means work to create positive change.

Keywords: redefining professionalism, regionalism, constructional intimacy.

PARALLEL ACADEMIC SESSIONS
WEDNESDAY 6TH AUGUST 2014 | Hall 1 B ICC

WEDNESDAY 6TH AUGUST 14.20-14.40 | Hall 1 B ICC

THE FORMS AND SPIRITUAL MEANINGS OF VERNACULAR ARCHITECTURE IN XUZHOU CHINA – A CASE STUDY OF THE TRADITIONAL DWELLINGS IN HUBU MOUNTAIN

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Abstract

This paper aims to explore the forms and spiritual meanings (a.k.a. ‘soul’) of vernacular architecture in Xuzhou China based on a case study of the traditional dwellings in the Hubu Mountain district. Located in the north of Jiangsu Province, the city of Xuzhou has a history of more than 4,000 years. The Hubu Mountain district is one of the districts in Suzhou and its development mirrors the changes of Xuzhou from a longitudinal perspective. Due to the prosperous commercial environments in this area, a lot of residential buildings were built up around the Ximatai (which is a heritage with a history dating back to 206 B.C.) in the Ming and Qing dynasties. It formed a special urban context called ‘a high platform (i.e. Ximatai) surrounded by thousands of dwellings’. By the early years of the People’s Republic of China, there were over 100 well preserved courtyard houses left in the Hubu Mountain district, served as a museum of vernacular architecture (especially dwellings) in Xuzhou. Unfortunately, however, many courtyard houses have recently been damaged or demolished during the process of urban renewal. Currently there is a conflict of interests between the preservation of vernacular architecture and further development of the city.
This paper looks at the development process of traditional dwellings in the Hubu Mountain district. Based on site surveys and relevant archive studies, it provides an insight into the physical forms and spiritual meanings of traditional dwellings. Special characteristics of vernacular architecture in this region, such as building typology, structure, construction methods and decoration details and so on, have been explored in order to provide guidance for future city regeneration and integrated urban-rural development in China.

**Keywords:** Hubu mountain, vernacular architecture, dwellings, courtyard, culture.

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**SPATIAL ECONOMICS – THE WEALTH OF THE URBAN POOR**

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**Abstract**

General Resilience is largely dependent on our ability to adapt, our capacity to reorganise and to learn from the current state of our cities. This discourse outlines the ‘wealth’ of urban dwellers which are usually associated with expressions like marginalised and poor. In a unique look at one of the informal settlements around Namibia’s capital, the research maps typical urban form in these townships and compares it to the planned areas of the city. Throughout the research, capitalist monetary terms are substituted with spatial and social terms to show how distorted our ideas of wealth are. This paper by no means suggests that living in an informal settlement is glamorous or ideal but rather desires to highlight the necessity of re-assessing our current Westernised trends in planning and place-making.

Windhoek, like many South African cities, is popularly defined by massive social & geographical divides as a result of Apartheid planning. Land, like most other basic resources in Namibia, is not distributed equally. Spatial segregation is a global concern, especially within the context of rapid urbanisation and population growth. The Informal Sector in Windhoek has succeeded in many tasks which the nation-state has failed to perform within their nationalist ideals of modernity.

Urban form in Windhoek’s informal settlements is adaptable: it encourages community interaction; it results in unexpected outcomes and allows ritual to determine and regulate space. In taking care of their own housing and commercial needs they have generated a uniquely resilient and sustainable model for urban living. While suburban minorities travel in private cars and live in isolation behind high fences, the urban poor thrive on many levels within a network of a larger social identity.

The research hinges around the idea that architecture has the “potential to influence thinking and policy”, as the conference theme suggests, and aims to instil Capra’s sentiments that “there are solutions to the major problems of our time, some of them even simple. But they require a radical shift in our perceptions, our thinking, our values” (Capra 1996, p. 4).

**Keywords:** informal sector, responsive environments, spatial segregation, resilience.
ARCHITECTURE’S CONTRIBUTION IN THE FORMATION OF REALITY PERCEPTION

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Abstract

The paper attempts to present the constructed environment as a symbolic creation contributing to the formation of reality perception. It focuses on Nelson Goodman’s aesthetic theory of symbols and its application in architecture. The research includes the investigation of the symbol both at macro- and at micro-scopic level, the analysis of Goodman’s aesthetic theory of symbols, the investigation of the relationship between man and space, the examination of the way the built environment is constructed and perceived, and the application of Goodman’s theory in architecture. The paper has the following objectives. The first is to demonstrate that symbolism is a dynamic process which through the connection and combination of different fields of experience and knowledge contributes not only to the perception, elaboration and interpretation of reality, but also to its creation, and as such to the cognitive process. The second objective is to highlight the common structure and common way of the formation of symbols and artworks and therefore also of architectural projects. The overall objective of this paper is to prove that the built environment as a symbolic creation not only enhances morphologically and notionally human experience but also contributes in the creation and promotion of knowledge and most importantly, mediates in the formation of reality perception.

Keywords: symbols, aesthetic theory, reality perception.

THE ROLE OF ORAL HISTORY IN ARCHITECTURAL PEDAGOGY IN BANGLADESH

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Abstract

Oral traditions are an essential source of information for architectural history in South Asia, particularly in countries such as Bangladesh where the dearth of archival material and critical publications on the subject leave it as one of the only viable sources of knowledge to be referred to. Survivors of the first generations of trained architects in the country still exist in practice as do sources on local brands of sustainability passed down through word of mouth, but academic curricula are yet to refer to either. All architecture schools in Bangladesh still use linear, survey type history theory courses borrowed from older Western models with no room for oral history or any other local creative inputs. Another interesting thing to note is that only two private university curricula have so far introduced courses on rural architecture, even though 71.9 percent of the population of the country still live in rural areas according to a survey conducted by the World Bank in 2010. This might be owed to these courses requiring an out of the box, informal pedagogical approach not based primarily on typical textbooks or other printed materials but rather on first hand experiences and narratives. This paper would attempt to assess the relevance of oral history in the teaching of locally designed courses in schools in Bangladesh. It would analyse the significance of oral history in architectural narratives through discussing a number of important recent projects relying on this such as Rem Koolhaas’ Project Japan: Metabolism Talks and the Art Institute of Chicago’s Chicago Architects Oral History Project and also look at the syllabi and pedagogies of the first courses on rural or informal architecture in Bangladesh. It would discuss how as informality is recognized as a productive force in architecture, oral history becomes an integral contributor to its development.

Keywords: oral, pedagogy, interdisciplinary, bottom up.
DESIGNING FOR CONSTRUCTION HEALTH AND SAFETY (H&S)

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**Abstract**

Relative to other industries in South Africa and construction industries worldwide, the construction process generates a disproportionate number of fatalities, injuries, and disease and both the direct and indirect costs contribute to the cumulative cost of construction.

Designers influence construction H&S directly and indirectly. The direct influence is as a result of design, details and method of fixing, and depending upon the type of procurement system, supervisory and administrative interventions. The indirect influence is as a result of the type of procurement system used, pre-qualification, project duration, partnering, and the facilitating of pre-planning.

The purpose of the paper is to present the results of studies conducted among designers and other stakeholders in South Africa to determine their perceptions and designers’ practices relative to ‘designing for construction H&S’. The following constitute the salient findings. Cost, quality, and time are more important to designers than construction H&S. H&S during the user phase is more important to designers than the other phases. A range of design related aspects impact on construction H&S. To a degree, construction H&S is considered on most design, procurement, and construction occasions by designers. Experience predominates in terms of the means by which H&S knowledge was acquired. A range of aspects have the potential to contribute to an improvement in knowledge and the application of construction H&S.

The paper concludes that designers contribute to construction H&S, but that there is potential for and a clear need for enhanced contributions. Recommendations include the inclusion of construction H&S in designer tertiary education, and continuing professional development (CPD).

**Keywords**: designers, construction, health and safety.

CONTROVERSY OF REHABILITATION AND RESTORATION FOR ANCIENT BUILDINGS

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**Abstract**

Contemporary architectural masterpieces will become precious heritage for our generations in future. According to the regulation of protection policies for the international cultural heritage, we cannot restore or rebuild any building in the ancient ruins which have been included in the protection list. This regulation is not suitable for ancient oriental architecture. Neither building systems nor construction materials, Eastern and Western architecture have many different characteristics from ancient times. Chinese ancient buildings are wooden architecture. They are not resistant to fire or moisture. So they must be constantly repaired and protected. Some of the destroyed buildings have often been
reconstructed in place, or even been rehabilitated off-site. In this way, a lot of wonderful stories and landscape features in Chinese history and culture can be inherited from generation to generation. This article lists two modern works in The Forbidden City, Jianfu Palace Garden’s reconstruction and Qianlong Garden’s repairing and protecting works, which have been given high recognition by the domestic and international community. What’s more, we cannot use a single method to rehabilitation or protect our ancient buildings. The most important thing is, we should give particular attention to the history, authenticity, scientific nature and artistic quality, and pursue excellence.

Keywords: restoration, rehabilitation, China, ancient architecture.

WOOD, STRAW, REEDS & CO: ECOCAL MATERIALS FOR A CONTEXTUAL ARCHITECTURE

Dominique Gauzin-Müller

Lecturer at several international universities, professor h.c. at the Unesco/CRAterre chair for constructive cultures, curator of exhibitions among them the French Pavilion at the UIA Congress in Durban,
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Abstract

Rammed earth, wattle and daub, stone… are they just old-fashioned materials or one of the solutions for sustainable buildings, energy savings and local employment with the upgrading of regional resources?

A ‘contextual’ architecture pays attention to the site, its population, its history and its resources. French architects choose this way according to the four cornerstones of sustainability: economy, ecology, social… and culture. This conference is a tribute to their creative use of traditional fiber-based materials in a contemporary way, looking for the happy medium between low-tech and high-tech. It goes from science to art and from craftsmanship to architecture.

Keywords: wood, straw, reed, hemp, contextual architecture, creativity, sustainability, local resources, local economy, low-tech, holistic approach.

TO DARE: OTHERNESS, SPECIFICITY, BENEVOLENCE, CULTURES

Prof. Philippe Madec

Architect, town planner and writer, France, philippe_madec@me.com

Abstract

This eternal architecture is going through a singular period at the beginning of the 21st century. We’re experiencing a complete upheaval of the human condition. The relations we’ve had with nature for millennia are changing, and human establishments are evolving in their wake. Idiosyncrasy is a key to render specificity and difference, shared values, common values rich with otherness, cultures, climates, geographies, etc. The differences are the foundation of what’s shared, what’s in common. The more you’re part of a culture, the more you access the universal.

Keywords: consubstantiality with earth, benevolence, idiosyncrasy, culture, civil society, architecture and the earth, one and the same.
EARTH, STONE & CO: ECOLOCAL MATERIALS FOR A CONTEXTUAL ARCHITECTURE

Dominique Gauzin-Müller
French architect and journalist, professor h.c. at the Unesco/CRAterre chair for constructive cultures, curator of exhibitions among them the French Pavilion at the UIA Congress in Durban, gauzinmueller@me.com

Abstract

Rammed earth, wattle and daub, stone... are they just old-fashioned materials or one of the solutions for sustainable buildings, energy savings and local employment with the upgrading of regional resources?

A ‘contextual’ architecture pays attention to the site, its population, its history and its resources. French architects choose this way according to the four cornerstones of sustainability: economy, ecology, social... and culture. This conference is a tribute to the creative use of traditional granular-based materials in a contemporary way, looking for the happy medium between low-tech and high-tech. It goes from science to art and from craftsmanship to architecture.

Keywords: earth, stone, sustainability, contextual architecture, creativity, local resources, local economy, low-tech, holistic approach.

LIGHTING OTHERWHERE, LIGHTING OTHERWAY

Christophe Marty
Ingelux lighting Design/ Cluster Lumière, France. Christophe Marty is a lighting designer, director of Ingelux and secretary of the Cluster Lumière in Lyon, France. Civil Engineer and Architect, he manages daylight and artificial light projects in many countries, using the latest technologies as the LED lighting of Mona Lisa painting in Louvre Museum, Paris, France. c.marty@ingelux.com

Abstract

Light is deeply linked with architecture. It can enhance its strength, create emotion. But the interpretation of light is a question of culture: artificial lighting is not perceived the same way depending on the country.

On the other hand, light is also the same for all: human beings need light, wherever he lives. Daylight and artificial light both have the same impact when it comes to health.

The session will present a comparison of lighting designs in several countries and continents, stressing the cultural interpretation and showing the impact of the latest technologies.

Keywords: lighting, energy saving, health, smart-grid, city beautification.
PROGRAMME PARTNER SESSIONS
PART 4: ARCHITECTURE EDUCATION FORUM

TUESDAY 5TH AUGUST 2014

The Architectural Education Forum for Southern Africa will be hosting a critical discussion by educators around transformation and education, looking at educating architects in ways that are relevant and responsive to diverse and dynamic new contexts. Session one will be discussions around poster presentations on current strategies and session two aims to map a way forward in educational research.

Educational models from Europe and America have to be transformed to harness the potential of the multi-layered and multi-cultural contexts of Africa. A global conversation between educators can uniquely interrogate the gaps between theory, practice and society.

Ariane Janse van Rensburg is a Senior lecturer in design and teaching and learning convenor in the School of Architecture and Planning, University of the Witwatersrand, Johannesburg. She has completed the following qualifications: BAS (UCT), B.Arch (UCT), M Arch by Research (Wits). She is currently busy with her PhD research on enabling transformation in architectural education. Ariane is also involved in various university teaching and learning bodies and serves SACAP and CAA accreditation panels. She started the Architectural Education Forum after a successful symposium hosted at Wits this year (2014).
A CASE FOR INCLUSION OF APPROPRIATE BUILDING TECHNOLOGY AND SUSTAINABLE BUILDING DESIGN IN UNDERGRADUATE CURRICULUM IN DEVELOPING COUNTRIES

Prof. Vasanth K. Bhat
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Abstract

It is observed that the curriculum for undergraduate architectural education in most developing countries is oriented towards western concepts of building. By the time students come out of Architecture schools, they have western oriented pattern of education, less suited to the needs of their own society. Thus they end up practicing in cities and towns turning out buildings in cement and steel, which are energy consuming, inefficient, climatically inappropriate and unaffordable for the large majority. The purpose of this paper is to make a case for inclusion of the principles, methods and materials of appropriate building technology (ABT) building in a cost-effective manner, designing in consonance with local ecological factors, etc. in the curriculum of architectural education in developing countries.

Keywords: curriculum, appropriate technology, sustainable building design, undergraduate.

EXPLORATION OF ARCHITECTURAL DESIGN EDUCATION AND PRACTICE --RECONSTRUCTION OF RESIDENCES AND ENVIRONMENT IN RURAL POOR AREAS OF CHINA

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Tianyi Yu
Dalian University of Technology, Dalian, China

Abstract

Many problems exist in residences and environment in rural poor areas in China, such as the discharge of sewage, littering and the chaos of the residential model. Architectural educators should guide students to express concern for such social problems and try to propose solving schemes in view of architect. The author, as an architectural educator, has led the undergraduate students to complete the mapping and reform design of rural residential and surroundings in poor rural areas and guided students to finish their work according to the procedure—Survey, mapping, design, implementation, evaluation. According to these kind of steps, the author tried to enhance the students’ social awareness and responsibilities as an architect. In this paper, an ‘open’ education mode with social interaction has been proposed according to the summary and conclusion of the whole teaching process. At the same time, the paper established the basic framework of ‘open’ education mode, which was compared with Chinese traditional architecture teaching methods. Then the paper tried to demonstrate the social adaptability of this new teaching model, reveal the effectiveness of this model by showing the diverse achievements, and finally propose a program to generalize the results.

Keywords: reconstruction, architecture, traditional residence, China.
TUESDAY 5TH AUGUST 11.40-12.00 | MR 12CD ICC

THE TRANSFORMATION OF ARCHITECTURAL EDUCATION TOWARDS Responsive, Relevant and Ethical Social Practice: A Model for Interdisciplinary Collaboration and Social Participation

Yashaen Luckan
Durban University of Technology, South Africa, luckany@dut.ac.za

Abstract

The role of architectural education and ethical social practice within the context of the developing world has drawn much interest in recent times. The developing world is characterised by the complex coexistence of multiple layers of diverse existential contexts. Multiculturalism, different scales of economic activity and ecological diversity present many challenges, as well as unique opportunities for the built environment professions, which in turn requires a critical review of professional education and practice. This however challenges the colonially inherited historical modes of practice in the developing world, which have had to transform in order to respond to contextual realities. In this regard, contemporary architectural practice, and education, in the developing world has much to offer the developed world. Historical practice, curricula and pedagogic approaches, however, inhibit responsive architectural practice and relevance within this context. The paper argues that, in order for architectural practice to become responsive, relevant and ethical social practice, the inherited historic curricula and pedagogic approaches defining architectural education have to be fundamentally transformed. Architectural education and practice has to step out of their disciplinary silos and start to engage with the broader context; this in turn requires a fundamental shift in epistemological balance. In this regard, the studio, as the principle learning space in architectural education, would be critically reviewed in order to transform into an interdisciplinary collaborative and inclusive environment. The paper will conclude by developing a conceptual model for an interdisciplinary, collaborative studio in order to bridge the gaps between education, practice and society in order to develop relevant and responsive solutions to complex built environment problems. The key theoretical concepts of Epistemological Balance, Hybridity, Interdisciplinary Engagement and Collaborative Learning Spaces define the theoretical framework for this paper.

Keywords: architectural education, transformation, epistemological balance, collaboration, interdisciplinarity.

TUESDAY 5TH AUGUST 12.00-12.20 | MR 12CD ICC

IMPACTS OF INTERNATIONAL EDUCATION OF ARCHITECTURE AND PLANNING: A CASE STUDY OF AFRICAN OVERSEAS STUDENTS

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School of Architecture, Tsinghua University, China, jin-xu11@mails.tsinghua.edu.cn

Abstract

More and more African students choose to go abroad, due to a lack of professional education of architecture and planning in their own countries. For an individual, this long period of time abroad provides a chance to gain knowledge and skills, and establish connections with students from other countries. As this group of overseas students will play a pivotal role in areas of architecture and planning in Africa, the impact on national development is potentially significant in the long term. This paper will research the question of how the students have gained from ‘otherwhere’ and how they bring the enriched knowledge and professional techniques ‘here’ to integrate with the spirits in the local community in order to alleviate poverty and achieve equality. The study adopts a method of snowball sampling, starting with one African student in Cambridge, UK and another in Beijing, China.
On the other hand, cases of how urbanisation in China is influenced by Chinese overseas architecture students in the 1920s are analysed and a three-stage system of overseas education is put forward as an inspiration for Africa. Theoretically, there are suspicions about whether overseas education meets the requirement of local practice. However, from the viewpoint of African overseas students, it is concluded that overseas education adds individual competitiveness, enables the improvement of skills and techniques, and raises awareness on winning the discourse around the right to empower and protect the full potential of Africa.

**Keywords:** overseas education, architecture and planning, otherwhere, localised.

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**TUESDAY 5TH AUGUST 12.20-12.40 | MR 12CD ICC**

**METHODOLOGICAL APPROACH TO ARCHITECTURAL EDUCATION IN BRAZIL: EXPERIMENTAL TEACHING VERSUS TRADITIONAL TEACHING**

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*Student Raiane Rosi Duque*

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**Abstract**

The information age has changed our way of thinking about society and it is not far from the urban context and reality. The contemporary city presents a wide range of problems and to solve them or try to soften them, it is necessary to generate new solutions through new technologies and ways of thinking. The traditional approach to architectural education has not proven itself as a possibility to help solve increasingly complex urban problems. The ancient methods of teaching like the pre-set hierarchy of disciplines or the conventional classroom environment is no longer enough to supply the needs of our present day. For that, it is believed that the experimental teaching would respond more effectively and quickly to the contemporary urban questions. Their methodological fundament presents a multidisciplinary approach that requires a flexible and permeable learning environment which responds to the new technological demands of society. In Brazil, despite the evolution of architectural education in the last 30 years, the teaching methods remain in the traditional way, with rare exceptions, in a universe of nearly 300 schools. This article aims to propose a discussion between the two methodological approaches of education making a counter point between traditional and experimental which will make us face a virtual reality in Brazilian architectural culture.

**Keywords:** teaching, experimental, traditional, architecture.
POPULATION AND POVERTY. URBAN TRANSFORMATION, COLLABORATION OPPORTUNITY.
CASE STUDY ‘SAN JOSE EL ALTO’

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Abstract

Global influences have an effect on the behavior of society. In Mexico, poverty and overcrowding often compel public politics to make unplanned decisions. The urban transformation phenomenon occurs day to day in communities, this study-work sets the community of San Jose el Alto, Queretaro as an example, whereby, collaboration shall be the trigger to integral development.

The main goal of this study-work is to show that, with solidarity and realism, and with true participation of citizens, as well as that of social organizations, government, architecture students and professionals, it’s possible to affect global issues within a local scope.

In this study, data about poverty and population in Mexico are identified; furthermore, the main characteristics of urban strategic planning are looked through a summary. With planning bases and considering global trends as an opportunity, data about architecture students and professionals in Mexico are indicated, aiming to acknowledge the impact they may have in the make-up of a city. Finally, the case study is carried out, the development of an urban housing project for 161 homes for the socially organized group ‘Antorcha Campesina’, in collaboration with architecture students and professionals of the State of Queretaro, Mexico.

This study-work aims to become a role model of collaborative urban management; this first draft is expected to be copied by other projects in similar circumstances, although not necessarily ideal, intending the urban transformation phenomenon in communities to consider, in a balanced manner, improvement in dimensions of housing equity, environmental sustainability, social equity, infrastructure, quality of life, governance, gender equity, productivity, and competition.

Keywords: opportunity, architecture, collaboration, urban transformation.

THE NEED FOR THE INCLUSION OF CONSTRUCTION HEALTH AND SAFETY (H&S) IN ARCHITECTURAL EDUCATION

John Smallwood
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Abstract

A disproportionate number of accidents occur in construction relative to other industries, the direct and indirect cost of which contributes to the cost of construction. Construction is a multi-stakeholder process and consequently all stakeholders, architectural designers included, influence the construction process. Design influences and impacts on construction H&S directly and indirectly. Directly through: concept design; selection of structural frame; detailed design; selection of cladding, and specification of materials. Indirectly through: the selection of procurement systems; related interventions such as prequalification; decisions regarding project duration, and selection of contractor.
Given the aforementioned, architectural designers should be empowered to contribute to construction H&S. However, the need for such empowerment is amplified by legislation in certain countries, such as the OH&S Act and Construction Regulations in South Africa. Despite the influence and impact of architectural design on construction H&S and the evolution of legislation, traditionally South African architectural designers have perceived construction H&S to be the responsibility of the contractor.

This paper reports on descriptive surveys conducted among architectural designers, and architectural departments at Universities and Universities of Technology in South Africa, which determined that: a range of design related aspects impact on construction H&S; construction H&S is considered to a degree on most design, procurement, and construction occasions by designers; experience predominates in terms of the means by which H&S knowledge was acquired; architectural programmes address construction H&S to a limited extent; construction H&S is perceived to be fairly important to the discipline of architecture, and design related activities have a moderate impact on construction H&S.

The findings of the literature and descriptive survey amplify the need for the following relative to architectural programmes: the inclusion of construction H&S as a module; consideration of H&S when designing, detailing, and specifying, and the inclusion of H&S among the criteria used for evaluating design projects and working drawings.

**Keywords:** architectural education, construction, design, health and safety.
The case study presented, is for the part-time BTech (Applied Design) programme offered by OpenArchitecture in collaboration with the Cape Peninsula University of Technology, which started in February 2014.

**Keywords**: open architecture, authentic learning, online learning, architectural education.

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**TUESDAY 5TH AUGUST 14.40-15.00 | MR 12CD ICC**

**SEEDS FROM THE SOUTH: AN EDUCATIONAL PROGRAM FOR ARCHITECTURE AND URBANISM IN THE 21ST CENTURY**

**Andréia Moassab**

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**Abstract**

A myriad of challenges arises as the curriculum for a new public school as particular as UNILA - Universidade Federal da Integração Latino-Americana (State University for Latin America Integration) is defined. The totally new university was created by the Brazilian government with the chief mission of contributing and collaborating with/towards Latin American integration.

From the perspective of post-colonial theories in dialogue with a decolonial approach, some fundamental questions arise: will it be able to bring new perspectives into the educational programs in a usually very conservative field, still grounded on Eurocentric modern bases? How can education contribute towards local empowerment and cause significant change in the quality of Brazilian and Latin American built environment? Can education spread insurgent practices of architecture and urban planning? Future urban and design professionals will be deeply engaged in the challenges of working in low resource contexts, where creativity and skill are essential to achieve impacting results. For this, one needs an educational foundation based on the recognition of the importance of engagement with local communities and respectful of the diversity of architectural cultures in the world.

It presupposes bringing into the pedagogic level marginal architecture production and procedures mostly outside the literature and the hegemonic meaning production systems in the field. It also requires that additional skills are added to the usual training of future professionals such as methodology in participative projects, collective mediation, pedagogical approaches and management of public policies. Nevertheless, the hegemony of Eurocentric rationality within the field evokes enormous reluctance regarding the necessary switch to such a curriculum.

This paper presents some hypothesis which emerged from the on-going debate over the implementation of UNILA’s School of Architecture and Urban Planning. It is based on postcolonial theory in dialogue with a decolonial approach, interweaving authors such as Boaventura de Sousa Santos, Paulo Freire, Achille Mbembe and Walter Mignolo.

**Keywords**: educational program, south-south, empowerment, architectural diversity.
International Council for Research and Innovation in Building and Construction CIB (http://www.cibworld.nl) was established in 1953 with a mission to facilitate international cooperation in building and construction research and innovation. CIB is a network of over 5000 experts from 500 member organisations across 70 countries and includes most of the major laboratories and leading universities in building and construction. Two CIB Workgroups are Programme Partners of UIA 2014. The first one being:

CIB W 104 OPEN BUILDING IMPLEMENTATION. Open Building encompasses ideas about the making and incessant transformation of the built environment by acknowledging the existence of distinct levels of intervention, the principle that users must be enabled to make design decisions and the technical principle that the interface between systems allows change/replacement with minimum disruption and conflict.

Wim Bakens is the Secretary General of CIB (since 1994) and is a visiting professor at the University of Westminster in London, UK. He graduated in 1975, and obtained a PhD on "The Future of Construction" from the University of Technology, Eindhoven, The Netherlands.

Stephen Kendall, Emeritus Professor of Architecture, Ball State University, is a registered architect and educator. He received his PhD in Design Theory and Methods from Massachusetts Institute of Technology under the direction of Prof. John Habraken. He is currently conducting research for the US government on healthcare facility design for flexibility. (http://skendall.iweb.bsu.edu/index.html)

Jia Beisi, Associate Professor of Architecture, University of Hong Kong, studied at Southeast University in Nanjing, China, and obtained a PhD from the ETH Zurich. He is Director and Partner of Baumschlager Eberle Hong Kong Ltd. He lectures internationally on his studies of adaptable housing design. (http://www.baumschlager-eberle.com/en/office/locations/hongkong.html).

Shin Murakami, Professor, Department of Human Environment, Sugiyama Jogakuen University, Japan, received his PhD from the University of Tokyo. He is also a photographer and a hyper-space creator. He lectures internationally and serves as an advisor to the Urban Renaissance Agency Chubu. His focus recently is on activation of the existing housing stock. (http://shin-murakami.com).
PROGRAMME PARTNER SESSIONS
MONDAY 4TH AUGUST 2014 | Hall 11 AB ICC

MONDAY 4TH AUGUST 11.00-11.20 | MR 11AB ICC

IMPROVING URBAN RESILIENCE IN AFRICAN CITIES BY MAINSTREAMING TRADITIONAL PUBLIC OPEN SPACES: A STUDY OF IMO STATE, NIGERIA

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Abstract

Across the world today, the trend in urbanization tends to lend credence to the fact that by 2050 over 80% of world population will live in urban areas and the trend seems most evident in Africa. This no doubt is bound to pose great challenges for emerging cities in African settlements which are witnessing an increase in environmental, social and security challenges, resulting from distortions in the physical and social environments, thereby reducing their capacity to regenerate, maintain and sustain themselves. This is quite different from the situation in traditional societies where the environment naturally accommodates and regulates all changes with minimal distortion and or disequilibrium, thereby making the traditional environment quite resilient. Such resilience is attained when the traditional public open spaces are able to adjust to, and accommodate changes in their environment. Imo state, with 534 community government centres, 27 local government headquarters, at least 7 new towns, 7 urban centres and the state capital Owerri, coming to about 545 development and potential urban centres, is set for not only democratizing and spreading urban centres but creating resilient cities, the majority of which will definitely evolve around traditional communities hence the public open spaces. With its high population density, this situation will make Imo State one of the fastest growing resilient urban states not only in Nigeria but in Africa. This study used questionnaires, photographs, visits and interviews to explore this potential at the level of socio-economic and environmental values of traditional public open spaces. The data collected and analyzed using z-test statistic showed that these emerging urban environments could function better, be more resilient and sustainable if urban design is not only democratized but if conscious efforts are made to accommodate, integrate and evolve them around traditional public open spaces, by systematically mainstreaming this environmental heritage into urban design.

Keywords: African cities, improving, mainstreaming, open spaces, traditional

MONDAY 4TH AUGUST 11.20-11.40 | MR 11AB ICC

RECICLAGEM DO GRANDE HOTEL: AN OPEN BUILDING DESIGN INTERVENTION FOR SOCIO-ECONOMIC EMPOWERMENT IN MOZAMBIQUE

Ir. Robert Cruiming
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Abstract

Poor economies find themselves in an almost no-win situation: They would benefit from improving the economic situation of the very poor by making them self-supporting and economically productive.
However, the very poor are occupied by daily survival and thus cannot afford to improve themselves. This paper describes the status quo of a dilapidated hotel in Beira, a so-called vertical slum that is squatted by one thousand inhabitants trapped in self-sustaining poverty. It builds on the assumption that if a technical intervention creates conditions with clear lines of control, defensible space and basic conditions for trade and productivity, the downward spiral can be reversed towards improvement. The concept of Open Building gives guidelines for a built environment that works based on a clear division of control. Then a proposal to improve the hotel is presented, based on Open Building levels of intervention: the urban fabric reconfiguring the base building and adding modular units that can house small businesses around collecting, recycling and selling materials. In the final analysis, a scenario is painted as proof that interventions that create controllable space could be the first step towards improvement and could work as a template for similar cases.

Keywords: vertical slum, colonial heritage, recycling, Open Building, self-empowerment

MONDAY 4TH AUGUST 11.40-12.00 | MR 11AB ICC

REPURPOSING ARCHITECTURAL AND STRUCTURAL ENGINEERING EDUCATION TO COMBAT CATASTROPHIC STRUCTURAL FAILURE IN DEVELOPING COUNTRIES: A NIGERIAN CASE STUDY

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Abstract

Regular and calamitous collapse of buildings is a major concern in Nigeria. To combat this menace, stakeholders have tried to identify its causes and make recommendations for its amelioration. This paper discusses the major building collapses in history and gives examples of collapses in Nigeria that have claimed lives, and it also identifies their causes. The profit motive and professional incompetence or negligence epitomise major facilitators of substandard structures that lead to structural failure, with immeasurable human costs. In Nigeria, these two facilitators are manifest in several processes and activities in the design and construction of buildings. The paper maintains that it is possible to strike a balance between quality and quantity in building structures, and recommends re-envisioning of the training of architects, engineers and other professional in the construction industry. The deficiencies in the training, practical exposure and ethical orientation of student architects, engineers and quantity surveyors are highlighted. These shortcomings can be ameliorated by requisite adjustments to the curriculum, more rigorous field training of students, emphasis on project management skills, and greater integration of the disciplines responsible for the built environment. This integration should include colocation of the disciplines in the same or adjacent faculties, course sharing, teaching of architectural design and structural analysis courses by subject experts, emphasis on multidisciplinary design software such as Revit, and encouragement of teamwork by encouraging the use of some form of Building Information Modelling (BIM) for the design, analysis and costing of structures. The establishment of multi-disciplinary consulting firms should be encouraged by removing legal bottlenecks to registration, and by giving them preference in the Public Procurement Act.

Keywords: architecture, education, engineering, Nigeria, structural failure.
MONDAY 4TH AUGUST 12.00-12.20 | MR 11AB ICC

SI SYSTEM AS USER-ORIENTED HOUSING APPROACH FOR EMERGING MARKETS: A COMPARATIVE STUDY ON ADAPTED DWELLINGS IN INDONESIA, SOUTH KOREA AND BRAZIL

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**Abstract**

Building adaptation is about responding to changes in demand for property and thus, it is more prevalent in industrialized countries. In the developing world, redevelopment is encouraged rather than adaptation because of the shortage or poor quality of the existing stock. The conceptual framework is based on the SI System principle, which separates decision-making in a residential environment, according to a subsystems approach that distinguishes parts that should adapt according to the user's needs (Infill) and parts that should endure for a century or more (Support). This principle has reorganized the design and construction of residential buildings into user-oriented systems in Japan. We believe this principle can be reinterpreted and updated to harness benefits of developing industries and technologies, improved logistics, and new social values on emerging markets.

In order to investigate the features for implementing the SI System principle on emerging nations, research was developed in Indonesia, South Korea and Brazil. A fieldwork study was conducted to survey about 110 multi-storey dwelling units located in metropolitan areas of Jakarta, Seoul and Sao Paulo in order to identify the conflicts between the agents involved with the management of dwelling adaptations. The methodology consisted of dwelling observation and interviews about home adaptation, contract and management methods, and work troubles and complications. Three major differences were identified, characterized and analysed in comparison to the SI System adopted in Japan. 1) Another level or sublevel of decision-making is required between the support and infill levels, especially in low income apartments in Indonesia; 2) Unlike the SI System adopted in Japan, the support should respond to facade interventions such as balcony enclosures in the three nations; 3) Construction codes in Indonesia and Brazil should be reviewed as done recently in South Korea, because they are incompatible with the actual decision-making structure.

**Keywords:** multi-storey housing, residential open building, and dwelling adaptation

MONDAY 4TH AUGUST 12.20-12.40 | MR 11AB ICC

A SURVEY STUDY OF APARTMENT REMODELING PLAN FOR THE ELDERLY IN KOREA

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**Abstract**

In South Korea, an expanding elderly population has been accompanied by rising rates of poverty and suicide within this age group, indicating that many of the country's senior citizens are suffering economic and social isolation.

The type of housing in which Korean seniors reside can be divided into three categories: owner-
occupied, rental and elderly welfare facilities. Buildings can be largely classified into two types: detached and multi-unit houses. Compared to owner-occupied and rental houses, elderly welfare facilities are limited in number and are designed to provide care for seniors with physical disabilities, not for those at risk of isolation. It is necessary to provide an appropriate type of housing that can contribute to the social and mental health of seniors at large.

In this context, this study proposes co-housing for the elderly as a means to contribute to the mitigation of elderly isolation through the remodeling of permanent rental apartments in which more than half of the current residents are aged, and goes on to explore the possibility of adopting this senior co-housing remodeling plan based on the results of interviews about the co-housing plan aimed at the senior residents of permanent rental apartments.

**Keywords:** senior housing, co-housing for the elderly, remodeling of permanent rental apartments, interview analysis.

MONDAY 4TH AUGUST 12.40-13.00 | MR 11AB ICC

RHIZOMATIC HEALTHSCAPES

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**Abstract**

In many parts of the world, the political, social and environmental effects of the rampant production of space lead to reactionary movements such as insurgent urbanism (Davis 2013) which seek, under pressures of insufficient governance and minimal civic capacity, to address emerging manifestations of spatial chaos. However, what appears to be chaos at one level has the potential to emerge as a different form of complexity or order in a dynamical system of another scale. In this paper, it is argued that individuals, communities, even whole living cities together can self-organise, increase resilience, evade decay, and even flourish with the right supports. Following a literature review and desktop research, two rapidly globalising locations are examined for the potential of new systems to emerge: an informal settlement in one of the most unequal cities in the world, Johannesburg (South Africa), and an unplanned settlement in Dublin, in one of the fastest globalising countries in the world (Ireland). A theoretical investigation of related critical urban and spatial theory is followed by a focus on healthcare provision, and a definition of ‘Rhizomatic Healthscapes’ is proposed. One site in each city is examined in relation to the possible provision of appropriate rhizomatic healthscapes, defined as non-fixed health provision which minimises obduracy, following Habraken’s open building theory, and extending it to design scales around and above architecture. Then systems are proposed which could be less fixed and obdurate than existing provision, more open and flexible, and ultimately more successful in resistance to forces of unequal spatial production which prevent appropriate healthcare in a rapidly globalising, increasingly connected world.

A framework is proposed for stimulating official responses to issues of health, spatial justice and quality in unplanned and informal settlements with reference to innovative policy, and suggestions are made for new design processes, products and responses to informal, unplanned and spatially chaotic scenarios.

**Keywords:** spatial chaos, scenario planning, open building, rhizomatic healthscapes.
MONDAY 4TH AUGUST 14.00-14.20 | MR 11AB ICC

ANTIFRAGILITY IN ARCHITECTURE: IMPROVING ARCHITECTURE WITH APPROPRIATE REACTION TO POSITIVE STRESSORS

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Abstract

Unpredictable building and neighbourhood stressors provoke a constant request for adaptability, threatening fragile systems with collapse if they are incapable of reacting. Inspired by evolutionary epigenetic mechanisms, strategies are proposed that increase the adaptability of the built environment. In applying consciously developed, partially controllable positive stressors to existing neighbourhoods and buildings, reactive processes occur that redirect fragile systems towards robustness, resilience or onto antifragility.

An assessment model is developed for the implementation of positive stressors in neighbourhoods, buildings and processes increasing the adaptability of the built environment and generating collective benefit.

Keywords: evolution, epigenetic, antifragility, cooperation, resilience, open architecture, adaptability.

MONDAY 4TH AUGUST 14.20-14.40 | MR 11AB ICC

OPEN BUILDING IN BRAZIL: IS IT POSSIBLE?

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Abstract

The provision of social housing in Brazil has been in progress since 2009 carried out by the Program Minha Casa, Minha Vida. The program, sponsored by the Federal Government, has seen little progress in relation to prior housing policies, also in regard to the quality of the dwelling spaces. Its production is quite opposed to the conceptual principles of Open Building, not addressing features such as flexibility, connectivity and efficiency, and offering ready-built, finished, standardised, non-adaptable, obsolete and under-utilised spaces.

The context of such formal housing mass production, based on productive capitalist principles, involves [1] agents and institutions of the private and public sectors, their properties and relationships, [2] the condition and the conduct of architects within the scope of their education and cultural heritage [3] and current Brazilian society considering the social, economic and political transformations of recent decades.

The logic of practice in this field, as carried out by the private market and legitimised by the State, hinders the participation of dwellers in the decision-making process related to the space where they will live. This contrasts with the prevailing practice of self-construction, and addresses the question, not as an architectural or technological issue, but mainly, as a political, economic and social issue.
In other words, the circumstances involve the market, the government, the professional, academia and the population, a context where capital prevails, ruled by consumerism, which in principle or historically, is not interested in developing evolutorial spaces that are unlikely to be demolished for the construction of newer dwellings.

The text ultimately proposes to challenge and investigate to what extent it would be possible to apply the Open Building methodology to the Brazilian housing production initiatives, in view of the flaws indicated in the logic of this practice, and the effective association of the movement’s principles to contemporary Brazilian housing policy. The present paper is part of a larger Ph.D. study that is in progress, which further investigates this theme.

**Keywords:** Open Building, social housing, public policies, autonomy.

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**MONDAY 4TH AUGUST 14.40-15.00 | MR 11AB ICC**

**OPEN EMERGENCY AND URGENT CARE SYSTEMS: EMERGENT PROJECT DESIGN DECISIONS UTILISING SCENARIO PLANNING WITH SYSTEMS SEPARATION**

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**Abstract**

An inter-disciplinary project team has a challenging job to design healthcare architecture that is resilient and adaptive to change, whilst ensuring that the system, services and assets fit with a region’s uniqueness. Emergency and urgent care is a microcosm of the wider regional picture and so provides an ideal case study environment to test scenario planning and system separation. What is more this setting is increasingly under pressure and so there is a need for a new approach. For example there is an increase in demand for emergency care services, in UK by some 4% annually (in England a 2014 report by the National Institute for Health Research suggests 11% increase of unplanned attendances between 2008 and 2013), and a need for efficiency savings of £20bn in the healthcare system.

This paper identifies the importance of establishing a project design approach that discusses levels of strategic and operational importance with the various stakeholders. In this sense it proposes an approach that goes beyond a traditional view of static space and building definition. It presents state-of-the-art hospital design concepts such as operational flow, system separation (from open building), operational whole life, acuity adaptability and scenario planning from a literature review. Finally the application of these concepts from live case studies within the UK National Health Service (NHS) is explored. It was found that a combination of these advanced concepts is a valuable means of considering resilience through adaptable design in emergency care systems. What is more they can support inter-disciplinary team discourse and open principles over an assets whole life.

**Keywords:** open, emergency, acuity, adaptive, design, scenario, system, resilience.
MONDAY 4TH AUGUST 15.00-15.20 | MR 11AB ICC

SEARCHING FOR AN ALTERNATIVE WAY FOR DWELLINGS BY DRAWING A PARALLEL BETWEEN BUILDING FACADE DESIGN AND THE IDEA OF CLOTHES ACCORDING TO CHARACTERISTICS OF CLIMATE

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Abstract

Through the history of humanity for keeping their bodies temperature in an optimum level, it is needed to create something which covers the surface that is in contact with the air directly. This very natural need evolves variously from region to region with different characteristics. Within the local properties, the living developed outfits and a way of using them on their bodies. The materials, from plant fibre to hair, show different qualities together with the different application methods. These basic components, which are mainly based on stabilizing the thermal comfort of the body for life, create another skin over the body. One step further, today the dwelling creates an extended skin while the basic needs are met such as sleeping, nutritional requirements, shopping …etc. In the meantime, the work of thermal regulation of the body is managed by the constructed environment via minimizing possibilities. That is why in our century, heating or cooling of buildings has a great effect on over consumption of the energy. As a method, this article mainly observes three different weather characteristics. Firstly, in terms of ways of dressing under these climatic properties and observed data are used to explore the way how to apply this to dwellings with the logic of the functional aspect of clothing. As a conclusion, this article hopes to bring a new aspect into space and its thermal regulation by getting ideas from the past where the only technology is the use of nature.

Keywords: locality, clothing, body, comfort.

MONDAY 4TH AUGUST 15.20-15.40 | MR 11AB ICC

THE IDEA OF NATURE: SELF-DEFENSE SENSITIVE PATCH

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Abstract

Every day the environment changes, and every day we change as well. The way some genes are expressed is determined by how the environment interacts and helps the genes become noticeable. External factors such as light, chemicals, or temperature are the factors that affect us in the simplest ways. This project is mainly based on an adaption to the environmental parameter by getting inspiration from nature. When we look into wildlife with this question, the solution or way of being alive in wild circumstances is clearly seen. This is what Himalayan Rabbits do. The unique characteristic of these rabbits is to protect themselves against dramatically changing weather conditions on their skins. The adaption is directly related to the sun. The system is ordered giving reaction, also a means of creating self-defense, against the two certain factors which are cold and hot. This project seeks to translate this logic into sustainability and it is used for new energy of life. The idea is using commonly found materials and providing a connection between the known working principals on the creation of a sun-sensitive system in the easily agglutinate and pluggable patch. In this article, according to the weather conditions, four scenarios are specified. Throughout, the scenarios are observed and for each circumstance, the adaption of the patch is explained. The designed patches directly aim to reduce heat escaping from the transparent surface by benefiting from the advantages of optical transmittance, to support the interior thermal comfort by creating an isolation layer on the transparent substance of the face and to find a solution for the problematic side of using transparent surface on the building facades.

Keywords: absorption, adaption, color energy, isolation, pluggable.
THREE-DIMENSIONAL ‘SITES’ – AN INVESTIGATION INTO SOLVING THE PROBLEM OF EMPTY BUILDINGS IN CITY CENTRES

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Abstract

What can we do with empty buildings? It appears that in most cases, only the surface is redesigned – new walls, new floor plan layouts, new ceilings – for offices or apartments or whatever suits the project. However, is it perhaps time to redesign deeper? Is it time to look into the existing elements and use everything – structure, volume, services – as tools that can be re-shaped, cut away or added and re-used? Is it perhaps time to question what ‘site’ really is?

This paper will discuss a possible way of re-using existing, empty buildings. Similar concepts and ideas will be discussed and examples of existing empty buildings in Pretoria’s CBD will be shown (like the controversial Kruger Park and Schubart Park). The author’s own thesis will also be touched on as an illustration of a solution and as starting point for the theoretical discussion. The concept of three-dimensional ‘sites’ will be explored, together with theories and examples of international projects where this principle can be seen.

Along the lines of the conference themes, ideas and concepts will be investigated that will include: resilience – a new system or way of thinking about re-using existing structures; ecology – open-building and designing for change; values – questioning traditional concepts of ‘site’. Advantages like speed and cost saving, amongst others, will also be discussed, together with the disadvantages and possible foreseeable problems. Even for new buildings these principles will be applicable and also examined (designing for change).

South African cities are diverse and full of potential, not just within the streets, the users or the cultures, but even within existing structures. This paper will ask: what if ‘site’ was not restricted to physical ground, but was rather something three-dimensional, higher up, creating new possibilities?

Keywords: re-use, site, open-building, adaptability, change.
PROGRAMME PARTNER SESSIONS
TUESDAY 5TH AUGUST 2014 | MR 11 AB ICC

TUESDAY 5TH AUGUST 11.00-11.20 | MR 11AB ICC

STRATEGIES FOR ALLOGRAPHIC URBANISM

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Abstract

In a time in which city-wide planning strategies are failing due to a lack of city governance and the widespread bankruptcy of communities, bottom-up models present themselves as an alternative approach to balancing public-private partnerships governed by corporate bodies. Even European cities with relatively functional administrations are moving away from top-down planning models, and therefore it would seem that the counter posed bottom-up strategy is taking its place. Characterized as deploying ad-hoc maneuvers stretching from guerrilla urbanism to DIY, these strategies are not an adequate response to the widespread need for city-wide design strategies. However, bottom-up approaches do possess a potentiality for rapid change, and this potentiality can be actualized if adequate notations and design frameworks are set in place that can capitalize on open source participation while simultaneously regulating the large-scale outcome. This paper examines strategies that take advantage of small-scale networked design implementations as a method of addressing issues of large-scale transformation. These projects navigate top-down and bottom-up strategies, combining the best of both and abandoning scenarios that are rigid, generic, or ad hoc. These projects utilize interim design as a testing ground for user participation, while mediating the simultaneously embeddedness of dynamic urban notations that address larger urban issues of long-term integration. The notion of multiplicity, replication and directed participation becomes a critical part of these game changing strategies.

Keywords: allographic urbanism, do-it-yourself, guerilla, pop-up, tactical urbanism, bottom-up and top-down urban strategies.

TUESDAY 5TH AUGUST 11.20-11.40 | MR 11AB ICC

HEALTHCARE FACILITIES DESIGNED FOR FLEXIBILITY: THE CHALLENGE OF CULTURE CHANGE IN A LARGE US PUBLIC AGENCY

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Abstract

The US Department of Defense Health Agency (DHA) has an international network of healthcare facilities to serve personnel serving in the armed forces.
The DHA has a budget approximating $3 billion per year for the acquisition of new facilities and the maintenance and upgrading of existing facilities. Recently, the DHA – driven by a US government-wide mandate - has made a commitment to a policy of sustainable facilities. DHA leadership recognized that a key element of a sustainable asset portfolio is that the facilities must be flexible – planned for the likelihood of expansion, contraction, alteration or change of function or a combination of these – and thus capable of meeting the challenges of changing missions, patient demographics, medical practices, and medical technology.

This paper discusses the work being done to introduce flexibility as a high level principle in the DHA policies, practices and criteria. The paper discusses the recommendations being made to implement flexibility by the insertion of flexibility requirements in the key guidance documents used by architects and engineers in designing new and renovating existing DHA facilities. Because many of these are recommended to be mandatory (not simply incentives), their adoption is expected to require a change in the culture of DHA and in the entire decision-making chain for the acquisition and management of DHA healthcare facilities.

This paper reports on the recommended flexibility requirements and the culture change required for their full implementation.

**Keywords:** Healthcare facilities, flexibility, whole-life performance, sustainability, open building.

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**TUESDAY 5TH AUGUST 11.40-12.00 | MR 11AB ICC**

**DEFINING FORMS OF COLLABORATIVE LIVING IN MODERN CHINA**

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**Abstract**

The increase in social and environmental problems caused by rapid industrialization and urbanization has prompted the Chinese government to seek sustainable and affordable approaches to social housing. Collaborative housing has been regarded as a spontaneous form of social housing since the early 20th century. This study identifies the forms and characteristics of collaborative living in urban China since around 1949 and considers the role of social housing construction. The study analyzes various scenarios of collaborative living in different periods in modern urban China and points out that collaborative housing used to be the chief housing provision for residents who were unable to access the housing market. These scenarios of collaborative living are examined in terms of motivation and original intention, community plan and design, physical form and scale, the residents’ role and structure, and financing and ownership to determine the reasons that motivate short-lived experiments of collaborative housing in China. Collaborative housing in Denmark, the Netherlands, Switzerland, the United States, and Australia are also investigated to determine how collaborative housing can be applied in different contexts and how collaborative housing is capable of spatially balancing privacy and community. Suggestions for future collaborative housing are generated from this comparison. The findings of the study emphasize that collaborative housing is capable of providing an alternative approach to high-quality and low-price social housing in China.

**Keywords:** forms of collaborative living, collaborative housing, social housing, cohousing model, sustainable low-price community.
TIME-INCORPORATED BUILDING SUPPORTING CHANGING CARE NEEDS: INTEGRATED DESIGN AND LIFE CYCLE IMPACT ASSESSMENT OF A FLEMISH PILOT PROJECT

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Abstract

By 2050, more than a quarter of the Flemish population will be older than 65 years; for other European countries similar figures are predicted. The current traditional care system in Belgium and Western Europe is characterised by a segregation of elderly people from active society and by high nursing costs. Based on this, a drastic shift is needed towards a systemic integration of informal care (by family, friends and volunteers) for a majority of older people that only require little or infrequent care. Such a shift will however require other architectural concepts, allowing dwellings and care facilities to support changing (caring) needs and improve the well-being of the elderly and the carer.

Time-incorporated building will play an important role in providing flexible, adaptable and customised dwelling and care solutions towards realising aging-in-place. In this, the design allows for different forms of (re-)gaining autonomy and developing identity, two prerequisites for a sense of well-being in a living and care environment.

The development of a Flemish pilot project provides a playground to investigate the beneficial effect of innovative architectural concepts on the total life cycle environmental impact of the building and the organisation of care, as well as the well-being of the future residents. Through research by design and a life cycle impact assessment the following related research questions are tackled in this project:

- In which way will time-incorporated building design help to balance the initial impact and life cycle impact of the building?
- What is the effect of time-incorporated building design on environmental impact?
- In what way do building elements need to be detailed to support low external environmental costs, low financial costs and changing care needs in a (care)home environment (leading to low organisational costs)?

**Keywords**: design for change, research by design, life cycle impact assessment, life cycle costing.
UR FREESTYLE HOUSE (PART 1): REACTIVATION PROJECT BY DIY RENOVATION FOR EXISTING RENTAL DWELLING UNITS IN KOZOJI NEWTOWN JAPAN

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Abstract

Kozoji Newtown Study Group with participants from universities in Aichi Prefecture and Nonprofit Organizations (NPOs) has studied future urban development for Kozoji Newtown where residents are rapidly aging. Meanwhile, the Urban Renaissance (UR) Agency, having many rental dwelling units in the Newtown, faces the problem that young people have moved out of the Newtown. For this reason, the Study Group in collaboration with the UR Agency planned a project ‘UR Free Style House’ to encourage young people to move to the Newtown. One of the characteristics of the project is that the obligation to restore a room to their original state, which is usually imposed on a resident, was removed from contracts so that the resident could change the room according to his preference.

Also the following three steps were taken to suppress the expense for both the owner UR Agency and the resident.

Step 1 - As a primary construction, the owner, i.e. the UR Agency, renovates the dwelling unit that has a dining room, kitchen and two other rooms, to a single-room dwelling unit so that a resident would be able to renovate the room more freely.

Step 2 - The UR Agency sets up open room days so that visitors can actually see the rooms, and the Study Group sets up panel exhibition in the rooms to show DIY renovation examples and raise visitor interest.

Step 3 - After receiving an application, the UR Agency and resident make a lease agreement where the resident is allowed to do ‘Do it yourself’ (DIY) renovation and will not be charged for the first three months stay.

Keywords: DIY, rental dwelling unit, infill or fill-out, renovation.
Abstract

This study is a continuation of the ‘UR Freestyle House Part 1’, Do-It-Yourself (DIY) revitalization project of existing rental unit in Kozoji Newtown. This paper surveys evaluations received from those with the potential to live there for the ‘UR Freestyle House’ (hereafter UR-FSH) Project framework and surveys their awareness of DIY. We also reveal the potential and issues of developing rental units that can have DIY in Japan based on the results of the survey.

The survey method is a questionnaire for visitors who came to see the project unit and young people.

The results of this survey are revealed as shown below.

- Those in their 20s have the most interest with more than 70% of respondents stating they wanted to live there. UR-FSH may promote young people to move into them as per the goals of the project.
- About 25% of the total had DIY experience. Over 80% of respondents felt uneasy about DIY constructions. Support after moving in is required to perform DIY construction.

Keywords: DIY, rental units, renovation, evaluation.
ENERGY SAVING STRATEGIES FOR THE XUANCHENG OLYMPIC SPORTS CENTER DESIGN IN ANHUI PROVINCE, CHINA

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Abstract

From 2020, the Guidelines of the China Government require construction of new buildings with 65% energy saving compared to existing ones. This paper investigates how it is possible to reach that objective using the combination of two fundamental factors: the use of a specific planning methodology and the appropriate use of technologies containing integrated and innovative plant systems. The two key factors are developed by the authors in the design of the Xuancheng Olympic Sports Center located in the cold winter and hot summer region of China. The adopted planning methodology develops the principles of the bioclimatic planning which are verified through the analysis of the annual energy consumption of buildings designed. The aim is to maximize the winter sun radiation and, at the same time, to minimize the excessive summer solar radiation using innovative automated shading systems which are specifically developed for this project. Shading systems are considered as an integral part of enclosure system design, in order to reduce primary energy demand according to different plant solutions, to balance day-lighting requirements and to optimize visual and thermal comfort.

To achieve the goal of nearly ZEB buildings, different innovative solutions of plant systems using renewable energy sources are adopted in different buildings such as:

1) Integrated photovoltaic panels connected to a heat pump with geothermal probes for heating and cooling;
2) Integrated solar panels for hot water production;
3) Integrated solar panels to provide energy to the absorption machine for the solar cooling and heating system.

The design process control was carried out through the aid of dynamic energy simulation software such as DesignBuilder. The results show that design strategies adopted allow increase the level of interior comfort and the energy efficiency of buildings by the best use of climatic resources of the site.

Keywords: Energy efficiency, solar screens, shading systems, lighting control, integrated simulation.
TUESDAY 5TH AUGUST 14.20-14.40 | MR 11AB ICC

AN APPROACH TO REDesign FOR CHANGE: RESEARCH-BY-DESIGN

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Abstract

The high environmental impact of construction is currently challenging conventional architectural practice. In reaction, the strategy ‘design-for-change’ has been put forward. Through the adoption of ‘interchangeable’ building components and ‘reversible’ connections, this alternative design strategy fosters both reuse and recycling. Consequently, it reduces the generation of construction waste and minimises the need for new resources.

To date, it has been unclear how ‘design-for-change’ fits architectural practice; interviewees from the construction sector indicated multiple design-related impediments to its wider implementation. In order to find out if those impediments are well founded and how they can be overcome, we observed a conventional redesign process of an ongoing renovation. From our findings, we initiated the development of a practical approach to ‘redesign-for-change’.

Based on our observations we could conclude that the redesign process does not differ substantially when adopting a ‘redesign-for-change’ approach. In contrast, ‘redesign-for-change’ holds the opportunity to coordinate multiple design levels and can guarantee long term quality for the user as well as commercial viability for the owner. From the development of the practical redesign approach we learned that ‘design-for-change’ can bring more design options than those initially considered.

Nevertheless, the evaluation of multiple design options remains a bottleneck. Life cycle analyses can be performed, but more user friendly evaluation tools are necessary. Furthermore, since ‘design-for-change’ is not common yet, the technical development was indicated as the most difficult part in our research-by-design.

Keywords: research-by-design, design-for-change, adaptable building, design process.
ACTION TO LONG-LIFE QUALITY HOUSING IN JAPAN – DURABILITY OF THE METAL JOINTS OF WOODEN HOUSES

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Abstract

Recently in Japan, there is a lot of R&D about long-life quality housing. In this paper, I focus on the action to long-life quality housing (LLQH), especially to durability of the metal joint of wooden houses.

In Japan, the Act on the Promotion of Popularization of Long-life Quality Housing came into effect in June 2009. Based on this act, over 300,000 units were certified as LLQH by July 2009. The standards of LLQH are – Construction durability, Earthquake resistance, Adaptability, Maintenance, and Fit for the elderly. The technological background of these is based on General Technology Development Project of Ministry of Construction in 1980s, with cases collected and organized by durability subcommittee of the comprehensive verification project of Wooden Long-Life Quality Housing, which was a subsidized project of MLIT from 2006. There are 7 themes in this project – Study of Degradation external force, study of durability of preservative chemicals in wood, study of inspection data of new and old housing, evaluation of strength of the joints when wood decays, evaluation of durability by the simulation of dew condensation, study of the durability of the metal joint, and study of maintenance.

In order to establish appropriate durability criteria, we need the information of degradation rates and structural performance when the parts are degraded. The information was obtained through exposure tests of metal plates on the preservative woods and structural tests of nails with rust in the woods. With the information, we concluded that the nail with the rust on the surface is stronger than the nail without the rust, and when the rust grows, failure mode changes and strength is reduced.

Keywords: wooden structures, long-life, metal joint, durability, degradation.

THE DESIGN AND MANAGEMENT METHOD OF AMALGAMATED DWELLING FOR THE LONG-TERM CHANGEABLE OF FAMILY STRUCTURE

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Abstract

In order to ensure the long-term Suitability for dwelling, the inside space not only need to adapt the diversity at the beginning, but also the needs of space changeable for long term changeable of family structure. The changeable include increment for younger and decrement for elder, the younger need to improvement their space step by step, and the elder need to change their excess space into cash to increase pension. In this paper, we use open space method to try to coordinate this pair of contradictions, to realize the long-term suitability for the long-term changeable of family structure by unchangeable total space of the whole community. Otherwise, we also use book-life components to reduce the expansion of nature resource.

Keyword: Open space Amalgamated dwelling, Long-term suitability, coordination between increment and decrement, book-life components
THE OLD BUILDINGS REUSE DESIGN BASED ON THE REPRODUCTION OF PLACE SPIRIT

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Abstract

The paper takes old building renovation as the research target, sets foot in the rebuilding of the place spirit, analyzes and researches the profound connotation and functions of old building renovation from such three aspects as territoriality, historical context and social emotions etc., expounds the molding methods and expression methods of the place spirit from the perspectives of restructuring and division of spatial space of buildings, optimization of detailed form and quality of the spatial landscape and solves the contradictions of design between human beings and buildings, environmental history and reality and inheritance and innovation to realize rejuvenation of old buildings in the place spirit of restructuring of territoriality and the sense of belonging.

Keywords: place spirit, old buildings, design renewal.

VUKUZAKHE – BROAD BASED SUSTAINABILITY IN THE DELIVERY OF MUNICIPAL SERVICE ARCHITECTURE FOR ETHEKWINI

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Abstract

The complete document explores the potential for broad-based economic sustainability through municipal service delivery structures within the Ethekwini Metro. The research aims to re-evaluate the process of procurement, supply, construction and asset management.

Building systems, materials and processes of construction were examined in order to seek a more effective methodology, beneficial to local residents. A wide variety of projects were analysed and consultants in economic and social development consulted to provide a framework for responsible and accelerated delivery of community buildings.

Materials and construction systems were analysed in terms of their
- local availability,
- energy carbon footprint in offsite and onsite processing,
- adaptability through various building solutions,
- potential for skills development,
- ease of uptake in local communities,
- ability to develop small industries,
- benefit to end user, whether service provider or receiver.
Although some conclusions were made, the objective is to develop a means of analysing building design and material specification in order to offer maximum sustainable economic growth.

Benefit was seen in:
- Cost-effective materials that are commonly available and processes that are easily adopted due to existing skills.
- Proposed systems allowing simple fabrication of portable components that can be adapted to suit multiple conditions.
- Building processes were proposed that allow community participation from project inception to building completion in architectural and non-architectural aspects of the project.
- A multi-departmental co-operative municipal approach to the development of the site.
- Successful systems would allow for further development of small business in the customization of components.

This research is currently being further developed in the design of fire stations for the eThekwini Fire Dept. It is feasible that by August 2014 a building will be in production.

Keywords: local relevance, community benefit, environmental responsibility.

PROGRAMME PARTNER SESSIONS

TUESDAY 5TH AUGUST 2014 | MR 11 E ICC

TUESDAY 5TH AUGUST 14.00-14.20 | MR 11E ICC

PROVIDE BUILDING FABRIC DESIGN THAT POSITIVELY RESPONDS TO THE DIVERSITY OF ENVIRONMENTAL AND SOCIAL CONDITIONS OF UNSERVED COMMUNITIES

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Abstract

The network of healthcare facilities in Mozambique is made up of facilities that are old and do not meet the current healthcare needs of the country. Many facilities have already existed well beyond their useful life of approximately 50 to 75 years, and continue to operate without considerable maintenance. The access to care is very low. According to the Ministry of Health, the ratio of population at the primary level of care delivery (health centres) is an average of 17,000 people per each healthcare unit and for the secondary level (district and rural hospitals) is 501,000 people per each healthcare unit.

The population is growing very fast, with projections pointing to 25,041,922 inhabitants in the year of 2014, and 29,310,474 inhabitants by the year 2020. The population is migrating from rural to urban areas, settling in peripheral unplanned ex-urban areas which are currently unserved in terms of access to healthcare. Because most existing healthcare facilities are old, in a state of disrepair, and do not support state of art practices in healthcare, it is evident that there is a need to improve the current planning and design tools. Furthermore, these tools will help decision makers and designers to improve the process of decision making in design, and will boost design solutions that will positively respond to the diversity of environmental and social conditions of the communities.

The set of proposed tools brings awareness and underlines the planning, organization and design of a building fabric to ensure the current state of art in healthcare delivery while responding to the overall healthcare needs of the communities, including:
(i) patients, staff and family needs; (ii) health and safety, and (iii) improvement of staff efficiency and effectiveness; emphasizing as well the overall site and surrounding context to provide a friendly, rather than harming facility.

**Keywords**: building, design, environmental, unserved, communities.

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**TUESDAY 5TH AUGUST 14.20-14.40 | MR 11E ICC**

**DIFFERENTIATED DESIGN FOR THE REUSE OF OLD BUILDINGS BASED ON THE SPACE ADAPTION**

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**Abstract**

With the development of urban cities, the problems about reuse of old buildings in urban renewal are becoming more and more highlighted. The so-called space adaptive of old-building reuse is a phenomenon that is caused by numerous special conditions in our times. It cannot be seen as a reversal of radical modernist methods, nor can it be seen as catering to modernism, while it takes the concept that the buildings are different from each other as a prerequisite, and emphasizes & pursues that each building has its own unique-space and self-definition. This paper, taking the perspective of building space, from three study aspects-design techniques, aesthetics and technological innovation, combining cases, analyzes and discusses the design method of space adaptation in different kinds of space, aiming to provide useful help for old building reuse in the future.

**Keywords**: building reuse, urban renewal, space adaptation.

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**TUESDAY 5TH AUGUST 14.40-15.00 | MR 11E ICC**

**TECTONIC AUTHENTICITY: A STUDY OF TRANSITION FROM CHINESE CLASSICAL WOOD ARCHITECTURE TO CONTEMPORARY WOOD ARCHITECTURE**

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**Abstract**

In recent years, the cities in China have become the testing ground for architects all over the world. There were a large number of excessive symbolic or baroque architecture which were built with incredible speed. Nevertheless, it was too difficult to find the buildings with gene of Chinese culture in modern Chinese cities, so many concrete jungles. As one kind of typical Chinese buildings, classical wood architecture was disappearing. For the idea of design with wood and the technology of wood construction were forgotten or even abandoned by the vast majority of contemporary Chinese architects. They chased after international trends instead of tracing back to Chinese traditional architectural culture. The paper addressed tectonic authenticity as new methodology in Chinese contemporary architecture design. The author aimed to find a way to convert traditional elements into contemporary architecture. First, the author outlined the characteristics of Chinese classical wood architecture, which involved culture, history, formal, material and technological issues. Second, the wood tectonic methods were defined as the core part for the process of transition from tradition
to contemporary. Third, several case studies, including Pritzker Prize winner Wang Shu’s projects, were employed to analyze the possibility of transformation with the guidance of tectonic authenticity. Finally, the conclusion was drawn that Chinese wood architecture design was the issue related to sustainability in the area of environment and culture. The paper generalized that wood could be treated as a kind of tectonic material for contemporary design for bearing traditional Chinese culture. The application of the tectonic authenticity in wood architecture could bridge the gap between Chinese classical culture and contemporary architecture. Furthermore, the author pointed out that tectonic authenticity could be an ideal paradigm for all the architects who want to combine tradition and innovation in countries with a long cultural history.

**Keywords**: tectonic authenticity, wood architecture, tradition, sustainability.

**TUESDAY 5TH AUGUST 15.00-15.20 | MR 11E ICC**

**FRAMEWORK FOR AN OPEN SPACE ECOLOGY IN ARCHITECTURE**

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**Abstract**

The paper discusses the changing modes of conception, production and consumption of architecture within the larger open source discourse. Analogies are drawn from the field of computer science to conceptually understand the relevance of ideas like hackitivism, crowd sourcing, open source, social media and user centric approaches with regards to architecture in the 21st century. These ideas are discussed in relationship with a long lineage of research carried out within the architectural community regarding user participation in design. Contemporary interpretation of similar ideas is discussed with relation to how they could be systematically classified based on the nature of the ‘open’ and the ‘source’ as an approach towards design and architecture. Hybridising these approaches leads to what can be termed as ‘Hackitecture’, a systemic appropriation of the hacker culture and the open source movement as an architectural agency. The paper then argues for an open source framework for architecture where obvious differences between the user and designer are dissolved and wherein the conception to production and eventual conception of the architectural ‘object’ exists as a continuum. Such a framework is discussed with respect to the technological shift emerging within the discipline. The paper concludes with the possibility of situating such processes within the larger post capitalist socio political turmoil seen today while discussing the problems of such an approach.

**Keywords**: open source architecture, crowd sourced design, participatory design processes, user interaction, post capitalist architecture, social media.

**TUESDAY 5TH AUGUST 15.20-15.40 | MR 11E ICC**

**‘DYING’ VILLAGE: ANCIENT VILLAGES IN THE SUBURBS OF LARGE CITIES**

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**Abstract**

With the rapid development of cities, it has become even more obvious that development in Beijing focuses on a single area. However, the country is far away from the city center and facing the condition
of rapid decline relative to the crazy development of the city. Modern architecture and modern blocks are expanding at an unbelievable speed in the city, which is pursuing efficiency. It is seriously influencing the survival and development of ancient villages and ancient buildings. Based on the research of the ancient village in Yanqing, we found their development situation is not optimistic. The investigation has discovered that the existing management and development mode of the ancient villages in Yanqing has the following two kinds:

First, dismantling the old building and replace a new one without any consideration. This leads to a result that the features of new villages are far away from the original, not only in the physical form but also in terms of spatial organization. The connection in lifestyle and residential culture between the new and original are also completely cut off.

Second, dismantling the old building and build a new one with some outside features of the original village. It deliberately creates fake ancient villages full of nostalgia. This only leaves material bodies of the ancient villages after the original residents move away. We put forward some sustainable strategies of the protection of ancient villages. This is based on the analysis of different kinds of shortcomings of ancient villages in current development situation. We should discover and use natural resources and culture resources, and at the same time, reserve the features in the development and protection of an ancient village. Perpetuating the trajectory of village development becomes a kind of possibility and it will be a highlight of ancient village planning.

Keywords: ancient villages, protection, development, sustainable strategies.

TUESDAY 5TH AUGUST 15.40-16.00 | MR 11E ICC

TIME-BASED DESIGN APPROACHES FOR INFORMAL SETTLEMENT UPGRADE IN SOUTH AFRICA

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Abstract

It is no longer sustainable for the state to deliver full and fixed housing units to the poor. Moreover, while all people act on, and influence their immediate environment, this is especially evident in situations where people have difficulty to access the formal housing market. These initiatives create an energy that needs to be celebrated and managed in efficient ways through innovative delivery, finance and technical systems. Given these realities, in South Africa, Informal Settlement Upgrading (ISU) practice need to adopt design approaches that focus on flexibility and multi-actor participation. Using Open Building (OB) concepts, this paper argues that improved housing delivery can be achieved by focusing state investment on the development of complete housing eco-systems and allowing for diverse interpretations in terms of typologies, densities and mix of functions, tenure and income groups. The concept of Base Buildings becomes a framework for managing participation processes and allowing for shared and distributed decision-making in a system that is inherently participative. Base Buildings ensure a method and tool to manage, the sometimes conflicting, requirements of various actors in the built environment.

Keywords: Time-based design, Open Building, Informal Settlement Upgrading (ISU), incrementality, South Africa
STUDYING THE EFFECT OF ADAPTABLE MATERIALISATION ON LONG TERM URBAN DEVELOPMENT GOALS: A METHODOLOGY

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Abstract

Sustainable urban development is increasingly studied within the framework of dynamic theories such as resilience, adaptation or transition – concepts based on the acknowledgement of an uncertain and changing future. However, the use of dynamic concepts in the development discourse is not reflected in the approaches used to materialise our urban environments – conventional approaches mostly lead to the creation of buildings, infrastructure and public spaces that are unable to accommodate changes over time.

In order to study the effect of a more adaptable built environment on long term urban development goals, there is a need for methodologies linking dynamic theories on the urban level to concepts of adaptable materialisation. Using complexity theory as a theoretical framework, we have developed such a methodology: the Lab for Urban Fragment Futures. This paper discusses the aim to balance theory and practice, illustrates the methodology based on an urban regeneration project for a social housing estate in Mechelen (Belgium), and discusses its potential use and merits.

In essence, the methodology is a design charrette. The goal is to ‘refurbish’ an existing urban development project and adaptable variants of that same project, based on a hypothetical future scenario. Afterwards, the refurbishments of the existing project and its variants are evaluated in terms of their long term sustainable development goals. The development of the methodological framework and resulting theories is an iterative process, evolving case by case (similar to a grounded theory approach).

On a theoretical research level, the Lab could be useful to explore the benefits and drawbacks of adaptability on the neighbourhood level, to formulate theory, to create preliminary tools and guidelines, and to explore if there are planning principles to optimise the distribution of adaptable capacity in an urban fragment. At the same time, it could function as a decision support platform for policy makers, designers and other stakeholders of urban projects by demonstrating the importance of adaptable materialisation in supporting long-term sustainability goals.

The next stage in the development of the Lab for Urban Fragment Futures is testing the methodology in practice, which will be done in an ongoing redevelopment project in the city of Turnhout, Belgium. The results and experiences of the test case will then be used to explore and assess the methodology’s strength in terms of verifying hypothesis about urban fragment adaptability.

**Keywords:** adaptability, complexity, urban fragment, design charrette, design scenario.
HANDLING MULTIPLE ECOCLOGIES IN ARCHITECTURAL DESIGN

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Abstract

In light of the many challenges of resource scarcity, climate change, rapid urbanization and changing social patterns facing societies today, mainstream architecture remains remarkably ‘resilient’ to conceptual innovation regarding its nature and role in society. If the idea of open architecture, able to accommodate change over time is a necessary development in architectural conceptualization, what are the barriers and problems inherent in the present design culture, and how may these be overcome?

In an educational experiment, architecture and architectural engineering students were asked to imagine that their recent housing projects had been built and occupied for 25+ years. The students were given the task to transform each other’s projects according to new social programs, increased urban density and strict energy and resources use paradigms, using a design methodological framework in which they were to address liveability, environment, recyclability and energy across several architectural scales.

Drawing on Actor Network Theory (ANT) vocabularies to describe the process, the authors identify challenges and potentials: A need for further cross disciplinary integration remains if architects are to address the increasing demands for resource optimization and environmental performance with great precision, but the experiment also showed promises in resolving design problems with multifaceted solutions addressing social and environmental issues simultaneously. The methodological framework in which the traditional scales of relative size were combined with new scales of time, intensities and durations proved instrumental towards creating a design culture of multiple ecologies.

Keywords: multiple ecologies, integrated design methods, transforming the built environment, sustainability.

THE HELSINKI SEASIDE QUARTER OF SUSTAINABLE BUILDING TYPES

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Developer, Owner: SATO Corporation /Jouko Kausela, Hannu Korhonen, Maarit Tuomainen
Building Contractor: SRV Company /Project managers Juha Leivonen, Janne Sihvonen

Abstract

Medium density housing has in Finland been lately estimated as the best solution both in terms of quality and energy use. But new urban areas lack social interaction, don’t meet up with residents’ values and are rigid for changes. Improvement requires new building types with adaptability to create a versatile urban quarter. Studies of this theme started in 2007 and a good location was found in the former Helsinki harbour area. The City application was approved and the research and design projects started. Building work was finished by the end of 2013. The Housing types were 1. The
social Gallery House with 77 small combinable flats for rent around a 5-6 floors high inside court with a glazed roof. 2. The Family Block, 6 floors and 45 owner-occupied reasonably priced family apartments, which are open for different uses without structural changes. 3. Town Houses in two three-floor buildings, 11 apartments with courtyard, roof terraces and many user selections. The whole quarter’s technical systems, services and parking are under the common courtyard. Outcomes of the project are encouraging. Versatility and customer fitted housing types improved apartments, common spaces and social environment. Previous research work gave solutions for family housing, especially for small apartments. The building process was based on prefabricated structural elements and the cost level was normal. The demand for flats was lively; almost all apartments except the town houses are occupied. Residents moved in Jan 2014. A feedback survey of both housing blocks has been implemented: the resident satisfaction was high.

Keywords: social versatility, adaptability, sustainability, urban building types.

WEDNESDAY 6TH AUGUST 12.00-12.20 | MR 11AB ICC

LIFESTYLE ADAPTATIONS IN MULTICULTURAL STUDENT HOUSING – CASE STUDIES IN JAPAN AND IN USA

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Abstract

Accelerated mobility necessitates mixed culture living environments in nations where the majority of citizens are of a single-ethnic group and speak the same language. These countries, including Japan, are under great pressure to provide living environments that accommodate diverse culture. Originally multi-ethnic nations such as USA also have remaining issues in true equality of different ethnic groups and religions.

In Japan, traditional housing had a lot of shared spaces, but the trend after the WWII was toward a higher level of privacy. Recently, however, shared space or community space has become revalued for educational purposes and sustainability. And international students from other cultures prefer to adapt traditional Japanese ways of living or community spaces to make the best of the limited size and equipments of their rooms. Even the lack of privacy may become a tool for encouraging communication. Coexistence of different cultures in a shared space sometimes helps the effective use of limited resources.

In the international student housing survey in USA, cultural lifestyles and the Anglo-Saxon oriented planning theory were conflicting. We observed that minority lifestyles were still being ignored after years of multi-cultural living, although they may give us good suggestions for community building and sustainable living. In comparable cases, simpler room plans seemed to allow more freedom for residents to use their apartment to maintain their cultural lifestyle. We also observed, however, that cultural lifestyles have been rapidly disappearing in globalization in the last decade or two.

These are only a limited number of case studies, and there may be different types of cultural conflicts and situations in other places. These cases, however, have suggested that cultural lifestyles are worth revaluing. Therefore, this article opens discussions on how other people have been accommodating diversity and how we should plan the multi-cultural living environment in the future.

Keywords: diversity, lifestyle, tradition, community, planning.
IMPROVING LEARNING ENVIRONMENTS THROUGH DESIGN: HOW THE BUILT-ENVIRONMENT IMPROVES SOCIETY THROUGH EDUCATION

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Abstract

An exploration of exemplary learning environments on all seven continents, this paper reveals the timeless and global challenges that face humankind and the power of architectural innovation to impact educational solutions to these challenges. From research facilities at the South Pole to K-12 schools in the frozen tundra near the North Pole, learning environments are a major contributor to the advancement of society. This paper reports on model architectural approaches to the design of learning environments that explore and respond to the diverse needs of multiple regions and communities.

The scope and sequence of this paper parallels the conference theme and sub-themes. The concept of “Architecture Otherwhere” is illustrated through three specific case studies, each demonstrative of the practice of architecture in a variety of locations.

The sub-theme ECOLOGY is illustrated through case study #1, where, through the utilization of sustainable building materials, Laotian villagers are economically constructing community centers and schoolhouses that are appropriate and effective within the local context. Innovative designs in Laos and Cambodia respect the indigenous culture of their native citizens and create inspiring environments for intellectual agility and community solidarity.

Case study #2 highlights how the British Council for School Environments has designed, built, and transformed over two dozen school buildings in the U.K. Each school has realized long-term spatial economies, community RESILIENCE, and the importance of government investment.

Case study #3 is a master planned college campus in Orissa, India for 100,000 students which combines learning, teaching opportunities, and the development of professional VALUES. Integration of geo-political and cultural diversity is challenging architectural planning solutions.

In addition to these case studies, this presentation provides other examples of international architectural practices that encapsulate the ecological progress of global learning environments; the resilience of people in remote areas; and the value placed on architectural solutions.

Keywords: Architecture/design education, creative problem solving, climate, sustainability, rigor, relevance, relationships.
THE CIRCLE MANAGEMENT FOR URBAN BLOCKS

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Abstract

The frequency renovation of urban block not only product a great deal of solid waste, but also cut off the long-term development of community culture. Economic, population, consumption capacity and the quantity of reserve land for future development are all the important factors for the phenomenon except building lifetime. For the lack of prediction of the future space requirement, the developed urban blocks will come to renovation under the pressure of population and profit. On the other hand, the crowd of core area and environmental erosion on the urban boundary highlight the limited of urban space and aggravate the renovation pressure of the developed blocks. The temporary space requirement come from unplanned renovation are also the fact that promotes the blocks’ renovation.

In this article, we try to construct an urban space management which base on blocks circle, it can be mainly divided into following steps:

1. Calculate the future space requirement by the growth of population and unit residents space requirement;
2. Set up the classified regulation for urban land base on ecological value and probability of construction, which can be used to predict the storage of urban space that can be used to develop.
3. Make the circle schedule of blocks renovation based on the lifetime of building and the quantity of developed blocks, coordinate the action time for constructing, using and demolishing in different blocks.
4. Calculate the volume rates of blocks in different stages, and use the storage space to reduce the peak value in order to keep suitable space density.

Keyword: Building life, Space Requirements, Land grading, Land update periodic schedule, Livable density

ADAPTIVE CAPACITY OF BUILDINGS: A DETERMINATION METHOD TO PROMOTE FLEXIBLE AND SUSTAINABLE CONSTRUCTION

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Abstract

The subject adaptive construction has been on the agenda of the construction sector for decades. The adaptive capacity of a building includes all properties and qualities that enable the building to keep its (economic feasible) functionality during the technical life cycle, under altered conditions and needs.

Meanwhile, the interest in flexible building has increased significantly from a broader perspective than
before. This increased interest is caused by the high structural vacancy of buildings, the economic crises and the increased awareness of and interest in sustainability issues and the circular economy.

The relationship between flexibility and sustainability is explicitly laid. Market developments demonstrate an increased demand for flexibility and sustainability as well as a growing awareness of the necessity of a circular economy in construction. This explicit sustainability constraint ensures a conscious look at the sustainable efficiency of flexibility measures. These measures are sustainable only if they are actually used during the life cycle of buildings.

The Dutch Government, a number of companies and branches of the construction industry started a public-private initiative in 2012 to promote and accelerate sustainable building in the Netherlands with the project called: a method to determine the Adaptive Capacity of Buildings. The cause of the present research is the lack of a widely accepted method with assessment criteria for measuring the potential for adaptation into other possible functions during the life cycle of a building. In this research paper, a full report is given of the development of this method to determine the Adaptive Capacity of Buildings (the AC Method), the research methods used and the preliminary results.

Keywords: adaptable, sustainable, flexible, vacancy, assessment method.

WEDNESDAY 6TH AUGUST 14.20-14.40 | MR 11AB ICC

IS OPEN BUILDING OR LOW-CARBON BUILDING LONG LASTING? TESTING THE OPEN BUILDING THEORY OF LEVELS OF RESPONSIBILITY IS APPLICABLE OR MEANINGFUL FOR LOW CARBON ARCHITECTURE DESIGN OR NOT IN THE CONTEXT OF CHINESE CITIES

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Abstract

Introduction and research problem:
Environmental sustainability is one of the urgent issues of contemporary society and there are many definitions, including “green” building. However, many of them pay more attention to human comfort and static environmental protection but without emphasis of level organization, comprehensive long lasting continuity and interaction with people. That makes sense to discuss the Open Building approach and theory, which aims at adapting the diverse requirements of residents at different levels and with the target of building construction for more than 200 years.

It is interesting to take a look at Chinese cities such as Pearl River Delta region, where after a rapid urbanization during two decades, social, economic and urban transformation is taking place. Nevertheless, many of its inconsiderable architectural design and constructions cannot fulfil long term requirements as well and will be demolished in a short period.

Methodology:
In order to resolve the problems, methodology mainly consists of theoretical research and case study. For instance, in case study evaluation, making use of “level” concepts from Open Building theory as a tool, by rearranging variables relative to environment, time and people dimensions. A control situation is quite important for the final assessment. Several residential projects designed either by Open Building or Low-carbon approach in this region such as Staff Residential Apartments of Dongguan Institute of Science & Technology and Vanke City IV will be selected.

Conclusion:
Some cases with both social and environmental considerations within level framework construction
and operation will probably be long lasting, those cases without level concern will be predicted to be eliminated soon. At the same time, this new integrated sustainable approach gives an alternative and flexible solution to evaluate comprehensive housing sustainable problems in China.

Keywords: open building, low carbon building, sustainability, China.

WEDNESDAY 6TH AUGUST 14.40-15.00 | MR 11AB ICC

SUPERPLAN.ME

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Abstract

The paper focuses on the involvement of social media in participatory design processes. The role of communications is simultaneously present in the core of the exploration while enhancing the interchange of information within the associated groups throughout the whole process. The main objective of the authors is to cultivate a critical attitude towards the gradual relocation of collaborative processes in the digital domain. In order to evaluate these changes we examine case studies of online based participatory design. The observations are mapped and classified composing a manual for future ventures of participatory projects. This research evolves in the upcoming field of e-culture providing a fundamental rethinking of social and cultural activity in the digital domain. By observing analytical toolkits that initiate online action in participatory processes we further explore the internationalization of design practices shifting the focus from organizations to small entrepreneurs and designers.

The critical positioning towards the transition from physical to e-media participation together with the development of creative toolkits are the two objectives targeted at the particular interest of our audiences. The multiple relational understandings of our research can serve as an effective mechanism for the Creative Industry to enhance internationalization.

The title of the research reflects on the participatory process examined, while being the domain name of its blog and the title of a forthcoming book that:

· will form a curatorial for future workshops through social media.
· will examine the role of the individual in strategic design decisions -thus the title component “.me”.
· will examine the role of excess information as well as the ‘remains’ of the two ways communication in internet history (eg. Facebook wall, fora etc) as a ‘palimpsest’ of a plan, almost a ‘new monument’ for re-planning. Thus the title component “Superplan”.

Keywords: social media, participatory design.
RESEARCH ON PUBLIC PARTICIPATION IN THE REGENERATION OF HISTORICAL ARCHITECTURE—A CASE STUDY OF HUANGTIAN VILLAGE, ANHUI

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**Abstract**

With the passage of time as well as the development of the economy, more and more new buildings have been erected around us. Meanwhile ones that bear the context of history are demolished on a large scale. Now historic buildings are existing in a dilapidated way because of the age, or saved in museum mode manners. However, by and large these efforts treat the symptoms, rather than addressing the root cause, the historic buildings are declining further, so we have to find a better cultural form to save them. Historic buildings are different from other works of art; they have lots of utility function closely relating people’s life. The reason why the buildings that have long history are declining is their internal function cannot satisfy the needs of modern life very well. For the regeneration of historic buildings, the public need to be involved, so that the vitality of historical buildings can be played better.

Through the case study led by Professor Ou Yang Wen on Huangtian Village of Anhui— a study of a typical village regeneration in Huizhou culture characteristics, the article analyses that public participation is important for the regeneration of historic buildings by means of theoretical research, field research and comparative research methods, combining the protection of historical buildings and the residents living needs, to seek pioneering ways for the regeneration of historic buildings.

**Keywords:** historic building, rehabilitation, public participation.

POSSIBLE DEVELOPING MODES OF ELDERLY-ORIENTED REAL ESTATE INDUSTRY IN CHINA--TAKE BEIJING FOR EXAMPLE

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**Abstract**

The population aging is increasingly serious in China and it will become a huge social problems. Our Chinese have a unique social structure and concept of pension. Therefore solving the problem of pension in China needs a wise strategy that could adjust measures to local conditions.

It does little to change the problem in positive ways if we just simply improve the facilities and construction method in the microcosmic point of view. The exploration should start from the mode of real estate development and the government’s policy. And we need to build up the pension development operation mode which accords with the situation of China in a macro point of view.

The situation here is that public pension services mainly rely on a handful of private nursing home and the state-operated pension institutions are scarcer. It is not applicable that learning the pension development mode of other country such as United States, Japan, France directly without accommodation. The current domestic real estate development to solve the problem of pension is just rising. We could find there implied the leading of the government with the support and tendency on policy in it.
We have extracted several kinds of the characteristics of the existing mode from the analysis of all kinds of status quo and fully exploit the characteristics of the elderly customer in China at the same time. We have to enhance our control as a whole in each link of senior housing real estate development. Only in this way that we could further explore the feasible mode senior housing real estate development in China. There is no reason that we believe the numbers of problems which caused by ageing population will be fundamentally improved is an impossibility.

Keywords: aging, endowment concept, Chinese characteristic, senior housing real estate

WEDNESDAY 6TH AUGUST 15.40-16.00 | MR 11AB ICC

THE IMPORTANCE OF THE ORIGINAL RESIDENTS IN THE PROTECTION AND RENOVATION OF HISTORICAL DISTRICTS

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Abstract

Nowadays, with the development of society and people’s growing recognition of traditional culture, people pay more attention to the cultural value of historical districts. The government has started to implement the protection and renovation of historical districts. It has long gone that the historical districts are demolished and new buildings are constructed quickly. But tourism development and commercial revitalization have become a new orientation of the historical districts by the government due to economic interests and the people’s surface recognitions. As a result, the original residents tend to be away from their land under this situation. To some extent, their life quality is improved and the historical districts are well protected and renovated. This greatly changed the characters of the historical districts. The vitality of the historical districts disappears as well as the original significance of historical districts themselves. The original value of them is neglected.

What is most important in the protection and renovation of historical districts is paying attention to the inherent significance of their existence. Attention should be paid to humanity. The original residents are the carriers of local cultural heritage. This thesis expounds that we should not only pay attention to the spatial style and the building appearance, but also attach importance to the original value and the inheritance of their culture. It analyses the important role of original residents in regaining the original vitality of historical districts. This article lists and analyzes typical cases in order to find a way to settle original residents. As a result, we can recall government and people’s concerns about the original residents during the protection and renovation of historical districts. Furthermore, this would push the original value and culture of historical districts.

Keywords: historical districts, original residents, authenticity.
PROGRAMME PARTNER SESSIONS
PART 6: CIB W110 INFORMAL SETTLEMENTS AND AFFORDABLE HOUSING

MONDAY 4TH AUGUST 2014

The second Programme Partner linked to the International Council for Research and Innovation in Building and Construction (CIB) is:

CIB W 110 Informal Settlements and Affordable Housing. This international research group engages with issues of sustainable livelihoods and community participation in informal settlements as well as how the exchange of technology may be achieved towards the development of the physical, social and economic conditions of human settlements. The commission also explores topics on the provision of affordable housing across the whole housing market.

Happy Ratna Santosa, Professor in Architecture, is Head of the Laboratory of Housing and Human Settlements at the Institut Teknologi Sepuluh Nopember, Indonesia (2008-present). She has fulfilled various roles at the ITS since 1975 including the Director of the Post-Graduate Programme (2003-2007) and Head of the Population and Environmental Research Centre (1988-1997).

Amira Osman, Associate Professor at the University of Johannesburg, is the UIA 2014 Durban General Reporter. She studied at the University of Khartoum, obtained a diploma from the Institute for Housing Studies (IHS), Rotterdam and a PhD from the University of Pretoria. She is a registered architect and rated NRF researcher.
FROM REFLEXIVE ACCLIMATIZATION TO POSITIVE ALTERATION

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Abstract

The goal of resilience is to examine various links amongst resilience ideas and development subjects. Complex problems require a diversity of approaches that can inform each other, generate productive arguments, and eventually lead to more appropriate explanations. The term resilience is being used more extensively in policy rounds and strategy discussions, yet these meanings may be at odds with scientific understandings of resilience that accentuate change and alteration.

Resilience relates to natural dynamics and governance questions related to specific resource systems and to global issues such as biodiversity conservation, urban growth, economic development, and human security and well-being. Human communities are an integral part of the biosphere, and sustainable social development depends on the incessant generation of indispensable ecosystem services. Thus ecosystem change is often considered as one factor which decreases social and ecological resilience. Over the past decade, we have entered a new era where human activities have emerged as a main force shaping the biosphere from local to global scales, as reflected by climate change, vulnerability in the economic system, large losses of biodiversity, and irreversible changes in ecosystems. This is also a time of exceptional development issues: intransigent poverty and unfairness are major threat to human welfare and to planetary sustainability. There is a rising awareness in the transformability of social ecological systems. But a serious dilemma faces humankind: How can more equitable and beneficial social development paths be stimulated in light of these challenges?

The work will try to investigate different types of change in social-ecological systems, from reflexive acclimatization to positive alteration. And will try to extricate the notion of transformation at a certain scale will entail adaptation at another?

Keywords: resilience, ecosystem, social development, social-ecological, transformation.

ECOLOGICAL CATHARSIS THROUGH URBAN ACUPUNCTURE

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Abstract

Buildings as living machines entails the implication that context is merely a consequence of the geopolitical dynamic between built forms, rather than a discernible progression of spatial motivations. Considering a broader perspective of terming cities as ecosystems that engage through a variety of interaction points, it is evident that the synergy of natural processes maintains its own progression independent of architectural intervention. The nature of public space and the genetic grains of
urban fabric are similar, terming context as the precursor to architectural intervention rather than its sequential result. The traditional interactive relationships between natural ecosystems and built environment influenced by local culture and identity are gradually deteriorating; causing cities to lose their distinctive cultural identity and urban landscapes. If we consider the city as a living being in and of itself, growing exclusive of the built environment as an emergent entity similar to the cyclic evolution of a neural network, we can associate that both have an interconnected network structure and sustain the capacity to adapt and self-organize by manipulating morphogenetic information. Successful examples of such cities evolve in a very specific manner, retaining older patterns while responding to change by adding novel adaptations. As a result, a thorough initiative to engage the communities in active participation of urban renewal needs to be conducted, where individuals learn how to produce small-scale socially catalytic interventions through urban acupuncture, leading to the transformation of a larger urban context. The objective of this research is to establish the need to understand the paradigm of urban ecosystems and how the built environment is shaped through it, while investigating the phenomena of cultural landscape and ecology as part of city image. Cities with engaged communities are more resilient and adaptive, gearing their activities towards poverty alleviation and the achievement of sustainable ecological communities.

**Keywords:** urban acupuncture, neural network, sustainable neighbourhoods.

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**MONDAY 4TH AUGUST 11.40-12.00 | MR 11E ICC**

**FROM CHAOS TO ORDER: A CONTEXT-SPECIFIC DESIGN RESPONSE FOR KHUTSONG SECTION INFORMAL SETTLEMENT, IVORY PARK, MIDRAND, JOHANNESBURG, SOUTH AFRICA**

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**Abstract**

Informal settlements are a common feature in developing countries like South Africa. Due to the rising interest for in situ upgrading in the Department of Human Settlements in South Africa, an exploratory design research was carried out by the author for Khutsong Section informal settlement located in Ivory Park within the City of Johannesburg area. The Breaking New Ground policy upon which upgrading initiatives are founded, promotes context-specific approaches to upgrading projects. Through a context-informed design a sustainable upgrading vision for enabling urban environments may be developed to be used for participatory and incremental in situ upgrading for Khutsong Section. Building on lessons learned from an in situ upgrading project in Swaziland and Katamay’s (2004) research on Khutsong Section, a context-specific design response was developed using a qualitative visual method. The visual research involved mapping and analyses of the urban spatial structure of this highly dense urban settlement (more than 60 persons per hectare). The analysis showed that Khutsong possess some characteristics of a pedestrian-oriented city like complexity, linkage, human scale, imageability and enclosure, but lacks legibility, coherence, transparency, and tidiness. These findings were then used to do a visual iterative process using sketches resulting in site-specific design solutions for the in situ upgrading of the settlement.

**Keywords:** Khutsong Section informal settlement, pedestrian-oriented urban structure, context-specific design.
MONDAY 4TH AUGUST 12.00-12.20 | MR 11E ICC

HOUSING AFFORDABILITY IN NIGERIA

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Abstract

Housing poverty is on the increase in Nigeria. Public housing provision has not yielded much. The country has not complied with the 1976 United Nations recommendation of providing an annual construction rate of between 8 and 10 dwelling units per a thousand populations. The present level of annual Housing provision in Nigeria is so low that it is estimated at between 2 and 3 dwelling units per a thousand population as at 1985 which is as a result of high cost of provision due to utilization of conventional building materials. However, it is believed that if the importation of these expensive construction materials could be substantially reduced using locally available alternatives such as Laterite as is being used in other parts of Africa, the Middle East, Brazil and nearly the whole of Latin America, such a measure can reduce cost of construction, increase housing stock and also increase foreign reserves of the economy of the country.

This paper therefore, makes a case for the incorporation of Laterite into Housing policies in Nigeria in order to reduce housing poverty. Data used are majorly secondary data which was done through Historical survey approach method and complemented with personal observation. The analysis of past government efforts of the National Development Plan and the National Housing Policy of 1991 were done and the paper found out that the program did not yield much due to high cost of provision of housing units which leads to unaffordability by people, disregard for alternative avenues of housing provision etc.

The paper concludes based on the findings above that in order to achieve sustainable housing provision in Nigeria, the material should be incorporated into housing policies and programs which should not be at the exclusive preserve of Federal Government and at the exclusion of State and Local governments.

Keywords: public housing provision, high cost, conventional building materials, Laterite incorporation, housing policies.

MONDAY 4TH AUGUST 12.20-12.40 | MR 11E ICC

SMALL SCALE REAL ESTATES DEVELOPMENT AND SPATIAL PLANNING ‘ADJUSTMENT’ IN SURABAYA, INDONESIA

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Abstract

Spatial planning in Indonesia has developed since the mid-1980s. Standards on minimum supporting facilities for settlements have also been enacted by The Public Works Department since 1976. The urbanization process, however, converted many land farms into small-scale real estate development on the periphery of Indonesian town and cities. The sizes of these real estates are so small, in many
cases only up to 20 plots. However, in some cases, three to five such small real estates are adjacent to one another. Hence, they couldn’t provide areas for public spaces and other supporting facilities like shops, kindergartens let alone graveyards. Problems are arisen, as the inhabitant needs those facilities. To accommodate this issue, the established spatial planning needs to be adjusted to solve the problems. Evaluation is required for the implications of such modification.

The methods used in this study are field observations and interviews to related parties including the official governments. The results are then compared to the available spatial planning. The observations include the indication of possible adjustments on the spatial planning. A preliminary result is then discussed in a group meeting, to reach an agreement in preventing such developments in the future. This study is carried out at the periphery of Surabaya and this paper is a preliminary result of the overall study. From the study it can be figured out that there is a need to set criteria in minimum size of a real estate developer. All the results are expected to be the subject of further studies in order to gain the anticipation of possible negative impacts on city planning.

Keywords: small scale real estate developers, adjustment, spatial planning.

MONDAY 4TH AUGUST 12.40-13.00 | MR 11E ICC

HOUSING CONSOLIDATION: INNOVATIVE ATTEMPTS OF HOUSEHOLDS IN CONSOLIDATION OF LOW COST HOUSING IN SOUTH AFRICA

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Abstract

South Africa's low cost housing provided by the state is described as a starter house. It is intended that as a result of accessing housing, socio economic status of households will improve and households will be able to extend their dwellings to suit their needs (Napier 1998). It has however been documented that households have had challenges in consolidating i.e. improving and extending their dwelling, basically due to financial and site constraints. Despite this, with a self-help approach, many households have attempted to consolidate their dwellings within their means, relying on their limited finances, and technical know-how.

The paper reports on the innovative ways households in the post-apartheid Reconstruction and Development Programme (RDP) settlements have attempted to consolidate their homes. It seeks to answer the question – how can consolidation be enhanced in state funded settlements?

To answer this question, field work research is undertaken and documents innovative consolidation attempts, constraints and impacts of such attempts both on the household and the environment. Focus is placed on visible efforts by purposefully selected households. It is hypothesized that households are resilient in their approach to address housing needs and lessons can be learnt from them.

Findings show that inherent know-how of the household is expressed in the construction methods employed, and where expertise is lacking in the household, assistance is sort from social network groups and broader pull of skilled expertise of the urban area.

Keywords: RDP settlements, housing consolidation, indigenous knowledge systems, site layout, building design.
A SPACE EXPANSION MODEL FOR PRODUCTIVE HOUSING IN FISH PROCESSING KAMPUNG
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Abstract
Productive housing is an alternative which is implemented for increasing a family’s economy. The existence of productive housing also leads to some conflict; one of them is space conflict. Space conflict is as a result of the overlapping between domestic needs and production needs. This happens in the research area, Kampung Sukolilo, which is famous for fish processed products. In kampung, most inhabitants choose to process fish products as family support. Space conflicts that occurred in this study area don’t only occur in the house, but also in the surroundings. Space conflicts occur outside the productive space because of the need for production space that is always increasing while the houses are not able to accommodate the production. In addition, conflicts also occur during the drying process. This is particularly noticeable in the study area where most of the drying process occurs in the road as well as housing alleys for the drying area.

This survey was conducted by interviews and field observations with participant’s observation as the primary method. The data collected was analyzed and interpreted in order to understand the basic qualitative approaches that can be used for material synthesis models.

The study found that most inhabitants expanded their house space to accommodate their space needs. Several types of space expansion were done by the inhabitants. The space extension model could be horizontal expansion and vertical expansion. Culture and norms help the inhabitants in expanding the space of their production houses in Kampung Sukolilo.

Keywords: conflict, domestic, housing, productive, space, expansion.

ANALYSIS OF FACTORS AFFECTING UTILITY IN RESIDENTIAL BUILDINGS AT EREKESAN URBAN-CORE AKURE, SOUTH-WESTERN NIGERIA.
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Abstract
Utility in residential building is a measure of the appropriateness of the building to the user. Moreover, the utility of a building depends on user’s attitude to spaces within the building and the users’ space requirement. However the factors that influence utility in buildings often go beyond the functional arrangement of building spaces. In fact, this research indicated that the household size is a major factor affecting derived utility within buildings in the Erekesan area of Akure urban core. Moreover, the study also revealed that housing need in the urban core is affected by the utility derived from building and that the utility of a building within the urban core determines to a large extent, the rent. Thus, this research examines the utility of residential buildings in the urban-core through four specific variables, measured in interval scale and these are: (i) rent paid per annum (ii) household size (iii) the number of rooms per household and (iv) distance between homes to workstation. These variables being the independent variables was regressed against building utility—the dependent variable, and a model of this relationship for the Erekesan urban-core area of Akure was consequently generated.

Keywords: Erekesan, building utility, urban core, mixed use.
THE INTEGRATED ENERGY EFFICIENT AND CONSERVATION ECOLOGICAL DWELLING

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Abstract

With advent of national and global energy demands, almost all aspects of social lifestyles are in the process of change to conserve energy. This is attributed to the sharp decline in fossil fuel resource which is a non-sustainable entity. Architectural fraternities are transforming the era of construction and design to produce environmentally friendly habitats for the Homo sapiens. This model demonstrates the benefits of integrating biotechnology and architecture to dwellings that encourage a sustainable lifestyle. Materials construction: materials would range from cob/adobe and earth blocks. Rain harvesting: roof and surface runoff to be channeled into holding systems that would be mostly subterranean to save on surface land-use. Waste water: the two streams of grey and waste water would have independent systems to recycle and re-use, utilizing anaerobic biological treatment. Other biological systems would be used to ensure sufficient energy such as the use of algae tanks to draw internal CO2 which is utilized by algae for growth. Oxygen rich air from the head space of the algae tank would supplement ventilation of the house. Splitterwerk Architects and engineering firm Arup have unveiled what is thought to be the world’s first building to be powered partly by algae. Officially “unveiled” at the International Building Exhibition hosted in Hamburg, the design, dubbed the BIO, has a “bio-adaptive” facade that is claimed to be a first for using algae within its glass-paneled facades in order to generate energy, and provide shade, to a working building. This model would integrate biological systems with technology to create an environmentally friendly habitat.

Keywords: ecological dwellings, sustainability, conservation.

THE TRANSFORMATION OF HOUSING DEVELOPMENT AFTER 2000: WHERE IS ISTANBUL AS A THIRD WORLD CITY?

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Abstract

One of the major transformations caused by the industrial revolution, technological developments and globalization is undoubtedly an acceleration of the urbanization process. Globalization in particular is one of the major factors that trigger this transformation. In this context, globalization is examined through multi-dimensional transformation projects. The role of third world megacities in socio-economic and cultural geography is highly important due to its spatial economy in the world. On the other hand, in the framework of a global world, the restructuring process that third world economies enter has found reflection in the practice of urban and architectural development. Third world metropolises have become almost show stages of growth, development, and demonstration. The changes observed in residential architecture after 2000, while focusing on the character of the
city of Istanbul in third-world identity, will be attempted to be read by economic and socio-cultural data. In Istanbul, it is a fact that urban development, accepting the superiority of economy and supporting investment in the central business area, has quite changed with the development of the service sector. With unplanned population growth observed on an urban scale, different life styles and forms have emerged within the same city. Entrepreneurial plans and projects produced in the housing sector are an important phenomenon encountered in developing countries, especially in Istanbul. At first, urban rents at the hands of small entrepreneurs have been replaced by the interests of large capital in recent years. After the period of apartment living, seen as a symbol of luxurious life, especially for rising living standards, an ideal home conception for homogeneous and elite life in sites far from the city and close to nature has seemed to gain importance. Thus, this paper aims to examine transformation forms of housing development in Istanbul in support of economic, social and cultural parameters.

Keywords: transformation, housing, development, globalization, third-world.

MONDAY 4TH AUGUST 15.20-15.40 | MR 11E ICC

UNDERSTANDING URBAN FORM AND SPACE PRODUCTION IN INFORMAL SETTLEMENTS: THE TOI MARKET IN NAIROBI, KENYA

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Abstract

Several authors argue that a better understanding of urban informality is required to create inclusive urban policies and projects. Whereas studies about slums are copious and date back to the sixties, informal urbanism is receiving a new emphasis and has become an unavoidable subject in urban and development debates. This three-part paper develops an analytical framework of urban informality with a focus on the production of space in informal settlements. First, a literature review on the domains of informal urbanism and planning provides a preliminary theoretical framework. Second, a case study is analyzed and compared with findings from the literature review. The case-study explores processes of space production in one of Nairobi’s informal markets, through direct observation, structured and semi-structured interviews and mapping. Third, an analytical tool is created to highlight the main approaches, limits and gaps in the existing literature.

Considering the production of space in terms of processes and outcomes, the literature review identifies three theoretical approaches: the functional approach, which focuses on space organisation and form and the concept of order; the anthropological approach, which investigates everyday practices; and the process-oriented approach, which considers informal settlement formation and evolution processes. The case study illustrates how the poor give significant attention to the production of space and site organisation; which directly affect, and are affected by, economic, socio-political and cultural circumstances, providing opportunities for significantly improving living conditions. Although the case study findings cannot necessarily be generalized, the complex and specific experiences that emerge from it suggest that most common definitions cannot efficiently and fully describe informal realities. A bottom-up approach and willingness to learn are fundamental to identifying practical lessons from the slum dwellers’ perceptions and use of space; these must simultaneously challenge and complement top-down planning approaches.

Keywords: informal urbanism, informal settlements, space production, Nairobi.
THE FORECAST OF THE DEVELOPMENT TREND ABOUT EFFECTIVE ARCHITECTURE

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Abstract

Along with economic development and population growth in the world, great changes have taken place in our living space. A lot of buildings have been built, and now energy saving ideas has been transformed into architectural drawings. But a lot of architecture has exposed the problem, mainly reflected in three aspects of waste: technical measure, architectural material, and architectural space. With the globalized step of world city, the wastes are not only architectural funds; more important are the world’s available resources. I hoped draws the correct conclusion through this research, this article can give present the effective architectural development to provide the effective instruction direction.

Keywords: Technology, form, validity, user

URBAN POVERTY AND HOUSING INADEQUACIES IN NIGERIA: NEED FOR INTERVENTION IN THE CORE AREAS OF CITIES

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Abstract

Against the background of increasing poverty and housing inadequacies in Nigeria, this paper appraises the housing situation in the core areas of cities with a view to upgrade the standard of living in order to meet the present day requirements and estimated future needs of the residents. It uses Ibadan, a city in the south western part of the country as a case study and a simple random sampling technique was used in selecting 252 houses in the area while questionnaire and direct field observation form the instrument for data collection. The paper found out that accommodation density in the area is as high as 31 – 40 persons per house while the household size is above 20 which are good indicators of poverty. Also, 11.79% of the buildings in the area are in good condition while 27.64% buildings are fair and poor and fallen buildings constitute 36.56% and 23.98% respectively. Recommendations were therefore proffered based on the findings above, in order to achieve housing sustainability in the area.

Keywords: Poverty, housing inadequacies, housing situation, core areas, upgrade.
SUSTAINABLE HERITAGE TRAIL RESTORATION DEVELOPMENT OF THE HISTORICAL DEAD/LIVE CAIRO

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Abstract

In the center of greater Cairo, near the old historical Islamic core, lies a fringe zone that acts as a host for a mixture between life and death. Maqaber area or cemeteries has a unique pattern for being a host for poor and informal residents practicing their daily activities and practices among cemeteries and tombs, in addition, contain a group of the most historical monuments in Egypt and the world generally.

Although, the area has been –for long- a subject for projects and development studies focusing on how the living conditions continues its deterioration, and life remains an existence in this area. Even if titles “City of the dead”, simple initiatives can be an effective and efficient start to achieving a self-sustaining livable community.

This area is considered one of the richest and most complicated urban fabrics all over the world that could be re-planned as sustainable heritage urban settlement and trail in the same time. Since the beginning of the Caliphate era, the zone has witnessed continuous expansion and growth rates. Currently, Maqaber has defined limits and boundaries; but there is no clear accurate demographic statistics, no complete data about building types, in addition to compact dense informal housing lots. The inhabitants rely on daily or seasonal crafts to make their own forms of living. On the other hand, the area has forms of public external interventions and limited traffic penetration.

The objective of the development initiative that this research is concerned with is to create a self-sustaining community that restores the ancient life for its historical value and provides basic living standards with a productive sustainable urban settlement in the middle of one of the biggest cemeteries in the world. Within a political well and public support with experts work, the development phases can be applied consequently on long-term basis.

Keywords: dynamic urban space, sustainable heritage trail, city of the dead, self-sustaining livable community, socio-historical urban development.

STUDY ON THE INNOVATIVE APPLICATION OF BAMBOO-CABLE COMPOSITE STRUCTURES

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Abstract

In 2010 Shanghai Expo, people were deeply impressed by the Sun Valley. However, due to large energy and labor consumption, the Valley is not consistent with the Expo slogan of sustainability.
What if the steel is replaced with bamboo? Possessing excellent mechanical properties, bamboo has been nowadays recognized as one of the most sustainable potential structural materials. However, the irregularity in cross sections and the inefficient joint configuration could be bottlenecks in developing future large span bamboo structures. A novel spatial composite structure is proposed with the methodology of bamboo-cable structural systems which consist of bamboo, steel elements and adhesive construction materials. Meanwhile, key technical difficulties involved with this application are carefully investigated and analyzed, which we target to address in the near future. Additionally, several tentative structural styles are presented in order to explore the application of this bamboo composite structure. Hopefully, fabrication of bamboo can be standardized and large-span bamboo structures can be realized.

**Keywords:** bamboo-cable member, bamboo joint, composite structure, sustainability.

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**MONDAY 4TH AUGUST 15.00-15.20 | Hall 2 B ICC**

**CONTRADICTIONS OF DESIGNING “GREEN” CITIES: INTEGRATION OF THE TERM “GREEN” TO UNLIMITED GROWTH IN ISTANBUL**

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**Abstract**

It is essential to reinterpret the built environment in the context of environmental conscience to deal with global climate change and environmental destruction. However, in this sustainable environment design process, the attempt of different disciplines to apply the ideal and theoretical concept -social, economic and ecological sustainability- to practice leads to conflicts between these concepts under competitive market conditions. On the one hand, green cities seek to create more habitable environments with environmental concerns, on the other hand, as a result of methods to obtain this goal; it requires integration of innovative technologies directly related to capital investment. Unless governments fund these settlements with support policies and legislative regulations, these green settlements shall inevitably become sites with lack of social equity and therefore be areas of focus of capital projects using the term ‘green’ as a brand. The aim of this paper is to describe the contradictions of the concept of ‘green city’ within market relations, through the case of Istanbul and discuss the term green within its commodified meaning, which has more popular in the urban transformation of Istanbul. In this context, the contradictions of green settlements in terms of social, economic and environmental perspectives are defined primarily. Then these contradictions are exemplified by green cities (unlimited growth in a megacity) planned for construction in Istanbul and also through projects underway that pretend to be green, on the European side of Istanbul. Following a discussion on the way this term relates to the built environment and on its contradictions, suggestions are finally made to understand the city as an organism with the requirement of balance in every subsystem.

**Keywords:** sustainable urbanism, green city contradictions, green city.
ASSESSMENT OF THE LANDSCAPE VALUE OF AFFORDABLE HOUSES IN SUBURBAN BEIJING, CHINA

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Abstract

With the feature of economy and practicality, the Affordable House is a form of housing affordable for low-income families, and vigorously promoted by government now. However, the landscape construction of affordable house always cuts the expense by decreasing the quality or quantity of landscape to control the construction costs in current China, which has severely impacted the effects and functions of the residential landscape.

Due to the constraints of funds, cost has become an important factor during the design of residential landscape construction of affordable houses. Based on the principle of value engineering (VE), the paper takes the achievements of necessary function of residential landscape as the primary principles and landscape value assessment factors. The author has taken a deep investigation of fourteen suburban affordable housing areas in Beijing. By the way of questionnaire survey and on-the-spot observation and statistics, the author tries to fully understand the behaviour mode and psychological demand of residents, and establishes the necessary functions of landscape, B1-B8. Then this paper uses analytic hierarchy process (AHP) to quantify the factors and analyse the weight of survey data in order to achieve the importance of different necessary functions. After that, this paper further splits the eight functions to thirty-eight detailed forms of landscape elements, quantifies the factors and analyses the weight again to obtain the comprehensive weights of landscape elements, C1-C38. Finally, the comprehensive weight standard has been applied to fourteen affordable houses. After the accounting and calculating, the paper gets the landscape score of every area as the objective basis for evaluation of the residential landscape value. According to establishing the way of investigating and assessing, this paper attempts to promote the standardization and industrialization mode of landscape construction in affordable houses, in order to play a role of guidance and demonstration for future construction.

**Keywords:** affordable housing, landscape values, Beijing, suburban housing.
THE RURAL AREA AS AN URBAN DEVELOPMENT MODEL THAT DIFFERS FROM THAT OF THE MEGA URBAN AFRICAN TOWNS OF THE FUTURE: MATERI, BENIN

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Abstract

The plan for the development of the township of Matéri (Benin) was taken as the starting point for an experimental project by the Workshop for environmental sustainability of the University IUAV of Venice, the purpose of which is to find a solution to the growing problems caused by the demographic explosion in the country.

The objective is to propose an urban-rural model for the development of the contemporary African township that could be extended to other areas of Benin. This shifts the emphasis from the mega urban towns to rural areas, so as to propose a way of life linked to the community and its agricultural production, starting from the traditional way the land is used and occupied in Africa.

This is a way to deal with the lack of development in rural areas: creating a self-sufficient economy, reducing immigration from the countryside to the large towns and the consequent uncontrolled urbanization. But it is also a proposal of a development model that differs from that of western economies.

Central to this idea is the encouragement of sustainable agriculture by means of a distribution structure made up of small producers, food processors and wholesalers able to be self-sufficient, thanks also to the training carried out by European institutes and universities.

The sustainability of the strategy and the feasibility of the proposals developed by the Workshop will be verified in practice in April-May with a training program involving both Italian and Benesi teachers and students, the community and the city authorities of Materi. The objective is to produce a proposal which is both appropriate and agreed upon by those directly concerned, for the development of the contemporary African city.

Keywords: identity of the contemporary African town, new rural-urban model, sustainable agriculture, training.
ECO-URBAN RETROFITTING

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**Abstract**

The following Case Study in Trondheim (Norway), designed by Donner Sorcinelli Architecture, appears as an innovative urban re-conversion, which passes through the revitalization and integration of the existing built fabric, viability, open spaces and green areas. As a complex organism, the urban settlement needs updates, additions and changes over time, which strengthen the integration with the surrounding areas, showing a predominant functional vocation and creating a cultural and social identity.

The concept of Eco-Urban Retrofitting, wants to summarize the implemented design choices, focusing on the enhancement, re-use (e.g. II World War Bunker called Dora) and re-composition of the existing residential urban fabric through the timely integration with new buildings, new functions and spaces of socialization, such as plazas, courtyards, private gardens, parks, kitchen gardens (with collective greenhouses) as well as walking and cycling paths. The strategy adopted in designing urban settlements takes into consideration the emotional impact on the quality of life of individuals created by the presence of historical buildings. A direct consequence of this is the conservation and functional transformation of part of the existent buildings in the urban context. The future good feeling emanating from this kind of new place must be given by the perception of being tailored for people, distant from alienating space sensations.

The impact of a heterogeneous settlement, embracing new buildings of two, three and four levels together with old buildings, will convey a feeling of habitability to the residents, recovering the area’s history and focusing the human dimension in urban and architecture design. The objective is therefore to make the districts not only eco-sustainable in relation to energy use, zero emissions of CO2, soft mobility, reuse of rainwater and to use natural materials in buildings, but also and above all to reconnect the urban quarters to the human dimension. A modern lifestyle requires reconnecting social relations to daily life.

**Keywords**: urban retrofitting, sustainability, lifestyle.
UPGRADING HISTORICAL AREAS SURROUNDED BY INFORMAL SETTLEMENTS

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Abstract

In Egypt there are around 25 million people inhabiting informal settlements under extremely low standards of living. The situation further induce other problem, due to the fact, that – unfortunately – several of these informal settlements surround and intermingle Cairo’s numerous archaeological and historical areas where the poverty stricken population have settled in high density. As a result, significant architectural buildings of great historical heritage are now standing amidst drastically deformed environs as visual pollution ruins their original magnificent quality.

This paper proposes a twofold approach of heritage preservation and community development. It represents the outputs of a practical research and planning/design exercise which has been undergone by the author in collaboration with a team of ten post graduate students in the area of the very famous Al Sayeda Zeinab Mosque in the center of Cairo. This exercise, including physical, architectural and social surveys…etc. accumulated in generating a master-plan for upgrading/rehabilitation of the study area.

Keywords: informal settlements, community development, heritage preservation, visual pollution, upgrading historical square.

ARKWRIGHT TOWN AND THE ELDONIANS: EVALUATION OF SOCIO-ECONOMIC AND PSYCHOLOGICAL ASPECTS OF TWO DISPLACED COMMUNITIES IN THE UNITED KINGDOM

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Abstract

Located in Derbyshire England, Arkwright Town was a small coal mining community in decline during the late 1980’s. In 1989 methane gas leaked from abandoned mine workings, resulting in the partial evacuation of the town and a plan to relocate the whole town and its community to an adjacent site. Throughout the design and relocation process, an independent longitudinal research project was undertaken by environmental psychologist Dr. Gerda Speller of Surrey University. This study highlighted the effects that the relocation had on the people of Arkwright and sought to define place attachment with individual and collective identity.

This paper highlights the background to and methods used by the Arkwright Town architects to engage the community in the design and relocation of their new village. The paper compares the goals and objectives of the architects’ community consultation process with the findings of this longitudinal study to determine the success of the community engagement process and the resultant design and long-term social conditions that evolved from the relocation. In addition, the paper describes an
alternative community project, the Liverpool Eldonian Community. This entrepreneurial community was established in the early 1980s and received a United Nations World Habitat award in 2004. Finally, this paper contrasts and evaluates the outcomes of both community models.

**Keywords:** displaced community, capable community, entrepreneurial community, environmental psychology, identity, place attachment, sustainable community.

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**TUESDAY 5TH AUGUST 15.00-15.20 | Hall 2 B ICC**

**GREEN INFRASTRUCTURE AND ECOSYSTEM SERVICES IN INFORMAL URBAN SETTLEMENTS**

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**Abstract**

Urban areas are usually home to important bio-physical assets, which based on their functions, values and potentials to provide basic structures that supports society’s functioning, are construed as green infrastructure. Informal settlements as a notable mode of habitation by the poor in cities of developing countries are usually connected to these bio-physical assets. This paper identifies ecosystem services and disservices emanating from informal settlement residents’ interactions with these bio-physical assets.

**Keywords:** informal settlements, green infrastructure, ecosystem services, ecosystem disservices.

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**TUESDAY 5TH AUGUST 15.20-15.40 | Hall 2 B ICC**

**RESEARCH ON CONSTRUCTION OF INDEMNIFICATORY COMMUNITIES IN NANJING AND OPTIMIZING STRATEGIES BASED ON MIXED HOUSING MODE**

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**Abstract**

Against the background of city renewal and implementation of government-subsidized housing systems, a large number of indemnificatory communities are emerging across China. However, these constructions of indemnificatory communities were carried out basically under the premise of differential effects of urban land and housing filtering implemented, which undoubtedly increased residential differentiation among various levels. Low-income people are relatively concentrated, have gradually been marginalized and become a hidden danger of social and urban development. Firstly, through analyzing the spatial distribution of indemnificatory communities in Nanjing from 2002-2012, this article summarizes the main characteristics of current indemnificatory communities constructions. Secondly, the relationship between indemnificatory communities and urban residential differentiation is discussed. Thirdly, it researches major problems caused by indemnificatory housing, such as long distance from employment, inconvenient traffic and poor public facilities, and urban residential...
spatial differentiation. Finally, based on the mixed housing theory, from the perspective of urban planning, it proposes three strategies on constructions of indemnificatory communities, including dispersion strategy, mixing strategy and construction strategy, so as to provide references for the future of indemnificatory communities construction and accelerate harmonious social development.

**Keywords**: Nanjing indemnificatory communities, residential differentiation, mixed housing mode, optimizing strategies.

**TUESDAY 5TH AUGUST 15.40-16.00 | Hall 2 B ICC**

**THE INHERITANCE AND APPLICATION OF ECOLOGICAL THEORY OF TRADITIONAL HOUSES: TAKING HUIZHOU HOUSES AS AN EXAMPLE**

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**Abstract**

Chinese traditional houses are engineered with the integration of nature, the society and human beings, and are also built on the basis of the ecological theory of the harmony of man and nature. This paper takes Huizhou traditional houses as an example, and lists the ecological ideas inside it from four aspects; villages planning, house courtyard and space layout, house structure and materials, house decoration. Then it summarizes that Huizhou houses have several ecological characteristics, inspiring today’s residential construction to some extent.

Today, however, due to the change of social and ecological conditions, the traditional houses’ ecological way of conforming to nature is no longer able to be fully applicative. So the formulaic way of imitating must be abandoned. Instead, we should face the inheritance of ecological theory in traditional houses using a systematic thought. Only by combining with the reality of society and life can the world of human and nature be in sustained harmony.

**Keywords**: Huizhou traditional houses, ecology, inheritance.
POSSIBILITIES OF DIALOGUE: THE CASE OF THE TRANS-LOCAL URBAN ARTISTIC RESEARCH PROJECT NINE URBAN BIOTOPES.

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Abstract

This paper addresses the question of trans-local dialogue in the case of the EU-funded socially engaged urban art project Nine Urban Biotopes – Negotiating the future of urban living (9UB), running throughout 2014 in cities in South Africa and the European Union.

9UB is an urban research, cultural exchange and artist-in-residency project among partners on all levels of urban engagement (grass-roots, cooperative, private sector, university, cultural institution, NGO and government) addressing issues of urban social sustainability. It aims to build working relationships that allow mutual learning across cultural, geographical and institutional divides. Local solutions are being interrogated and communicated globally by means of artistic interventions and purposely designed time-, site- and media-specific dialogue structures. The particular issues addressed in each of 9UB’s sites of operation are without doubt of major concern and widely shared interest (public space, safety, mobility, identity, economic survival, among others). Yet the possibility of dialogue in the first place needs careful interrogation. In this paper we ask; What conversations are afforded by 9UB’s artistic interventions and what are the implications of these interventions more broadly when considered within the context of transnational cultural policy? Finding answers to these questions is crucial for all endeavours concerned with ‘learning from’. How are the ‘otherwheres’ of the project addressed and made productive without holding them in a position of otherness? How can we produce and share knowledge among equal partners if these partners do not speak the same language – literally and symbolically – in regard to issues, aims, tools and frameworks?

Keywords: Dialogue, dialogical art, relational object, people as infrastructure, expedience of culture.

CREATING ABUNDANT AND FLOURISHING CITIES THAT FUNCTION LIKE AN MATURE ECOSYSTEM

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Abstract

Creating abundant and flourishing cities seems like a utopian dream. However, nature provides many inspiring examples of how different organisms and systems have evolved to solve this challenge. We suspect that nature knows something that we still need to learn. Abuja Centenary City was a design process that acknowledged nature as a mentor in seeking ways to create urban systems that give
back more than they take. Using Biomimicry3.8 Life’s Principles, we developed a strategic design framework to guide decision-making and create a conceptual design based on how nature might build a city.

What makes nature’s systems function so effectively is the fact that there is constant and perpetual change, with a flow of energy, of nutrients, of materials and of information. Conceptualising the city as a system of flows was a key driver for the spatial design of the city, focusing on creating resilient systems. Developing a decentralised model for the energy, urban water cycle, solid waste and food flows as a regenerative circular metabolism at the neighbourhood scale helped to create many new opportunities for the green economy to flourish. A land-use model that maximises diversity at every scale, mimicking nature’s principle for resilience, ensures that we are able to optimise the interdependency of infrastructure needs between a wide variety of land-uses. This in turn helped to inform the design of the transport systems so that it is optimised for the best possible flow for a new set of transport hierarchies. Green infrastructure corridors will connect communities, providing high quality public transport and non-motorised transport as the highest priority. Motor vehicles, specifically cars, will not be excluded from the master plan but they will be integrated carefully into the background.

Abuja Centenary City will provide a radical new model for African development based on the genius of nature.

Keywords: biomimicry, urban infrastructure, regenerative urban systems, decentralization, resilience.

WEDNESDAY 6TH AUGUST 14.40-15.00 | Hall 2 B ICC

CHANGES AND UPDATES IN THE TEACHING OF ARCHITECTURE. LEARNING FROM INFORMAL CITIES

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Abstract

The studies developed by the United Nations within the scope of the perspectives on the world’s population growth for the next 30 years estimate a strong imbalance between the growth and distribution of urban and rural populations, increasingly accentuating the distances between the world’s richest and poorest regions. The growth projections for the next 30 years predict that, by 2030, about 60% of the world’s population will be living in urban centres, this growth being fundamentally absorbed by the globe’s poorest urban regions. Thus, the critical analysis of this issue in contemporary reflections about the city’s problem areas has become necessary in the study of large urban centres, with special relevance in underdeveloped and densely populated contexts. From the reality of the numbers and the evidence of the pictures and technical reports, the paradigms of informal cities, recognize a potential case of reflection and intervention, where the acceleration of the unsustainable concentration and growth of the population and of the precarious housing conditions show the need for concrete and effective solutions on the part of the great thinker of the city: the architect. Crossing information between Architecture schools and their location, it is remarkable to see that most of them are concentrated in the northern hemisphere. We raise the following questions: Is this teaching, predominantly in academic moulds, ready to intervene in the southern hemisphere? Is the education provided in the southern hemisphere schools aware of and faced with these familiar problems?
This is where it enters the conflict of an ‘architecture of necessity’ with the traditional boundaries of architecture as an autonomous subject, too academic and detached from reality.

The non-adaptation of the curriculum plan to the emerging needs today prevents architects, unlike all other professions, from exercising and being aware of his social duty.

**Keywords**: human settlements, urban growth, urgency, architectural practice, teaching.

### WEDNESDAY 6TH AUGUST 15.00-15.20 | Hall 2 B ICC

**CONCEPT OF UTILITY IN THE TRANSFORMED RESIDENTIAL BUILDINGS OF EREKESAN URBAN-CORE, AKURE SOUTH - WESTERN NIGERIA**

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**Abstract**

This research sought to investigate the implications of housing transformation on utility of residential buildings in the Erekesan urban-core of Akure, South Western Nigeria. The research posits that utility is affected by housing demand and rent and viewed housing demand and rent in the context of the economic concept of increasing rent being the result of inadequate housing supply. The study revealed that the inadequate housing experience in the urban core is the result of housing transformation. Moreover, the research showed that reduced rents in the urban core is not as a result of enhanced supply of habitable spaces but due to poor housing conditions, that is obtainable and affordable at low rents in the urban core. Despite this, the study showed that rent reduction is a significant determinant of satisfaction among residents of the urban core. Methodology and material adopted was in the form of a questionnaire. Finally, the study posits that economics of rental income among landlords of urban core housing is a major factor enhancing housing transformation and consequently utility derived in housing in the study area.

**Keywords**: utility, transformation, housing demand.

### WEDNESDAY 6TH AUGUST 15.20-15.40 | Hall 2 B ICC

**EVALUATING THE FUNCTIONAL PERFORMANCE OF SMALL-SCALE PUBLIC DEMOUNTABLE BUILDINGS**

**Junjie Xi**  
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**Abstract**

This paper investigates the design, operation and use of contemporary demountable buildings, and explores how functional performance can be assessed in small-scale example for public use together with their relations to other design elements. The research focuses on three case studies that do not require a high-technology building environment or complex construction skills. Demountable buildings are defined as those that are transported in a number of parts for assembly on site. Contemporary demountable buildings respond to ecological issues, social impacts, technological innovation and economic demands. They can be used to measure a society’s development in environmental sustainability, innovation and economic growth through various forms. Small-scale demountable buildings fulfil many temporary habitation needs in diverse roles, such as non-emergency transitional
housing, ephemeral exhibition buildings and seasonal entertainment facilities.

The purpose of examining functional performance is to assess if, and how, the requirements of the design have been achieved. This enables project operators to address functional performance from a public perspective by reflecting on the scope and ambition of their projects. The research was conducted by combining both quantitative and qualitative research methods, including field research, case studies, interviews, questionnaires and group discussions. Fragmented narratives were transformed into structured evidence, identifying models of best performance in demountable buildings and developing a new method – the Evaluation Conceptual Model – for the effective evaluation and evidencing of the value of demountable buildings in the 21st century. Recommendations for adapting a suitable model to evaluate other design elements in demountable buildings and other types of moveable buildings in further research are suggested and the findings have been used to lay the foundations for a practical evaluation tool for the future.

Keywords: demountable, evaluation, function, public, small-scale.

WEDNESDAY 6TH AUGUST 15.40-16.00 | Hall 2 B ICC

FISHERMEN SETTLEMENT DEVELOPMENT IN THE CONTEXT OF THE SUSTAINABLE CITY OF SURABAYA

Happy Ratna Santosa, Sarah Cahyadini, Hasian Siregar, Endy Yudho Prasetyo
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Abstract

The sustainable city is one aspect to be fulfilled in city development. There are many fishermen settlements in the coastal areas of Surabaya, which need to be improved and developed to support the sustainability of the city. Most of the settlements still have inadequate infrastructure and facilities, particularly in the management of waste from households and processed sea products. Housing and human settlement physical conditions and supporting infrastructure need to be improved, to create adequate housing and free the area of slums. The objective of this research is to identify the characteristics of fishermen housing and human settlement and also their supporting housing infrastructure. The research dealt with the improvement and development possibilities of a fishermen’s village on the eastern coast of Surabaya, using explorative survey methods. Analysis was done using city sustainable standard produced by the UN: Sustainable Cities. The research results showed that some improvement in the management of waste and the natural environment of the settlement can create more liveable and healthy settlements, which contribute to the sustainability of Surabaya city.

Keywords: fishermen settlements, housing, sustainable city.
GAME OVER: THE OTHERWHERE OF SPORT STRUCTURES

Carl Wright
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Abstract

‘A city is an amazingly resilient organism, like the heart. Even after Olympic promises of civic glory have failed to pan out and while the bills are still rolling in, a proud city reinvents itself’ (Michael Kimmelman in The Olympic City).

LEGACY: What does the infrastructure of sports stadia provide our cities once the games are over? Looking back at major sporting event host cities, their arenas and stadia have dazzled, sparkled and secured their place in our collective visual memory. We remember Beijing and the Birds Nest, Barcelona and its diving pool. The traces of these events can be seen as far back as the ruins of Olympia in Greece, leaving large and very permanent reminders.

Taking years to construct at significant cost, building sport structures without long term foresight or a viable legacy plan has resulted in liabilities for many host cities after the final whistle has been blown. Many of the shiny stadia whose conceptualization and design failed to consider maintenance, community interest and long-term use, have lost their lustre in a post-games landscape.

VALUE: While the value generated from investments in infrastructure and a global profile generated from such events should not be underestimated, what can stadia leave its inhabitants?

The City of Durban is poised for an opportunity to host the 2022 Commonwealth Games and the possibility of a 2024 Olympics bid. This paper will review the pitfalls and successes that host cities from past to present have experienced in a bid to ensure that such citiescape stadia are integrated and sustainable. The paper will look as issues related to designing sustainable venues and how flexible and adaptive design can achieve successful facilities and appropriate legacy in the long term.

Keywords: value, legacy, sustainability, gentrification, social cohesion.
DSD (www.designsocietydevelopment.org) is a Community of Practice (CoP) based in the Faculty of Art, Design and Architecture (FADA), University of Johannesburg (UJ). Its members represent the disciplines of Design, Development Studies and Economics. In the face of staggering inequality in South Africa, DSD interrogates research and projects that focus on the intersection of design, society and development.

Angus Donald Campbell, Senior Lecturer in Industrial Design, UJ, is a qualified industrial and product designer with over a decade of experience. His interest is in design and technology for sustainable development and his current transdisciplinary Doctorate in Development Studies explores innovation and adaptation of technology by small-scale urban farmers in Johannesburg.

Terence Fenn, Lecturer in Multimedia, UJ, is interested in interactive design and is currently enrolled for a Masters in Information Technology at UCT. He initially trained as a fine artist and obtained a Master of Art and Design Education at the University of New South Wales. His primary areas of interest include design for social development, design thinking and interactive technologies.

Naudé Malan, PhD and Senior Lecturer, Development Studies, UJ, has previously studied participation in Agricultural Development and his Doctorate investigated the role of Civil Society in the realization of the right to have access to social security. He is a Visiting Research Fellow at the Centre for African Studies at Cambridge University and has taught at various faculties within UJ.
PROGRAMME PARTNER SESSIONS
MONDAY 4TH AUGUST 2014 | MR 12 E ICC

MONDAY 4TH AUGUST 11.40-12.00 | MR 12E ICC

TRANSIT ORIENTATED DEVELOPMENT AND ITS APPLICATION IN A SOUTH AFRICAN CONTEXT

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Abstract

South Africa is experiencing a rapid rate of urbanisation, and as a result is struggling to expand infrastructure, build housing, provide health care and educate its population. Transit Orientated Development (TOD) is well known worldwide urban phenomenon linking transport infrastructure to property development in a sustainable way. It is possible that TOD principles, developed carefully within a South African context could help urbanise South Africa in a structured, rapid and sustainable way.

Keywords: transit orientated development, TOD, sustainable development, development, transit, transportation, South Africa, Africa, urbanization.

MONDAY 4TH AUGUST 12.00-12.20 | MR 12E ICC

WAFOMO’S AND ENBULE’S: FACILITIES FOR IMPROVED LOCAL SUSTAINABILITY

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Abstract

WAFOMO stands for a Water, Food and Mobility and ENBULE stands for Energy, Business and Learning. The paper describes the conceptualisation and development of innovative new facilities which support improved sustainable water, food and mobility performance and improved energy, business and learning performance within a local area, or neighbourhood.

The paper draws on a case study area to show how WAFOMO and ENBULE facilities may work to support local sustainability. The Built Environment Sustainability Tool (BEST) is used to assess existing levels of sustainability within the case study area. The design and functionality of the WAFOMOs and ENBULE facilities are then described and located within the area. The area is then reassessed to ascertain the improvements in sustainability performance. The results of this exercise are then discussed and the proposed facilities critically reviewed. Finally, the paper distils recommendations for further research and conclusion.

Keywords: sustainability, neighbourhood facilities, built environment sustainability tool.
IN-CONTEXT AND ECOLOGY IMMERSION FOR RESILIENCE: AN EXPLORATION OF THE DESIGN OF A HOUSEHOLD FARMING KIT

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Mr. Angus Donald Campbell  
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Abstract

Human-Centred Design proposes the method of In-context Immersion or meeting people where they live, work and socialise as a method to gain new insights and opportunities for the designer (IDEO, 2013). This method as per the majority of empirical research tends to simplify complex situations in order to provide a set of criteria that can then guide a design intervention to such problems. This paper explores how it is important to not only understand the contextual situation of a problem, but also a much broader range of contexts and influences which constitute the ecology of the problem.

Ecology Immersion can be defined over and above the designers’ immersion into a specific context by the further discovery and exploration of other connected contexts. The designer is able to map a broader system by immersing her/himself in these interconnected contexts and hence foreseeing how a proposed intervention could interact in the greater ecology of the problem. An example could be the effect the seemingly independent biological system and economic system could have on a small-scale agricultural project. This improved understanding then allows for the design intervention to have a better foundation in terms of the systems it relies on, which potentially aids the final intervention’s resilience. This paper explores and criticises the design process of a household farming kit as an example of such a method. This critique will offer potential insight into future applications of this method in the field of Industrial Design and its potential application in other design disciplines to encourage greater resilience.

Keywords: In-context immersion, ecology immersion, industrial design, small-scale agriculture, food security, design for social development, social impact design, Johannesburg.

ACCESSIBILITY AND HERITAGE IN ITALY

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Abstract

Italy, like most European cities, has a great number of Heritage sites: not only buildings, but entire ancient cities and archaeological sites of great significance. Individuals should be enabled to fully enjoy these sites, despite the fact that their morphological and architectural features often cannot easily afford it. However, the presence of architectural barriers characterises all architecture and landscapes representing the world’s historical and cultural Heritage. Accessibility and usability must be faced taking into account each unique context: the specific features and qualities of the historical, cultural and natural landscape; the legislation; and the several technical and structural constraints peculiar to the project. Several examples of successful interventions “for All” in Italy are presented in this paper with a special focus on touristic sites and interpretative museums aimed at improving the use and enjoyment of historical Heritage sites by everyone, including people with disabilities and children. This paper also questions some of the assumptions surrounding the aesthetics of accessible and Heritage architecture and searches for a possible middle ground: the possibility to design...
solutions which meet expectations for both accessibility and high quality “architecture” and “design”. We will also illustrate the commitment of the city of Venice: it is a particularly interesting case study, in a true open-air museum. The paper’s outcomes demonstrate that the accessibility project does not stop inside a single building but embraces a broader vision, thus offering an integrated Heritage experience for the widest possible range of people.

**Keywords:** sustainability, accessibility, Design for All, Heritage

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**MONDAY 4TH AUGUST 14.00-14.20 | MR 12E ICC**

**DESIGN OF A WHOLESALE KITCHEN MARKET IN DHAKA CITY**

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**Abstract**

Food supply is one of the most vital functions for a city where this purpose is generally done by a large marketing system and this is called a Wholesale Kitchen Market. Mostly a city is not capable to produce all its required food supply for her dwellers; as a result, she needs to collect most of her food from different part of the country as well as from abroad. It is a very important function for any city because of its large scale contribution for ensuring a very primary and basic human need. The concept of Wholesale Kitchen Market is an essential component of any agricultural marketing system, especially for a horticultural crop producing country like Bangladesh. This Market generally deals with some very primary agricultural products like cereals, vegetables, roots and tuber, fruits, fish and meats etc; which come in and go out with different kinds of vehicles and where a large number of people of various professions are involved with these activities.

In Dhaka city, wholesale kitchen markets are growing unplanned, unhygienic and without having any particular system. The overall scenario of these market places is highly crucial and hostile. Inappropriate site selection, unplanned zone development and shortage of functional spaces are making wrong use of valuable land resource. Large number of incoming and outgoing traffic for loading/unloading systems also create severe traffic congestion in the middle of the city. There is always a lack integrity is observed in different types of working group who works in the wholesale kitchen markets. The raw products of the market, especially the perishable items create garbage, odor and an unhygienic environment. Even with the lack of a proper trading system, it takes some lengthy and unnecessary steps for products to reach the consumer.

Considering the great demand of functional development of Wholesale Kitchen Markets, this paper will try to identify the problems of the existing experiences as well as the opportunities for designing an efficient market system in six major aspects; these are space requirements for the kitchen market, internal zoning, internal transport system and loading unloading, unit or shop detail, human resource management and waste management. The focus of this research paper is to propose a sustainable design decision method for the future development of a Wholesale Kitchen Market in Dhaka city. This paper is based on field survey data, observational study and analysis of current five wholesale markets in Dhaka city and a B.Arch. Thesis, “Design approach of wholesale Kacha Bazar (Kitchen Market) in Dhaka city”.

**Keywords:** space requirements, kitchen market, zoning, internal transport system, human resource management, waste management.
Abstract

Across different cultural and climatic contexts, the decreasing role played by local systems and materials in the production, maintenance and upgrading of the urban built environment has led to the widespread adoption of standardized technologies alongside a concurrent homogenization of architectural identity. Studies have demonstrated the glaring economic and environmental costs of this shift, resulting in higher costs of construction, maintenance, rising energy loads and deteriorating levels of indoor human comfort. Recent developments in the field of material science and industrial biopolymer research have provided opportunities, through the use of renewable agricultural by-products, to alleviate the costly mechanical modulation of environmental flows through the use of high-performance materials.

This research proposes a design framework for the development of local knowledge economies that activate the potential for post-agricultural waste to propel local industrial development of low-carbon products and become global models for driving performance metrics of building life cycles. Through the collaboration of Ecofibers-Achitech Ltd (Ghana), a small-scale agro-industrial company, and the Center for Architecture, Science and Ecology (CASE) at Rensselaer Polytechnic Institute (USA), the development of coconut agricultural by-products is designed in response to social, economic, environmental and technical criteria using life-cycle methodologies, material testing, energy simulation and user evaluation feedback loops. The proposed design methodology integrates the use of culturally-situated design tools to reshape social perceptions of low-tech material systems, by situating the design development of coconut material systems in response to the environmental, social and semiotic historical functions of Ghanaian adinkra façade systems prevalent within the local context.

This design framework expands the extent socio-economic contexts play in the design and evaluation of building systems, as opposed to merely being impacted by such technology. The choice of coconut by-products is a reactionary, rather than prescriptive, design proposition to environmental and economic burdens within a hot-humid context. The architectural implications resulting from the effective thickening and aeration of the building facade proposes a conceptual and physical shift from two dimensional, materially inert and stationary surfaces, towards the construction of a responsive, dynamic boundary for inhabitation, storage and exchange.

Keywords: coconut agricultural by-products, academic-industrial alliance, built ecology, participatory design, culturally-situated design tools.
ADAPTING THE NIGERIAN BUILT ENVIRONMENT TO CLIMATE CHANGE.

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Abstract

Recent flooding of two-thirds of the states in Nigeria is a pointer to the impacts of climate change. The country will need to cope with rising temperatures and increased precipitation (rainfall). Over a period of time, the unpredictable changes in weather patterns is expected to stress infrastructures, endanger flora and fauna of both rural and urban settings, render unfit and/or destroy habitations, increase illness and deaths among vulnerable populations. In spite of the mounting challenges and its associated risks, the Nigerian built environment and indeed Africa’s are yet to integrate climate adaptation into their developmental program. Today’s infrastructural investment within the country is not taking into consideration the effects of climate change nor are they targeted to meet the requirements of a long lifespan, this is further compounded by the inadequacies of the urban and rural management systems that in most cases are ill informed of the changing risks situations/scenarios. Within this discourse, of significance is the necessity to link current official adaptation plans to an enhanced and expanded natural risk assessment, management and mitigation program with a capacity to adequately respond to such anticipated challenges. This paper addresses some of the challenges confronting the vulnerable populations and adaptation of the built environment. The paper also discusses implementable strategies that will enhance adaptation activities within the Nigerian urban environment, by describing a probably potential climate change adaptation structure that is all encompassing.

Keywords: adaptation, built environment, climate change, community management.

SPACE, ARCHITECTURE AND INFRASTRUCTURE “IN-BETWEEN CITIES”. GDANSK - SOPOT CASE

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Abstract

Division of the city, infrastructural barriers, empty spaces, no man’s land with chaotic development, cut-off areas, which we can observe in many big cities, threaten the city’s image and functioning. Urban planners world-wide are discussing how to stop these processes leading to disintegration, aesthetic disturbance and ugliness, but still we have no satisfactory solutions. The problems can best be observed in the areas in-between cities. One of the main questions for urban planners and architects seems thus to be: how to connect the city spaces instead of creating the barriers, how to create the areas “in-between” friendly, safe and attractive?

The presented case study, related to the space, architecture and infrastructure between Gdansk and Sopot in Poland, illustrates the issues arising from the wrong spatial planning systems and the lack of a coherent policy between the neighbouring cities, causing spatial, functional and visual barriers.
The article presents some ideas and guidelines helping to solve such problems. The set of integrated mitigation measures such as environmental policy, spatial and urban planning, metropolitan plans, SEA/EIA system and landscape architecture which are still not sufficiently implemented in practice in Poland, has been presented. They can be used to protect and enhance a unique environment, cultural heritage and landscape and to create new values, like attractive public spaces in-between cities.

**Keywords:** infrastructural barriers, values, threats, divided cities, mitigation measures.

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**MONDAY 4TH AUGUST 15.20-15.40 | MR 12E ICC**

**ACCELERATING RESILIENCE IN ENVIRONMENTAL, SOCIAL AND ECONOMIC SYSTEMS: CREATING GLOBAL HARMONY THROUGH LOCAL INTERDEPENDENCE**

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**Abstract**

Resilience in environmental terms can be defined as the ability of systems or processes to restore to equilibrium or near normalcy after stretching within elastic limits. Man has exerted pressure upon the environment through urbanisation, resource extraction and in the manufacturing processes without regard for natural recovery. These trends accelerated from the industrial era up till now, causing destructive impacts on the global climate patterns, land and marine ecosystems, and food, water and energy streams. The emergence of global warming issues, atmospheric pollution by greenhouse gases, land and water contamination by solid wastes and effluents were the alarm bells warning of the dangers ahead.

While industrial production has multiplied wealth unto men and nations, government intervention is required in the human development indicators –health, education, welfare– and infrastructure for improved quality of life and poverty alleviation. The free market economy promises ever-widening surpluses over other models; however, expanding stock markets and property speculation gallop on until a bubble bursts, increasing the poverty gap against the have-nots who lack capital in investible forms. Thus, free markets still need infused ethical structures and social reforms, safety nets and public policy advocacy for regular stabilisation.

Recent history showed global cities, transformed into new strategic spaces through creative architecture and geo-political economies, now account for seventy percent of the global GDP. This contrasts with when such cities lost their share of national wealth through physical decay. Though economic systems are necessary for development, we need balanced considerations on people, planet and ecology before profit to foster resilience and sustainability while aiming for climate mitigation and adaptation. The Earth Summits of 1972 and 1992, and UN Conference on Sustainable Development (Rio+20) all in Rio de Janeiro, Brazil threw up environmental concerns and indigenous peoples’ rights, UIA 2014 Congress theme: ARCHITECTURE OTHERWHERE could harmonise these for solutions.

**Keywords:** resilience, global harmony, local interdependence, global cities.
SUSTAINABLE HERITAGE TRAIL RESTORATION DEVELOPMENT OF THE HISTORICAL DEAD/LIVE CAIRO

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Abstract

In the center of greater Cairo, near the old historical Islamic core, lies a fringe zone that acts as a host for a mixture between life and death. Maqaber area or cemeteries has a unique pattern for being a host for poor and informal residents practicing their daily activities and practices among cemeteries and tombs, and in addition, contain a group of the most historical monuments in Egypt and the world generally. Although the area has been for a long time a subject for projects and development studies focusing on how the living conditions continues its deterioration, life remains an existence in this area. Even with titles ‘City of the dead’, simple initiatives can be an effective and efficient start to achieving a self-sustaining livable community.

This area is considered one of the richest and most complicated urban fabrics in the world that could be re-planned as a sustainable heritage urban settlement and trail at the same time. Since the beginning of the Caliphate era, the zone has witnessed continuous expansion and growth rates. Currently, Maqaber has defined limits and boundaries; but there is no clear accurate demographic statistics, no complete data about building types, in addition to compact dense informal housing lots. The inhabitants rely on daily or seasonal crafts to make their own forms of living. On the other hand, the area has forms of public external interventions and limited traffic penetration.

The objective of the development initiative that this research is concerned with, is to create a self-sustaining community that restores the ancient life for its historical value and provides basic living standards with a productive sustainable urban settlement in the middle of one of the biggest cemeteries in the world. With political will and public support and experts work, the development phases can be applied.

Keywords: dynamic urban space, sustainable heritage trail, city of the dead, self-sustaining livable community, socio-historical urban development.
CHANDIGRAH FROM THE EYES OF AN INSIDER: AN APPROACH TO DISCOVER THE PSYCHO-SOCIAL INTEGRITY OF THE INDIAN LIFESTYLE IN AN ARCHITECTURALLY CONTROLLED ENVIRONMENT

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Abstract

Chandigarh, independent India’s first planned city, famed French architect Le Corbusier’s professional milestone, is an open laboratory. The city’s architecture is an ongoing experiment where planners continue to learn the relationship between the built mass and the ecosystem evolving in it. All ecosystems show a level of resistance to any new environment, though soon end up adapting and harmonizing with the new realities. Often, the cultural landscape is a major factor that determines its progress and facilitates the existence of the various species. In terms of the modern architectural world, an ecosystem is dependent on the socio-cultural and economic set up of the society. Any building, community or city is human(e) enough only if it gives its inhabitants the space to grow and regenerate.

Chandigarh is one such outstanding example in the modern world. It has well established itself to be a breeding ground for the Indian culture, the rugged north Indian culture, that has over the last five decades lent in every possible way for adaption to the vision and ideologies set by a foreign planner and architect.

Metamorphosis of a social pattern is indeed an interesting concept that can be studied by observing Chandigarh. It clearly portrays the inter-relationship of human life and architecture, the values that are integrated into the lifestyle by a different architectural style given to them by a visionary of a different social setup.

A study of Chandigarh, is not only study of a master architect’s work, is an ongoing experiment to evaluate the impact of this world class architecture on a culture which is vastly different. It is also a study of how the architecture has evolved and impacted by local practices and sensitivities, and has incorporated the cultural ethos of the ecosystem it needs to sustain.

Keywords: Chandigarh, grid iron plan, resilience, urban scenario, ecosystems, chaupal, climatology.
SPACE TRANSITION FROM SOCIAL PRODUCT TO CAPITAL STOCK: ISTANBUL CASE

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Abstract

The concept of space has been discussed from a variety of views for centuries. While some philosophers regard space as vacancy, some others suggest that space is a relation of things. However, it is hypothesized that space may represent a transition in its meaning. This paper mainly scrutinizes the mentioned transition in architecture. Many developing cities have been dramatically changing in parallel with industrialization, globalization, improvements in technology, population increments and changes in expectations, lifestyle and social relations. These alterations have turned urban lifestyles into more individualistic ones and qualitative values have become the minority in a changing environment. Thus, the resilience of social space is worth studying in detail in the quest for pieces of sociality in cities. This metamorphosis has been being observed transparently via public spaces in Istanbul, as an important metropol of a developing country, Turkey. This study looks into the main reasons for the transition with regard to Lefebvre’s theory of city as a social product and Harvey’s theory of city as a capital stock. Major differences between public spaces in Istanbul before and after urban transformation from a political, ideological, economic and theoretical view are studied, exemplified by a number of projects. How can the transformation projects affect the concept of space? Are the current public spaces representing a space or vacancy / non-place, or a new meaning of space? Which actors may affect this process? Whether they are spontaneous or a result of an ideology-oriented one constitutes the main research questions of this continuing study. It is aimed at synthesizing positive and negative aspects of the two mentioned theories on public spaces in Istanbul on the basis of the changing meaning of space. As a conclusion, it has been observed that finding a balance between the two meanings of space may lead to a better social life for urban citizens.

Keywords: space, resilience of social space, public space, Istanbul.

PLAYGROUND TYPOLOGIES AND MATERIALITY FOR SUSTAINABLE PUBLIC OPEN SPACES IN AN URBAN CONTEXT

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Abstract

The process of urbanisation will result in an increase in population densities and extended land usage. The need to maintain and provide sustainable public open spaces within future and existing urban developments will therefore become more critical.

Presently, there are still a large number of undeveloped sites in the older suburbs of Johannesburg bordering on the inner city. These sites are owned and maintained by the City of Johannesburg and provide public open spaces ranging from small pocket ‘parks’ to large destination parks, many of which incorporate some form of playground equipment.

Research was conducted on a sampling of public playgrounds within these ‘park’ settings to establish:
space utilisation and layout, the type of play equipment and subsequent play opportunities provided for children, the general condition of the playground equipment in relation to vandalism and maintenance, and other facilities available on the site.

All authors writing on childhood development concur on the benefits of play for healthy development, with specific importance placed on outdoor play. However research has shown that the traditional forms of playground and play equipment design, which prevail in the majority of public parks surveyed for this study, do not adequately meet the developmental needs of children. They are also proving to be unsustainable within this context.

The aim of this study was to establish design criteria for alternative playground typologies for public playgrounds and play equipment, in order for them to better meet the developmental needs of children, and in turn contribute towards the sustainability of public open spaces in poorer urban areas. Examples are discussed that were developed within the constraints of the established design criteria.

Keywords: playground typologies, public open spaces, childhood development.

TUESDAY 5TH AUGUST 12.00-12.20 | MR 12E ICC

STUDY OF GUIDELINES OF DARMO CORRIDOR SURABAYA AS A FLEXIBLE SPACE DURING CAR FREE DAY PROGRAM

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Abstract

In 2009, the municipality of Surabaya initiated a Car Free Day program every Sunday morning at Darmo corridor to provide the needs of public spaces, which increased significantly following its population increase. People are invited to occupy space in the corridor by doing various activities, later forming a public space in the corridor. Since public involvement in this program is increasing, the corridor is getting crowded, and thus, people’s satisfaction reduces. The purpose of this study is to prevent the comfort level of Darmo corridor from decreasing to encourage people’s engagement in the public space. We would manipulate the activity zones, then deliver alternatives that would be analyzed through an Analytical Hierarchy Process (AHP) method. The product of this study includes the guidelines to manage Darmo corridor to become more comfortable. Furthermore, the corridor will be able to be a comfortable flexible public space by applying the guidelines.

Keywords: car free day, public activities, public space.
EVOTECTURE

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Abstract

Under the headline ‘Evotecture’, a new methodology implication guide will be evaluated for eco-resilience. Solutions against poverty & hazards are debated. Innovative & holistic evoplanning, using bio-reasoning, supported by advanced computing and production methods for socio-economic improvements, integration, renovation plans, is the theme of the study.

Evotecture is not a substitute term for ‘sustainable planning’ or ‘green building’ in many senses. It can have completely opposite results to ‘modern’ usages of bio-reasoning. New logic, under the headline ‘Evotecture’, can create more advanced examples than nature. Evotecture uses advanced computing techniques and 3-D printing. Those tools are used with bio-mental compositions. Those usages are very different from today’s ‘high technology’ implications.

Case studies of Batıkent & Manhattan are chosen to evaluate Evotecture methodology. Those are old methods are not be advocated; Turkey’s biggest social housing initiative ‘Batıkent Settlement Project– West City of Ankara’ was an attempt to eradicate poverty, aimed to evaluate resilience of society by ecodesign. In Evotecture research, usage of Batıkent experience will be one of the tools to evaluate evoplanning against poverty and hazards. Authors of this article were in the Batıkent team from the beginning and followed the project for more than forty years. Manhattan is also used just to illustrate the fractal geometry of a built-up area. It is a simple example of fractal geometry usage without holistic planning ideals.

Evolutionary strategies for the design and delivery of human settlements should conclusively be studied. The case studies and Evo model must be holistic & unitarian. Composite researches will lead to a new model implication for Johannesburg and other settlements.

Keywords: ecological architecture, Batıkent, biomimetic, evolutionary architecture, Evotecture.

AN ARCHITECTURE FOR MARGINALISED SOUTH AFRICANS: THE ROLE OF EDUCATION

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Abstract

The quality of architecture in economically and socially disadvantaged communities of South Africa is poor. Schools of architecture are partly to blame, for implementing a curriculum and pedagogy that do not address students’ general lack of understanding of such inequalities. The first part of this paper addresses the predominant architectural design theories implemented within schools: Beaux-Arts, Modernism, Post-modernism and to some extent Neo-modernism. An analysis of these, in relation to the needs of socially and economically disadvantaged communities, indicates that they do not meet the challenges posed by the on-going struggles of marginalised communities. The second part of the paper investigates examples of community-based student projects in an attempt to explain the influence of these theories on the pedagogy and curriculum on individual schools. To develop a South
African educational model, critical thinking and cross-disciplinary research are proposed as a way of achieving a critical pedagogy; thereby enabling architecture students to address the inequalities between advantaged and marginalised communities in South Africa.

**Keywords**: community architecture, South Africa, architectural education theory, critical thinking.

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**TUESDAY 5TH AUGUST 14.00-14.20 | MR 12E ICC**

**SPATIAL IDEOLOGY OF F-TYPE PENITENTIARIES IN TURKEY**

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**Abstract**

The other places are the spaces other than these used in general by a person. Thus they are not commonly known by the persons. One of these unknown places is the penitentiary. The penitentiaries where criminals are imprisoned in order to execute their punishments have a long history in terms of their underlying ideologies. The first forms of punishment, revealed as a manner of redemption of the criminal, were to subject the physical body to torment and eventually torture, and these have been transformed in time in order to serve a higher cause. The objectives of the new, improved punishment methods are to prevent the future committing and thereby reoccurrence of the same crimes by the criminals by means of rehabilitation of the criminal’s soul. However, penitentiaries occupy a quite narrow space within this process, since confinement of the soul, the conviction, did not achieve the objective of creating a public example of the crime within the structure of the new criminal system.

However, in time, it was discovered that the dominant ideology can indeed be a proper mechanism for discipline of the body and soul, as discipline would be able to prove, to create the power directly on the bodies and not only by reflecting its own existence on them. The currently used penitentiary spaces were shaped according to this fact. The f type Turkish penitentiary or prisons are important, since they are a focus for discussion in the first years of their establishment.

Thus, this study aims to analyze the spatial ideology of the f type penitentiary’s archaeology, its place within the formation of penitentiary, the steps realized and its final aim.

**Keywords**: F Type penitentiary, space, discipline power, control power, isolation.
In parallel to worldwide urban processes, 1980s Turkey and the city of Istanbul showed rapid development and renewal implementations, which take place both formal or informally. Today, Istanbul is a city of specialized quarters with business, culture, tourism and housing whereas the city faces the loss of identity, change in its pattern, fragmentation in social and physical texture and as well as a shift in its local inhabitants. The role of the city is redefined within the globalization process and the urbanization of the city clearly shows a variety of invisible borders between societies, settlements and economies.

This paper focuses on a developing axis of Istanbul where social and physical fragmentation is visible in its formally and informally built texture. Maltepe-Başıbüyük axis, at the Asian side of the city is a vertical section from the Marmara Sea towards the forest area in the North and composes former modernist settlements of 60s, informal settlements of the 50s to 80s, informally constructed housing cooperatives mostly for low and middle-classes, besides the public and private sector’s housing complexes for the high income groups.

The aim of this research is to define a development tool for a sustainable and humane living environment in rapidly transforming mega cities such as Istanbul, where urban settlements are being regenerated regardless of their local, cultural, historical and physical potential. Through detailed analysis, mapping and evaluation, this research will overlay cultural, social, economic, physical and environmental fragmentation processes among the axis. By the use of its potential, this research targets an alternative sustainable development tool for the area, define a second choice and a different vision of urban upgrading model of similarly transforming and fragmenting areas of the city and the region.

Keywords: urban transformation, urban fragments, Maltepe-Başıbüyük axis, İstanbul.
COMMUNITY PLANNING PRACTICE IN PEARL RIVER DELTA, CHINA: THE CASE STUDY OF DABU COMMUNITY

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Postgraduate students of Urban planning in South China University of Technology.  

Abstract

In the current wave of urbanization in China, the vast majority of urban planning is of a top-down style, this kind of urban planning cannot really react to public requirements. With the consumption of land resources, incremental planning gradually is reduced, and inventory planning has been paid attention. Huge demolition and construction style of urban development have caused many social problems. This article selected community planning in Pearl River Delta as a typical case study, analysed the community planning process. The planning met the requirements of the local community, inspired a creative community, and expanded the resource investment of policies promotion. In the community planning process, planners combined the social forces and the government resources to mobilize the residents of the community consensus, reconciled the traditional top-down way of thinking, and guided the government to make reflection of development space, culture, industry, public participation and other issues with community residents. The government and the residents had organic interaction in the process of planning, so that the community planning can really guide spatial development in the area. The practice showed that urban planning gradually changed into fine design and participatory design. The government and the public interact to the community planning and construction, this is an inevitable tendency in China. This practice also provided a paradigm of public participation in the similar areas of urban planning and construction.

Keywords: community planning, urban planning, China.

ADVOCATING GROWTH IN SUSTAINABLE DEVELOPMENTS FROM AN INDEPENDENT TO AN INTERDEPENDENT SUSTAINABLE PARADIGM

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Abstract

Most growth patterns have three levels of maturity; dependency, independency and interdependency. This study will research supporting theories to indicate this maturity scale in the sustainable built environment. It aims to urge the growth of sustainable urban developments to mature from an independent sustainability paradigm into an interdependent sustainability paradigm.

The three spheres of sustainability (economic, environmental and social spheres) are placed in different relationships to each other in the weak- and strong models of sustainability (Vale & Vale 2009). The weak model of sustainability indicates equilibrium of hierarchy between the three spheres, which makes off-setting the one with the other seemingly harmless. The strong model of
sustainability indicates a definite hierarchy between the spheres, explaining that the economic sphere is dependent on the sustainability of the social sphere and the social sphere is dependent on the sustainability of the environment. The weak model relates to the independent- and the strong model to the interdependent levels of sustainable maturity.

The three typologies of architecture; vernacular architecture (first typology) represents dependency with the environment, loose standing buildings (second typology) represents independency and integrated urban developments (third typology) represents interdependency are located parallel to this (Vidler 1996). Precinct developments are currently the prevailing building scale which means the urban fabric is becoming the object rather than the building itself. Therefore sustainability of the urban development needs to become more relevant than just the individual building’s sustainability.

Firstly, this study reviews current literature as research to the maturity scale of the sustainable built environment. Secondly, it makes use of a case study specifically related to the adaptive reuse precinct development; Maboneng precinct in the inner city of Johannesburg. Empirical research findings are used as a tool to reflect on the sustainable maturity of this relevant urban adaptive reuse development situated within a growing world class African city.

Keywords: sustainability, sustainable communities, precinct design.

TUESDAY 5TH AUGUST 15.20-15.40 | MR 12E ICC

PEOPLE AND PROJECTS AS CATALYSTS: AN APPROACH TO COMMUNITY ARCHITECTURE

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Abstract

Our understanding of architecture has significantly changed over time. Having been trained in a postmodernist idiom in the eighties, one of the authors has witnessed the transformation of the profession and architectural design teaching over this time. Younger architects have been educated at a time of intense debates on relevance, justice and new professional values.

They are now having to invent new roles for themselves and develop new methods of practice as they navigate this relatively uncharted terrain.

The teaching of architecture in general, and residential architecture in particular, has significantly changed over the years. Rooted in participatory design approaches and postmodern teaching pedagogy in architecture, this paper re-thinks the design studio, which is now many times extended beyond the confines of the university campus, building metaphorical bridges between academia and communities.

The idea of catalysts is key in terms of achieving an intimate understanding of the settings within which students and staff operate and where project sites are located. Thinking in terms of catalysts influences processes of identifying potential community collaborators as well as potential project briefs and sites.

Some individuals/groups are perceived as “institutions” and champions within their communities: in the sense that they are known, respected, accepted and many activities seem to either be initiated by them, supported by them or revolve around them. Identifying these individuals/groups is paramount to the success of a project. These individuals/groups become agents of change. Planning
and design interventions may either enhance or undermine this agency capacity and the potential to institutionalise it. This concept is linked to previous research and writing on urban acupuncture and agency in the built environment.

Identifying where interventions could take place, what kind of intervention and anticipating the kind of influence it would have on the surroundings is critical. Mapping existing energies and forces in an area may provide indicators as to where input may have the most potential for triggering a variety of responses. That is after all the ultimate aim: to intervene where it will generate a response thus allowing more agents to become actively involved in the formulation of the built environment.

Key people/groups and small projects are thus seen as vehicles for collaboration, development and learning. This paper presents a process of engagement between the design studio and communities in a proposed framework for this particular component in the teaching of architecture. These generic concepts are reinforced through some case studies and reflections on practice.

**Keywords**: catalysts, community, architecture, South Africa

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**TUESDAY 5TH AUGUST 15.40-16.00 | MR 12E ICC**

**SUVASTU CULTURAL COMPLEX**

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**Abstract**

The cultural centre supports creative initiatives that promote the cultural development of communities through recovery of traditions, conservation of cultural patrimony, and technical guidelines of this specific issue. The cultural centre promotes public understanding of the value of diversity in building healthy communities. This will make and improve an interaction with public or private institutions by sharing educational programs, public exhibitions, and events which will promote tourism that highlight the local community. The cultural centre is a way to recognize the cultural heritage of areas based on living history and those that are practiced and valued in the present day and that maintain the vitality of cultural community in the future. The centre must be rooted in physical environment and therefore play a part in historically based but continuing beliefs, customs and practices.

**Keywords**: Suvastu cultural complex, culture, community.
TOWARDS A FUTURE AFRICAN CITYSCAPE: DECO NOUVEAU AFRIQUE (DNA)

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Abstract

Cities in South Africa are transitioning from colonial replicas of former foreign strongholds into settings that more fully represent an African milieu. Apart from obvious changes such as street names, other factors are investigated that might be required to evolve the City of Durban into a habitat that resonates with locals and appeals to tourists, business visitors and government delegations. Taking a cue from the 1925 Paris Exhibition titled International Exposition of Modern Industrial and Decorative Arts, an innovative genre bursting out of Africa has been initiated. The DNA progression, ‘Deco Nouveau Afrique’ originated by Green Heart City, gives cadence to revived energies in artistic frontiers. DNA foregrounds the human ‘heart in art’ as heightening consciousness around wind, wave and sun technologies incorporated into techno-arts. African Indigenous Knowledge Systems are combined with cultural and artistic activity to offer the world another direction in human achievement. Through practitioner-led interventions, a variety of activations are tested by innovators at Green Heart City Movement. These include cultural icons representing the dreams and ambitions of local inhabitants and treating the streets as living beings. Open House Durban is envisaged to unlock the doors of some of the City’s most architecturally impressive, socially intriguing and culturally important buildings. Set to coincide with UIA 2014, Open House Durban presented by Green Heart City will showcase 20 great buildings, from the obvious to the overlooked. The 20 have been chosen to surprise and delight the public, each one offering a unique insight into Durban’s architectural story. An analysis of different activations (green heart regalia, BunnyKats, green felt heartcakes, city poetics, graphic novels, future design, and cultural ecology) reveals the appealing and economically viable innovations to be incorporated into the planning of a future African City. Transnational indigenous knowledge is the glue that can hold Africa together.

Keywords: Deco Nouveau Afrique, Open House Durban, techno-organic arts, green-consciousness, Ubuntu crossroads.

A MOBILE CULTURAL PLATFORM IN CAPE TOWN

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Abstract

2014 is a year of celebration for architecture in South Africa thanks to the UIA. It builds knowledge networks between institutions, professionals, students and communities. It offers opportunity to
 rethink the engagement of our profession in the social transformation of society. However, there is still a risk that cultural events such as UIA or World Design Capital would lead to further isolation of creative classes by not profiting the disadvantaged and the poor. To get people involved in the celebration of a cultural event, serious efforts are to be made in the public spaces.

Currently, rapid and poorly governed urbanization in Africa points to a profound developmental crisis. To find ways of mitigation, we make participation a design method. In this way, architects intervene by remaining rooted in local context. Based in Paris, our experience in Africa started with urban design projects. Then we built an education centre for handicapped children in Ouagadougou, Burkina Faso. We learned with the project to cope with very limited resources.

At the occasion of Cape Town World Design Capital 2014, our idea is a socially meaningful object to serve a well-organized cultural program run by a local theatre association. The design is a mobile platform including basic staging facilities to be installed on new playgrounds next to the schools in Wesbank community. The stage can be moved from the townships to City Centre. A prefabricated and highly flexible structure guaranties easy montage and disassembly. After the cultural season 2014, it will be transformed into a mobile library for kids and to be donated to Equal Education - a very active association working on South African education.

We believe that "Design" should and could profit to everybody. For "Design" to become a popular event enjoyable for all, the key question is not interest but accessibility.

**Keywords:** design, mobile cultural platform, mobile library.

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**WEDNESDAY 6TH AUGUST 11.40-12.00 | MR 12E ICC**

**MEGASTRUCTURE AS A NEW URBAN PARADIGM: ‘HAUPTBAHNHOF’ STATION OF POST-CARBON CITY**

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**Abstract**

In this research, I would like to explore the history of megastructures in general and more specifically the use of large built structures in the Berlin metropolitan area. Megastructuralism can be explained in three different steps showing its self-evolution.

First step: megastructure as a residential project. The beginning of the megastructure era was related to the residential housing project located along a highway from the modernist movement’s ‘Fort l’Empereur project’ (Le Corbusier, 1931) or Archigram’s proposal link to the new urban forms in a technological period known as ‘Lower Manhattan Expressway’ (Paul Rudolph 1970).

Second step: megastructure as institutional project. The use of large structures found its place in cultural spaces such as ‘Centre Pompidou’ (Piano, Rogers and Franchini 1970), in workplaces of the post-industrial city described by Koolhaas in ‘Delirious New York’, as well as the megalomaniac project of Mitterrand in France in the 1990’s ‘Grande Arche’.

Third step: Megastructure as mobility, ecology and technology project. The modern society of the 21st century has a never before seen demand for mobility. Today’s cities have become more and more machines of transportation. The combination of computer technology and the challenges of the 21th century produce a new kind of megastructuralism. Berlin’s public transportation system is one of the Europa’s biggest train stations: ‘Hauptbahnhof’.

In this research, it will show that Hauptbahnhof station must be seen as a new kind of megastructure.
In the future, cities will become more and more crowded; hence space will have to be used more efficiently. Hauptbahnhof shows how space can be used most efficiently if buildings grow into megastructures that accommodate every possible function. The station is therefore a vast source for models of densification that could lead to a sustainable urbanism in the future.

**Keywords:** megastructure, sustainability, urbanism, regeneration, mobility.

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**WEDNESDAY 6TH AUGUST 12.00-12.20 | MR 12E ICC**

**ARCHITECTURAL STANDARDS AND EDUCATION AFTER APARTHEID**

Kai Wood Mah  
*Laurentian University*  
Patrick Lynn Rivers  
*School of the Art Institute of Chicago*

**Abstract**

While architecture in the Global North concerns itself with “performance,” even middle-income nations in the Global South like South Africa focus upon “standards” for school buildings and infrastructure related to the basic provision of water, electricity, ablution, libraries, and blackboards in schools. Contemporary South African conversations tend to be shaped by civil society organizations like Equal Education, which recently brought a successful case against the Minister of Education that led to publication of precise measures by which educational progress could be assessed. The paper is used to highlight the centrality of architectural standards in South African debates about the quality of primary and secondary education. Precise standards become a baseline that can be used to hold the state accountable in terms of educational transformation as well as a means to experiment with what a “standard” might mean as the Global South context can be instructive to the Global North where inequality is growing. Further, we particularly advocate a “re-understanding” of architecture that moves the “work” of architects in the South and North from concerns about detached aesthetics and regulations to debates about politics and policy where, with the rise of neoliberalism, the everyday professional practice of architects and designers is increasingly shaped in new ways.

**Keywords:** architectural standards, education, South Africa.

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**WEDNESDAY 6TH AUGUST 12.20-12.40 | MR 12E ICC**

**RACE, RIGHTS AND HOUSING DESIGN FOR REFUGEES AND ASYLUM SEEKERS IN SOUTH AFRICA**

Kai Wood Mah  
*Laurentian University*  
Patrick Lynn Rivers  
*School of the Art Institute of Chicago*

**Abstract**

In a 2012 court filing, the South African government revealed plans to more closely control the movements of refugee and asylum seekers within its borders. This necessitates the provision of housing for those arriving in South Africa in search of legal status. Plans for such housing revolve around the design and construction of what will essentially be detention camps that satisfy South Africa’s treaty obligations and fall within international standards for such housing. In addition, the government must comply with South Africa’s own constitutional standards for the provision of housing even for non-citizens. There is, however, a disconnect between these three markers to which
the Department of Home Affairs and Department of Public Works must simultaneously adhere. In this project, we specifically concern ourselves with the way that the variability of the political processes producing standards and norms (national and international) for the provision of refugee and asylum seeker housing interfaces with relatively static design processes that state agencies like Home Affairs and Public Works must engage.

**Keywords:** refugees, race, housing, asylum seekers, South Africa

**WEDNESDAY 6TH AUGUST 12.40-13.00 | MR 12E ICC**

**THE CHALLENGE FOR PROSPERITY IN MEXICAN CITIES**

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**Abstract**

Market laws determine today’s cities by prompting them to make a profit, thus pushing them into a financial and territorial re-structuration which brings about overcrowding. This is the neoliberal model, with its characteristic open economy, wherein several sectors’ interests prevail over social groups, hence, conditioning worldwide development.

Urban development and transformation phenomena are a constant in communities. This study-work identifies two contending perspectives in today’s urban advent, especially for cities like the ones in Mexico. The first perspective refers to the neoliberal model, stuck in the globalization process, and also to the way governance prompts developing cities to adjust their structure in order to achieve economic development. The second perspective refers to the Prosperous Cities Initiative of U.N.-Habitat proposed in 2012 whose strategic political project prompts local governments to commit into adjusting politics, strategies, and actions toward the new concept of prosperity.

This study-work analyzes both of these perspectives; hence, their main characteristics are drawn and are also linked to urban development in Mexico. The intention is to push Mexican public politics, before urban development and transformation phenomena, to be holistically managed, by binding strategies in an inclusive and creative manner. Finally, the planning of several challenges and the actual realities toward the achievement of prosperous cities in Mexico are also presented.

After thirty years of a non-equitable developmental model, and before an initiative disguised as equity, the question arises, is the Prosperous Cities Initiative actually convenient to Mexico?

**Keywords:** Challenge, prosperity, holistic, globalization, quality of life.
WEAPON OF MASS CONSTRUCTION (WMC): AN OPEN PALM FOR POOR HOUSING BY A BOTTOM-UP APPROACH THROUGH AN AGGLOMERATIVE SCHEME

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Bachelor student, MSR Institute of Technology, India

Abstract

The BRIC(S) countries are popularly being looked at by the general mass around the planet for their increasing man power, knowledge and growing economies (owing to their unstable nature from time to time). In India, projects related to redevelopment of urban poor housing or providing permanent housing options for the poor have become merely a marketing gimmick or a tool used by the authorities to win election and gain popular votes. Projects are handled in an individual context, mostly designed by individuals with no prior design experience. Architects and urban planners/designers are not consulted let alone included in the project to ‘save money’. As a result, most of these projects if carried out successfully lead to places, poorly designed and incomplete, rather than spaces, ‘designed’ for human usage and comfort. The challenge here is also to create awareness and motivate architects to work out the project’s cost effectively. We need to create better neighborhoods bottom up in a society and not top down which is 2% of the upper elite. We need some weapons of mass construction. My proposal has two parts to it.

Part 1 includes a scheme which is rather an agglomerative effort to bring different expertise on one plate as effectively as possible. By the means of creating an open source platform where architects or students can upload designs which can be downloaded and adapted to local needs and context. Components can be printed using a flatbed CNC mill (Parvin 2013) and assembled easily. Here I use the concept of Designer = Enterprise (D = E) (Arquilla 2011) where D = E is a promoter of innovation who can develop a product without being a design professional. They are of course acting like a designer when they transform a given situation into a desired one (Simon 1969). So there is no cost concern anymore. This is Part 2, where the architects and planners who do contribute designs receive free marketing (Hars & Ou 2001). Designs that are used give a small tax benefit to the designer.

The intent here is to encourage a free flow of DIY approaches not just in construction but also in design. Through this, we have a very healthy exchange of information and knowledge. We also create a sense of open critique and open innovation which is very healthy for an emerging no frills economy.

What we will learn from this topic is how we can manage this information flow and knowledge transfer in a positive efficient measure and design an effective policy around it.

Keywords: weapons of mass construction, bottom-up, housing, India, open source.
WEDNESDAY 6TH AUGUST 14.20-14.40 | MR 12E ICC

ON THE INTERFACES CITY/WATER, THE URBAN FORMS IN TRANSFORMATION

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Abstract

This paper takes an urban and morphological vision of the relationship between the city and the water environment. It focuses on the evolution of urban form at the interface city/water. It studies the case of Wuhan - a Chinese fluvial metropolis where the waters have determined a unique urban form. At first, we examine the current state of the interfaces city/water: their dynamic deployment, their spatial characters and the different logics of urban fabric. And then we follow the evolution of interface city/water in reviewing the urban projects and architectural models applied to the waterfront in successive periods with distinct policies: military, commercial, industrial and environmental. In the end, we propose to rebuild the dialogue between the city and its waters. This case study shows us the urban waterfront has both ecological and social benefits in urban planning and development. It confirms that when the waters are consciously taken into consideration, they may be revealed as a stimulant element for urban development at all scales.

Keywords: interface city/water, urban form, transformation, Wuhan.
Global Studio (www.theglobalstudio.com) is a people-centered action research project since 2005, focuses on how participatory design and planning can better serve the needs of the urban poor. The exhibition, People Building Better Cities has been shown in 8 countries and 12 cities in 2013 and it shares the Global Studio approach, processes and outcomes. The Global Studio – CSUD exhibition, People Building Better Cities, will again be shown in association with this program. For full program details see www.peoplebuildingcities.org

The Global Studio at UIA 2014 Durban will aim to review of the Global Studio focus area. They will also be providing a brief outline of the POST 2015 Action Plan workshop objectives. Post 2015, the Sustainable Development Goals (SDGs) will replace the poverty alleviating 2000-2015 Millennium Development Goals. What can the design professions contribute to the SDGs and the global framework for development?

Anna Rubbo (link to http://csud.ei.columbia.edu/people/staff/), B.Arch (Melbourne), D. Arch (Michigan), research scholar, Center for Sustainable Urban Development at Columbia University. Formerly at the University of Sydney, she was a member of the UN Millennium Project Task Force on Improving the Lives of Slum Dwellers (2002-04) and went on to found Global Studio in 2005.

Rodney Harber, architect, urban designer town planner, is principal of Rodney Harber and Associates. He has decades of community development and design experience. He lectured for 4 decades nationally and internationally. Rodney has represented architectural education in Africa and is on the UNESCO and UIA Education Commissions. He has been involved with Global Studio since 2005.

Jennifer Van Den Bussche is project manager for Global Studio, and director of Sticky Situations. She is a Project Manager with exceptional organisational and facilitation skills, complimented by a background in construction, training in architecture, and experience in Community Development. She is currently undertaking a Masters Degree in International and Community Development.
What is a resilient community? As we seek to understand the contemporary city, the notion of resiliency is both complex and compelling. From the storm-ravaged communities of New Orleans to the economically depressed townships of South Africa, the effects of climate change, economic crises, rapid urbanization and globalization have profoundly shaped the current realities and future development of our cities. It is in this context, that the concept of resilience is increasingly taking hold. It is emerging as a more holistic and adaptable lens through which to view the challenges and opportunities for transforming the conditions of the city for the urban population in general and the urban poor in particular. For the architect, this shift in perspective also presents a shift in framing the profession itself. What does it mean to design a resilient community? While the built environment plays a prominent role in these conversations, it is but one element in a system of forces shaping the city and the human experiences within it. In short, there is an increasing need for architects to design the systems themselves, not just buildings, in order to support resiliency.

Through resiliency-inspired projects in three cities (Detroit, USA, Kano, Nigeria, and Nairobi, Kenya), this paper seeks to examine the evolving role of architects as designers of systems. From transforming the methods of end user engagement to the nature of the design process to the ultimate final outputs, this exploration will provide insight as to how to bridge our understanding of the role of design and our aspirations for resilient communities.

Keywords: Community engagement, design process, Detroit, innovation, Nairobi, Nigeria, systems design

The purpose of an early warning system is to warn people that something bad is likely to happen. How can architecture possibly work as early warning system? We have a theory, an assumptions and an aspiration.

The theory is that no sustainable urbanisation will be possible without pursue the effective and efficient realisation of human rights for all. The assumption is that by monitoring architecture on progress we can trace a chain of information which can forecast and signalize a lack of human rights. The aspiration
is to promote architecture as a framework that integrates the norms, principles, standards and goals of the international human rights system into the plans and design of cities.

ARCHITECTURE AS EARLY WARNING SYSTEM is a collection of international and interdisciplinary brainstormings serving a book project titled Human Rights and Architecture that Tiziana Panizza Kassahun started in Addis Ababa 3 years ago. By now the collection counts 20 brainstormings performed by different professionals and institutions all over the world. This paper reports on the brainstorming conducted by the two authors in Milan Italy at the Domus Academy Laureate Universities in May 2013. It focuses on innovation at the intersection of human rights, technologies, architecture on the urban scale. The content is intended to be an inspirational input for the creation of a possible future app linking architecture and human Rights and it is based on pure imagination. One of the challenges of this paper will be how to report on a free chain of powerful ideas and convey them into a base for a more academic and critical conversation.

**Keywords:** human rights, smart-phones, architecture, sustainable cities

MONDAY 4TH AUGUST 12.40-13.00 | MR 12AB ICC

URBAN RECONSTRUCTION LESSONS IN POST-SANDY NEW YORK CITY AND NEW YORK CITY REGION

Lance Jay Brown
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**Abstract**

Cities and regions around the world are experiencing dramatic risk related phenomena attributed to the effects of climate change and sea level rise. New York City and the east coast region of the U.S experienced a major hurricane on October 29, 2012. New York was the first major high-rise dense urban area to experience so large a storm system. The American Institute of Architects New York Chapter, working with other collateral organizations and the City of New York responded to challenges presented by the storm. Many questions remain unanswered and people are still out of their homes and New York City has yet to fully define what recovery looks like and how long it will take. However, the (DfRR) Design for Risk and Reconstruction Committee of the AIA New York Chapter is committed to work on the answers, be part of the solutions and help prepare the city and region for a collective resilient future.

Efforts to date are numerous including: Helping train 90+ design professionals in post disaster damage assessment techniques; Conducting Hurriplan training for 140+ stake holders; Working with 300+ professional volunteers to write the Post Sandy Initiative Report; Working with the DCP, the Mayor’s office and City Council on new resilient measures to build back better; Continuing our partnership with Architecture for Humanity on recovery including a Recovery Help Desk; Participating in the workings of the Housing Recovery office and the Housing Recovery Playbook; Working with the Governor’s office on housing recovery and the 2100 reports feedback loop; Giving supportive testimony at City Council hearings on code and zoning issues; Assembling the AIA Regional Recovery Working Group across 4 states; Advocating for Good Samaritan legislation; Working with HUD and the current Build Back programs; Organizing numerous expert panels and programs on disaster and resilience issues.

**Keywords:** risk, resiliency, collaboration, climate change, design.
Borderlands are places that used to be part of the colonial or developing countries discourse and currently experience the afterlife of their imposed existence. They experience unsustainability as more than the biophysical impacts of the city; they face its modes of defuturing via structures of socio-economic classification, physical and cognitive de-skilling, population growth and ghettoisation, artificialisation of food, surveillance and exclusion. By ontologically designing their inhabitants, borderland cities nourish conditions of conflict and survivalism, which will subsequently lead to revolt and chaos. Despite being perceived as destined to become non-places or ghost cities, borderland cities could consist of a paradigm of sustainment and social resilience, ecology and values of the Common. Part of this proposal is the introduction of the borderland city as the reconfigured space of learning in the framework of unlearning and relearning, by adopting as its main educational platform praxis deriving from theory, re-coding of need and desire and establishment of design concepts such as metrofitting, re-use and elimination by design. In this context, the implications of the contemporary global unsettlement due to climate change and geopolitical conditions will be addressed and the role of architecture as a re-directive practice will be discussed under the burden of urban dysfunctionality and population endangerment.

Keywords: city, borderlands, unsustainability, unsettlement, colonialism.
METROPOLIS EDGES: FROM SUBURBS TO RESILIENT BELTS: A PARADIGM FOR THE SUSTAINABLE DEVELOPMENT OF METROPOLITAN SETTLEMENTS

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Abstract

The UN-HABITAT 2012/2013 State of the World’s Cities Report identifies climate change and the wasteful expansion of cities in endless peripheries as the major problems of contemporary metropolis. A convergent urban growth pattern characterizes both developed and developing countries: the unsustainable low-density-based suburbanization. The gradual moving away from an urban centre coincides with the inability to manage open spaces. Fringe areas become undefined places, characterized by degradation and inequalities. The life of civilizations has historically depended on the ability to address threats, restoring conditions of safety and balance, even if this has necessarily meant leaving long-lasting marks on the landscape. This paper provides a city model whose urban edges become resilient belts on different scales: a means of adapting to climate change, a mechanism for giving open spaces an identity, and a spatial, economic and cultural resource. An urban fringe project as an extensive system of territorial control – like the greenbelt was - is still valid today, but the challenges are different. A regional and urban fringe project, which creates synergies with site-specific climate, resources and culture, triggers sustainable development in degraded areas of expansion. This paper can contribute to the drafting of international guidelines for planning resilient and identity-shaping urban spaces. Resilience will be truly effective if it becomes a factor in shaping identity, in synergy with the specific physical and cultural features of a region.

Keywords: urban edges, sustainable development, model, resilient belt, social inclusion.

EXIT FROM THE URBAN CRISIS: ARCHITECTURAL FORM VS. CONTEMPORARY DEVELOPMENT CHALLENGES – POLISH EXAMPLE

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Abstract

Since the end of the World War II, the development of cities in Poland has been accompanied by number of crises caused by the specificity of a given period.

Under the period of communism, after the extensive destruction of and then a sudden influx of people to the cities (mostly in the 60s and 70s), urban development plans were closely linked with modernistic architecture and principles of functionalism.

After the system transition started, there has been a shift towards individualized (in many cases cacophonous) architecture, which was aimed at historical patterns. Under the influence of good practices of comprehensive urban revitalization, transferred through programs aimed at supporting young Polish self-governance and later the European Union, there was interest in restoration of degraded areas of a genuine historical value. In Poland, interestingly, the term ‘revitalization’ is still synonymous
with the renewal of historic districts, although the European Union in the current programming period departed from the historic as the eligibility criterion to support the urban area and cohesion policy.

Today we are facing the post-transformation period and the third crisis, which among others is being caused by enrichment of society - a quick and random spillage of new residential areas, threatening the capacity of urban organisms.

Derivation of Polish cities from the first two crises had been associated with specific guidelines for architectural form. In this context, it is important to answer the following question: Is architecture likely to play a role in alleviating the third crisis or will the new strategy be based solely on functional solutions?

**Keywords**: architectural form, transition, urban development.

**MONDAY 4TH AUGUST 15.40-16.00 | MR 12AB ICC**

**BEYOND GLOBALISATION: LIBERATING ARCHITECTURE FOR A NEW ECODEVELOPMENT**

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**Abstract**

Architecture practice, and education, evolved as a tool to serve a rising market-based economy with power over land, resources and people. The control of the human environment by capital forces driven by globalization has produced sharpening social inequality and a rising ecological crisis. Cities, as humans' habitat, are more than places for the unequal distribution of wealth, production, poverty, accumulation and waste. Self-organisation is the feature that allows urban complex systems to develop their own autonomous structure and become less vulnerable to external changes. Resilience is the feature that emerges from this process in order to cope with unpredictable changes in the environment. Based on current practices drawn from the case study of Dondo, located in the central region of Mozambique from the date of independence in 1975 onwards, the self-organised urban system can effectively evolve without planned intervention by a centralised authority. As long as the urban system is capable of absorbing the impact of disruption without damage and gradually overcoming obstacles, it can develop continuously through self-organisation. This is explained through existing political ecology theories envisaging a society that is both equitable and in harmony with nature.

Nowadays, the importance that spatial dimension has to sustainable urban development, and spatial justice becomes less about high technology, power and capital, and more about the way space is effectively used and worked out in order to satisfy local requirements of society and its natural conditions. Therefore, calling attention to the spontaneous production and management of housing, urban space and natural resources as a positive form of city growth this paper suggests new grounds for a liberated architecture. Released from its perverse dependence on capitalism, architecture might regain its social and ecological responsibility by joining multidisciplinary efforts towards mutually beneficial collaborative processes involving the community, urban stakeholders and decision-makers and trigger the materialization of a new ecodevelopment.

**Keywords**: liberated architecture, spatial self-organisation, participatory architectural education, ecodevelopment, Mozambique.
ABIDING ARCHITECTURE: WHAT I'M LEARNING FROM WORKING IN TITANYEN, HAITI

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**Abstract**

Today in Haiti 357,000 people remain in the squalid conditions of 496 camps, where the risk of cholera, malaria, and rape remain very high. Eighty-four percent of these residents have been there since January, 2010. Ninety-nine camps -- or 42,000 people-- are highly vulnerable to mudslides. All told, 58% of the adults have no work, even though most of the displaced remain in the metro area. The current policy of emptying the camps by promising rental subsidies will not work. In 2012, 70,000 people were again on the move, either forced from camps or their lives upended by storms. Still, the city's population is expected to grow by three million in the next twenty years, doubling current figures. Seventy-five percent of this growth will be in informal settlements. For these reasons, the price of wasting the peri-urban territories just beyond Port-au-Prince, which are critical to resilient development but fast becoming tragically missed opportunities, is inestimable. This paper explores new planning tools for peri-urban development in Titanyen, Haiti that recast our understanding and approach to scale as well as suggest new ways of working with modules that emerge from pertinent, manual gestures to become adaptive strategies within existing systems. For architects to have a place in recovery that is not rooted solely in building technologies, they must gain confidence to read the process differently--through an understanding of government, money, and land. Smarter choices and good decisions are the result of invested systems that can justify and leverage limited resources and capacities into a broad and coherent vision for reconstruction that is fair and equitable over time. We are exploring this process through constant acts of abiding.

**Keywords:** post-disaster recovery and reconstruction, peri-urban development, informal urbanism, urban decentralization, Haiti, resilient urbanism, abiding architecture, systems architecture.

SHARING, JOINT PLANNING, SELF-BUILDING, FOR A PROFESSIONAL ANTI-SEISMIC AND ANTI-CYCLONE SCHOOL IN THE SOUTHERN HEMISPHERE

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**Abstract**

Due to the state of emergency, non-governmental organisations (NGO) and missionary groups often build in an unsuitable manner in relation to: available resources, workers’ skills, and actual needs of the affected populations. There is no doubt that part of the damages and deaths sustained in Haiti due to the earthquake of 2010 can be directly linked to the improper buildings erected with the aid
coming from first world countries, which introduced wrong building methods, unsuitable for the area.

The dry building technique (proof of the mechanical, technological evolution of traditional techniques compared to chemical processes) is certainly easier to understand by everybody; resistance against wind, rain, sun and maintenance are well visible. It is able to easily adapt to local materials, stimulating the workers and users to recycle and re-use. The know-how is transmitted through comprehensible and shareable behaviours that relate to conscious and unconscious memories within us. Sustainable technology must be written on the walls like an abacus. Like instructions for use, applicable to everybody.

The construction site represents the place to train, educate and inform volunteers and the communities involved, about good practices and virtuous behaviour for peaceful cohabitation on this planet. We are well aware that building together is able, like nothing else, to stir forms of appropriation, pride, identity, that are essential for the work in order to generate social inclusion.

A professional school in Haiti built with 5x15x400 cm wooden beams and metal joints to withstand earthquakes and winds up to 170 km/h.

The technical school designed for the Monfort Missionaries is intended to fulfil the need of imagination. The population of Haiti needs more than subsidized aid. Haitians cannot act for long as spectators of their social life. Collaborating in the construction activities is essential to feel part of the community.

**Keywords:** self-building, sharing, joint planning, Haiti.

**TUESDAY 5TH AUGUST 11.40-12.00 | MR 12AB ICC**

**PROMOTE THE PROSPERITY OF DEVELOPING COUNTRIES IN THE GLOBALIZATION PROCESS. A PROPOSAL**

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**Abstract**

Solving the problem of poverty in the developing countries is equivalent to guaranteeing prosperity
today and in the future to the communities of reference. A challenge that calls for the valorisation of existing anthropological, environmental and landscape resources. The process of globalization taking place in the world requires a holistic vision and therefore a pinch of awareness on the part of developed countries that their prosperity over time is closely linked to the promotion of welfare of developing countries with an approach in relational terms and the sharing of knowledge and resources. These are the dimensions of the pilot project of cooperation between Materi in the north of Benin and Veneto region in the northeast of Italy. The goal of the project is to convert the human, environmental and landscape resources of Materi in the engine of transformation and of the value generation in order to ensure those conditions that will avoid migration which cause forms of poverty for the region and for the individual. The project includes the development of a first relational bridge between young people and it will be established through an exchange between the Italian University and Materi’s young people. It will be led by an interdisciplinary team composed of experts from Benin and Italy. The Italian representatives will bring their skills in the productive sector (primary, secondary and tertiary) and the ones in valorisation of the environmental and landscape heritage matured in their community. The interdisciplinary team will support local government with the knowledge required to enable a correct approach to the management of priorities, of investments and the involvement of the local population through adequate training. The hope is that the relatedness of the project be able to ensure innovative contributions that can improve decision-making processes of both countries.

**Keywords:** developing countries, welfare, poverty.

**TUESDAY 5TH AUGUST 12.00-12.20 | MR 12AB ICC**

**CITIES IN AFRICA DRAWN, ONE HUNDRED URBAN SPACES ILLUSTRATED**

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**Abstract**

What does the urban form of one hundred cities in Africa reveal? Can the characteristics for resilient cities be applied to cities in Africa, as discussed by Salat and Bourdic’s (2012) Systematic Resilience of Complex Urban Systems? Could emerging cities in Africa learn from the resilient figure-ground map of old Rabat, Morocco?

The paper introduces cities in Africa as figure-ground maps. Two key paradigms around cities emerge out of the variety of urban forms: origin and contemporary settlement patterns. Structural patterns inform the understanding between built and un-built space. This urban spatial comprehension contributes towards a spatial manifesto for cities in Africa. Why cities in Africa as one hundred scaled drawings? Collecting accurate urban maps and re-drawing them at the same scale, using the same graphic convention, will establish a frame of reference, in this case figure-ground maps, for architects’, urbanists’, and students’ work. The paper results from a research project, undertaken primarily by Gary White and Associates / Holm Jordaan Architects Urban Designers, in collaboration with the University of Pretoria’s Urban Research Group. Architects, urbanists and students have contributed to this in-depth, hands-on investigation. Results for urban resilience are drawn by visualising spatial diversity and complexity. Resilience is visualised when the urban spatiality of cities are compared, and the ingrained plasticity of its urban spatial nature is exposed.

“A map is defined by its status as an artefact and a mediation in a process of social communication, and by the particular conditions of its production and reception, rather than by formal traits. In a problematic mixture, it combines the transparency of referential illusion, with the opacity of a medium that materialises the geographical image” (Jacobs 2006, p. 21).

**Keywords:** figure-ground map, Africa, urban mapping.
UN-INSULATED: A VISION FOR CONTEMPORARY ARCHITECTURAL EDUCATION

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Abstract

Increasingly, the boundaries of architecture as a discipline are being transcended, as professionals take on a wider array of projects that go beyond objectified design and begin to include other goals as design criteria. However, the educational programs which produce new and future architects ignore even normal practice models and have yet to adapt to new explorations of the value of the discipline in a larger context, keeping future practitioners insulated from the discipline’s full potential. Disciplines which require successful interweaving in the profession remain nearly entirely separate in academia, even as shared or overlapping content is pursued. The contextualization of the architect’s role as a societal player is often either missing or de-emphasized in favour of the architect’s positioning of oneself within the narrow scope of the profession. The result is an insular education that views architecture as a single discipline and leaves students ill-prepared for the reality of interdisciplinary practice. It minimizes the architect’s role to merely a preparer of buildings in an era in which a small but growing generation of architects is seeking to erode that perception of the discipline and transform it into one that promotes comprehensive design strategies including problems of social engagement, environmental sustainability, cultural sensitivity and genuinely pragmatic problem-solving. In response, architectural education, particularly through design studios, requires a fundamental re-evaluation and retooling in order to embrace the future of architectural practice.

Keywords: architectural education, interdisciplinary education, architectural profession, integrated studios.

UN-BUILDING POVERTY AND BUILDING HEALTH

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Abstract

This paper challenges the scope, design and method of any architecture linked to development work and will prescribe ways to un-build poverty and build health.

The prescription for the un-building of poverty will involve making some immediate community improvement as part of the design methodology. It will require detailed assessment of the multi-layered design problems common to development work, learning new ways of telling the development story to those most effected by the works, combining human stories and hard data to define success or failure and developing ways to engage the next generations in the work to sustain people, their health and wellbeing.

Keywords: Architecture, housing, health, housing for health, development, poverty.
CATALYTIC APPROACHES TO INFORMAL BUILDING IN RURAL SOUTH AFRICA

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**Abstract**

Because of technological, political and social challenges in South Africa, traditional (local) building systems have been largely abandoned for industrial construction methods. The authors have investigated the challenges and opportunities of using earth and other traditional building methods to provide shelter in South Africa. Their findings suggest a research methodology and protocol designed to focus on extant examples, barriers, successes, failures, geographic distribution, current practitioners, etc. in regards to building strategies that use local materials and that could lead to the renewed utilization of these techniques. They believe that such a research strategy could help guide activities toward pending issues in sustainable development in rural areas in South Africa, as well as serve as a potential model for other regions. This research could help improve the design, economy and physical performance of informal dwellings and other structures. The authors hypothesize that traditional methods hold value as a repository of tested solutions that can be applied to current housing issues. Through utilizing unique North-South networks and resources, the authors propose initial ‘catalytic’ opportunities (where modest efforts can have large impacts) for design research based in part on current earthen-mapping strategies applied in Europe and the US, as well as service-learning models such as Global Studio, Rural Studio, CalEarth, etc. Through evidence-based approaches, rational strategies toward addressing the challenges of applying local materials in the informal building sector can be best realized. Through community-engaged social design activity in South Africa, mentor-student teams can tackle this research agenda through real-world projects, learning, cultural exchange and outreach, and thereby add to the global database of sustainable approaches to human needs as identified by the United Nations Millennium Development Goals.

**Keywords:** South Africa, earth construction, design research, traditional building, informal building sector.

THE INTEGRATED APPLICATION OF SPACE SYNTAX AND SPACE SIMULATION IN PREDICTION OF ARCHITECTURAL SPACE

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**Abstract**

The status of urban pedestrian space is an important indicator for measuring the quality of urban spaces, urban landscape and built environments. It significantly affects integral mechanism of urban vigor and the reinforcement of cities’ identity. Integrating with a variety of activities composite walking spaces, which can play an optimism role in the development of a city, should be openness, sharing,
dependent, variability. Therefore, through prediction and evaluation of existing urban physical spaces on different levels from macroscopic to microcosmic, understanding of quality of urban pedestrian spaces can be much more reliable and comprehensive for providing design ideas for urban renewal, plot reconstruction or other movements to improve the urban environment.

This study takes Hong Kong as an example, which is a high-density city. And the central area, in Hong Kong, is selected as a sample of preliminary study. Based on the information of status quo, the data and quantitative material such as path length, connection relationships, open space scale, etc. have been classified in different levels of progress. Then, combining space syntax analysis methods and 3d software simulation means to predict and evaluate potential usage of urban pedestrian space in this area with a perspective of physical dimension. And these tests are done in different classes corresponding to levels respectively from macro to micro: urban fabric, streets in blocks, individual open spaces, spaces guided inwards. By reference to both computer analysis results and field investigation, some suggestions and possibilities for improving the quality of regional pedestrian space are put forward.

**WEDNESDAY 6TH AUGUST 11.40-12.00 | MR 12AB ICC**

**WORLD IN TRANSITION – A STRATEGY FOR MULTIDISCIPLINARY PEDAGOGY IN DIFFERENT CULTURAL ENVIRONMENTS**

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**Abstract**

The international Master’s Degree Programme in Creative Sustainability (CS) at Aalto University is a joint teaching platform for the University Schools of Art, Design and Architecture, Economics, and Engineering in the fields of architecture, business, design and real estate. The CS programme offers courses and projects that bring together students from different fields to develop a more rigorous, multidisciplinary approach to problem solving. World in Transition (WiT) is a combination of CS courses organized by different schools of the Aalto University. The courses and design studio projects address issues of development and globalization, in different scales depending on the discipline. By bringing them together, WiT establishes a multidisciplinary platform for collaborating with disadvantaged communities at grass root level. The focus of WiT is on community empowerment through participation, sustainable design solutions and cultural awareness.

This paper aims to demonstrate Aalto University’s approach to pedagogy in the context of globalization and development through World in Transition. It examines the challenges and drawbacks of the approach, as well as its outstanding benefits to communities in the world majority context, and to learning processes in multicultural environments. The strong social and cultural emphasis of World in Transition calls for commitment and personal involvement. It offers students an opportunity to test their own skills and potential in communication, problem solving, teamwork and participatory planning methods. It challenges them to put their ideas and knowledge into practice, and to step from vision to implementation. With its multicultural and interdisciplinary approach, World in Transition prepares students to confront real life challenges at a local as well as global scale – while being connected to the practicalities of human life at the grassroots level.

**Keywords:** multidisciplinarity, university pedagogy, development, globalization, participatory planning.
WEDNESDAY 6TH AUGUST 12.00-12.20 | MR 12AB ICC

TOWARDS ENTREPRENEUR ACTIVIST ARCHITECTURAL PRACTICE

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Rudolf Perold
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Abstract

This paper explores how design education and practice can address informality and poverty. Student projects at the Cape Peninsula University of Technology (CPUT) often engage with informality and poverty, both in the studio and on site as design-build projects. However, in relation to professional values there is still a gap between what students are exposed to during their training and the opportunities which they have to act upon these values once they enter the profession.

Since the promulgation of the Architectural Profession Act in 2000, the scope of professional registration in South Africa has widened. Graduates from CPUT can now enter the architectural profession as independent practitioners. This has an important implication for architectural education: Universities of Technology (UoT’s) cannot focus only on providing technicians as employees in architects’ offices; rather National Diploma and BTech graduates must be equipped with sufficient skills to start and manage their own practices. Due to an acute awareness of the socio-economic disparities in South African society, as reflected in our own student demography, the Design-Build Research Studio (DBRS) at CPUT is developing an alternative form of work integrated learning (WIL) pedagogy which prepares students to enter the profession as entrepreneur-activist architectural practitioners.

We will present a case study of one such project, focusing on a highly specific developmental problem: the upgrading of RDP housing through additions and alterations. The project explores professional engagement with low-cost housing on a one client, one practitioner basis. We conceive this as a hybrid practice: part entrepreneur, part activist. Such a hybrid practice requires a skill set much wider than what students are traditionally equipped with: knowing how to supplement extremely limited budgets through subsidies or sponsorships and designing to allow for a degree of informality while satisfying building regulations; amongst others. Rudolf Perold and Hermie Delport-Voulgarelis are senior lecturers in the Department of Architectural Technology at CPUT. They coordinate the Design-Build Research Studio (DBRS), which provides students with learning opportunities in the real world through the design and construction of architectural interventions. Their work at the DBRS informs their respective doctoral research at the Hasselt University in Belgium and CPUT.

Keywords: education, design-build, alternative practice, entrepreneur.

WEDNESDAY 6TH AUGUST 12.20-12.40 | MR 12AB ICC

MAINTAINING A DESIGN-BUILD PROJECT – REFLECTION ON SOCIAL ARCHITECTURE, SUSTAINABILITY AND ROLE CONFLICTS

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Abstract

The social themed architecture – from pro bono, necessity, humanity to change, activism, development and empowerment (book titles of diverse architecture publications) – is getting more attention than ever.
My first built project being a student made it in the book of ‘10 years and 100 buildings’ on Post-Apartheid Architecture in South Africa and over the past eight years, I have been actively involved in about 20 social architecture projects and as managing director of the NPO buildCollective, collaborating with an Austrian School project, actually maintained and lived in a ‘design-build’ Township-school for 1.5 years.

The idea of architecture as an inclusive service catering for the other 90%, gives sense to its hard work. The power of profession - defining our built environment, as a tool for social change makes the hard work meaningful.

But a definition on the social in architecture seems unclear and the reflection on the production of space is hard to find (For example, Henri Lefebvre’s Who? What? Why? And for Whom?).

Which systems and partnerships enable social architecture?
What is the role and responsibility of architecture in development or social change?
What makes a project sustainably balanced (social, ecological, economically)?
How do participation, skills development and empowerment actually influence design, material and implementation process?
What makes north-south/partnerships more equal?

I believe social architecture is about collective experience, reflection and creation. A trans-disciplinary and often cross-cultural process in which trial and error is a great methodology if documented and shared.

The presentation will reflect on process and production of social architecture, global discourse and lessons learned in practice.

Keywords: social architecture, design-build, practice, reflection, process.

ARCHITECTURAL PLANNING WITH UNDERPRIVILEGED GROUPS – THE ROLE OF UKUMBI

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Abstract

Ukumbi is a Finnish non-governmental organization established in 2007. It operates on the principle of ethical, aesthetic and environmental sustainability. Environmental sustainability can be achieved through the use of local, recycled and renewable materials, and by ensuring that design conforms to the local climate of the location at hand. Aesthetic sustainability is based on functionality, local culture and how the building fits into the environment. Ethical sustainability is achieved through participatory planning, by engaging the local community in projects from design to implementation.

Ukumbi offers architectural planning and design for underprivileged groups. Often such groups include women, children or young people whose opportunities for public participation are limited. Improving the status of women in particular has proved to be an effective way of supporting community development. Ukumbi wishes to demonstrate that architecture is a tool which can be used to mitigate poverty, raise self-esteem and improve the living conditions of communities.
The success of a development project is measured by its long-term impacts: has the building served as a facilitator of change, is it rooted in the culture and the landscape – and is it still being used by the same community with which it was designed? A potential risk of neo-colonialism is also recognized: all parties involved in the project must be fully credited for their input for the project to be properly embedded into the community.

Ukumbi’s architectural practice can be seen as a form of action-based research characterized by the ambitious goal of finding sustainable solutions for improving the quality of the living environment in specific cultural contexts. Ukumbi’s architecture avoids obtrusive formalism and fashion. It is based on local culture, materials and hierarchies of space, deeply embedded in the collective unconsciousness of local residents.

**Keywords**: cultural sustainability, participatory planning, recycling, locality, gender equality.
SAPI (http://www.sapi.org.za) has over 1700 members and is overseeing the growth of the urban and regional planning professions in South Africa. SAPI aims to engage the built environment professions on collaborative and multi-disciplinary approaches to place making, project cross-overs and the possible professional integration towards the creation of great places.

Yusuf Patel studied Financial Economics at the University of London, Development Planning and Quantity Surveying at WITS. He is a professional planner and a development specialist. He has a wide range of experience including Integrated Development Planning, Infrastructure Investment, Affordable Housing and Community Development. He is Executive Director at Basil Read and President of SAPI.
FUTURE VISION FOR EGYPTIAN CITIES

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Abstract

In Spite of the deterioration of the Egyptian urban system, we can rehabilitate some Egyptian cities to be global cities, in order to play an active role in the system of global cities. These cities will lead the development of the Egyptian urban system through the development of planning aspects depending on future technologies and needs of a new lifestyle, which is expected to be different from the current way of life and depending on a set of mechanisms that could play an important role in the development of this cities at a global or regional level, which will attract people to these cities through a deep understanding of future urban trends, respecting future needs of cities to meet the requirements of future generations.

The research formulates a future vision of Egyptian cities by turning them into global cities and future cities depending on both current circumstances and future challenges based on the theoretical bases as well as international experience. It highlights the importance and urgent need to look to the future so that Egyptian cities can play a major role regionally and globally as these cities act on the international level. This will bring back the capabilities of the development of urban centers of Egypt, and will emphasize urban competitiveness aspects between these new global centers and open up new areas for development in the Egyptian desert through the geo-economic restructuring of Egypt—that would contribute to a reduction in population density in existing cities from the narrow congested valley to new urban communities.

Keywords: the urban system, globalization, global cities, future cities, urban competitiveness.

ANALYSIS OF CHINESE ANCIENT URBAN FORM BASED ON CLIMATE ADAPTABILITY

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Abstract

Ancient Chinese cities have histories dating back thousands of years. Different historical dynasties recorded different urban planning philosophies. Many of these ancient practices in urban planning and design can be used as references for today’s urban planning. A study of the climate adaptability of ancient Chinese urban form is theoretically significant. It helps to guide the modern city design, to create and build a modern city with Chinese characteristics and to inherit and carry forward local traditional culture. Moreover, such studies can enrich the current deficient knowledge in ancient city construction history. Current research in ancient Chinese urban form mainly focuses on historical geography, archeology and architecture. The morphology of ancient Chinese cities, considering the object, can be divided into three levels: research in the individual case of urban morphology; research
in typological, regional and urban form in different historical periods; comprehensive study of Ancient Chinese urban morphology from a macro perspective. Most scholars mainly focus on city history while more or less neglecting the climate adaptation of the ancient urban form.

**Keywords:** climate adaptability, ancient Chinese urban form, site selection, urban water system, city layout

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**MONDAY 4TH AUGUST 11.40-12.00 | MR 21DEF ICC**

**CAMPUS AS A SPATIAL ENVELOPE FOR TERTIARY EDUCATION: ARCHITECTURAL PRINCIPLES OF ‘WORLD CLASS’ UNIVERSITIES**

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**Abstract**

This paper is devoted to the general requirements of spatial conditions for modern ‘tertiary education’ (tertiary education in terms of UNESCO: as professional university and postgraduate training). This research investigates the qualities and strategies of a comfortable spatial environment for the successful research / educational complexes in modern communities. A modern university is the place for the forming of mentality (knowledge, innovations, competences), and a meeting place. The best universities become the catalysts for the development of regions, but new educational technologies demand new spaces.

Through an analysis of university campuses (from the top global campus lists) we form the characteristics of the comfort architectural environment and urban strategy for the university space, which would be useful for research and educational activities.

The contemporary university campus is a ‘cluster’, it can be organized in several types: distributed in the city fabric, local cluster and greenfield campus (outside the city).

We can mark some principles for the successful modern campus:

1. Code and identity: the common values of the university must be implanted into the space forms.
2. Autonomy and resilience: it needs resources for development and independent management.
3. High qualities of the architectural environment: the spatial forms of the university must be attractive for the best staff and students.
4. Ecological stability as integration in natural landscapes and climate.
5. System of local transport and engineering infrastructure.
6. Safety and social comfort as university traditions: architectural forms integrate university values in local space.
7. Primary objects of the modern university campus are research/educational centers. It is a mixed-use building, which unites research and teaching spaces for different spheres of knowledge in one spatial shell.

The conclusions of the paper were used as a basis for the project for a new campus at Ural Federal university in Ekaterinburg (Russia, the Europe-Asia border), which will be constructed by 2020.

**Keywords:** campus, architectural environment, sustainable development, world-class university.
POSSIBLE FUTURES FOR THE AFRICAN BUILT ENVIRONMENT TOWARDS 2050

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Abstract

Africa’s built environment has been a subject of focus at the top of every local, regional and national planning and political agenda. There are important questions to ask as to where these future properties will be built, who will construct them, what will they be like and whether the built environment will meet the needs of future generations towards 2050. The question of Africa’s existing built environment stock and its capacity to meet future needs, poses a major key issue toward 2050.

In Africa, countries are continuously exposed to the fast changing external environment of the 21st century. Political leaders and decision makers are faced with daunting challenges associated with rapidly fluctuating regulatory and legal changes, macro-economic trends and risks, socio-political transformation, globalisation, technological innovation, increasing competition, environmental concerns as well as pressures and expectations for building community support. It is therefore important for African countries to position themselves in the rapidly changing, complex, and global environment. Africa, striving in the midst of a changing global environment, requires the application of built environment based planning, and if possible, change navigation in some form or other.

The environmental scanning approach firstly entailed the affirmation of what is already known and knowable with respect to what prevails at the intersections of Africa and its built environment development, and then the exploration of the many ways in which environmental scanning and built environment development could co-involve, synergise, and inhibit each other in the future. Then to examine what possible paths may be implicated for Africa’s poor, and vulnerable built environment. Environmental scanning is a methodology designed to help researchers, nations, and organisations alike through this creative process. This paper identifies drivers of change, and then combines these drivers in different ways to create a set of possibilities in terms of how the future built environment of Africa could evolve.

Keywords: driving forces, built environment, society, government policy, strategy.

GLOBALISATION AND IDENTITY IN THE ARCHITECTURE OF CONTEMPORARY CITIES: VALUES OF LOCAL FORMS

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Abstract

The research is devoted to the problem of identity crisis in architectural space in modern cities. We have reviewed modern-day urban planning and design practices that have given rise to an “international”
style in architecture, and identified a certain principle underlying the modern “global” city, suggesting several strategies for the conservation of cultural identity in the global world. Globalisation of the urban space is accompanied by the devaluation of “place”. When an international global city is created, we would find it symbolically “empty”. Thus, “historical” cities in Europe and Asia are likely to be more suitable as examples of “future cities” than modern megalopolises.

The global city most often acquired the following morphological spatial lines, regardless of localisation:
- it becomes the main migratory attraction for residents of neighboring areas and loses its national identity;
- the downtown is typically an inadequately overpriced area, with the high-rise centre being the focus of business activity, and complex services become the basis of the city economy: consulting, finance, multimedia.
- local traffic is extremely congested despite the fact that at least 20% of the area is allocated to transport infrastructure.

We assume that a lot of people would prefer to live in unique cities with a national character which creates individuality. A contemporary city, which brings both cultural historical identity and modern technologies into urban life, would be more attractive for people and more stable. Accordingly, instead of globalisation, we should create a different approach to the traditional urban structures using their new functional and technical possibilities. The identity of city comfort space is based not only on local forms or decorations but also on space and configurations of space and their correlations with citizens. Also, this quest is undertaken within the context of a search for strategies for different regions. Future social urban structure is dependent on new forms of social organisation relying on more flexible architectural urban spaces and mixed functions.

**Key words:** cityscape, sustainable development, globalisation, cultural identity.

**MONDAY 4TH AUGUST 12.40-13.00 | MR 21DEF ICC**

**MODERNITY AS THE FOUNDATION OF URBAN STRUCTURE IN CHINA: CASE STUDY ON A MODERN URBAN RUIN**

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**Abstract**

The historic downtown of Shantou, as a well-preserved urban texture of modern period, is now suffering significant blows of poverty, recession and depopulation. Over the last decade, all regeneration attempts turned futile. Construction and collapse of modernism act as a historical clue in our study, in which we explore that spatial structure transformed from traditional “opus” format to “centrality” framework in early years and declined in the shadow of modernism collapse in space and scale. Critically, it is further argued that all the regeneration efforts will end in vain without the reconstruction of modernity. With the prevalent absence of modernity in Chinese cities, the construction of modernity is still vital even in the emerging postmodern context of urban transformation.

**Keywords:** modernity, Shantou, centrality.
WICKED PROBLEMS FRAMEWORK: ARCHITECTURAL LESSONS FROM RECENT URBAN DISASTERS

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Abstract

This paper extends the design framework of Horst Rittel (1930-1990), who argued that complex societal problems that cannot be addressed using linear systematic processes, namely, ‘tame’ problems, may need alternative approaches, since they are ‘wicked’ in nature. Urban issues such as informal settlements, poverty, and overcrowding, are merely the physical symptoms of deep systemic issues beyond the control of planners and architects alone, and hence, are ‘wicked’. Rittel, a thought leader of design thinking, coined the expression “Wicked Problems” in 1973 to describe the complex issues of society situated in the real world that cannot be solved using rationality alone. In fact, such issues need transdisciplinary understanding and action to optimise decision-making based on multiple viewpoints and methods of inquiry.

Many of the ‘wicked’ attributes of society are amplified in a state of chaos such as in urban disasters, and this paper argues that the wicked problems framework can lead to alternative visions through democratic, transdisciplinary design strategies. The Rittelian framework is still relevant in today’s complex societies, particularly in community development projects. This paper presents some of the key findings from three post-disaster case studies, tracing some of the successful design decisions that were made by local stakeholders with and sometimes without architects.

Drawing from an empirical research of professional responses to three recent disasters: the 2010 Canterbury earthquake, the 2010 Haiti earthquake, and the 2005 Hurricane Katrina, this study proposes a re-conceptualisation of urban disaster reconstruction that prioritises community empowerment through democratic design processes rather than through architectural symbolism, and a re-conceptualisation of architecture as a by-product of community-driven activities rather than as an end-goal.

Keywords: Horst Rittel, wicked problems, disaster recovery, community development, democratic design.

DESIGNING FOR DEMOCRACY: ARCHITECTURAL POSSIBILITIES OF THE POST-APARTHEID

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Abstract

Architecture is one discipline for which the demise of apartheid serves as an opportunity to develop practices that reflected South Africa’s shift to democracy. Under apartheid, the architectural profession was (for the most part) beholden to the apartheid state and its related capitalist apparatus. Criticism of apartheid was limited to personal expression and a few tightly constricted disciplinary terrains, such as university teaching. One of the liberating promises of post-apartheid was the possible transformation of architectural practice, from a technology of repression and separation into one of democracy.

While it is tempting to evaluate the degree to which this promise has been realized, in this paper I will
instead trace the history of how it has begun to unfold, and the possibilities and challenges that have arisen. The paper will work through one case - the Philippi Public Transit Interchange, in Cape Town. This will serve as an emblematic site, to provide a ‘text’ through which to ask: what it means in the South African context to design for ‘democracy’, how such design opportunities unfold, and what is at stake when a profession such as architecture addresses societal change and challenges.

To answer these questions, the paper will examine architecture dialectically: as form making, and as a professional practice that is in essence a set of social relations. By examining a project such as the Philippi Public Transit Interchange in this dialectical manner, I will begin to describe the disciplinary and social context in which architecture has been practiced after apartheid. My hope is that an informed understanding of the history of ‘designing for democracy’ can help put criticism and celebration of South Africa’s post-apartheid condition in dialogue with each other, to move forward productively.

Keywords: post-apartheid, South Africa, design, Philippi public transit interchange.

MONDAY 4TH AUGUST 14.40-15.00 | MR 21DEF ICC

CITIZENSHIP, AGENCY AND CONTROL: CONTESTED URBANSCAPES IN THE MODERN CAPITAL OF PAKISTAN

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Abstract

When the Master Plan of Islamabad was designed by Constantinos Doxiadis in the 1960s, an internationally famous and well-connected star architect of his time, the fundamental trope was that of human scale. A ‘Sector’ was designed such that it consisted of residential spaces for all income groups, including the lowest working class to facilitate the wealthy. But like most Modernist cities conceived and designed in the 60’s it was city for the rich. As the population increased, the city centers grew dense and the lowest working class, who were never really conceived of as residents of the capital of the republic, were pushed towards the periphery of the city, forming squatter settlements.

In the last forty years, thirty six squatter settlements have emerged within the outskirts of the capital city, as ‘communities within a community’ of underprivileged members of society, of which only eleven are acknowledged by the government for aid. As the population continues to increase exponentially the inhabitants are sporadically occupying more territory, and in order to facilitate and control these endeavors the government plans to resettle the squatters that, in terms of government rhetoric, hinder its path to rapid urbanization.

This paper intends to discuss the idea of citizenship with regard to Henri Lefebvre’s concept of ‘right of space’, which implies the right to urban life, defined as the right to appropriate and participate in the production of space. The polemical intention of the paper is to define the evolving notion of citizenship in Islamabad, and its role in creating equitable cities. The intention is to deliberate on the hypothesis that citizenship is an ideology orchestrated through the geographies and imaginaries of inclusion and exclusion, as operational through space and territory, and how the contestation of presences and absences in that space mark ownership, or the lack thereof, to give rise to a new force of territoriability once that is promulgated through the various negotiations of socio-political narratives of space.

Keywords: right to the city, master plan, doxiadis, citizenship, squatter settlements, modernist capital, modern planning in the 1960s.
SOME REFLECTIONS ON THE 'NATURE OF AN APPROPRIATE AND RESILIENT SPATIAL PLAN' FOR SOUTH AFRICAN CITIES

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Abstract

A number of settlement-making paradigms have been operative in South Africa: the pre-colonial; the earlier and later colonial; and the ‘modern town planning’. In recent times there have been numerous calls for a shift away from the mechanistic, reductionist and functionalist ‘modern town planning’ paradigm, which continues to be based on a programmatic land-use planning approach and which was appropriated by the operative apartheid ideology in South Africa for very many decades, leading to universally acknowledged pathological societal and settlement actualities that endure.

Paradoxically, physical change appears more arduous to achieve than political change. For nearly two decades the ‘New South Africa’ has been democratic, yet modern town planning remains the dominant ‘mindset’ amongst built environment professionals. It is an approach that has shown itself to be neither resilient nor capable of dealing effectively with many realities entrenched in the physical structure of settlement, some characteristics of which continue to be propagated in newer and even current developments.

The paper rests on the premise that closer examination of some of the attributes of pre-modernist models of settlement-making, as well as some models in use in some other parts of the world currently, is of relevance to the quest for some valid principles for the more equitable and resilient physical structuring of settlements currently in South Africa. Selective evidence will be marshaled, as well as reference to parallels between features of the practices of settlement-making briefly examined in the paper and ideas about the making of the city expressed in the 1950’s-60s and more recently by some urban design pioneers, critics and planners.

Basic constituents of an appropriate approach to the problem of settlement-making in South Africa and some of the most important elements of a minimalist urban structural and spatial order will be suggested in conclusion.

Keywords: resilient urban Planning, land-use and programmatic plans, structural and spatial plans, urban design.

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1 Material from a paper published nearly 20 years ago in Pretoria is here included: see Todeschini, F., 1995. Earlier version of this paper, appearing under somewhat different titles, were presented at the Joint AESOP/ACSP Congress and at a joint University of Witwatersrand and Pretoria University 'Urban Design Seminars' during July and August 2013, respectively. Because a version of this paper is to be published as a chapter in a book by Springer, the full paper can not appear in the UIA conference proceedings.
EVALUATING THE IMPORTANCE OF TRADITIONAL URBAN SPACE IN SOUTH AFRICA’S CITIES: A CASE STUDY OF THE USE OF URBAN SPACE IN FOUR SOUTH AFRICAN CITIES

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Abstract

Electronic communications (ICT) and access to transportation mobility provide the connecting network for communities of the relatively wealthy who often choose to live in a dispersed urban region. In South Africa, however, where the recently urbanized only have limited access to ICT and independent transport, traditional urban space is still the networking mechanism that the poor need. In South Africa this co-existence has led to both creative vitality as well as conflict in the use of urban space. Resolving this dichotomy has important implications for South Africa’s cities. Important inner-city urban spaces were identified in Port Elizabeth, Uitenhage, Cradock and Grahamstown. Activities were monitored over a twenty-four hour cycle and analyzed by type, duration, intensity and spatial impact. Points of conflict and coherence were identified. The main findings of the study include the vital importance of traditional urban space for the poor for whom it provides an important resource for trade, the heavy demands that their intensity of use puts on the material fabric of the space, and their need for space that unlocks opportunity. This intense vitality in the use of urban space is often perceived as hostile by the relatively wealthy. The implication of the study for South African cities is the vital importance of maintaining compact, traditional urban space as a key urban resource for the poor, and managing this resource effectively.

Keywords: social impacts, social impact, spatial cultures, urban opportunities.

EXPERIMENTAL STUDIES OF COMFORT LEVELS IN BUILDINGS EXPOSED TO DIFFERENT WIND ORIENTATIONS IN WARM HUMID CLIMATES

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Abstract

Thermal comfort problems associated with warm humid climates in Nigeria and other developing counties have been a major concern for architects and other environmental designers confronted with the task of designing buildings with acceptable indoor thermal comfort standards. This paper, through controlled experiments, studies the indoor comfort levels of buildings with North-West/South-East (Model A) and North-East/South-West (Model B) wind orientations. Data on thermal comfort factors including air temperature and relative humidity among others were obtained from the experimental model buildings (Model A and Model B) specifically constructed for this comparative experiment at the premises of Imo State University, Owerri, Nigeria. Data obtained from the experimental units and thermal comfort parametric ranges already established were analyzed using statistical tools involving central tendency and dispersion. Results showed statistical significant differences for the air temperature of the model buildings. Also, the differences in relative humidity of the model buildings were not statistically significant. Model B with North-East/South-West wind orientation had a more acceptable indoor comfort level.
This paper therefore recommends North-East/South-West wind orientation for maximum air flow as a passive means for the achievement of better indoor comfort conditions and consequently lower energy usage for the development of low cost houses in warm humid climates.

**Keywords:** building, temperature, thermal comfort, warm humid climate, wind orientation.
THE CRISIS IN SOUTH AFRICAN CITIES WITHIN THE CONTEXT OF THE ENTRENCHED DYSFUNCTIONAL RELATIONSHIP BETWEEN URBANISTS IN THE PUBLIC, PRIVATE AND ACADEMIC SECTORS

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Abstract

The most significant obstacle to meaningful urban transformation in South Africa lies not in a shortage of academic ‘know how’, not in a shortage of public sector investment, not in a shortage of private sector mobilisation, but rather in the entrenched dysfunctional relationship between these three sectors.

The public sector has become driven by a number of imperatives that require it to ‘procure’ the ‘services’ offered by the private sector in a standardised mechanism. The unavoidable net result of this strategy is a contested, unproductive standoff between the public sector ‘urban silo’ and the private sector ‘urban silo’. No vision or leadership emerges from this standoff.

In a similar way urbanists in the ‘academic silo’ come under increasing pressure to focus not on the South African urban crisis, but rather on ‘purer’ academic pursuits. This trend seems unstoppable, with a momentum developed from very high up in South Africa’s higher education community. Those from private practice who give their time to the university, do so as volunteers and turn away hourly paid work to do so. Academics offering to serve the public sectors are as a commodity to be bought through a procurement system.

In architectural practices we find that the energies of the brightest minds are committed to pure commercial pursuits. Architects at the top of their game commit most of their valuable time and energy in managing risk, resolving conflict and ensuring cash flow. Research and Development have become expensive swearwords in architectural practices that are intent on staying in business.

In this way, the silos grow more and more isolated and positions within them become more and more entrenched, urbanists of otherwise impeccable credentials begin to withdraw into cynicism and isolation. Great ideas are shelved. Big visions parked. Energy diverted.

**Keywords:** urban crisis, professional practice, academic, public sector, collaboration.
FACTORS EFFECTING CITY PLANNING FROM PAST TO FUTURE: FUTURE VISION TO CITY PLANNING

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Abstract

The objective of this paper is to present the history of city planning from past to future to form a future vision of cities, whether it will be a sustainable city or future city, taking into account both current circumstances and future challenges.

The paper identifies that theories of sustainable cities and other future cities set their establishment standards and planning criteria. It delineates the most prominent factors that have affected city planners over time to planning cities going towards the future with international experience. For the purpose of establishing new sustainable urban communities in the Egyptian desert. To provide a vision of Egyptian cities, in light of future changes, and the implementation basis to realize their sustainability from all aspects.

Keywords: city planning, Egypt, urban communities.

DETERMINANTS OF HOUSING SATISFACTION IN PRIVATELY OWNED DWELLINGS IN EDENGLEN, JOHANNESBURG, SOUTH AFRICA

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Abstract

This paper presents finding on the survey conducted with residents’ in Edenglen Suburb, Gauteng Province South Africa, that are living in privately owned dwellings to assess their level of satisfaction with the residential apartments. The study also investigates the factors which affect individuals’ satisfaction levels in privately owned dwellings within, with regard to the physical and social aspects. A structured questionnaire survey was conducted in Edenglen suburb, in Johannesburg to determine the objectives of the study. The respondents involved in the data gathering were residents of the suburb of Edenglen. The survey results revealed that residents were satisfied in terms of their housing needs. Further findings showed that the majority of residents were highly satisfied with the security provided in and around the suburb as well as the social aspect such as neighbourhood friendliness and distance to local amenities. Dissatisfaction mainly occurred with renters in comparison to home owners especially with the aspect of maintenance. Due to the raising number of privately owned estates in South Africa as well as the low visibility of literature in this aspect with regards to South Africa, it is important to establish the basic factors which contribute to residents’ satisfaction in privately owned dwellings. The paper contributes to this body of knowledge.

Keywords: Housing satisfaction, privately owned dwelling, Edenglen, South Africa
BUILDING DEVELOPMENT TRAJECTORIES

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Abstract

Building development trajectories refers to the path being followed by the development of built environments. This path can be influenced, and change, depending on external factors such as economic climate, client preferences, legislation and fashion. It can also be intentional and have a specific direction and destination that is established and followed by government and users, owners, planners and designers of built environment.

The scale and nature of social, economic and environmental pressures, climate change and the limited resources to address these challenges mean that new built environment development models need to be developed. This paper describes, and reviews, a sustainable development model for the built environment that addresses these issues. The model aims to ensure that sustainability is not just a consideration in the development of built environments, but is integrated in ways that define and direct building development trajectories.

The theoretical basis of the model is described and a tool and methodology for application presented. The review and discussion of the model and tool is undertaken and recommendations for further research and development are made.

Keywords: sustainable, building, development trajectories, BEST.

RESEARCH ON TRADITIONAL DWELLINGS UNDER DIFFERENT GEOGRAPHICAL CONDITIONS AND CLIMATE

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Abstract

According to local conditions of geography and climate, using local materials is the spirit of traditional dwellings. The traditional dwellings were built by natural materials that come from the nature and no pollute the environment. Field tests for indoor thermal environment of dwellings of different renewable materials under different geographical climate conditions were carried out, and more specifically, the indoor temperature of dwellings with different renewable material walls as well as the surface temperature of building envelope were tested and comparatively analyzed. The test results show the current situations and features of indoor temperature changes of the dwellings of different materials, which may provide a basis for improving the thermal environment of dwellings and which may find the way of saving-energy and sustainable development.

Keywords: climate; dwellings; renewable material; energy; temperature
TUESDAY 5TH AUGUST 12.40-13.00 | MR 21DEF ICC

THE BENEFITS OF URBAN DEVELOPMENT PLANNING FOR AFRICA TOWARDS 2050

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Abstract

A successful city cannot operate efficiently in isolation from its environment. It must balance social, economic and environmental needs. A successful city must offer investors security, infrastructure and efficiency, and should also put the needs of its citizens at the forefront of all its planning activities. Poor urban planning and management can have grave results for the urban economy, the environment and society. Poorly managed urban settlements will be unable to keep pace with urban expansion, and un-serviced slums will proliferate, bringing with them poor health, poverty, social unrest and economic inefficiency. Local governments in Africa therefore have an enormous influence on how urban-environment relationships develop, and on how their cities interact with their hinterlands and with the wider global community. Effective local governance can make African cities more competitive, more efficient and more attractive to investors and workers by promoting the sustainable development of the urban environment.

This paper investigates how these instruments are applied in several well established approaches to integrated urban planning. It examines the characteristics, strengths and weaknesses of Integrated Development Plans, City Development Strategies, and Strategic Environmental Assessment, all of which are defined and illustrated.

The paper also outlines the information which urban managers should receive from support programmes to assist them in the development of their urban development strategies.

Keywords: urban planning, livable cities.

TUESDAY 5TH AUGUST 14.20-14.40 | MR 21DEF ICC

SOCIAL RESILIENCE: THE CASE OF DIVERSITY AND INCLUSION IN THE ISRAELI PROJECT RENEWAL

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Abstract

Israel is coping with deprived neighbourhoods since mid-1970’s. In 2014 there are 104 sites including in Project Renewal (PR) with heterogeneous population of 1,250 million inhabitants created the diversity with the influx on new immigrants most of which arrived from Ethiopia and ex-Russia in the early 1990’s. This group found itself in different ethno-cultural, educational, social, economic and political adversities comparing to the veterans population who have already passed through the corridor of the “Melting Pot” into the Israeli society.
Diversity and social inclusion are two poles that need special policy leading to integration. PR established holistic approach expressed in understanding of what does culture mean to each of the different groups of immigrants and how professionals translate and implement terms in daily work policies. Social resilience policy became the tool that enabled the transformation from adversity to capacity of both individual and community to negotiate for the resources to be provided in culturally meaningful. The uniqueness and success achievements of the Immigrant Integration Defined Localities (IIDL) program are due to six main components: targeted population; managerial unit; intensive efforts; creation of social networking; developing space as service area; and integrating physical, social, economic and cultural aspects. The paper deals with three questions: Firstly, how the concepts of social resilience, social capital and human capital can be relevant to the challenges of social exclusion, cultural tension, marginalization, disengagement, lack of networks with host community, norms and values differences; Secondly, what are the social, human and cultural capitals benefits of the absorption processes in a new country; thirdly, did the process of absorption achieve social resilience and social inclusion among new immigrants.

The paper describes the unique concept of a simultaneously holistic involvement in community-social, environmental-housing, personal-family and the organizational network aspects achieving community resilience. The IIDL model became best practice for programs operators dealing with social policy plans especially emphasizing the cultural sensitivity toward different ethnic groups in the Israeli society.

TUESDAY 5TH AUGUST 14.40-15.00 | MR 21DEF ICC

‘OTHER’ REALITIES OF DE/SIGNING A RESEARCH AND DESIGN PROGRAM, DEALING WITH MOMENTS OF CRISIS AND OTHER URBAN REALITIES.

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Abstract

Questions of ‘uncertainty’ loom larger within the current world climate. Uncertainty reigns high with respect to the future and longevity of political spheres of influence, economic tenacity, ethnic reliance, and, not to mention, social and human sustainability. Crisis at the level of the built landscape manifests at a number of levels. The first being the questionable levels of influence that architecture, both as praxis and critical discourse, holds within times of crisis. Second, the levels of influence architecture may exert as stabilizing mechanism within territories, whilst thirdly, the questions placed over the role architecture (as spatial discipline) can play through its material embodiment within spatial economies and communal praxis to help facilitate radical forms of survival or reconceptualization of human and social engagement. The specific focus of this paper will be to rescript the notion of ‘values’ in terms of education and crisis. As a paper it will attempt to render visible the relations between (a) the operational logics within competing rationalities as basis for a spatially critical approach within education. Then (b) to address - by way of example - the possible approaches for territories caught within extreme forms of economic crisis, and (c) to elaborate on material engagement of territorial governance and social sustainability through concepts of ‘communing’. The argument made will reflect on the problems encountered within a postgraduate (architecturally focused) education program, the aspects of architectural uncertainty within environmental management and the obstacles encountered within the design-driven curriculum. Examples will show the points of departure, the moments of critical inflection, and specifics of the ‘re-scripting’ of spatial practices as means to reposition an integrated urban-architectural design model configured out of spatial strategies, labour skills and ‘commoning’ tactics. Conclusions are to be made in the form of specific ‘value’ related and ‘educational’ statements.

Keywords: urban, crisis, design, postgraduate, values, education.
THE FABRIC OF THE LIVABLE CITY
ASSEMBLAGE AND THE ARTISAN CITY

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Abstract

The focus of this paper is on the techné required in creating and shaping our cities. Urban decision makers have moved away from being craftsmen with technical knowledge of techné to planners with a theoretical understanding of the practice defined as epistémé. Historically, cities were humble places where people congregated, representing the rise of humanity from its primitive origins to a state where it imposes its will on the world. The city was originally designed by its users, and these craftsmen have over time been replaced by town planners which left our urban landscape populated with cities which have rather become a congregation of buildings and automobiles. As a result of this process, city components, once modestly designed and built by its users, have become disassociated from the human users. It is argued that a combination of the historic rational processes as well as empirical methods will produce livable and humane cities. Precedents taken from a recently completed framework project in Zanzibar will be used to substantiate this.

Keywords: Zanzibar, artisan city, techné, epistémé, context driven design.

MULTIPLICITY AND MOBILITY IN A TIME-SAVING PLANNING MODEL UNDER A MARKET SYSTEM:
A STUDY OF THE PHENOMENON OF "MULTI-HOME COMMUTERS" IN THE MEGACITY OF BEIJING

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Abstract

Beijing is a megacity which is in the process of rapid urbanization due to the growth in both its population and its built-up areas in recent decades. The formation of the Metropolitan Circle of Beijing-Tianjin-Hebei is remarkable, and has even accelerated recently with support from the government in the promotion of Beijing-Tianjin-Hebei integration. The evolution of the urban pattern of suburban Beijing has been accompanied by the growth of the real estate industry in a transitional market system in China. In the course of this process, people's lifestyles have also changed gradually, especially their dwelling behavior, their commuting behavior, and their preferences within the built environment. This has influenced the arrangement of space in the city and has challenged current planning and design strategies.

The new phenomenon of the emerging group of “multi-home commuters” in metropolitan Beijing and its neighboring areas, which differs from the traditional commuting and dwelling styles in most cities, is studied in this paper in terms of quantitative and qualitative data, as a new way for urban designers to think about the evolution of urban form. The case study involves suburban developments in metropolitan Beijing and its surrounding towns, including a questionnaire survey. People’s commuting behavior and preferences in terms of environment choices are discussed in order to suggest a potential solution to urban problems in the megacity in a time-saving urban planning model, with reference to the influences of the real estate market. Thus, introducing multiplicity and mobility into the existing urban planning and design framework may be a possible cure for the problems of the megacity. A time-saving planning model for the megacity under a market system is examined in ecological terms.
The early classic urban design theories and planning models; i.e. the mono-centric and the multi-centric; are also reviewed here. Also, a new view of multiplicity and mobility is put forward in this paper as an addition to the existing planning theories and models.

**Keywords**: megacity, urban planning and design, real estate market, multi-home commuter, Metropolitan Circle of Beijing-Tianjin-Hebei.

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**TUESDAY 5TH AUGUST 15.40-16.00 | MR 21DEF ICC**

**DENSIFYING AND ACTIVATING TO DEVELOP THE EAST CITY, CAPE TOWN AS A CULTURAL HUB**

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**Abstract**

I look at densification, the creation of quality public spaces and street activation as a means to develop the East City, Cape Town as a cultural hub, but also as appropriate responses to Cape Town’s urban environment generally. Densification is largely seen as a necessary development in today’s cities for them to be sustainable in future, and has been specifically recognised as necessary for Cape Town (The Cape Town Densification Strategy Technical Report). I want to propose densification as a strategy for the East City that is necessary for these broader goals of sustainability but that will specifically contribute to the cultural character of the area. Density will place more people into the area, a higher density of dwelling units will increase people-presence over a fuller range of time, and in conjunction with appropriate public space formed, will draw more people out onto the streets, helping to develop the East City as a vibrant and fertile context for emerging entrepreneurial business and the arts. Various modes of thinking within urban design and planning have existed since the late 20th century that advocate densification as a means to create more socially vibrant and environmentally sustainable urban contexts. Peter Newman and Jeffrey Kenworthy explore the correlation between density and reduced energy usage. Concepts such as ‘Smart Growth’ and ‘New Urbanism’ can suggest means of structuring a city which respond to these environmental imperatives whilst creating more vibrant, socially cohesive neighbourhoods. I propose that people are more incentivised to choose a way of life because of how it adds to their personal quality of life than because of a sense of collective duty towards environmental imperatives and hence that area redevelopment along sustainable lines needs to be integrated into strategies of developing a quality ‘sense of local place’ to be effective.

**Keywords**: densification, activation, conditions for innovation, growth strategy
UIA – PHG (http://www.uia-phg.org) is a working body of the UIA. It was founded in 1955 and represents all continents. Its vision is that world public health can benefit through dedicated architects to provide efficient, safe and aesthetic healthcare buildings and an environment for enhanced healing of the patients, operations and staff satisfaction. The coordinators of this component of the UIA 2014 programme are both based at the Council for Scientific and Industrial Research (CSIR, http://www.csir.co.za) in South Africa, one of the leading scientific and technology research, development and implementation organisations in Africa.

Geoff Abbott is a research architect working at the Built Environment Unit at the CSIR. His current focus is on the development of Guidelines, Norms and Standards for healthcare facilities in South Africa for the National Department of Health and on capacity development. He is a long standing member of the PHG and Honorary Life Member the SA Federation of Hospital Engineering.

Peta de Jager is a research group leader at the architectural engineering research group of the CSIR. She is a health infrastructure specialist and has been involved in several projects ranging from redrafting guidelines, norms and standards and working in TB infection prevention and control.
TRANSFORMATION OF A HOSPITAL BUILDING TO A HOSPICE: OPEN BUILDING AS STRATEGY FOR PROCESS AND PRODUCT - AN EXAMPLE FROM THE NETHERLANDS

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Abstract

This paper presents a case study describing a five year search for a new building for a Hospice, and the transformation planning, design and construction of an existing hospital building (polyclinic) into a Hospice of 1200 m² using Open Building as strategy for process and product.

The paper describes the state of the art of the Rent-Buy principles used in the Netherlands.

Applying this principle in this case resulted in the client renting a renovated base building (primary system) for 30–40 years and acting as owner for the secondary system.

A new principle is that the tenant (the Hospice) is financing improvement of the primary system. The net present value calculations for decreased rent compared with these investments shows a positive balance for the client. The budget system is based on a strict distinction of the primary, secondary and tertiary systems.

A competitive tendering (bidding) process was used for choosing a contractor as part of the design team. A distinction in tendering (bidding) was also made for the primary system (base building) and the secondary system (fit-out or infill). This corresponded to a technical separation between primary and secondary systems, in which all installation technology belongs to the secondary system (infill). To increase the capacity of the primary system for future changes, buffer spaces were created for future expansion. Gyproc’s CableStud were used for flexible wire management to good effect. Decentralized HVAC systems were used, offering maximum flexibility in future transformation of spaces.

The paper concludes with an evaluation of the process and product innovations used in the Hospice project, and makes recommendations for improving decision-making for flexibility in healthcare facilities.
EXTRACTING THE PRINCIPLES OF SUSTAINABILITY FROM THE ARCHITECTURE OF COLONIAL HOSPITALS IN MALAYSIA: APPRECIATING PAST WISDOM AS BEST PRACTICE

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**Abstract**

Malaysia’s sturdy hospital buildings built by the colonial government throughout the country are still in use today. These hospitals withstood years of operation and contributed, together with the current hospital buildings, in improving the health and well-being of Malaysians today. Hospitals are both expensive to build and to maintain. The quest for sustainable design includes the evaluation of the performance of both old and modern hospital buildings for future guidance. This paper focuses on the performance of selected colonial hospital buildings in Malaysia currently in-use. The objective is to learn, understand and extract the good values and wisdom from the past planning and design legacies as best practice. Qualitative approaches adopted for this study include a content analysis of relevant literature; fieldwork survey; random interviews and observations. The study analysed the hospital locations, its site planning, building massing, building attributes and environmental performance on thermal comfort, visual, day-lighting and ventilation. Findings of the study provide practical recommendations on criteria for site selection, site planning, building configuration, building depths and widths, and openings for ventilation and day-lighting. Limitations include the duration and number of buildings studied within the stipulated time frame, as well as permission to access the site. The significance of this study is the collection of past best practices on hospital design physical, sustainable attributes that are evergreen before they slowly disappear.

**Keywords**: sustainable, design, colonial hospitals.

DESIGN RESEARCH AND THE GLOBALIZATION OF HEALTHCARE ENVIRONMENTS

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**Abstract**

Objectives. Global healthcare practice has expanded in the past 20 years. At the same time the incorporation of research into the design process has gained prominence as best practice among architects. The authors of this study investigated the status of design research in a variety of international settings. We intended to answer the question, “how pervasive is healthcare design research outside of the United States?”
Method. The authors reviewed the international literature on the design of healthcare facilities. Over 500 international studies and conference proceedings were incorporated in this literature review. A team of five research assistants searched multiple databases comparing approximately 16 keywords to geographic location. Some of those keywords included: evidence-based design, salutogenic design, design research, and healthcare environment. Additional articles were gathered by contacting prominent researchers and asking for their personal assessment of local health design research studies.

Results. While there are design researchers in most parts of the world, the majority of studies 1) focus on the needs of populations in developed countries and 2) generate guidelines that have significant cost and cultural implications that prohibit their implementation in developing countries. Additionally, the body of literature discussing the role of culture in healthcare environments is extremely limited.

Conclusion. Design researchers must address the cultural implications of their studies. Additionally, we need to expand our research objectives to address healthcare design in countries that have not been previously considered.

Keywords: evidence-based design, design research, proxemics, culture

MONDAY 4TH AUGUST 14.20-14.40 | MR 11CD ICC

HEALTHCARE FACILITIES DESIGNED FOR FLEXIBILITY: THE CHALLENGE OF CULTURE CHANGE IN A LARGE US PUBLIC AGENCY

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Abstract

The US Department of Defense Health Agency (DHA) has an international network of healthcare facilities to serve personnel serving in the armed forces. The DHA has a budget approximating $3 billion per year for the acquisition of new facilities and the maintenance and upgrading of existing facilities. Recently, the DHA – driven by a US government-wide mandate - has made a commitment to a policy of sustainable facilities. DHA leadership recognized that a key element of a sustainable asset portfolio is that the facilities must be flexible – planned for the likelihood of expansion, contraction, alteration or change of function or a combination of these – and thus capable of meeting the challenges of changing missions, patient demographics, medical practices, and medical technology. This paper discusses the work being done to introduce flexibility as a high level principle in the DHA policies, practices and criteria. The paper discusses the recommendations being made to implement flexibility by the insertion of flexibility requirements in the key guidance documents used by architects and engineers in designing new and renovating existing DHA facilities. Because many of these are recommended to be mandatory (not simply incentives), their adoption is expected to require a change in the culture of DHA and in the entire decision-making chain for the acquisition and management of DHA healthcare facilities.

This paper reports on the recommended flexibility requirements and the culture change required for their full implementation.

Keywords: Healthcare facilities, flexibility, whole-life performance, sustainability, open building.
BUILDING CARE FOR SOCIAL CHANGE: CREATIVE LEARNING CENTRE FOR PEOPLE WITH DISABILITIES.

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Abstract

The fundamental design criteria for today’s healthcare facilities relates to flexibility, understood as: versatility, expandability over time, adaptability to the needs of different and changing end users. This implies the ability to design a building which, while maintaining unchanged its symbolic semantic expression, is able to respond to the different functionality of a dynamic quantitative and qualitative market demands.

The design of this case-study system has been developed for a social-care centre to be devoted to the hospitality and support of vulnerable people with limited intellectual capacity.

The facility should provide users with a type of temporary additional support to family care or, in more severe cases, the final stay within a protected structure. The first function results in a semi-residential daytime hospitality; the second, in a permanent long-term residential service. Users are adults (18-40 years) with mild or medium physical and intellectual disabilities and able to develop some level of self-sufficiency. The facility falls into the category of non-medical centres.

With these aims, the new building is designed for 100 users (60 part time residents and 40 residents). The structure consists of a large roof-terrace that covers a light and permeable hall that hosts daytime functions, onto which a series of residential blocks are plugged in. The generous open-space is equipped with the highest degree of internal flexibility and offers maximum visual contact with the outside world. Green spaces and cones of light pierce the space, creating open areas suitable for group activities.

The presentation will focus on the methodology and research that generated the design proposal.

Keywords: flexibility, resilience, universal space, technology, respite care.

PLANNING AND DESIGN RELATED TO A CRITICAL GLOBAL COMMUNITY NEED - MENTAL HEALTH CARE: A MUCH NEEDED FOCUS

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Abstract

38% of those who need mental health care receive it in the USA. Worldwide it is worse. Low to middle income countries have a gap between 76-85% and high income countries only meet 35-50% of the need. The measure of disability adjusted life years (DALYs) shows neuropsychiatric conditions cause losses which are higher than cardiovascular disease and cancer. Because of complex interactions and co-morbidity between mental health and physical health, the disparities are believed to be even much higher. Additionally, almost one million people die due to suicide each year and this is the third leading cause of death among the young.
The ‘front line’ and first priority on mental health care reported in WHO’s Mental Health Report 2001 is provision of mental health treatment through primary care.

This paper focuses on an example of planning and process for outpatient facilities for this critical need and how this is much different than physical health operations and settings.

Interdisciplinary research, analysis, design and evaluation processes included physicians, therapists, case managers, patients (clients/consumer), researchers and health care planners/architects. Data, hypothesis, analysis of operational, physical/environmental conditions, patient interviews and surveys led to modeling and design approaches for healthier environments.

Mental health is most devastating for the poor worldwide. Lessons learned include examples of positive and detrimental environments which are fundamentally different than physical health. This paper also suggests the link between integrated approaches improves outcome and built environments.

Because mental health fundamentally involves psychological and environmental perception the quality of the design or architecture for treatment is arguably more important than the design for other clinical care settings. This paper is about the approach toward planning and design which recognizes resilience, ecology and value also known as HOPE, STRENGTH and RESILIENCE.

Keywords: significance of mental health, mental health care vs. physical health care, integrated planning and development, lean methods, mental health design attributes.

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**MONDAY 4TH AUGUST 15.20-15.40 | MR 11CD ICC**

**CASE STUDY - REVITALIZATION OF ARMY FACILITY COMPLEX FOR THE PURPOSE OF A MENTAL CARE HOSPITAL – IDRIJA, SLOVENIA**

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**Abstract**

The city of Idrija, one of the UNESCO heritage sites (mercury mine), is the location of the case study. The site was built in 1933 for the purpose of military defence and later in 1953, changed its purpose into a health care facility. In 1994, the complete reconstruction of the complex began. The site located on the top of the hill above the city consists of five buildings. The nursing wards in buildings L and S were reconstructed from 1994 to 1997. The remaining building A (which will be presented in more detail) was reconstructed in 2009-2010. The purpose of the reconstruction was to create a suitable space for in- and out- patient therapy and daily activities covering the total of 3,251 m2 gross area including the outside terrace. The building was carefully refurbished and special colouring scheme was made in accordance with the program and available budget. Designing projects like this is a challenge for every architect searching for sustainable ways of creating a new environment out of existing buildings. Reconstructions are usually a more difficult way of creating a project, especially if you have to deal with health care, with its emphasis on functionality and long-term cost. The intention of the project team was to create buildings and an environment, in general, for people with mental health problems where they can feel appreciated and part of the community through delivering programs for revitalization, working areas, recreational facilities, open hospital wards and space for out-patients during day care, all with one goal to try to deinstitutionalize the existing system of mental health following the guidelines of Psychiatric hospital of Idrija SPES,AMOR and LIBERTAS (in translation hope, love and freedom in the end).

Keywords: healthcare, mental healthcare, reconstruction, Slovenia.
Abstract

The Mental Healthcare Act no 17 of 2002 was promulgated in 2002 and with this Act there was very little guidance for its implementation. Since then, the Mental Health Policy Framework and the National Strategic Plan 2013-2020 was developed and approved by the National Health Council in July 2013 and the development of Draft Guidelines Norms and Standards for Infrastructure in 2014.

For the past eleven years, provinces implemented the Mental Health Act as best as they were able to without the guidance from the National Department of Health. Hence, this resulted in mental health being delivered in not fit for purpose mental health units in health facilities in South Africa.

South African health care facilities are situated in various districts, in all the provinces. Mental health is a special area of a wide range of clinical areas that is offered by these health facilities. When the Mental Health Act no 17 of 2002 was promulgated, the mental health service was implemented but there were no technical guidelines as to how the facilities that render these services should look or how they should be designed. Thus, most health facilities that render mental health are in a very bad condition. This is reflected in a health facilities audit that was done in 1996 by CSIR and those reports indicated that all the mental health facilities and some general health facilities needed to be replaced.

Keywords: mental health, healthcare facilities, South Africa.
INNOVATIVE MATERIALS IN CHILDREN’S HOSPITAL DESIGN

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Abstract

Since the Modern Movement of architecture, hospital design has evolved and adjusted to changing needs. Nowadays, it is considered to be a function of multiple variables. It is an architect’s duty to design an environment that will propose security and positively affect the patient. The hospitalization process is inevitably a source of stress for an individual. The quality of healthcare facilities’ environment is rather crucial for adults but it is even more significant when the patients are children. The design of healthcare facilities for children is a field of architecture that deeply affects the young mind and body of a child during its visit or stay. Much attention should be given to the types of materials used, as children use touch more than adults and are keen to explore everything at ground level. Therefore, the materials used and the way that they are applied is one of the key factors at this point. The needs of the young patients that must be fulfilled are numerous (psychological, physical, social, etc.) but there are also certain priorities that determine the final choices of these materials. Sustainable design has provided strategies to maximize natural light, incorporate non-toxic materials and increase energy efficiency to reduce costs, energy saving and create cleaner indoor environments. On the other hand, new computer systems and sophisticated medical equipment must be combined with an aesthetics that is pleasant for patients, visitors and medical staff. The healing qualities of the space depend on the choice of materials and colours which also need to reinforce the functionality of the space and always support the patients’ psychology. The purpose of this paper is to specify the new and innovative materials used in up-to-date children’s healthcare facilities design and estimate the way that these materials can fulfil the young patients’ needs.

Keywords: technology in children’s healthcare, children’s hospital, children’s hospital design.

THE STORY OF BIRTH

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Abstract

This paper investigates the relation between childbirth and space. Given the current movement of giving birth at home in many developed countries, it is interesting to examine under which conditions it takes place and what is the role of architecture.

The space of delivery in all periods is studied, starting from Greek mythology. In fact, place is
investigated at the birth of the god Zeus and which was, in antiquity, the perception of birth practices and space. Ancient figurines and paintings enhance the data for the space of delivery. Also, the study refers to obstetrics and the movement from birth at home to the maternity wards, as a result of medical progress. After that, the return to home birth is studied, because of the requirements of pregnant women for natural delivery, while water births are mentioned, as a new space element in the delivery process. Finally, current attempts for a new approach are investigated, in combination with current architectural concepts for childbirth (birth centres, delivery rooms like at home in maternity wards).

The aim is to understand the relationship between architecture and childbirth and to highlight the significance of space in such an important moment of human life. In addition, it intends to sensitize the architects in order to design, with respect and care, the birth spaces, where the first contact of the fetus with the new world takes place.

**Keywords:** architecture of child birth, health care design and obstetrics, mythology and childbirth, birth practices and space.

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**TUESDAY 5TH AUGUST 11.40-12.00 | MR 11CD ICC**

**SMART STAFF REDUCING STAFF BY PATIENT AND FAMILY INVOLVEMENT, EFFECTIVE EXPERTISE LEVEL AND EFFICIENT ARCHITECTURAL LAYOUT. THE WARDS OF THE ERASMUS UNIVERSITY HOSPITAL ILLUSTRATE THE MOST RECENT TREND IN DESIGN AND LAYOUT.**

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**Abstract**

The cost of medical staff runs up to 70% of the total cost of healthcare and is increasing because of the complexity of safety procedures and aging of the working population.

The responsibility for a person’s health shows an increasing focus on maintaining a healthy status instead of curing when medical problems occur. This salutogenetic approach is getting worldwide recognition and is a mayor lead in designing healthcare buildings. In the hospital self-control of temperature, light, fresh air and food stimulates the active attitude of a patient. The help of family on non-medical tasks helps nurses to focus on their medical skills.

Planning of the right level of skill according to the healthcare status of the patient can affect the cost of medical staff in a positive way. Build examples in Singapore and Scandinavia show step back facilities to adjust the level of care to the patient needs at lower cost.

The new Erasmus ward is based on all private patient rooms. The location of medical supplies in decentralized stations is essential to provide effective medical care. Decentralized docking stations replace the rigid nursing station as all patient information is accessible thru wireless connected devices.

These three principles which were essential in the layout of the Albert Schweitzer hospital in Lambarene in 1913 are still valid in today’s ward design.
TUESDAY 5TH AUGUST 12.20-12.40 | MR 11CD ICC

BEYOND DESIGN: TRANSFORMING HEALTH CARE INFRASTRUCTURE INTO DEVELOPMENT STRATEGIES

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Abstract

Typical views of architecture and public health see little relationship between the two, other than buildings as containers for health care delivery. This approach minimizes the potential impact of design and construction processes to one that is diagnostic (identifying needs and responding), rather than one that is preventive (developing strategies for economic development and understanding of health care provisions), thereby creating only a partial result in the ultimate goal of improved public health. The role of architecture may be expanded in a more holistic vision of this goal, through principles of resource effectiveness, labour upturning, and infrastructure maximisation. A case study of the design and construction of Butaro Hospital in Burera District, Rwanda, illustrates some of these concepts in a real scenario, with results that are anecdotally successful but require further study. Ultimately, the most effective design solutions to health care problems can be analysed as a means to further the design profession’s ability to contribute to such an important cause.

Keywords: architecture and development, social impact, health care design.

TUESDAY 5TH AUGUST 12.40-13.00 | MR 11CD ICC

DE-HOSPITALIZATION & MINI-HOSPITALS: STUDY OF A NEW FRONTIER TO DESIGN HEALTHCARE BUILDINGS

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Abstract

Demand for hospital beds in Brazil is gigantic. De-hospitalization is one of the ways used to increase hospital beds. The process of de-hospitalizing follows the traditional way of promoting anticipated discharges of patients based on medical criteria and continuing recovery care at another healthcare facility. Since 1990, Brazil has adopted a new way of releasing hospital beds, no longer de-hospitalizing but to avoid hospitalizing patients of low and medium complexity surgery in big hospitals. Day hospitals were built for that role. Over time, day hospitals have assumed to give assistance to specialized issues of clinical care such as TB, HIV, oncology, better performed procedures of low and medium complexity. Again the demand for more hospital beds has become less assisted. Answering the demand for more hospital beds, the private market for healthcare has created a new kind of facility to act as a vector for attending ambulatory surgeries. The new facility called, for effects of this paper, mini-hospital has different qualities and technical performances and is separated from day hospitals by a frontier line which this study now investigates. Mini hospitals are facilities designed to promote healthy and scientific spaces capable of giving prompt answers to patients and the staff. They welcome patients into cozy shelters of homelike spaces where they receive proceedings of healing and are close to their physicians. Homelike spaces as proposed in the architecture program means being known to patients without losing their scientific mission. Mini hospitals are healthy and scientific buildings.

Keywords: small hospital, de-hospitalization, mini-hospital, healthcare architecture.
HEALTHCARE OTHERWHERE – IN SINGAPORE

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Abstract

Singapore has, up to now, been successful in keeping its expenditure on healthcare to within 4% of its GDP, while providing a high quality of care to its citizens. However, with the increasing ageing of its population, healthcare needs are changing.

Traditionally, healthcare is provided in the acute hospital, but this can be very expensive and is not ideally designed for the varying needs of the population. The Singapore government is embarking on a new wave of healthcare development, and is experimenting with different typologies and infrastructure to gradually evolve its existing towns into aged-friendly habitats, in line with its policy to avoid a “ghetto-risation” of seniors. It is exploring different forms of facilities designed to cater to the different needs of different people: polyclinics, day centres, aged care centres, hospices, community hospitals integrated with acute hospitals, as well as various options for ageing at home. Experiments in public housing attempt to create a “city for all ages”, designed to help seniors age-in-place, by providing new infrastructure and services that encourage community bonding and living.

This paper explores the various options being developed in Singapore for the aged, chronic sick, terminally ill and people needing rehabilitation care. While the Government is providing substantial aid in terms of infrastructure and training, it requires the cooperation and conscientious aid from both the private and public sectors to carry out the various schemes.

Keywords: Singapore, healthcare, aged care, integrated development.

USER LED DESIGN: REDEVELOPMENT OF THE CHRISTCHURCH HOSPITAL, NEW ZEALAND

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Abstract

Building the new Christchurch Hospital is part of an overall Canterbury-focused strategy of delivering ‘the right care, in the right place, to the right person, at the right time’. In 2010 and 2011, major earthquakes hastened implementation of the project. In mid-2013, design consultants were appointed to work with clinical user groups to design a new building that includes: additional operating theatres; ~360 inpatient beds; purpose-designed space for children; an expanded intensive care unit, and an emergency department.

Initiated prior to appointment of the design consultants, and now running in parallel with the project, the Canterbury District Health Board (CDHB) set up a ‘Design Lab’ to enable clinicians, engineers, architects and user groups to work together to rethink how health services are provided.
Derived from the principles of rapid prototyping similar to those promoted by design ‘thinktanks’ such as IDEO, the Design Lab concept was brought to the project by a US architectural firm in response to the CDHB CEO’s interest in lean and process design from other non-healthcare related industries. On the Christchurch project, this interest has been further developed to focus on patient safety and the patient experience.

This paper examines the interaction between the Design Lab process, the ‘user-led design philosophy’, and its impact on the traditional role of the healthcare architect working within a normal time and fee-constrained project delivery environment. In particular, it will examine the broader implications for the project including sequencing of various parts of the design, and the impact of often ‘naïve’ user led design input on the delivery program and budget. It will describe the negotiation of this environment by the project team and will evaluate the success of this approach to the design of a new, major hospital in an urban New Zealand setting.

**Keywords**: healthcare design, user-led design, lean process design, prototyping, project delivery.
PROGRAMME PARTNER SESSIONS
WEDNESDAY 6TH AUGUST 2014 | MR 11 CD ICC

EMERGING TRENDS IN PUBLIC HEALTH FACILITIES PLANNING AND DESIGN: NIGERIAN CASE STUDIES

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Abstract

Public Health Facilities in Nigeria are classified as Primary, Secondary or Tertiary controlled by Local, State and Federal Government respectively. Primary Health Care provides general health services of preventive, curative, promotive and rehabilitative nature to the population and the National Primary Health Care Development Agency developed the Ward Minimum Health Care Package to be provided for the population. The typologies in use include: clinics, dispensaries, health posts, maternity units and model primary health care centres. For secondary healthcare which is to provide specialized services to patients referred from the primary health care level through out-patient and in-patient services of hospitals for general medical, surgical, paediatrics, obstetrics and gynaecology patients and community health services, there are comprehensive health centres and general hospitals. There are teaching hospitals, Federal medical centres and other specialized healthcare facilities for tertiary healthcare which are to provide highly specialized services to care for specific disease conditions or specific groups of patients. Earlier studies have shown that there is lack of adequate health facilities in various parts of the country as in other parts of the developing world. There is the need to study the design typologies developed over time for the various facilities as well as the emerging trends. The aim of this paper is to examine the various design typologies that have been developed over the years for public healthcare facilities with focus on how they meet their objectives according to the National Health Policy. The methodology is the visit and documentation of the facilities as well as interaction with stakeholders. The results, apart from providing a documentation of public healthcare facilities in Nigeria, provides examples from which other developing countries can learn in the quest to provide qualitative healthcare for their citizenry.

Keywords: Public health facilities, design typologies.

A PROMISE FULFILLED: HEALTHCARE AT THE GRASS ROOTS LEVEL: THE DECLARATION OF ALMA-ATA IN VALENZUELA CITY, PHILIPPINES

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Elda Shina Samoza  
Associate Architect  
Dana Angela Bantigue  
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Abstract

The International Conference on Primary Health Care held in Alma-Ata, USSR in 1978 produced a most enduring declaration that up to this time, three and a half decades later, still resounds with its
truth and values for communities all over the world. Health, it declared, is a fundamental human right, and primary health care is a key to its attainment. Primary health care is essential care that is practical and scientific, accessible and affordable, and located as close as possible to where people live and work. With the best of intentions, without even having heard of Alma Ata, a young and energetic politician campaigned on these values as one of his platforms, to become the Mayor of Valenzuela City, and won overwhelmingly. If elected, one of his promises was to upgrade the services and facilities of the Barangay Health Stations (BHS) during the first 100 days of his term of office. Even before the vigorous campaign period that preceded election, he commissioned a study of all 46 of them.

The BHS delivers primary health services in general medicine, paediatrics, obstetrics and non-surgical gynaecology; family planning; dental medicine; and tuberculosis monitoring.

The study delivered a compendium of information on the site conditions of each BHS, population served, services delivered, physical spaces and conditions; and analysed them against standards of the Department of Health. The analysis resulted to specific recommendations on what to do with each BHS:

1. “retain” – spaces are adequate, merely improve on site;
2. “extend” – spaces are inadequate, expand on available space on site; and
3. “relocate” – available site is inadequate, build in another site.

This paper will describe the study in detail and the implementation of the “promise” during the first 100 days and beyond, of the Mayor’s term of office.

Keywords: grassroots, Alma Ata, primary health.

WEDNESDAY 6TH AUGUST 12.00-12.20 | MR 11CD ICC

URBAN PRIMARY HEALTH CARE FOR POOR AND DISADVANTAGED POPULATION IN BANGLADESH - ADDRESSING PLANNING AND DESIGN ISSUES

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Abstract

The rapid urbanisation caused mainly by rural-urban migration with a population growth rate of 5% is posing a threat to the living environment and health in the urban areas of Bangladesh. Around 60% population of Bangladesh will reside in urban areas by the year 2050. The national health policy, 2011 stressed the need for providing urban primary health care, especially for poor, disadvantaged and unemployed persons. The demography and epidemiology, behavioural pattern, living norms and so on of urban poor are quite different in Bangladesh. So, special attention needs to be given while planning and designing urban health care facilities for poor and disadvantaged populations.

However, there are no clear guidelines for planning and design of health care facilities in general and urban health care in particular in Bangladesh. The paper will focus on urban primary health care facility planning and design issues and guidelines. The paper begins by looking at the existing health care planning and design of public health facilities in Bangladesh, identifying problems and important issues specific to urban areas. It will also try to gather knowledge from other developing countries. A sample case study will be carried out to identify the problem areas which could be developed further for future study. The final section explores ways of developing guidelines taking account of problems identified through case study and literature search with recommendation on planning and design of urban primary health care, especially for poor and disadvantaged populations.

Keywords: Urban Primary Health Care, urban poor, planning, design, guidelines.
AIR, SURFACES AND HOSPITAL ASSOCIATED INFECTION (HAI): AN INTERDISCIPLINARY EMPIRICAL APPROACH TOWARDS ARCHITECTURAL DESIGN VALIDATION, A HEALTH CARE DESIGN INITIATIVE

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Abstract

Architectural design validation is not an unfamiliar notion; however the subjective nature of our field evokes much contention. Health care design presents a much more tangible possibility through interdisciplinary research for validation. A collaborative approach using epidemiology, microbiology, medical and engineering fields presents evidence for an empirical architectural validation model.

Scientific evidence has firmly established the causal relationship between microbes and disease. Furthermore, science has established causal associations between certain environmental conditions and proliferation of certain disease causing micro-organisms. Microbiologist, epidemiologist, doctors and engineers have developed models and methodologies to define infection rates and occurrences. When one correlates this with the cost per capita as was done in the United States, the financial burden of HAI weighs heavily on national healthcare budgets.

This abstract attempts to present a new design construct, a microbial design construct for architecture. A theory grounded on interdisciplinary observation on the causal nature of, air quality and risk, surface type and space, microbial ‘fallout’ and persistence.

People, users are infected and affected by indoor environments daily; therefore a microbial architectural model of design for the built environment could address these pertinent challenges with empirical authority.

The literature presents indicators for indoor environment quality and microbial conditions, in considering the diverse fields of research, striking correlation relationships are found. It recognises the potential for developing a microbial model for Architectural design that can serve as empirical design validation.

Keywords: Architecture, microbial, HAI (Hospital Associated Infection), interdisciplinary.

FROM TRADITION TO INNOVATION OF THE HOSPITAL LABORATORY

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Abstract

Why is system separation needed?
Life cycle economies with complete separation of the 3 building systems combined with an updating of medical technical equipment as tertiary system is nowhere more relevant than in the hospital laboratory. (Primary system for 100 years / Secondary 20 years / Tertiary for 5 years of life expectancy).

How was it introduced for the treatment building at the University Hospital in Berne?
An architect’s competition for the primary system alone, separated from a later competition...
for the secondary system. My former company was the winning team. This treatment building contains the emergency department, x-ray, the surgical department, the intensive care and also the laboratory. The aspect of grey zones as undefined empty areas within the layout for later use will be explained.

**What was the development of hospital laboratories during the last 40 years?**
The process from decentralisation to centralisation, then to concentration - achieved. Introduction of 80% automation of all laboratory services - implemented. A socialisation among different specialists - introduced. New technologies - continuously introduced. Miniaturisation as a next step is already in preparation and ongoing implementation.

**How could the turnaround be achieved technically?**
- The open plan and the anticipated layout has to prove its flexibility
- Dimensions between floor and ceiling are important
- Introduction of different types of water and water evacuation
- Individual HVAC for special units to be introduced later where required
- The still free grey zones may be used for coming innovative further ideas

**Why system separation? – A conclusion**

**Keywords:** System separation, life cycle economies, new technologies in use for laboratories.

**WEDNESDAY 6TH AUGUST 14.40-15.00 | MR 11CD ICC**

**MOSHE ZARHY – A LIFE FOR HEALTH FACILITIES**
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**Abstract**

Moshe Zarhy, born in 1923 in Jerusalem, counts among the second generation of architects, who have contributed decisively to shaping the face of today’s modern state of Israel. By his functional, aesthetical and unadorned style he can be seen in direct succession to the founding fathers of Israeli architecture, who - in the twenties and thirties of the twentieth century - laid the foundation for the settlement of Palestine.

In his life as an architect he has achieved supreme international recognition. Numerous national as well as international distinctions were conferred upon him. One field of work, however, has been of particular interest to Moshe Zarhy since the beginning of his activities: Health facilities. It is in this field that he has achieved mastery by a multitude of outstanding and ground-breaking hospitals.

He has been involved in the International Union of Architects’ (UIA) since the mid-sixties. As a voting member of the Public Health Working Group, Zarhy has represented the Israeli National Section in all UIA Congresses since 1969. He was UIA Council Member during the years 1990-1993, was elected UIA vice President Region II for the terms of 1993-1996-1999, and has served as Director of the UIA Work Programme “Architecture for Science and Hi-Tech Facilities” since 1999.

This lecture will give an insight into his substantial work, including his influence on the work of the UIA.
PROGRAMME PARTNER SESSIONS
PART 11: SOCIAL HOUSING FOCUS TRUST (SHiFT)

MONDAY 4TH AUGUST 2014

SHiFT (www.shift.org.za) is an NGO which provides expertise on the role and design of housing and human settlement in the transformation of the built environment, for building sustainable communities and humane settlements. It promotes an integrated approach through critical engagement with all stakeholders, and develops expertise through research/knowledge generation and through workshops, lectures and site visits.

Tariq Toffa, Executive Manager at SHiFT, lectures in the University of Johannesburg’s architecture department, and writes for www.Urb.im on social and urban topics. He completed his professional architectural studies at UCT, an architectural research Masters at WITS, and studied religious and constitutional law at UKZN.
Abstract

Most architects are still adamant that pre-colonial black communities lived in scattered villages or homesteads and that there were no indigenous towns in southern Africa. However, contrary to popular belief, the resupply station established in 1652 by the Dutch at the Cape of Good Hope was not the first urban entity in the region. More than a thousand years ago, complex societies evolved in the Shashe-Limpopo basin, which culminated in the region’s first town, Mapungubwe. Great Zimbabwe, and then Khami succeeded it. In the early 1800s, travellers into the interior reported Sotho-Tswana agro-towns larger and more populous than contemporaneous Cape Town. During the second half of the 19th century, all of these towns ceased to exist because of internal conflict and the seizure of land by European farmers. Many Tswana communities subsequently relocated west, to present-day Botswana, where a number of these traditional towns still exist, with some of them incorporating patterns from Khami. The Tswana are, therefore, the only indigenous society with an uninterrupted urban history originating in pre-colonial times. This paper compares the morphology of the most prominent indigenous pre-colonial urban entities with colonial cities and towns, in terms of shape, size and spatial organisation within a common timeframe. The aim is to unfold an integrated historical overview with the intent of dispelling the myth that black people did not build towns. It is also hoped that this brief overview will make the profession aware of this rich, indigenous tradition.

Keywords: early European towns, pre-colonial urbanism, Tswana
Regulations, and new prescribed energy regulations. Complex interrelated issues include unstable soil profiles, the safe control of storm water in a tropical climate, pedestrianized access where the population primarily uses public transport, integration of urban space as part of the development, and ultimately increasing densities at the lowest possible cost while allowing for back yard extensions. The built form, determined by the complex synergy of the above, invariably determines the town planning layout, as opposed to the traditional approach of providing a town planning layout as a framework for development to take place.

The rationale behind two detailed house prototypes, with their options for future extensions will be discussed, which demonstrate the detailed response to these issues. The way in which these determine the town planning layout and that within a sub-urban context will be demonstrated.

**Keywords:** low-cost housing, steep gradients, storm water, densification, Durban.

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**MONDAY 4TH AUGUST 11.40-12.00 | Hall 2 B ICC**

**A SUSTAINABLE ALTERNATIVE THROUGH PROCESS ORIENTATED MODULAR CONSTRUCTION SYSTEM WITH STRAW-LIGHT-CLAY**

**Marlene Wagner**

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**Abstract**

Human settlement programs in South Africa, like Breaking New Ground or the Peoples Housing Process provide strategies supporting community driven building initiatives to overcome the backlog of adequate housing and to develop skills in areas with high unemployment rates. To implement these new sustainable strategies, an adequate architecture and design has to acknowledge local resources, financial capacities and skills and at the same time provide quality and ecological solutions. In collaboration with the inhabitants of a community in Ekurhuleni and the University of Applied Science Carinthia, a modular construction system with light-clay infill could be established to provide an affordable and ecological building technology.

Self-produced concrete pillars and steel trusses support the local economy and provide the load-bearing structure, which is filled up and compacted with straw - light - clay using a climbing framework. The ecological and affordable modular system for low cost housing or communal facilities with focus on self – building, provides insulation and accumulation within the element for comfortable room climate in winter and summer. The advantage lies in the availability for the prospective users - (financially and geographically) easy to transfer know how, appropriate technology (as no special tools are needed) and is workable for adaption concerning climate as well as users needs. In the whole world - earth - as a local resource, serves as a traditional building material. The different ratios of clay, silt and sand, as well as climate condition (insulation vs. accumulation) define most suitable processing. Light straw -clay is an adaptation, of wattle, daub or cob. Developed in Germany, it has been in use for over 600 years. In times of energy crisis, scarcity of housing and a more conscious, environmentally friendly way of building - light clay can serve as an affordable alternative.

**Keywords:** straw-clay, modular construction, ecological, low-cost housing, community involvement.
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**Abstract**

Nowadays the Italian territory is characterized by urban, morphological and settling changes particularly meaningful, primarily in the Veneto region. The strong flux of migration, both European and non-European, issues a challenge about how to respond to ever-increasing demand for residences, which have to consider different national habits, lifestyles and religions. What will be the new frontier for architecture regarding this issue? Probably thinking about new housing typologies more effectively connected to peculiar lifestyles and traditions. So how can these new housing projects become a source of the urban evolution or rather centres for intercultural and social aggregation? We must consider some internal spatial dispositions, which differ according to the origin of people and especially the housing tradition in their mother countries. In the next few years, this will surely be a great challenge for architecture throughout the world, not only in Italy.

Connecting privacy, habits and traditions means to create new housing typologies, which have to be the driving force of socialisation. The living practices already used, such as the social and collective housing, should be structured following a complex internal distribution, where the visual field will be more or less selective. Private and collective courtyards will be integrated, while individual housing units will include internal logistic strategies according to cultural differences. In this context, policies of access to housing (e.g. income thresholds) should aim to create a social mix instead of segregating urban spaces.

**Keywords**: social, migration, lifestyle, hybrid, housing.

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**LOW COST AFFORDABLE HOUSING OPTIONS FOR THE LOW INCOME POPULATION OF DHAKA CITY**

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**Abstract**

The mega-city Dhaka with a population over 15 million as of 2013 is growing at a fast rate (4.2% per year, one of the highest rates amongst Asian cities) and is expected to be double by the year 2050. Dhaka city has around 40% of the national urban population and due to a lack of housing, 40% of the city people live in slums and squats. The worsening urban housing situation, especially for low income groups, is caused by rapid population growth, shortage of urban land, poor economy, poverty levels of low income groups, housing policy and climatic factors. The Housing policies of Bangladesh have also addressed the need and demand of housing for low income groups in Dhaka city. However, the supply of affordable and durable accommodation for this group is far beyond the demand. This paper examines the housing situation for the low income group in Dhaka from actual field survey, desk top
research and a studio project where a similar situation has been exercised. The studio project was designed and conducted by the authors for the 4th year 2nd semester (Spring 2012) students on affordable housing options for the low income population in Dhaka City. The focus of the project was to search options to reduce cost using low cost materials, achieve density, addressing energy saving issues, income generation as well as creating a healthy and creative housing environment for the low income urban population. Findings show that economising space helps to achieve the expectations of the target group and thus a probable way has been revealed to propose guidelines for future development so that future investments in this sector can become more sustainable, affordable and users would get a better living environment.

**Keywords:** affordable housing, low income group, low cost materials, option appraisal, sustainable design guidelines.

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**MONDAY 4TH AUGUST 12.40-13.00 | Hall 2 B ICC**

**BREATHING HOUSE, QANAT VILLA AND HEART-SHAPED MICRO-CITY MASTERPLAN, SUSTAINABLE CASE STUDIES IN SAUDI ARABIA**

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**Abstract**

What are difficulties to develop a building or a new settlement in a Middle-East desert area? Analyzing the following three case studies, designed in Riyadh (Saudi Arabia), it will be possible to understand what are the real sustainability issues to solve, at different scales, in dry climates and how to relate new architectural and urban typological solutions to Islamic culture and local building traditions as well. The case studies are all international awards winning projects: the first one is a Modern Saudi House called Breathing House designed for a typical middle-low income Saudi family, based on affordability and the reinterpretation of the local traditional housing, combined with a high level of sustainability. The second one is called Qanat Villa, a luxury Villa for a private client, inspired by the ancient water supply system for human settlements and irrigation in hot and arid climates based on sloping tunnels and vertical shafts. Passive cooling is one of the main issue of the project itself. The last one combines some of the previous architectural developed solutions with the traditional urban ones, based on low rise and high density settlements organized by clusters around closed private courtyards and public spaces in between the urban fabric. The quarter has been designed like a self-sufficient Micro-City with all needed facilities included.

Breathing House - A building is considered sustainable according to how well it integrates with the natural elements of the surrounding landscape and with the habits of its inhabitants. This thought has been the springboard for designing a ‘house system’ in which the respect for privacy, the energy saving features of the building and the integration with the surrounding environment well blend together. The ‘breathing house’ concept not only refers to the exploitation of natural ventilation for the wellness of its dwellers, but also to the absorption – just as a lung - of the different though complementary energies present in nature.

Qanat Villa - The old oriental subterranean canalization system for the supplying of water, called Qanat, synthesises the concept of this villa better than any other. As a matter of fact, the project developed from several essential points: a high degree of privacy, a marked hierarchical layout of the internal areas of the house, in accordance with local customs, and integration with the surrounding landscape. For this reason, the figurative result is the direct consequence of mixing vernacular habits with natural ecosystems, integral to local Arab traditions of constructing.
Heart-Shaped Micro-City Masterplan - The analysis of the site and its urban and social context revealed the presence of certain salient morphological features, like a closed urban fabric, a highway and the desertic slopes, dominating the context and conditioning the overall settlement structure. The project involved identifying settlement matrices in the urban existing texture capable of interpreting the history of these places in a contemporary manner. This approach will overcome the physical city’s infrastructural and natural limits and permit its re-appropriation.

**Keywords:** Sustainability, Affordability, Housing, Saudi Arabia, Holcim Awards
DEVELOPMENT OF GREEN AND ECO-CITIES BETWEEN PROMISING TECHNICALITIES AND IMPEDING REALITIES: REGULATORY, FINANCIAL, POLICY AND SOCIO-CULTURAL IMPLICATIONS FOR EGYPT

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Abstract

Egypt has gone successfully through a massive scheme of developing new communities since the 80s to accommodate the accelerated population growth that can hardly be further in the already congested narrow valley and delta. However, there are clear indications that these future cities are still short of achieving the newly well-established trends of sustainability, as embedded in the concepts of environmental friendly, green, eco cities, based on principles of energy and water efficiency, use of renewable energy resources, waste reuse and recycling...etc., up to low carbon, carbon neutral development...etc. Currently, New Urban Communities Authority (NUCA), responsible for scheme management is undertaking an initiative to catch lost opportunities and fill the gap of lagging behind. Thinking and planning for the initiative has revealed clearly that political will - alone is not quite enough to nail down these new approaches and techniques to the ground. Realities of existing prevailing systems and procedures (national policies of subsidy, regulatory framework, design modes, private sector and households short term interests...etc.) provide for stumbling impediments. This situation has mandated thinking of new innovative approaches, mainly relating to regulatory reform and economic/financial instruments that intricately mix both incentives and disincentives. The main goal of this paper is to provide an articulate demonstration of innovative thinking and approaches of “change management”, based on the analysis of Egyptian case, which illustrate tools of accommodation and adaptation to existing averting forces.

This demonstration is based on the following components that record the experience, and ultimately comprise its method:

- Establishing of multi-disciplinary think-team
- Analysis of existing situation
- Strategic thinking and developing responsive counter-approaches and measures
- Examining and testing of proposed approaches
- Developing final set of actions (regulatory reform, pilot projects...etc.)
- Extraction, refining and compilation of learned lessons

Keywords: Egypt’s new cities, green cities, green pyramid rating system, financial incentives, capacity building.
WHAT IF WE HAD BITPARCELS INSTEAD OF PLOTS? OR HOW INVESTMENT ON CIVIC PRIDE AND CREATIVE OWNERSHIP COULD REINVENT THE DYING ECONOMY OF ATHENS CENTRE

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Abstract

“A money related problem is not solved with money. It is solved with behaviour and sentiments”, Dutch folk saying.

The problem: Although spontaneous public participation is easily stimulated in the turbulent financial situation of contemporary Athens, it is a rather big challenge to sustain longer-term people engagement.

The proposal: The paper presents a strategy for bringing together people with innovative and socially beneficial ideas, property owners and domestic financial investors, in order to re-fill and re-feed Athens centre according to people’s choices.

The way: The concept attempts to promote participatory design through an administration/communication platform.

The means and the result: The design which facilitates the matchmaking operations of the platform comprises of Bitparcels (physical and digital) and Yellow buildings (a strategy for the re-use of vacant buildings and spaces). The implementation of the ideas is not a fixed plan but rather a continuous ever-changing public space as a creative extension of the buildings, documented and ‘owned’ in ‘bitparcels’.

Keywords: Urban regeneration, participatory design, crowd sourcing, creative ownership.

THE THINKING OF CHINESE TRADITIONAL ANCIENT DWELLINGS’ VITALITY REPRODUCTION—A CASE STUDY ON GREAT ANCIENT RESIDENCES IN ZHANGJIAKOU

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Abstract

A huge group of ancient dwellings of historical legacy today are disappearing at an alarming rate, especially in recent 20 years; the damage is extremely serious. The wave of reform is forcing many cities quick access to modernization. With rapid economic development, population boom, the old town has been unable to bear the burden of urban living. Under the premise of the absence of a full investigation and planning, taking the transformation of dilapidated buildings as a good opportunity, ancient dwellings were in a condition where they were demolished, damaged and frequently idle.

Taking great ancient dwellings of the ‘BuZili’ in Zhangjiakou as the research object, this paper explores the existing state of local dwelling houses and protection strategy, which revives this valuable cultural heritage of ancient dwellings.

Keywords: ancient dwellings, renovation, transfer, cultural relics, protection.
EVALUATION SYSTEM OF ADAPTIVE DESIGN OF MEDIUM- AND SMALL-SCALE RESIDENCES

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Abstract

According to the construction idea of the long-lived habitation, the adaptive design of residences should meet the different adaptive requirements of space environment, residential functions for the nuclear family, and housing industrialization and components. It means that the structural system, equipment system and decorative system in the design stage should be chosen reasonably. Therefore, the purpose of this paper is to set up a relatively scientific evaluation system for the adaptive design of medium-and small-scale residences. In this system, it not only gives effective evaluation to the adaptive design, but also its indicators and relative weight coefficients visually reflect the future requirements and trends of the design for medium-and small-scale residences.

Keywords: medium- and small-scale residences, life cycle, adaptive design, evaluation system.

HOUSING TYPOLOGIES: TOWARDS A SOCIALLY MIXED AND DIVERSE URBAN DEVELOPMENT

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Abstract

The research investigates the possibilities of a more inclusive and diverse urban landscape and transforming areas in Sao Paulo, concerning important issues regarding the development of the city and new housing typologies, with the aim of improving “mixity” and diversity in high density areas.

The housing shortage in Brazil today is estimated at around 5.4 million dwellings, 81% or which are urban. Only in the city of Sao Paulo, the housing deficit is estimated to be around 630,000 housing units. The city, the biggest and most important of Brazil, offers a landscape engraved by its uneven development, a scenario in which affordable housing was rarely on the public agenda. Slum areas and segregated social housing complexes were, along its historical development, the only housing solution for the poor, increasing problems of marginalization, violence and widening the inequality gap and social tensions in the city.

Recent events show some hope. In 2001, The Statute of the City was approved in the national congress, creating a new set of urban tools which gave social housing a higher importance in Brazilian urban development.

At this moment, a paradigm shift is necessary in order to conciliate the necessary mass housing production with a more cohesive urban planning. This is in accordance with the UN Habitat Global Housing Strategy framework that relies on “inclusive cities as the foundation for sustainable development, ensuring social integration and elimination of urban divide”. New forms of dwelling are investigated with the aim of creating liveable neighbourhoods with a better integration of uses.

Keywords: housing, typology, urban, development, social.
TUESDAY 5TH AUGUST 12.40-13.00 | Hall 2 B ICC

(RE)BUILDING COMMUNITY ‘OTHERWHERE’ – ARCHITECTURE IN AN AGE OF RADICAL TRANSFORMATION

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Abstract
Rapid urbanisation on the African continent is a well recognized and documented phenomenon. Predominantly the result of marginalized peoples moving to urban centres in search of access to employment and the other benefits of urban agglomeration, these migrants have experienced two general responses to their need for shelter.

On the one hand they have been subjected to neglect and the concomitant necessity to fend for themselves, whilst on the other, some have benefitted from state and/or non-governmental organisational assisted housing programs. The former has given rise to the often maligned, yet currently fashionable, condition of so-called urban informality, whilst the latter has resulted in numerous homogenous and notably sterile mass housing projects, most commonly recognized as RDP settlements. What unites these two approaches is a dire neglect of social and public infrastructural support necessary for human dignity and dwelling in comfort. Whereas the provision of shelter through the provision of houses seems the easier approach, it is through slower socially based methods that more realistic, sustainable and resilient humane settlements are being created.

This paper will attempt to reference three projects where design agency is the driver of co-production in establishing viable human settlements. Using what might be termed ‘counter-mainstream’ projects implemented in post apartheid South African cities of Johannesburg, Durban and Cape Town, it will argue for a ‘situated’ approach to project implementation, that is more nuanced and located, and whereby architectural design agency is critically positioned to enable a horizon of interconnectivity between traditionally competitive roles. The resultant discourse between space and society has facilitated ‘design in action’ and the discursive practice necessary to produce integrated humanely sustainable development.

The production of critical locality within the continent of Africa requires parallel processes of pedagogic and professional transformation; the knowledge embedded in these projects has important lessons for educators and practitioners, particularly those attempting to confront the colonial legacy and work within a ‘non-western’ tradition.

Keywords: community, otherwhere, radical transformation, urbanisation.
SUSTAINABLE USE OF SMALL-SIZED HOUSES

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Abstract

In recent years, with the growing population, the shortage of resources, and the changing society and economy, housing policies are being adjusted to adapt to sustainable development of society in different countries. Each family can only afford one house. So the buyers’ market is turning its attention from the demands of function in short term to pursuit of housing value in the long term. The investors, architects and consumers are all looking for effective ways to solve the problem. Flexible design in houses is getting more and more emphasis.

Recently, newlyweds who are the main customers, are experiencing changes in their life. So they need the houses full of flexibility to satisfy the families’ demands, especially the kids and the elders. In the paper, we will discuss the possibility of achieving the long term value of the house by transforming and optimizing the interior space. In other words, we are to seek ways to realize the sustainable use of the house to meet consumer needs in different periods. The small-sized house is the main research object.

Keywords: long term value of the house, small-sized house, flexible design, children, the elders.

EFFECTS OF HOUSING QUALITY ON PEOPLE LIVING IN THE CORE AREA OF OGBOMOSO NORTH LOCAL GOVERNMENT, OYO-STATE, NIGERIA

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Abstract

The study assessed housing quality in Ogbomoso North local government with a view to create sustainable development in the area. It identifies the respondent perception of the condition of houses and the effects it has on people in the area. Data employed for this research work was obtained from primary and secondary sources. A total of 150 structured questionnaires were administered for data collection. The questionnaires were distributed using systematic random sampling method. A detailed literature review of the related documents on housing quality and sustainability was carried out. The data collected were analyzed using descriptive statistics. The findings reveal that (49%) of the respondents reported that the housing facilities were not adequate in terms of its standard and (60.7%) affirmed the absence of setbacks around their houses. The respondents were low income earners which has effects on housing condition in the study area.
It is therefore recommended that the government should subsidize building materials and equipment in the study area. There should also be urban renewal through upgrading of facilities and environmental sanitation of residents in the study area.

**Keywords:** housing quality, upgrading, government subsidy, building materials.

**WEDNESDAY 6TH AUGUST 11.40-12.00 | Hall 2 B ICC**

**A SUSTAINABLE BUILT ENVIRONMENT – THE PROCESS OF SHAPING OUR CITIES: TOWARDS VIVID PUBLIC SPACE. PRAGUE CASE STUDIES**

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**Abstract**

Both places and cities have always been shaped by the behaviour of their inhabitants. More than ever, today, we are facing rapid changes in our daily lives through modern technologies and our ability to move, work and communicate in different places simultaneously. Therefore, we search for safety; a feeling of home is very important and we would like to create a linkage with the place. C. Day’s sustainable space is such a place, where people will take care of it.

The shape and form of our built environment can contribute to a better understanding and orientation in our space. In the case study of Prague, current residential complexes, the qualities of public space and the city grid will be studied. Several examples of high-quality design show that the space in between matters, that the sense of visibility, accessibility and orientation is important, maybe more than some might think. Examples of newly built-up areas are not properly connected with the surrounded city and often they do not contribute to the existing environment by adding any new qualities.

Current residential complexes are studied on a different scale and the analytical method is proven. The qualities of public space, shaping streets and other features are compared with the old examples of good practice. It is evident that the understanding of space is related to its street pattern and shaping of space. The quality of buildings stands in second position. This must be taken into account when designing, but also in the process of decision-making. Public space plays an important role in the context of sustainable development and management of our cities.

**Keywords:** residential complexes, Prague, space syntax, public space, left over spaces.
HOUSING THE STRANGER: SOCIAL RESILIENCE IN POST CONFLICT AREAS

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Abstract

Housing is one of the very essential needs of humanity. With the alarming global growth rate in post-conflict zones, it is thus very important to consider housing as an important factor that plays a major role in the resilience of inhabitants. Indeed, this concept cannot be totally developed unless a clear picture of the past is understood and properly outlined in light of current circumstances. This study focuses on conflict as a man-made disaster that has caused different levels of losses, migration, displacement and the eventual resettlement of different groups of people, who are living in the locality of Asagi Maraş / Kato Varosha, a district adjacent to the borderlines of the ghost city of Maras / Varosha in the city of Gazimagusa / Famagusta. As of today, the area is still battling with the effects of the intervention as it has been cordoned off and left partially abandoned since 1974; even if housing construction has become a very important sector in other districts and cities in the island for the economy of the north. This study thus tries to understand the factors, which pose as internal problems served by inhabitants for recovery in the study area to understand the mechanisms for conflict mitigation. Therefore, resilience in this study is seen as involving the community, their housing environment and economic sustainability in order to improve the quality of life of the different groups of resettled inhabitants. Analysis of the standard of living is undertaken and presented as different layers of information from the users, understanding of the situation, needs and comments obtained from past housing situation, present phenomena and their future implications. With all the pros and cons tackled, this paper suggests active roles that the local institutional bodies could play in rebuilding a community and boosting its characteristics to withstand adverse future occurrences.

Keywords: adaptation, housing, post-conflict, resettlement, resilience.

RESIDENTIAL RESEARCH OF SPATIAL DISTRIBUTION IN GUANGZHOU, CHINA

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Abstract

This article analyzed residential spatial distribution in the last 50 years in Guangzhou, and then combined with some elements as follows: housing prices, social classes, population density. These different elements embodied in the same city on the spatial distribution, the results showed that the residential differentiation have formed in Guangzhou. Then the article analyzed the cause of residential differentiation, including public service facilities, traffic system, city environment and land use policy. These factors all influenced residential differentiation and brought some negative effects.
In response to sustainable development, the article draws up some strategies, including development control policy, urban planning, architectural design.

**Keywords**: residential research, spatial distribution, urban planning, architecture.

**WEDNESDAY 6TH AUGUST 12.40-13.00 | Hall 2 B ICC**

**FRAMEWORK FOR SUSTAINABLE BUILDING IN SOUTH AFRICA**

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**Abstract**

Sustainable building in South Africa must address environmental concerns and entrenched socio-economic problems engendered by the country’s debilitating Apartheid history. The cross-sectorial and multiple facets that constitute the framework for sustainable building transverse temporal and spatial scales, wealth disparities and social agents. Proactive interventions from post-apartheid governments towards socio-economically and environmentally sustainable development have resulted in a myriad of policies and legal imperatives with direct and less-direct impacts on building design and construction. This is a descriptive-analytical paper of the normative framework for sustainable building in South Africa. The paper critically locates the framework for sustainable building from strategic institutional level and operational scale standpoints. Because of the global dimensions of sustainable development, this exegesis also references applicable international initiatives. The intention is to propose a comprehensive conceptual framework for sustainable building in South Africa in which the various instruments can be inserted, shifted or disengaged for strengthening.

**Keywords**: sustainable building, SANS 10400-XA, SANS 204, ecosystem services.

**WEDNESDAY 6TH AUGUST 14.00-14.20 | Hall 2 B ICC**

**STUDY ON BASIC CHARACTERISTICS OF LIVING SPACE IN ELDERLY INSTITUTIONS - TAKE THE INSTITUTIONAL ELDERLY FACILITIES IN DALIAN AS EXAMPLES**

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**Abstract**

The living environment of the elderly cannot be ignored in building a harmonious community, of which the elderly community’s building in our country hardly started and research lacks experience. This paper aims to discuss environmental characteristics of living space of the elderly community from the elderly’s living environment, behaviour and other aspects of life. This article is based on the survey of urban and rural elderly facilities in the north of China to understand the basic condition of elderly facilities, space characteristics, using status, living methods and demand of old people. Elaborate the type of basic characteristics of elderly facilities. Sunshine home community located in Dalian Lvshunkou, is near World Peace Park and Dalian Jiaotong University, as well as some commercial facilities, not yet in use. According to the actual research situation, the case is not an obvious
gathering of tourism resources. Through questionnaires and interviews, the elderly mainly has six kinds of activities, entertainment, reception, sleeping, eating, labour and washing as shown. Because of the distance problems and traffic inconvenience, it is relatively difficult to obtain complementary resources of the city, and it affects medical care and staying out intercourse of the elderly. Therefore, studies of the elderly community have a real and urgent significance. According to the problems existing in the present situation, take the elderly’s behaviour and their own attributes into perspective, and offer a referential proposal for building elderly facilities in order to meet life need of the elderly. Provide the scientific basis and perfect technical reference for the development and construction of elderly facilities.

**Keywords:** elderly institution, facilities, spatial element, behaviour style.

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**WEDNESDAY 6TH AUGUST 14.20-14.40 | HALL 2 B ICC**

**EXPLORATION ON RENOVATION AND TRANSFORMATION OF BEIJING COURTYARD BASED ON POPULATION PRESSURE RELIEF**

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**Miao Xia**  
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**Abstract**

After years of the protection and renewal of Beijing old city, the policies of old city protection have become increasingly improved. But the high population density and high building density still limit the improvement of living quality in the courtyards, and also large areas of courtyards in the old city need to be renovated and transformed urgently. In order to have a better development for Beijing old city, in the master planning of Beijing, the local government has put forward the special policy of the city center population pressure relief. In this premise, the research on the renovation and transformation of the courtyard is conducive to protect the texture and style of the old city on one hand and more important, to improve life quality of residents on the other hand. Such has a relatively strong practical significance.

According to the careful investigation of existing conditions and the collection and analysis of literature data, this article clearly combs the existing measures of the renovation and transformation of the courtyards, analyzing the situation of population change in these measures and providing series of related policies. Then it summarizes the major problems in the renovation process and the difficulties of population pressure relief. Finally, it proposes the corresponding design principles. Under the guidance of these principles, two courtyards with different features are picked up to be studies comparatively in the small-scale and gradual renovation mode and to be given relevant evaluation. The research is trying to explore the methods and means to deal with the renovation and transformation problems for the courtyards in Beijing old city from another perspective.

**Keywords:** population pressure relief, courtyard, renovation, transformation, Beijing old city
PROGRAMME PARTNER SESSIONS
PART 12: URBAN WATERWAYS

TUESDAY 5TH AUGUST 2014

Waterways Urbanism is a proposal for a parallel one-day colloquium where leading scholars will discuss their research on new paradigms for the evolution of water-based settlements in three cities: Mexico City, Sao Paulo and Nantes. From retrofitting the metropolis to envisioning future cities on the water, each urban vision advocates a reconsideration of waterways urbanism and a recalibration of our settlement patterns-how and where we live-in the context of climate variability, waste and energy management, global economic shifts, post-industrial legacies, environmental migration, and population growth within a rapidly urbanizing world.

The primary intention of the project is to contribute to the debate on hydro-generated human settlements through three urban development case studies. The colloquium/panel discussion format will provide a forum for scholars, urban planners, architects and allied disciplines involved in city making to engage in a dialogue about the environmental, cultural and economic future of cities on the water.

Nancy Clark and Martha Kohen are co-managers of this project.

Nancy Clark is Associate Professor and Head of Graduate Programs University of Florida School of Architecture. She is the Founder and Program Director UF G|SoA Global Lab Research and Founding Member for the Consortium for Hydro-generated Urbanism. She is also an Ivan Smith Endowment Coordinator.

Martha Kohen, Dipl Arch CANTAB 1972, is a Professor at the University of Florida School of Architecture and Founding Member for the Consortium for Hydro-generated Urbanism.
Abstract

Urban waterfronts, where the land of city meets a body of water, are unique and finite resources representing the best opportunities for community enhancement and enrichment. On the other hand, waterfronts are also high risk areas, where water-related disasters could seriously affect the long-term sustainability of our urban environment. This paper focuses on the relationship of the cities with their waterfronts. We present a case study of Wuhan - a Chinese metropolis, where waterfronts play an important role in its urban planning policy. We attempt to investigate the mechanism of waterfront transformation, and we aim to find out which strategies to adapt and what resilience means in terms of urban waterfronts in a rapidly transforming city. We examine some representative urban projects on the waterfront and summarize spatial models applied on the waterfront with distinct policies. Finally, we demonstrate that an urban waterfront is an 'osmotic interface' which should be more correctly envisaged as a network of places, functions, additions and hinges between the city and its water environment. We clarify that waterfront areas represent a multidisciplinary and multi-tasking issue from the perspective of urban resilient development.

Keywords: waterfront, resilient development, urban renewal, Wuhan.
TUESDAY 5TH AUGUST 12.00-12.20 | Hall 3 C ICC

LANDSCAPE ARCHITECTURE SOLUTIONS FOR ENVIRONMENTALLY VULNERABLE AREAS

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Abstract

Recent natural disasters like rain and floods affecting the city of La Plata, Argentina, and surrounding areas, have provided the evidence of urban structures’ vulnerability and the fragile coexistence between nature and city under special situations.

The city, designed according to the ideas of the 19th Century Hygienist Movement, has faced its own growth in a fragmented and heterogeneous manner. The foundational core spreads outside its original boundaries following the traces drawn by the highways, generating scattered areas that have, eventually, transformed the foundational ideal. Architecture should take up the challenge of guiding the city’s growth into a fairer and socially balanced future.

To deal with the problem and act on it, we explore the case of the “Arroyo El Gato”, a stream running across the North extension of City. Here, the study of the spatial conformation of the area shows an interruption of the urban fabric along the stream’s borders without any recognition or topographical adaptation to the route of the watercourse. The area represents an opportunity to break and decompose the original city grid in order to recover the singularity of the place, reversing its current situation as a barrier of urban development. This proposal considers the production of knowledge on the subject considering: the exploration/ experimentation/ modeling of urban and architectural configurations in the irregular settlement located beside the channel, its surroundings and overflow area.

The following topics are developed:
- Proper dimensions of watercourses
- Proper architectural conditions for risk zones
- Continuity and rupture of the urban fabric
- Channel- flood park with designed spaces and natural environment
- Improvement and completion of new and existent dwellings.

Generation of public space and equipment, in order to, progressively, contribute to the spatial and social integration from the informal to the formal city.

Keywords: landscape, habitat, vulnerable, architecture
AN INNOVATIVE HOUSING MODEL FOR THE SHIFTING ECO-SYSTEM IN KERANIGANJ, A SUBURBAN AREA OF DHAKA CITY

Labib Hossain
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Abstract

Bangladesh is located in the world’s largest delta and the relationship with water is totally different from rest of the world. The satellite image of Dhaka city shows the presence of water bodies that girdle the city in the east and west periphery. At present, Dhaka, the capital of Bangladesh is growing with mind-numbing speed, filling up the lowlands with people, as all the highlands are increasingly being built on or covered. These wetlands, which generally acted as a flood basin for Dhaka, are now unable to fulfill their purpose and thus increase flood magnitude and its elongation period. This approach to land development is affecting the resilience of the city. This disturbance of the environment can be termed an ‘ecological disaster’, making the situation worse for the people of Dhaka city. An analysis of the pre-urban and post-urban context will show how the situation worsens with unwise and unplanned decision-making and not respecting the hydrology and its functions. The important observation is, that the strategy of ‘flood-free land’ should be transformed to ‘flood-free building’ in the new innovative housing model in this context, which can relate to our society and culture. This way there will be more space for water during monsoons and floods. The study aims to come up with a model of the new housing typology where human and other species and the natural functions of wetland can coexist.

Key words: ecosystem, suburban, housing, sustainability, wetland.

OPEN ARCHITECTURE USED IN POST-DISASTER RECONSTRUCTION

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Abstract

In recent years, domestic disasters, earthquakes, tsunamis, landslides, flooding and other geological disasters happen frequently. But the complexity of the terrain and the conditions of backwardness have led to the untimely delivery of disaster tents and supplies to victims, thus to resolve issues such as basic necessities has become important. Most importantly, where to live is a vital issue as only when people live in a comfortable environment will they have a sense of security and well-being. And then their material and spiritual needs will be solved. However, tent patterns are monotonous, impersonal and give a cold and uneasy feeling to people nowadays in disaster areas, which contribute to stricken living machines. Therefore, developing an open architecture model, specifically applied to the disaster areas, and in today’s society and diversity through adaptation to deal with evolving lifestyles and economic conditions, is vital. For China’s climate and topography and other natural and human factors, the author has designed a series of architectural model, through a model of the building in the first protection zone, so that the subsequent rescue and rehabilitation work will progress smoothly. What’s more, the building has been endowed with human color to reflect the local culture and customs. In order to give people a sense of belonging and warmth through architectural style, by making the reconstruction more orderly.

Keywords: open architecture, post-disaster, reconstruction.
WATER AND ARCHITECTURE FOR SOCIAL AND ENVIRONMENTAL RECONCILIATION IN COLOMBIA

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Abstract

Colombia possesses exceptional natural potential. Out of all the diverse geographical areas, those with the most startling landscapes and water sources are usually found in the most forgotten and distant regions in Colombia. These regions, despite their environmental wealth, are scenarios for violence and forced displacement. That is why these places and their population require special attention and vindication. They must be reconstituted as spaces for interaction and reconciliation between human beings as well as between humans and nature. Architecture (understood as mediator and facilitator in the coexistence of human beings and nature) presents itself as the ideal space for this encounter to take place when its therapeutic capacity is enhanced. This paper refers to an investigation underway that identifies certain aspects of the complex social and environmental problems that take place in Colombia; That raises, based on what is studied, theoretical and spatial proposals in which nature, water and the population affected by forced displacement meet and reconcile through architecture. Water is understood as an element necessary for healing, reconciliation and reparation; likewise, the therapeutic utility of architecture is explored when it interacts with water and with the natural and social habitat in which it is placed. Architecture, in general, and thanks to public policies, delivers spatial solutions to social initiatives in areas such as education, sports or health. But critical and theoretical reflections towards violence and its consequences are needed within the discipline. I suggest a reflection on the meaning of corporeal encounters with nature and our congeners. I pose, as hypothesis, that such reconciliation may take place in a congregational location such as a public bath that may stimulate and facilitate equal and transparent encounters between human beings and between them and nature recovering concepts from traditional and popular global cultures.

Keywords: water, architecture, environmental reconciliation, social reconciliation, Colombia.

LESSONS FROM SWAHILI COASTAL ARCHITECTURE FOR THE FIRST GENERATION OF RWANDAN ARCHITECTURE STUDENTS

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Abstract

By tracing the development of the third year undergraduate ‘Travelling studio’ at the young department of Architecture of the Kigali Institute of Science and Technology (now University of Rwanda), the paper reflects upon the challenges of cross cultural learning and pedagogy within architectural education in East Africa. The authors jointly ran the first ever studio in 2011, and framed its core objectives: to study, understand, and learn from the architectural and urban development of Mombasa’s and Zanzibar’s Swahili stone towns. Structured around a preconceived notion of environmentally conscious architecture, the course explored how to design small-scale interventions in a completely new and unfamiliar environment for both faculty and students. The semester long class was divided into two parts – the first a very important research and analysis exercise of three weeks duration, and the second a long, demanding, exhausting, thrilling building and site design challenge.
The paper discusses how, during the three years it was run, the studio fundamentally challenged the first generation of Rwandan students of architecture who, for the most part, had never been outside their country. By comparing the schemes produced by students with the original brief, it shows how adapting an established pedagogical model to the specific environment of Rwanda, produced unexpected and surprising results. It further argues that, despite its operational challenges, the travelling experience should become a fundamental component of the department’s curriculum, in order to promote curiosity and ability to investigate foreign milieus.

Ultimately it reflects on the difficulty of introducing critical thinking and openness to students’ mindset and their capacity of embracing complex problems that go beyond simple climatic or green issues, in order to address the social, political and economic contexts, and the crucial role that a new educational institution plays in a situation of scarce and limited resources.

**Keywords**: travelling studio, architecture, environmentally conscious architecture, Rwanda.

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**TUESDAY 5TH AUGUST 14.40-15.00 | Hall 3 C ICC**

**THE REGENERATION OF VLADIVOSTOK’S WATERFRONT: ENHANCING RESILIENCE THROUGH URBAN INTERFACES**

Carlos R. Zeballos Velarde and Sergei A. Mostovoi

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**Abstract**

Vladivostok is the largest city in the Russian Far East and a hub that connects Eurasia with the neighboring Asian countries. This dual character, being a European city in the middle of Asia, is expressed in its culture, urban landscape and architectural heritage. Moreover, its hilly topography allows visual contact with the impressive surrounding seascape. Paradoxically, the city has very few public spaces where people can enjoy the contact with water: most waterfront areas are occupied by industrial plots, parking lots and deserted beaches. Despite the potential that these areas offer and the existence of small and scattered public spaces in the waterfront, there is little connection of these areas with the city.

In order to enhance both the resilience to potential hazards and the development of public space for improving social and environmental conditions in the city, we propose a methodology that focuses on identifying urban interfaces, which are the areas of major exchange between different systems, and use them as catalysts for improving the surrounding areas.

To that end, this paper firstly analyses the historical role of the city’s waterfront and identifies its major potentials and conflicts. Secondly, using GIS techniques, it defines the major interfaces. Finally it proposes a system of interconnected urban spaces that would substantially increase the offer of public areas and improve the relation between the waterfront and the city.

**Keywords**: Vladivostok, waterfront development, urban interface, urban regeneration.
ENVIRONMENTAL DESIGN CRITERIA FOR A MARITIME LANDFILL IN FLORIANÓPOLIS, BRAZIL

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Abstract

This research presents the expansion of maritime landfills constructed since the 2000s in the metropolitan coastline of Florianópolis, city capital of the State of Santa Catarina, Brazil. The purpose of this study is to examine urban implications with the construction of the maritime landfill in the county of São José, which is planned to connect the metropolitan territory with the island of Florianópolis by a highway system. Considering the consequences of urban fragmentation and environmental deterioration, a gradual process of project implementation was developed envisioning an urban plan for the maritime landfill of São José. Physical categories in view of design solutions to spatial problems are associated to fluxes, boundaries, barriers and rupture, addressing the following topics: Spatial arrangements to connect neighbourhoods to the seafront; articulate the open space created between the city and the sea; spatial continuity for pedestrian accessibility to public space; explorative studies of specific spatial arrangements; strategic projects at local and intermediate scales; and, environmental regeneration.

Keywords: Florianópolis, maritime landfills, fluxes, boundaries, barriers.

URBAN EDGE: ECOLOGICAL, SOCIAL, AND RESILIENT DESIGN APPROACHES TO NEW YORK CITY’S COASTLINE INFRASTRUCTURE

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Abstract

In New York City, the perimeter of Manhattan is a well-defined ever-changing territory. At times natural, industrial, recreational, and now vulnerable, its history has been one of economic and political utility in service of human endeavor. With increasing demand for public space and urgent need to manage more frequent storms and hurricanes, the relevance of its edges have never been more pertinent. This paper investigates a history of New York’s edges through built works and theoretical proposals and focuses in on one project, urbanEDGE, which illustrates new potentials for ecological, social, and resilient design practices.

Located in a flood zone along the Harlem River in Sherman Creek Park, urbanEDGE is a project for the New York Restoration Project (NYRP). This non-profit organization – whose mission is to provide high quality public space while educating poor, underserved communities about ecology and water stewardship – asked us to design an outdoor classroom and boathouse in Upper Manhattan.

Early in the 20th century, Sherman Creek Park was a major center for rowing and home to numerous boathouses. In the 1960’s, industrialization and the sports decline caused most boat clubs to close along the Harlem River. From that time until the mid 90’s portions of the park and our site in particular, became an illegal dumping ground, filled with tons of toxic waste and debris. Through a cooperative agreement with the NYC Department of Parks, our client became stewards of Sherman Creek Park and initiated its restoration process.
This paper and urbanEDGE illustrate how government stakeholders, non-profit organizations, community members, and good design can transform neglected urban edges into dynamic public spaces.

**Keywords:** urban infrastructure, public space, flood inundation, resilient architecture, ecology.

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**TUESDAY 5TH AUGUST 15.40-16.00 | Hall 3 C ICC**

**LIVING AND SUSTAINABLE EGYPTIAN SHORELINES AS A TOOL TO MITIGATE NATURAL HAZARDS AND SEA LEVEL RISE**

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**Abstract**

Over the last decades, the world has been facing a number of challenges and crisis. Problems like droughts, gradual loss of natural resources, land deformation and sea level rises, are pushing and stressing land on an urban scale. All the above mentioned problems will obviously have a great impact on the behavior of diverse creatures. In Egypt, as one of the most vulnerable countries to climate change impacts, the Nile Delta and other deltas soon will be threatened by the SEA LEVEL RISE Phenomenon.

Scientific studies and experiments, such as managing realignment of urban settlement and offshore live flora and fauna, and many others are targeting futuristic development assessment.

The problem is in the way of thinking and methods of applications that architects, planners and developers initiate. In this paper, a framework will be introduced offering tangible solutions in tide timeline and addressing different development possibilities of shoreline and off-shoreline architecture with their local communities’ involvement in the design and implementation process.

Authors intend to identify the problem of dynamic urban planning and architectural design, which faces the majority of coastal communities that suffer from similar problems, hazards and natural crisis. This paper will address different research strategies through linking strategic analysis with the current situation. The outcome of the framework will be in the form of design guidelines and standard frameworks that match Egypt’s shorelines and communities.

**Keywords:** shorelines, urbanism, global warming.
<table>
<thead>
<tr>
<th>PAGE</th>
<th>ABSTRACT TITLES AND AUTHORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>27</td>
<td>THE LYT GREEN SCHOOLS CONCEPT: A RAPID DEPLOYMENT SCHOOL FOR REMOTE AND RURAL AREAS</td>
</tr>
<tr>
<td></td>
<td>Matthew Friedland</td>
</tr>
<tr>
<td>27</td>
<td>WHAT IF YOU DISCOVER A ROMAN THEATRE UNDERNEATH LATE OTTOMAN DWELLINGS?</td>
</tr>
<tr>
<td></td>
<td>Şeyda Güvenç Duran</td>
</tr>
<tr>
<td>28</td>
<td>(OTHER)ARCHITECTURE; BODY AS NEW SPATIAL SCALE FOR RECONSTRUCTION OF RESILIENT-URBAN-SPACE AGAINST NEOLIBERAL URBAN POLICIES</td>
</tr>
<tr>
<td></td>
<td>Murat Cetin</td>
</tr>
<tr>
<td>29</td>
<td>THE STOWAWAYS: DWELLING OTHERWHERE</td>
</tr>
<tr>
<td></td>
<td>Nicholas Coetzer, Dave Southwood</td>
</tr>
<tr>
<td>29</td>
<td>RENEGADE ARCHITECTURE: THE PRACTICE OF FREEDOM</td>
</tr>
<tr>
<td></td>
<td>Epifania Akosua Amoo-Adare</td>
</tr>
<tr>
<td>30</td>
<td>NEO-TERRORISM AND RESILIENCE OF URBAN INFRASTRUCTURE IN AFRICA: AN APPRAISAL OF CURRENT RESPONSES TO SECURITY CHALLENGES IN VOLATILE NIGERIAN CITIES AND IMPLICATIONS FOR ARCHITECTURAL PEDAGOGY</td>
</tr>
<tr>
<td></td>
<td>Bogda Prucnal-Ogunsote, Olu Ola Ogunso, Detur Gwatau</td>
</tr>
<tr>
<td>31</td>
<td>FATHER OF THE COMMUNITY ‘BAREFOOT’ ARCHITECTURE PROJECT</td>
</tr>
<tr>
<td></td>
<td>Tia Kansara</td>
</tr>
<tr>
<td>31</td>
<td>PLANNING FOR PERMANENT EMERGENCY</td>
</tr>
<tr>
<td></td>
<td>Arturo Velazquez-Ruiz, Fernando N. Winfield-Reyes, Gustavo Bureau-Roquet</td>
</tr>
<tr>
<td>32</td>
<td>FOUR SUITABLE DESIGN STRATEGIES FOR ENCLOSED HOUSING IN CHINA – CASE OF SHANGHAI</td>
</tr>
<tr>
<td></td>
<td>Li Zhenyu, Lu Bin</td>
</tr>
<tr>
<td>32</td>
<td>BE(A)WARE: RESILIENCE IS ABOUT SO MUCH MORE THAN POVERTY ALLEVIATION</td>
</tr>
<tr>
<td></td>
<td>Edna Peres, Chrisna du Plessis</td>
</tr>
<tr>
<td>33</td>
<td>REIMAGINING AN ‘OTHER’ AUSTRALIA: AN ENQUIRY INTO THE FUTURE OF AUSTRALIAN URBANISM</td>
</tr>
<tr>
<td></td>
<td>Hannah Slater, Madeleine Swete Kelly</td>
</tr>
<tr>
<td>34</td>
<td>MINI HOUSE——A RESILIENT STRATEGY IN RAPID URBAN DEVELOPMENT</td>
</tr>
<tr>
<td></td>
<td>Li Zhenyu, Xu Mengya</td>
</tr>
<tr>
<td>35</td>
<td>ARCHITECTURE AND THE DESIGN OF SUSTAINABLE COMMUNITIES</td>
</tr>
<tr>
<td></td>
<td>Ramatu Aliyu, OJ Ebohon, L. Gyoh</td>
</tr>
<tr>
<td>36</td>
<td>THE DESIGN PROFESSION REVISITED: ADAPTING OUR PRACTICE IN POST-CRISIS CITIES</td>
</tr>
<tr>
<td></td>
<td>Alexandra Jayeun Lee</td>
</tr>
<tr>
<td>36</td>
<td>DISTRESS ROAD TOURS: BUILDING EMPATHY ONE CONVERSATION AT A TIME</td>
</tr>
<tr>
<td></td>
<td>Wes Janz, Olon Dotson</td>
</tr>
<tr>
<td>37</td>
<td>THE ARCHITECTURE OF ENGAGEMENT: DESIGN AS A CATALYST FOR CULTURAL CHANGE</td>
</tr>
<tr>
<td></td>
<td>Jim Taggart, Albert Lam</td>
</tr>
</tbody>
</table>
PAGE ABSTRACT TITLES AND AUTHORS

38 CAN SHOPPING MALLS IMPROVE RESILIENCE OF CITY CENTRES? RELATIONS BETWEEN SHOPPING MALLS AND URBAN SPACE
Tomasz Eugeniusz Malec

38 THE POWER OF COMMUNION: MAPPING AND DOCUMENTING THE SPATIAL INFLUENCES OF "OCCUPY GEZI" IN ISTANBUL
Ece Ustun, Halil Semih Eryildiz, Demet Irkli Eryildiz

39 THE USE, ABUSE AND RE-USE OF THE DISCOURSE OF SUSTAINABILITY AND GREEN REALITY IN MEXICO
Raul Lopez Ramirez

39 'URBAN PASTORAL': THE TENTATIVE PLAN OF AN URBAN MOBILITY RESIDENCE MODEL
Ou Xiong Quan

40 (BROTHERS AND) SISTERS DOING IT FOR THEMSELVES: TURNING SOUTH AFRICA'S TOWNSHIPS INTO MORE RESILIENT NEIGHBOURHOODS
Melinda Silverman

41 ASSESSING THE RESILIENCE OF WINDHOEK – ON THE ROAD TO RE-DEFINING SUSTAINABILITY
Phia van Greunen

42 ADOPTING VERNACULAR STRATEGIES IN SOUTH AFRICA
Zack Wessels

43 SPATIAL JUSTICE AS A TOOL FOR SUSTAINABLE REFORM IN KHARTOUM METROPOLITAN AREA
Mariam Mohamed Abdalla Wagialla

43 RESPONSIVE ARCHITECTURE: AN ARCHITECTURAL THEORY FOR MAKING PLACES TO ALLOW MAN TO DWELL
Magdalena Cloete

44 REFURBISH CITIES RESILIENTLY WITH LOCAL ARCHITECTURAL TRADITION AND WISDOM CONSERVED: TWO CASES IN SHANGHAI
Zhongming Shi, Yi Wang, Mengya Xu

45 SPATIAL STRUCTURE AND CHANGING PATTERNS OF USE IN THE URBAN CONFIGURATIONS OF FOUR EASTERN CAPE COLONIAL TOWNS
Andrew Palframan

45 A PLACE UNDER THE SUN FOR EVERYONE: FORMAL AND NON-FORMAL SPACE PRACTICES
Marlene Wagner
<table>
<thead>
<tr>
<th>Page</th>
<th>Abstract Titles and Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>48</td>
<td>A Political Ecology Analysis of Resilient Urban Systems: The Case Study of Dondo, Mozambique</td>
</tr>
<tr>
<td></td>
<td>Céline Veríssimo</td>
</tr>
<tr>
<td>49</td>
<td>Sugarcane(AIR)Fields: The Effects of the Aerotropolis on the Evolution of Place</td>
</tr>
<tr>
<td></td>
<td>Mizan Rambhoros</td>
</tr>
<tr>
<td>49</td>
<td>Design with Nature: The Practice and Theory of Two Chinese Architects from the 8th Century</td>
</tr>
<tr>
<td></td>
<td>Sun Shimeng</td>
</tr>
<tr>
<td>50</td>
<td>Evolution of Choice of Optimal External Finishes and Roofing for School Buildings: A Study of Selected Nigerian Universities</td>
</tr>
<tr>
<td></td>
<td>Olu Ola Ogunsoete, Bogda Prucnal-Ogunsoete</td>
</tr>
<tr>
<td>51</td>
<td>Design Methodologies in Informal Territories</td>
</tr>
<tr>
<td></td>
<td>Daniela Getlinger</td>
</tr>
<tr>
<td>51</td>
<td>Architecture, Obesity, Bicycles and the Changing Ecology of Physical Activity in Large Cities</td>
</tr>
<tr>
<td></td>
<td>Fredric (Rick) Bell</td>
</tr>
<tr>
<td>52</td>
<td>Experiments in Urban Re-use, Regeneration, Culture and Architecture in the Ravenna Docklands. The TSN - Tiro a Segno Nazionale</td>
</tr>
<tr>
<td></td>
<td>Elizabeth Francis, Maria Cristina Garavelli, Elisa Greco, Cristina Bellini, Lara Bissi</td>
</tr>
<tr>
<td>53</td>
<td>The Role of the Architect in the Systemic Network of the Metropolises Perennial Trends</td>
</tr>
<tr>
<td></td>
<td>Elodie Nourrigat</td>
</tr>
<tr>
<td>53</td>
<td>The Skin of Brazilian Modern Architecture: Envelope Solutions in the Light of Concepts of Bioclimatic Architecture</td>
</tr>
<tr>
<td></td>
<td>Augusto Alvarenga</td>
</tr>
<tr>
<td>54</td>
<td>Study on Low-Tech Energy Saving Strategies in Shanghai’s Residential Design</td>
</tr>
<tr>
<td></td>
<td>Qiu Lidan, Li Zhenyu</td>
</tr>
<tr>
<td>54</td>
<td>Ecological Renovation Strategies of Workers’ New Village Housing in Shanghai</td>
</tr>
<tr>
<td></td>
<td>Li Zhenyu, Qiu Lidan</td>
</tr>
<tr>
<td>55</td>
<td>Explore the Boundary Space of Sustainable Development. The Revelation about the Hong Kong-Zhuhai-Macao Bridge – Hong Kong Boundary Crossing Facilities International Design Ideas Competition</td>
</tr>
<tr>
<td></td>
<td>Ou Xiong Quan, Wang Wei</td>
</tr>
<tr>
<td>56</td>
<td>Opportunistic Landscapes: Case Analysis of the City of Hazira, India</td>
</tr>
<tr>
<td></td>
<td>Gunjan Rustagi</td>
</tr>
<tr>
<td>56</td>
<td>Analysis of Settlement Pattern and the Dynamics of HydroEnvironmental Imbalance - Delhi as a Case Study</td>
</tr>
<tr>
<td></td>
<td>Kulsum Fatima, Gauhar Mahmood</td>
</tr>
<tr>
<td>57</td>
<td>Influence of Design on the Thermal Environment of Public Transport Transit Facilities</td>
</tr>
<tr>
<td></td>
<td>Philip Otieno Koteng, Evans Juma Oino</td>
</tr>
</tbody>
</table>
POLICIES THAT SECURE A SUSTAINABLE ARCHITECTURE
Oiza Osho, Ejiga Opaluwa

IF WE WERE LIKE ANTS... SCIENCE FICTION FOR ARCHITECTS: URBAN FORM IMAGINED AS A NATURAL, ORGANICALLY EVOLVING ECOSYSTEM
Ken Stucke

ARCHITECTURE AS THE ART OF CARE: A HEIDEGGARIAN AUGMENTATION OF CHRISTIAN NORBERG-SCHULZ’S ART OF PLACE
Hendrik A. Auret

SUSTAINABILITY THROUGH A BIOMIMETIC APPROACH - THE CASE OF ADDIS ABABA
Petra Gruber, Dawit Benti Erena

RESEARCH ON NATURAL VENTILATION OF VERNACULAR DWELLINGS IN JIANGNAN WATER TOWNS
Hua Zhang, Weiju Yang, Bing Chen, Tongtong Wang, Minghui Xiong

BETWEEN RURAL AND URBAN, SOCIALLY ACTIVE ECOSYSTEMS
Tomà Berlanda, Nerea Amorós Elorduy

BUILDING AND THE BEASTS
Tessa Jane Brunette

DETERMINING THE CURRENT CO₂ EMISSION STATUS OF THE SOUTH AFRICAN BUILT ENVIRONMENT
Jacques Laubscher

A KNOWLEDGE MODEL TO IMPLEMENT HOME WORKING IN MULT-TENANT HOUSING
Sam Moshaver, Hasim Altan

SUSTAINABILITY CONSIDERATIONS IN THE USE OF STAINLESS STEELS IN ARCHITECTURE
Bill Scurr

CORRELATION AMONG DISTRICT COLOUR COMPOSITION, ENVIRONMENTAL RECOGNITION, AND BEHAVIOURAL CHARACTERISTICS IN CITYSCAPES
Yuka Nakano, Sayaka Kurishima, Setsuko Kanai, Hirotomo Ohuchi

HUMAN LABOUR, GREEN RETURN
Julian Raxworthy

THE HISTORICAL ITALIAN CITY CAN BE CONSIDERED “OTHERWHERE”
Alberto Zanon

CITIZEN PARTICIPATION: THE CASE OF ISRAEL PROJECT RENEWAL
Zvi Weinstein

THE NATURAL SYSTEMS ENVIRONMENTAL DESIGN AS FUTURE FOR HUMAN SETTLEMENTS
Anna Tertel

ANALYSIS OF THE RELATIONSHIP BETWEEN BUILDING ORIENTATION AND ENERGY CONSUMPTION IN DHAKA CITY
Samina Mazumder Tuli, Nazmul Islam
PAGE  ABSTRACT TITLES AND AUTHORS

68  DUBAI UTOPIA
Luca Donner, Francesca Sorcinelli

68  AUTONOMY AND DEPENDENCY: THE DESIGN OF COHOUSING AS A MEANINGFUL APPROACH TO SUSTAINABLE LIVING
Fangqing Lu, Haishan Xia

69  TWENTY COMMON ECOLOGICAL TECHNOLOGIES OF CONTEMPORARY CHINESE BUILDINGS
Dou Zhi, Zhao Min
PAGE  ABSTRACT TITLES AND AUTHORS

71  GLOBAL ISSUES AND CITIES
Gaetan Siew

72  STUDY ON THE COMPOSITION OF LAYOUT PLANNING AND ENVIRONMENTAL COGNITION IN THE COLLECTIVE HOUSING AT MAKUHARI BAYTOWN
Hirotomo Ohuchi, Keisei Watanabe, Setsuko Kanai, Koji Ohdaira

73  SCOPE AND LIMITATIONS OF INNOVATION AND COLLABORATION IN INTEGRATED DESIGN (ID) FOR ARCHITECTURE
Ricardo Ferreira Leoto, Gonzalo Lizarralde, Benjamin Herazo-Cueto

74  ARE YOU MY TYPE? NEW EFFORTS IN THE ACCESSIBILITY OF ARCHITECTURE AT EARLY AGES
Juan Del Barrio, Jorge Castillo

74  THE STRATEGY ADJUSTMENT AND OPTIMIZATION FOR THE EXISTING PROBLEMS OF INDUSTRIAL HERITAGE RENOVATION – A CASE STUDY OF CHANGSHA BINJIANG NEW CITY
Huang Lei, Wei Chunyu

75  GLOBAL BIOETHICS AND RESPONSIBILITIES OF ARCHITECTS IN THE VALUE CONTEXT
Elisabed Giorgadze, David Abuladze

76  EMBRACING THE ‘OTHERWHERE’: CLIMBING OUT OF THE BLACK BOX OF THE ARCHITECTURAL PROFESSION
June Jordaan

77  THE VALUES OF LOW-BUILDING-COVERAGE CONTROL IN THE URBAN DEVELOPMENT OF SHANGHAI
Dong Yijia, Li Zhenyu

77  DIVERSITY AND MULTICULTURALISM – RESEARCH AND DESIGN FOR BAFATÁ UPON THE 90TH ANNIVERSARY OF AMILCAR CABRAL’S BIRTH
Paulo Tormenta Pinto, José Luís Saldanha

77  RE-DISCOVERING THE AFRICAN PHILOSOPHY OF THE ARCHITECTURE THROUGH THE OTHER/OTHER’S LENS: EUROPEAN-BASED CONSIDERATIONS
Małgorzata Kądziela, Anna Rynkowska-Sachse

78  HISTORIC SECRETS OF SZCZECIN’S MYSTERIOUS ISLANDS
Anna Tertel

79  LEADING THE NEXT GENERATION OF SOCIALLY RESPONSIBLE ARCHITECTS AND DESIGNERS
Sandra Plaza, Crystal Neff

80  AN OPPORTUNITY TO DESIGN A SOCIALLY RESPONSIBLE LANDSCAPE FOR RURAL COMMUNITIES: THE NDUMO CASE STUDY
Ezio Gori, Roz Harber, Cobus van Dyk

81  ARCHITECTURE REFLECTS THE CULTURAL SPIRIT——ON THE APPLICATION OF LINKAGE THEORY TO ARCHITECTURE DESIGN IN HISTORICAL DISTRICT
Jialong Lai, Tao Zhou

81  NATIONAL STANDARDISED BUILDING INFORMATION SYSTEM
Paul Boshoff
PAGE  ABSTRACT TITLES AND AUTHORS

82  A REAL PROPERTY STEWARDSHIP EXCELLENCE PROTOCOL FOR CANADA: Delineating Quality and Value Through Metaphors and Anecdotes
   Samuel Óghale Oboh

83  RETURNING TO THE RATIONAL ORIGINAL POINT: THE ANALYSIS OF CHINESE AUTHENTIC CONTEMPORARY ARCHITECTURAL DESIGN
   Qi Yi, Zhang Shanshan

84  DESIGNING LIKE YOU GIVE A DAMN - ABOUT WHAT EXACTLY? EXPLORING THE ETHICS OF ‘HUMANITARIAN’ ARCHITECTURE
   Nikki Linsell

84  WHAT LAWYERS THINK, WHAT CLIENTS THINK, WHAT CONTRACTORS THINK AND WHAT ARCHITECTS THINK OF ARCHITECTS
   Peter Sarlos

85  MOBILE LOITERING: A RESPONSE TO PUBLIC SPACE NEEDS IN NIGER’S HIGHLY GENDERED URBAN CONTEXT
   Mariam Kamara

86  (IN)FORMAL STUDIO – TRANSFORMING THEORY THROUGH PRACTICE
   Thorsten Deckler

86  ‘JOHANNESBURG IN PRACTICE’ or ‘FROM TEA PARTY TO INFORMAL GOLF ESTATE’
   Thorsten Deckler

87  STUDY ON BASIC CHARACTERISTICS OF LIVING SPACE IN ELDERLY INSTITUTIONS - TAKE THE INSTITUTIONAL ELDERLY FACILITIES IN DALIAN AS EXAMPLES
   Hongyi Wang, Xiang Wang

88  CONSTRUCTING THE COMMON IN DEHEISHE CAMP, PALESTINE
   Patrícia Capanema Álvares Fernandes

88  PROMOTING TECHNO-DIVERSITY FOR SELF RELIANT AND SUSTAINABLE DEVELOPMENT: A GANDHIAN THOUGHT
   Kamla Kant Asthana

89  INVESTIGATION ON WOMEN’S SPACE IN MASJID ARCHITECTURE: CASE STUDY OF SELECTED MASJIDS IN MALAYSIA
   Norwina Mohd Nawawi, Zaiton Abdul Rahim, Noor Hanita Abdul Majid, Puteri Shireen Jahn Kassim

90  PUBLIC PERCEPTION AND PARTICIPATION: MISSING, MISUNDERSTOOD OR MISAPPLIED COMPONENTS OF URBAN REGENERATION
   Otitoola Olufikayo Jason

90  SHARED DEVELOPMENT: HOW OTHERWHERE MODELS OF PRACTICE MAY INFORM THE CONTEXT OF AFRICA
   Stephen R. Hodder

91  THE FORMS AND SPIRITUAL MEANINGS OF VERNACULAR ARCHITECTURE IN XUZHOU CHINA – A CASE STUDY OF THE TRADITIONAL DWELLINGS IN HUBU MOUNTAIN
   Hua Zhang, Bing Chen, Tongtong Wang, Minghui Xiong, Jiang Chang

92  SPATIAL ECONOMICS – THE WEALTH OF THE URBAN POOR
   Phia van Greunen
PAGE  ABSTRACT TITLES AND AUTHORS

93  ARCHITECTURE’S CONTRIBUTION IN THE FORMATION OF REALITY PERCEPTION
   Apostolia Demertzi

93  THE ROLE OF ORAL HISTORY IN ARCHITECTURAL PEDAGOGY IN BANGLADESH
   Ishraq Z Khan

94  DESIGNING FOR CONSTRUCTION HEALTH AND SAFETY (H&S)
   John Smallwood, Claire Deacon

94  CONTROVERSY OF REHABILITATION AND RESTORATION FOR ANCIENT BUILDINGS
   Dou Zhi, Zhao Min

95  WOOD, STRAW, REEDS & CO: ECOLOCAL MATERIALS FOR A CONTEXTUAL
    ARCHITECTURE
   Dominique Gauzin-Müller

95  TO DARE: OTHERNESS, SPECIFICITY, BENEVOLENCE, CULTURES
   Philippe Madec

96  EARTH, STONE & CO: ECOLOCAL MATERIALS FOR A CONTEXTUAL ARCHITECTURE
   Dominique Gauzin-Müller

96  LIGHTING OTHERWHERE, LIGHTING OTHERWAY
   Christophe Marty
<table>
<thead>
<tr>
<th>PAGE</th>
<th>ABSTRACT TITLES AND AUTHORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>98</td>
<td>A CASE FOR INCLUSION OF APPROPRIATE BUILDING TECHNOLOGY AND SUSTAINABLE BUILDING DESIGN IN UNDERGRADUATE CURRICULUM IN DEVELOPING COUNTRIES</td>
</tr>
<tr>
<td></td>
<td>Vasanth K. Bhat</td>
</tr>
<tr>
<td>98</td>
<td>EXPLORATION OF ARCHITECTURAL DESIGN EDUCATION AND PRACTICE: RECONSTRUCTION OF RESIDENCES AND ENVIRONMENT IN RURAL POOR AREAS OF CHINA</td>
</tr>
<tr>
<td></td>
<td>Tianyi Yu, Yu Zhang</td>
</tr>
<tr>
<td>99</td>
<td>THE TRANSFORMATION OF ARCHITECTURAL EDUCATION TOWARDS RESPONSIVE, RELEVANT AND ETHICAL SOCIAL PRACTICE: A MODEL FOR INTERDISCIPLINARY COLLABORATION AND SOCIAL PARTICIPATION</td>
</tr>
<tr>
<td></td>
<td>Yashaen Luckan</td>
</tr>
<tr>
<td>99</td>
<td>IMPACTS OF INTERNATIONAL EDUCATION OF ARCHITECTURE AND PLANNING: A CASE STUDY OF AFRICAN OVERSEAS STUDENTS</td>
</tr>
<tr>
<td></td>
<td>Xu Jin</td>
</tr>
<tr>
<td>100</td>
<td>METHODOLOGICAL APPROACH TO ARCHITECTURAL EDUCATION IN BRAZIL: EXPERIMENTAL TEACHING VERSUS TRADITIONAL TEACHING</td>
</tr>
<tr>
<td></td>
<td>Mauro Santoro Campello, Douglimar Meireles de Oliveira, Gabriel Micherif Filgueiras e Oliveira, Raiane Rosi Duque</td>
</tr>
<tr>
<td>101</td>
<td>POPULATION AND POVERTY. URBAN TRANSFORMATION, COLLABORATION OPPORTUNITY. CASE STUDY ‘SAN JOSE EL ALTO’</td>
</tr>
<tr>
<td></td>
<td>María Teresa Trejo Guzmán</td>
</tr>
<tr>
<td>101</td>
<td>THE NEED FOR THE INCLUSION OF CONSTRUCTION HEALTH AND SAFETY (H&amp;S) IN ARCHITECTURAL EDUCATION</td>
</tr>
<tr>
<td></td>
<td>John Smallwood</td>
</tr>
<tr>
<td>102</td>
<td>TOWARDS AN ALTERNATIVE ARCHITECTURAL EDUCATION THROUGH AUTHENTIC LEARNING DESIGN: OPEN ARCHITECTURE – A CASE STUDY</td>
</tr>
<tr>
<td></td>
<td>Jolanda Morkel, Lone Poulsen</td>
</tr>
<tr>
<td>103</td>
<td>SEEDS FROM THE SOUTH: AN EDUCATIONAL PROGRAM FOR ARCHITECTURE AND URBANISM IN THE 21ST CENTURY</td>
</tr>
<tr>
<td></td>
<td>Andréia Moassab</td>
</tr>
<tr>
<td>PAGE</td>
<td>ABSTRACT TITLES AND AUTHORS</td>
</tr>
<tr>
<td>------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>105</td>
<td>IMPROVING URBAN RESILIENCE IN AFRICAN CITIES BY MAINSTREAMING TRADITIONAL PUBLIC OPEN SPACES: A STUDY OF IMO STATE, NIGERIA</td>
</tr>
<tr>
<td></td>
<td>Agoha Basil Onyekozuru</td>
</tr>
<tr>
<td>105</td>
<td>RECICLAGEM DO GRANDE HOTEL: AN OPEN BUILDING DESIGN INTERVENTION FOR SOCIO-ECONOMIC EMPOWERMENT IN MOZAMBIQUE</td>
</tr>
<tr>
<td></td>
<td>Robert Cruiming, Ype Cuperus, André Mulder</td>
</tr>
<tr>
<td>106</td>
<td>REPURPOSING ARCHITECTURAL AND STRUCTURAL ENGINEERING EDUCATION TO COMBAT CATASTROPHIC STRUCTURAL FAILURE IN DEVELOPING COUNTRIES: A NIGERIAN CASE STUDY</td>
</tr>
<tr>
<td></td>
<td>Olu Ola Ogunsoye, Joseph Olasehinde Afolayan, Chinwuba Arum, Bogda Prucnal-Ogunsoye</td>
</tr>
<tr>
<td>107</td>
<td>SI SYSTEM AS USER-ORIENTED HOUSING APPROACH FOR EMERGING MARKETS: A COMPARATIVE STUDY ON ADAPTED DWELLINGS IN INDONESIA, SOUTH KOREA AND BRAZIL</td>
</tr>
<tr>
<td></td>
<td>Marianne Costa, Hideki Kobayashi, Jiyoung Jung</td>
</tr>
<tr>
<td>107</td>
<td>A SURVEY STUDY OF APARTMENT REMODELING PLAN FOR THE ELDERLY IN KOREA</td>
</tr>
<tr>
<td></td>
<td>Jae-Hoon Lee, Woo-Jung Lee</td>
</tr>
<tr>
<td>108</td>
<td>RHIZOMATIC HEALTHSCAPES</td>
</tr>
<tr>
<td></td>
<td>Alan Mee, Eric Wright, Philip Astley</td>
</tr>
<tr>
<td>109</td>
<td>ANTIFRAGILITY IN ARCHITECTURE: IMPROVING ARCHITECTURE WITH APPROPRIATE REACTION TO POSITIVE STRESSORS</td>
</tr>
<tr>
<td></td>
<td>Peter Schwehr, Natalie Plagaro Cowee</td>
</tr>
<tr>
<td>109</td>
<td>OPEN BUILDING IN BRAZIL: IS IT POSSIBLE?</td>
</tr>
<tr>
<td></td>
<td>Rosamônica da Fonseca Lamounier, Denise Morado Nascimento</td>
</tr>
<tr>
<td>110</td>
<td>OPEN EMERGENCY AND URGENT CARE SYSTEMS: EMERGENT PROJECT DESIGN DECISIONS UTILISING SCENARIO PLANNING WITH SYSTEMS SEPARATION</td>
</tr>
<tr>
<td></td>
<td>Philip Astley, Grant R. Mills, Richard Hind, Andrew D.F. Price</td>
</tr>
<tr>
<td>111</td>
<td>SEARCHING FOR AN ALTERNATIVE WAY FOR DWELLINGS BY DRAWING A PARALLEL BETWEEN BUILDING FACADE DESIGN AND THE IDEA OF CLOTHES ACCORDING TO CHARACTERISTICS OF CLIMATE</td>
</tr>
<tr>
<td></td>
<td>Şebnem Çakaloğulları</td>
</tr>
<tr>
<td>111</td>
<td>THE IDEA OF NATURE: SELF-DEFENSE SENSITIVE PATCH</td>
</tr>
<tr>
<td></td>
<td>Şebnem Çakaloğulları</td>
</tr>
<tr>
<td>112</td>
<td>THREE-DIMENSIONAL ‘SITES’ – AN INVESTIGATION INTO SOLVING THE PROBLEM OF EMPTY BUILDINGS IN CITY CENTRES</td>
</tr>
<tr>
<td></td>
<td>Philip du Toit</td>
</tr>
<tr>
<td>113</td>
<td>STRATEGIES FOR ALLOGRAPHIC URBANISM</td>
</tr>
<tr>
<td></td>
<td>Marecella del Signore, Mona el Khafif</td>
</tr>
<tr>
<td>113</td>
<td>HEALTHCARE FACILITIES DESIGNED FOR FLEXIBILITY: THE CHALLENGE OF CULTURE CHANGE IN A LARGE US PUBLIC AGENCY</td>
</tr>
<tr>
<td></td>
<td>Stephen Kendall, Thom Kurmel, Karel Dekker; John Becker</td>
</tr>
<tr>
<td>114</td>
<td>DEFINING FORMS OF COLLABORATIVE LIVING IN MODERN CHINA</td>
</tr>
<tr>
<td></td>
<td>Yiwei LIU, Beisi JIA</td>
</tr>
</tbody>
</table>
PAGE ABSTRACT TITLES AND AUTHORS

115 TIME-INFRINGEMENT BUILDING SUPPORTING CHANGING CARE NEEDS: INTEGRATED DESIGN AND LIFE CYCLE IMPACT ASSESSMENT OF A FLEMISH PILOT PROJECT
Mieke Vandenbroucke, Wim Debacker, Tim Ost, Michiel Verhaegen, Frank De Troyer, Anne Paduart, Niels De Temmerman

116 UR FREESTYLE HOUSE (PART 1): REACTIVATION PROJECT BY DIY RENOVATION FOR EXISTING RENTAL DWELLING UNITS IN KOZoji NEWTOWN JAPAN
Nobuyuki Nomura, Masanao Hattori, Eisuke Tabata, Kazuhisa Tsunekawa, Norie Kawano, Shin Murakami

117 UR FREESTYLE HOUSE (PART 2) - POSSIBILITIES OF RENTAL UNITS BY MEANS OF DIY RENOVATION IN JAPAN
Shin Murakami, Norie Kawano, Masanao Hattori, Nobuyuki Nomura, Eisuke Tabata, Kazuhisa Tsunekawa

118 ENERGY SAVING STRATEGIES FOR THE XUANCHENG OLYMPIC SPORTS CENTER DESIGN IN ANHUI PROVINCE, CHINA
Lingling Li, Mauro Caini, Padua, Padua, Giovanni Brugnaro, Naihua Yue

119 AN APPROACH TO REDESIGN FOR CHANGE: RESEARCH-BY-DESIGN
Waldo Galle, Mieke Vandenbroucke, Anne Paduart, Niels De Temmerman

120 ACTION TO LONG-LIFE QUALITY HOUSING IN JAPAN –DURABILITY OF THE METAL JOINTS OF WOODEN HOUSES
Hiroki Ishiyama

120 THE DESIGN AND MANAGEMENT METHOD OF AMALGAMATED DWELLING FOR THE LONG-TERM CHANGEABLE OF FAMILY STRUCTURE
Yang Liu, Fan Yue

121 THE OLD BUILDINGS REUSE DESIGN BASED ON THE REPRODUCTION OF PLACE SPIRIT
Zhang Shanshan, Dong Xu, Zhang Xinyu

121 VUKUZAKHE – BROAD BASED SUSTAINABILITY IN THE DELIVERY OF MUNICIPAL SERVICE ARCHITECTURE FOR ETHEKWINI
Richard Stretton, Jonathan Edkins

122 PROVIDE BUILDING FABRIC DESIGN THAT POSITIVELY RESPONDS TO THE DIVERSITY OF ENVIRONMENTAL AND SOCIAL CONDITIONS OF UNSERVED COMMUNITIES
Custódia Maria Dengo

123 DIFFERENTIATED DESIGN FOR THE REUSE OF OLD BUILDINGS BASED ON SPACE ADAPTATION
Shanshan Zhang, Xu Dong

123 TECTONIC AUTHENTICITY: A STUDY OF TRANSITION FROM CHINESE CLASSICAL WOOD ARCHITECTURE TO CONTEMPORARY WOOD ARCHITECTURE
Qi Yi, Zhang Shanshan

124 FRAMEWORK FOR AN OPEN SPACE ECOLOGY IN ARCHITECTURE
Akshay Goyal

124 ‘DYING’ VILLAGE: ANCIENT VILLAGES IN THE SUBURBS OF LARGE CITIES
Wang Jun
PAGE  ABSTRACT TITLES AND AUTHORS

125  TIME-BASED DESIGN APPROACHES FOR INFORMAL SETTLEMENT UPGRADEING IN SOUTH AFRICA  
Amira Osman

126  STUDYING THE EFFECT OF ADAPTABLE MATERIALISATION ON LONG TERM URBAN DEVELOPMENT GOALS: A METHODOLOGY  
Pieter Herthogs, Niels De Temmerman, Yves De Weerdt, Wim Debacker

127  HANDLING MULTIPLE ECOLOGIES IN ARCHITECTURAL DESIGN  
Andreas Sattrup, Katrine Lotz

127  THE HELSINKI SEASIDE QUARTER OF SUSTAINABLE BUILDING TYPES  
Esko Kahri

128  LIFESTYLE ADAPTATIONS IN MULTICULTURAL STUDENT HOUSING – CASE STUDIES IN JAPAN AND IN USA  
Arno Suzuki

129  IMPROVING LEARNING ENVIRONMENTS THROUGH DESIGN: HOW THE BUILT-ENVIRONMENT IMPROVES SOCIETY THROUGH EDUCATION  
Steve H. Crane

130  THE CIRCLE MANAGEMENT FOR URBAN BLOCKS  
Yang Liu

130  ADAPTIVE CAPACITY OF BUILDINGS: A DETERMINATION METHOD TO PROMOTE FLEXIBLE AND SUSTAINABLE CONSTRUCTION  
Rob Geraedts, Hilde Remøy, Marleen Hermans, Evi van Rijn

131  IS OPEN BUILDING OR LOW-CARBON BUILDING LONG LASTING? TESTING THE OPEN BUILDING THEORY OF LEVELS OF RESPONSIBILITY IS APPLICABLE OR MEANINGFUL FOR LOW CARBON ARCHITECTURE DESIGN OR NOT IN THE CONTEXT OF CHINESE CITIES  
Qing Wang, Beisi Jia

132  SUPERLPAN.ME  
Elina Karanastasi, Athena Papadopoulou, Eva Papamargariti, Vassiliki Maria Plavou, Ethel Baraona Pohl

133  RESEARCH ON PUBLIC PARTICIPATION IN THE REGENERATION OF HISTORICAL ARCHITECTURE—A CASE STUDY OF HUANGTIAN VILLAGE, ANHUI  
Xiaomeng Xing

133  POSSIBLE DEVELOPING MODES OF SENIOR HOUSING REAL ESTATE IN CHINA——TAKE BEIJING FOR EXAMPLE  
Gan Zhenkun

134  THE IMPORTANCE OF THE ORIGINAL RESIDENTS IN THE PROTECTION AND RENOVATION OF HISTORICAL DISTRICTS  
Jiawen Li
136 FROM REFLEXIVE ACCLIMATIZATION TO POSITIVE ALTERATION
Mohamed Alaa Mandour

136 ECOLOGICAL CATHARSIS THROUGH URBAN ACUPUNCTURE
Ali Arsalan Pasha Siddiqui

137 FROM CHAOS TO ORDER: A CONTEXT-SPECIFIC DESIGN RESPONSE FOR KHUTSONG SECTION INFORMAL SETTLEMENT, IVORY PARK, MIDRAND, JOHANNESBURG, SOUTH AFRICA
Emmanuel Nkambule

138 HOUSING AFFORDABILITY IN NIGERIA
Odunjo Oluronke Omololaakanlawon Simon Ayorinde, Baba Abiola Olayemi

138 SMALL SCALE REAL ESTATES DEVELOPMENT AND SPATIAL PLANNING ‘ADJUSTMENT’ IN SURABAYA, INDONESIA
Ispurwono Soemarno; Erwin Sudarma

139 HOUSING CONSOLIDATION: INNOVATIVE ATTEMPTS OF HOUSEHOLDS IN CONSOLIDATION OF LOW COST HOUSING IN SOUTH AFRICA
Judith T Ojo-Aromokudu

140 A SPACE EXPANSION MODEL FOR PRODUCTIVE HOUSING IN FISH PROCESSING KAMPUNG
Adinda Sih P.R. Utami, Happy R. Santosa, I G. N. Antaryama

140 ANALYSIS OF FACTORS AFFECTING UTILITY IN RESIDENTIAL BUILDINGS AT EREKESAN URBAN-CORE AKURE, SOUTH-WESTERN NIGERIA
Fashuyi Olugbenga Stephen

141 THE INTEGRATED ENERGY EFFICIENT AND CONSERVATION ECOLOGICAL DWELLING
Trevor G. Govender, A. Anandraj

141 THE TRANSFORMATION OF HOUSING DEVELOPMENT AFTER 2000: WHERE IS ISTANBUL AS A THIRD WORLD CITY?
Tuba Sarı, Yurdanur Dülgeroğlu Yüksel

142 UNDERSTANDING URBAN FORM AND SPACE PRODUCTION IN INFORMAL SETTLEMENTS: THE TOI MARKET IN NAIROBI, KENYA
Georgia Cardosi, Gonzalo Lizarralde

143 THE FORECAST OF THE DEVELOPMENT TREND ABOUT EFFECTIVE ARCHITECTURE
He Junhua

143 URBAN POVERTY AND HOUSING INADEQUACIES IN NIGERIA: NEED FOR INTERVENTION IN THE CORE AREAS OF CITIES
Odunjo, Oluronke Omolola, Okanlawon, Simon Ayorinde

144 SUSTAINABLE HERITAGE TRAIL RESTORATION DEVELOPMENT OF THE HISTORICAL DEAD / LIVE CAIRO
Rasha Sayed

144 STUDY ON THE INNOVATIVE APPLICATION OF BAMBOO-CABLE COMPOSITE STRUCTURES
Yuguang Fu, Liyao Hu, Yuqing Hu, Xian He

145 CONTRADICTIONS OF DESIGNING “GREEN” CITIES: INTEGRATION OF THE TERM “GREEN” TO UNLIMITED GROWTH IN ISTANBUL
Ece Demir
ASSESSMENT OF THE LANDSCAPE VALUE OF AFFORDABLE HOUSES IN SUBURBAN BEIJING, CHINA
Yu Zhang, Xiang Wang, Li Dong

THE RURAL AREA AS AN URBAN DEVELOPMENT MODEL THAT DIFFERS FROM THAT OF THE MEGA URBAN AFRICAN TOWNS OF THE FUTURE: MATERI, BENIN
Patrizia Montini Zimolo, Flavia Vaccher, Gildas K. Sambieni, Sandro Toffoli, Romano Volpato, Carlo Piccoli, Giuditta Rado, Italo Rebuli

ECO-URBAN RETROFITTING
Luca Donner, Francesca Sorcinelli

UPGRADING HISTORICAL AREAS SURROUNDED BY INFORMAL SETTLEMENTS
Rawia Hammouda, Tarek Sobhy

ARKWRIGHT TOWN AND THE ELDONIANS: EVALUATION OF SOCIO-ECONOMIC AND PSYCHOLOGICAL ASPECTS OF TWO DISPLACED COMMUNITIES IN THE UNITED KINGDOM
Tessa Brunette, Gerda Speller, Martin Watson

GREEN INFRASTRUCTURE AND ECOSYSTEM SERVICES IN INFORMAL URBAN SETTLEMENTS
Olumuyiwa Bayode Adegun

RESEARCH ON CONSTRUCTION OF INDEMNIFICATORY COMMUNITIES IN NANJING AND OPTIMIZING STRATEGIES BASED ON MIXED HOUSING MODE
Wang Hui, Wu Xiao, Qiang Huan-huan, Liu Xi-hui

THE INHERITANCE AND APPLICATION OF ECOLOGICAL THEORY OF TRADITIONAL HOUSES: TAKING HUIZHOU HOUSES AS AN EXAMPLE
Meng Xiaodong

POSSIBILITIES OF DIALOGUE: THE CASE OF THE TRANS-LOCAL URBAN ARTISTIC RESEARCH PROJECT NINE URBAN BIOTOPES
Christian von Wissel, Alison Rooke

CREATING ABUNDANT AND FLOURISHING CITIES THAT FUNCTION LIKE AN MATURE ECOSYSTEM
Shannon Royden-Turner

CHANGES AND UPDATES IN THE TEACHING OF ARCHITECTURE. LEARNING FROM INFORMAL CITIES
Maria F. Canteiro Neto, Jorge H. Canastra Marum

CONCEPT OF UTILITY IN THE TRANSFORMED RESIDENTIAL BUILDINGS OF EREKESAN URBAN-CORE, AKURE SOUTH - WESTERN NIGERIA
Olugbenga Stephen Fashuyi

EVALUATING THE FUNCTIONAL PERFORMANCE OF SMALL-SCALE PUBLIC DEMOUNTABLE BUILDINGS
Junjie Xi

FISHERMEN SETTLEMENT DEVELOPMENT IN THE CONTEXT OF THE SUSTAINABLE CITY OF SURABAYA
Happy Ratna Santosa, Sarah Cahyadini, Hasian Siregar, Endy Yudho Prasetyo

GAME OVER: THE OTHERWHERE OF SPORT STRUCTURES
Carl Wright
<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Author(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>158</td>
<td>TRANSIT ORIENTATED DEVELOPMENT AND ITS APPLICATION IN A SOUTH AFRICAN CONTEXT</td>
<td>Tom Steer</td>
</tr>
<tr>
<td>158</td>
<td>WAFOMOS AND ENBULES: FACILITIES FOR IMPROVED LOCAL SUSTAINABILITY</td>
<td>Jeremy Gibberd</td>
</tr>
<tr>
<td>159</td>
<td>IN-CONTEXT AND ECOLOGY IMMERSION FOR RESILIENCE: AN EXPLORATION OF THE DESIGN OF A HOUSEHOLD FARMING KIT</td>
<td>Kyle Graham Brand, Angus Donald Campbell</td>
</tr>
<tr>
<td>159</td>
<td>ACCESSIBILITY AND HERITAGE IN ITALY</td>
<td>Isabella Tiziana Steffan</td>
</tr>
<tr>
<td>160</td>
<td>DESIGN OF A WHOLESALE KITCHEN MARKET IN DHAKA CITY</td>
<td>Samina Mazumder Tuli, Nazmul Islam</td>
</tr>
<tr>
<td>161</td>
<td>BUILDING INTEGRATED COCONUT ENVELOPE SYSTEMS – RETHINKING THE ROLE OF ‘LOW-TECH’ MATERIALS FOR HIGH PERFORMANCE IN THE HOT-HUMID REGION</td>
<td>Mae-ling Jovenes Lokko, Anna Dyson, Jason Vollen</td>
</tr>
<tr>
<td>162</td>
<td>ADAPTING THE NIGERIAN BUILT ENVIRONMENT TO CLIMATE CHANGE</td>
<td>Opaluwa Ejiga, Adejumo T. Olatunji, Morakinyo O. Kolawole</td>
</tr>
<tr>
<td>162</td>
<td>SPACE, ARCHITECTURE AND INFRASTRUCTURE “IN-BETWEEN CITIES”. GDANSK - SOPOT CASE</td>
<td>Aleksandra Sas-Bojarska, Magdalena Rembeza</td>
</tr>
<tr>
<td>163</td>
<td>ACCELERATING RESILIENCE IN ENVIRONMENTAL, SOCIAL AND ECONOMIC SYSTEMS: CREATING GLOBAL HARMONY THROUGH LOCAL INTERDEPENDENCE</td>
<td>Olaniyi Adekeye</td>
</tr>
<tr>
<td>164</td>
<td>SUSTAINABLE HERITAGE TRAIL RESTORATION DEVELOPMENT OF THE HISTORICAL DEAD/LIVE CAIRO</td>
<td>Dalia Moaty Rasmy, Rasha Sayed Mahmoud, Sarah M. Abdallah El Chafei</td>
</tr>
<tr>
<td>165</td>
<td>CHANDIGRAH FROM THE EYES OF AN INSIDER: AN APPROACH TO DISCOVER THE PSCHO-SOCIAL INTEGRITY OF THE INDIAN LIFESTYLE IN AN ARCHITECTURALLY CONTROLLED ENVIRONMENT</td>
<td>Anandita Anandita</td>
</tr>
<tr>
<td>166</td>
<td>SPACE TRANSITION FROM SOCIAL PRODUCT TO CAPITAL STOCK: ISTANBUL CASE</td>
<td>Cagin Tanriverdi, Demet Irkli Eryildiz</td>
</tr>
<tr>
<td>166</td>
<td>PLAYGROUND TYPOLOGIES AND MATERIALITY FOR SUSTAINABLE PUBLIC OPEN SPACES IN AN URBAN CONTEXT</td>
<td>Andrew Gill</td>
</tr>
<tr>
<td>167</td>
<td>STUDY OF GUIDELINES OF DARMO CORRIDOR SURABAYA AS A FLEXIBLE SPACE DURING CAR FREE DAY PROGRAM</td>
<td>Fath Nadizti, Happy Ratna Santosa</td>
</tr>
<tr>
<td>168</td>
<td>EVOTECTURE</td>
<td>Demet Irkli Eryildiz, Halil Semih Eryildiz</td>
</tr>
<tr>
<td>168</td>
<td>AN ARCHITECTURE FOR MARGINALISED SOUTH AFRICANS: THE ROLE OF EDUCATION</td>
<td>Annemarie Wagener</td>
</tr>
<tr>
<td>Page</td>
<td>Title</td>
<td>Authors</td>
</tr>
<tr>
<td>------</td>
<td>----------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>169</td>
<td>Spatial Ideology of F-Type Penitentiaries in Turkey</td>
<td>Ayşe Farahnaz Öztürk, Demet Irkli Eryildiz</td>
</tr>
<tr>
<td>170</td>
<td>Physical, Social and Economic Sustainability Through Maltepe-Başibüyük Developing Axis in the Transforming City of Istanbul</td>
<td>Demet Mutman, Demet Irkli Eryildiz, Candan Özülke</td>
</tr>
<tr>
<td>171</td>
<td>Community Planning Practice in Pearl River Delta, China: The Case Study of Dabus Community</td>
<td>Xiaomei Pang, Jian Yun Zhou, Lin Xiaojie, Dong Chao, Ding Wenjuan, Lin JunQi</td>
</tr>
<tr>
<td>171</td>
<td>Advocating Growth in Sustainable Developments from an Independent to an Interdependent Sustainable Paradigm</td>
<td>Elzabé Meiring</td>
</tr>
<tr>
<td>172</td>
<td>People and Projects: The Importance of Catalysts in Teaching Community Architecture in South Africa</td>
<td>Amira Osman, Jhono Bennett</td>
</tr>
<tr>
<td>173</td>
<td>Suvastu Cultural Complex</td>
<td>Naveed Iqbal</td>
</tr>
<tr>
<td>174</td>
<td>Towards a Future African Cityscape: Deco Nouveau Afrique (DNA)</td>
<td>Mikhail Peppas, Sanabelle Ebrahim</td>
</tr>
<tr>
<td>174</td>
<td>A Mobile Cultural Platform in Cape Town</td>
<td>Ning Liu, Carin Smuts, Nicolas Jobard</td>
</tr>
<tr>
<td>175</td>
<td>Megasstructure as a New Urban Paradigm: ‘Hauptbahnhof’ Station of Post-Carbon City</td>
<td>Antonio Luque Aranda</td>
</tr>
<tr>
<td>176</td>
<td>Architectural Standards and Education After Apartheid</td>
<td>Kai Wood Mah, Patrick Lynn Rivers</td>
</tr>
<tr>
<td>176</td>
<td>Race, Rights and Housing Design for Refugees and Asylum Seekers in South Africa</td>
<td>Kai Wood Mah, Patrick Lynn Rivers</td>
</tr>
<tr>
<td>177</td>
<td>The Challenge for Prosperity in Mexican Cities</td>
<td>María Teresa Trejo Guzmán</td>
</tr>
<tr>
<td>178</td>
<td>Weapon of Mass Construction (WMC): An Open Palm for Poor Housing by a Bottom-Up Approach Through an Agglomerative Scheme</td>
<td>Karthik V Narayan, Divya Srinivasan, Ashwini Karanth</td>
</tr>
<tr>
<td>179</td>
<td>On the Interfaces City/Water, the Urban Forms and Transformation</td>
<td>Yang Shu, Jiaming Qin</td>
</tr>
</tbody>
</table>
### ABSTRACT TITLES AND AUTHORS

<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>181</td>
<td>SYSTEMS DESIGNER – RETHINKING THE ROLE OF THE ARCHITECT IN THE AGE OF RESILIENCY</td>
<td>Liz Ogbu</td>
</tr>
<tr>
<td>181</td>
<td>ARCHITECTURE AS EARLY WARNING SYSTEM</td>
<td>Tiziana Panizza Kassahun, Stefano Cardini</td>
</tr>
<tr>
<td>182</td>
<td>URBAN RECONSTRUCTION LESSONS IN POST-SANDY NEW YORK CITY AND NEW YORK CITY REGION</td>
<td>Lance Jay Brown, Eleni Kalantidou, Tony Fry</td>
</tr>
<tr>
<td>183</td>
<td>ARCHITECTURE IN THE BORDERLANDS – AND SUSTAINABILITY IN THE AFTERLIFE OF COLONIALISM</td>
<td>Eleni Kalantidou, Tony Fry</td>
</tr>
<tr>
<td>183</td>
<td>ARCHITECTURE IN THE BORDERLANDS – AND SUSTAINABILITY IN THE AFTERLIFE OF COLONIALISM</td>
<td>Eleni Kalantidou, Tony Fry</td>
</tr>
<tr>
<td>183</td>
<td>ENGAGING DESIGN WITH SOCIO-ECOLOGICAL AND CULTURAL RESILIENCE. A CASE STUDY FROM CAIRO’S CITY OF THE DEAD</td>
<td>Costanza La Mantia</td>
</tr>
<tr>
<td>184</td>
<td>METROPOLIS EDGES: FROM SUBURBS TO RESILIENT BELTS: A PARADIGM FOR THE SUSTAINABLE DEVELOPMENT OF METROPOLITAN SETTLEMENTS</td>
<td>Elisa Brusegan, Serena Guadagnini</td>
</tr>
<tr>
<td>184</td>
<td>EXIT FROM THE URBAN CRISIS: ARCHITECTURAL FORM VS. CONTEMPORARY DEVELOPMENT CHALLENGES – POLISH EXAMPLE</td>
<td>Anna Goledzinowska, Magdalena Rembeza</td>
</tr>
<tr>
<td>185</td>
<td>BEYOND GLOBALISATION: LIBERATING ARCHITECTURE FOR A NEW ECODEVELOPMENT</td>
<td>Céline Veríssimo</td>
</tr>
<tr>
<td>186</td>
<td>ABIDING ARCHITECTURE: WHAT I‘M LEARNING FROM WORKING IN TITANYEN, HAITI</td>
<td>Marie Aquilino</td>
</tr>
<tr>
<td>186</td>
<td>SHARING, JOINT PLANNING, SELF-BUILDING, FOR A PROFESSIONAL ANTI-SEISMIC AND ANTI-CYCLONE SCHOOL IN THE SOUTHERN HEMISPHERE</td>
<td>Edoardo Milesi, Giulia Milesi, Valentina Marinai</td>
</tr>
<tr>
<td>187</td>
<td>PROMOTE THE PROSPERITY OF DEVELOPING COUNTRIES IN THE GLOBALIZATION PROCESS. A PROPOSAL</td>
<td>Italo Rebuli, Giuditta Rado, Gildas K. Sambieni, Alessandro Toffoli, Romano Volpato, Patrizia Montini Zimolo, Flavia Vaccher, Vitaliano Gobbo, Carlo Piccoli, Giancarlo Faggion</td>
</tr>
<tr>
<td>188</td>
<td>CITIES IN AFRICA DRAWN, ONE HUNDRED URBAN SPACES ILLUSTRATED</td>
<td>Bower Serfontein, Gary White</td>
</tr>
<tr>
<td>189</td>
<td>UN-INSULATED: A VISION FOR CONTEMPORARY ARCHITECTURAL EDUCATION</td>
<td>Garret Gantner</td>
</tr>
<tr>
<td>189</td>
<td>UN-BUILDING POVERTY AND BUILDING HEALTH</td>
<td>Paul Pholeros</td>
</tr>
<tr>
<td>190</td>
<td>CATALYTIC APPROACHES TO INFORMAL BUILDING IN RURAL SOUTH AFRICA</td>
<td>Joseph F. Kennedy, Adam Perry</td>
</tr>
</tbody>
</table>
PAGE  ABSTRACT TITLES AND AUTHORS

190  THE INTEGRATED APPLICATION OF SPACE SYNTAX AND SPACE SIMULATION IN PREDICTION OF ARCHITECTURAL SPACE
Shi Wei

191  WORLD IN TRANSITION – A STRATEGY FOR MULTIDISCIPLINARY PEDAGOGY IN DIFFERENT CULTURAL ENVIRONMENTS
Saija Hollmén, Tiina Laurila, Matleena Muhonen

192  TOWARDS ENTREPRENEUR ACTIVIST ARCHITECTURAL PRACTICE
Hermie E Delport-Voulgarelis, Rudolf Perold

192  MAINTAINING A DESIGN-BUILD PROJECT – REFLECTION ON SOCIAL ARCHITECTURE, SUSTAINABILITY AND ROLE CONFLICTS
Marlene Wagner

193  ARCHITECTURAL PLANNING WITH UNDERPRIVILEGED GROUPS – THE ROLE OF UKUMBI
Saija Hollmén, Jenni Reuter, Helena Sandman
<table>
<thead>
<tr>
<th>Page</th>
<th>Abstract Titles and Authors</th>
</tr>
</thead>
</table>
| 196  | FUTURE VISION FOR EGYPTIAN CITIES  
Mona Mohamed Samir Kahil Rady |
| 196  | ANALYSIS OF CHINESE ANCIENT URBAN FORM BASED ON CLIMATE ADAPTABILITY  
Zhongzhong Zeng, Haishan Xia |
| 197  | CAMPUS AS A SPATIAL ENVELOPE FOR TERTIARY EDUCATION: ARCHITECTURAL PRINCIPLES OF 'WORLD CLASS' UNIVERSITIES  
Maksim Puchkov |
| 198  | POSSIBLE FUTURES FOR THE AFRICAN BUILT ENVIRONMENT TOWARDS 2050  
Gillian Adendorff, John Julian Smallwood, Chris Adendorff |
| 198  | GLOBALISATION AND IDENTITY IN THE ARCHITECTURE OF CONTEMPORARY CITIES: VALUES OF LOCAL FORMS  
Maksim Puchkov |
| 199  | MODERNITY AS THE FOUNDATION OF URBAN STRUCTURE IN CHINA: CASE STUDY ON A MODERN URBAN RUIN  
Feng Qiong, Liu Jinrui |
| 200  | WICKED PROBLEMS FRAMEWORK: ARCHITECTURAL LESSONS FROM RECENT URBAN DISASTERS  
Alexandra Jayeon Lee |
| 200  | DESIGNING FOR DEMOCRACY: ARCHITECTURAL POSSIBILITIES OF THE POST-APARTHEID  
Sharone L. Tomer |
| 201  | CITIZENSHIP, AGENCY AND CONTROL: CONTESTED URBANSCAPES IN THE MODERN CAPITAL OF PAKISTAN  
Sundas Shahid, Javaria Shahid |
| 202  | SOME REFLECTIONS ON THE 'NATURE OF AN APPROPRIATE AND RESILIENT SPATIAL PLAN' FOR SOUTH AFRICAN CITIES  
Fabio Todeschini |
| 203  | EVALUATING THE IMPORTANCE OF TRADITIONAL URBAN SPACE IN SOUTH AFRICA'S CITIES: A CASE STUDY OF THE USE OF URBAN SPACE IN FOUR SOUTH AFRICAN CITIES  
Gavin McLachlan |
| 203  | EXPERIMENTAL STUDIES OF COMFORT LEVELS IN BUILDINGS EXPOSED TO DIFFERENT WIND ORIENATIONS IN WARM HUMID CLIMATES  
Odin Onuoha, Elijah Chika Azubuine, George Chinedu Alozie |
| 205  | THE CRISIS IN SOUTH AFRICAN CITIES WITHIN THE CONTEXT OF THE ENTRANCED DYSFUNCTIONAL RELATIONSHIP BETWEEN URBANISTS IN THE PUBLIC, PRIVATE AND ACADEMIC SECTORS  
Tim Hewitt-Coleman |
| 206  | FACTORS AFFECTING CITY PLANNING FROM PAST TO FUTURE "FUTURE VISION TO CITY PLANNING"  
Mona S. Rady |
| 206  | DETERMINANTS OF HOUSING SATISFACTION IN PRIVATELY OWNED DWELLINGS IN EDENGLEN, JOHANNESBURG, SOUTH AFRICA  
Clinton Aigbavboa, Wellington Thwala |
PAGE  ABSTRACT TITLES AND AUTHORS

207  BUILDING DEVELOPMENT TRAJECTORIES
Jeremy Gibberd

207  RESEARCH ON TRADITIONAL DWELLINGS UNDER DIFFERENT GEOGRAPHICAL CONDITIONS AND CLIMATE
Fan Shuai

208  THE BENEFITS OF URBAN DEVELOPMENT PLANNING FOR AFRICA TOWARDS 2050
Gillian Adendorff, John Smallwood, Chris Adendorff

208  SOCIAL RESILIENCE: THE CASE OF DIVERSITY AND INCLUSION IN THE ISRAELI PROJECT RENEWAL
Zvi Weinstein

209  ‘OTHER’ REALITIES OF DE/SIGNING A RESEARCH AND DESIGN PROGRAM, DEALING WITH MOMENTS OF CRISIS AND OTHER URBAN REALITIES.
Gerhard Bruyns

210  THE FABRIC OF THE LIVABLE CITY ASSEMBLAGE AND THE ARTISAN CITY
Louis Wright, Gary White

210  MULTIPLICITY AND MOBILITY IN A TIME-SAVING PLANNING MODEL UNDER A MARKET SYSTEM: A STUDY OF THE PHENOMENON OF “MULTI-HOME COMMUTERS” IN THE MEGACITY OF BEIJING
Chen Wen Zhe (Cathleen)

211  DENSIFYING AND ACTIVATING TO DEVELOP THE EAST CITY, CAPE TOWN AS A CULTURAL HUB
Bronwyn Horn
PAGE  ABSTRACT TITLES AND AUTHORS

213  TRANSFORMATION OF A HOSPITAL BUILDING TO A HOSPICE: OPEN BUILDING AS STRATEGY FOR PROCESS AND PRODUCT - AN EXAMPLE FROM THE NETHERLANDS
Karel Dekker

214  EXTRACTING THE PRINCIPLES OF SUSTAINABILITY FROM THE ARCHITECTURE OF COLONIAL HOSPITALS IN MALAYSIA: APPRECIATING PAST WISDOM AS BEST PRACTICE
Norwina Mohd Nawawi, Abdul Razak Sapian, Noor Hanita, Abdul Majid, Zuraini Denan, Aliyah Nur Zafirah, Srazali Aripin

214  DESIGN RESEARCH AND THE GLOBALIZATION OF HEALTHCARE ENVIRONMENTS
Mardelle McCuskey Shepley, Yilin Song

215  HEALTHCARE FACILITIES DESIGNED FOR FLEXIBILITY: THE CHALLENGE OF CULTURE CHANGE IN A LARGE US PUBLIC AGENCY
Thom Kurmel, Stephen Kendall, Karel Dekker, John Becker

216  BUILDING CARE FOR SOCIAL CHANGE: CREATIVE LEARNING CENTRE FOR PEOPLE WITH DISABILITIES.
Romano Del Nord

216  PLANNING AND DESIGN RELATED TO A CRITICAL GLOBAL COMMUNITY NEED - MENTAL HEALTH CARE: A MUCH NEEDED FOCUS
Philip Patrick Sun

217  CASE STUDY - REVITALIZATION OF ARMY FACILITY COMPLEX FOR THE PURPOSE OF A MENTAL CARE HOSPITAL – IDRIJA, SLOVENIA
Gabrijel Arko, Andrej Bohinc

218  DRAFT GUIDELINES FOR MENTAL HEALTH INFRASTRUCTURE
Awaatief Railoun

219  INNOVATIVE MATERIALS IN CHILDREN’S HOSPITAL DESIGN
Fani Vavili, Artemis Kyrkou

219  THE STORY OF BIRTH
Fani Vavili, Argyri Chalkia

220  SMART STAFF REDUCING STAFF BY PATIENT AND FAMILY INVOLVEMENT, EFFECTIVE EXPERTISE LEVEL AND EFFICIENT ARCHITECTURAL LAYOUT: THE WARDS OF THE ERASMUS UNIVERSITY HOSPITAL ILLUSTRATE THE MOST RECENT TREND IN DESIGN AND LAYOUT
Bas Molenaar

221  BEYOND DESIGN: TRANSFORMING HEALTH CARE INFRASTRUCTURE INTO DEVELOPMENT STRATEGIES
Garret Gantner

221  DE-HOSPITALIZATION & MINI-HOSPITALS: STUDY OF A NEW FRONTIER TO DESIGN HEALTHCARE BUILDINGS
Walkiria Tamar de Morais Erse

222  HEALTHCARE OTHERWHERE – IN SINGAPORE
Chern Siang Jye, Ruby Lai

222  USER LED DESIGN: REDEVELOPMENT OF THE CHRISTCHURCH HOSPITAL, NEW ZEALAND
Jane Carthey, Roger Carthey
PAGE  ABSTRACT TITLES AND AUTHORS

224  EMERGING TRENDS IN PUBLIC HEALTH FACILITIES PLANNING AND DESIGN: NIGERIAN CASE STUDIES
Adekunle Olusola Adeyemo

224  A PROMISE FULFILLED: HEALTHCARE AT THE GRASS ROOTS LEVEL: THE DECLARATION OF ALMA-ATA IN VALENZUELA CITY, PHILIPPINES
Dana Angela Bantigue, Elda Shina Samoza, Prosperidad Luis

225  URBAN PRIMARY HEALTH CARE FOR POOR AND DISADVANTAGED POPULATION IN BANGLADESH - ADDRESSING PLANNING AND DESIGN ISSUES
Jasmin Ara Begum

226  AIR, SURFACES AND HOSPITAL ASSOCIATED INFECTION (HAI): AN INTERDISCIPLINARY EMPIRICAL APPROACH TOWARDS ARCHITECTURAL DESIGN VALIDATION, A HEALTH CARE DESIGN INITIATIVE
Jako A Nice

226  FROM TRADITION TO INNOVATION OF THE HOSPITAL LABORATORY
Hans Eggen

227  MOSHE ZARHY – A LIFE FOR HEALTH FACILITIES
Peter R. Pawlik
PAGE ABSTRACT TITLES AND AUTHORS

229 1000 YEARS OF URBANISM IN SOUTHERN AFRICA: AN INTEGRATED OVERVIEW
Gerald Steyn

229 PLANNING LOW COST HOUSING ON STEEP GRADIENTS- FINDING THE FRONT DOOR AND IMPROVING LIVABILITY
Chantal Pieterse

230 A SUSTAINABLE ALTERNATIVE THROUGH PROCESS ORIENTATED MODULAR CONSTRUCTION SYSTEM WITH STRAW-LIGHT-CLAY
Marlene Wagner

231 MULTICULTURAL HOUSING SCENARIOS
Luca Donner

231 LOW COST AFFORDABLE HOUSING OPTIONS FOR THE LOW INCOME POPULATION OF DHAKA CITY
Jasmin Ara Begum, Rumana Afroz, Imran Ebne Amin

232 BREATHING HOUSE, QANAT VILLA AND HEARTH-SHAPED MICRO-CITY MASTERPLAN, CASE STUDIES IN SAUDI ARABIA
Luca Donner, Francesca Sorcinelli

234 DEVELOPMENT OF GREEN AND ECOCITIES BETWEEN PROMISING TECHNICALITIES AND IMPEDING REALITIES: REGULATORY, FINANCIAL, POLICY AND SOCIOCULTURAL IMPLICATIONS FOR EGYPT
Tarek Wafik, Ahmed Shalaby

235 WHAT IF WE HAD BITPARCELS INSTEAD OF PLOTS? OR HOW INVESTMENT ON CIVIC PRIDE AND CREATIVE OWNERSHIP COULD REINVENT THE DYING ECONOMY OF ATHENS CENTRE
E. Karanastasi, A. Kyriakidi, K. Grivas

235 THE THINKING OF CHINESE TRADITIONAL ANCIENT DWELLINGS' VITALITY REPRODUCTION—A CASE STUDY ON GREAT ANCIENT RESIDENCES IN ZHANGJIAKOU
Hongjun Wang

236 EVALUATION SYSTEM OF ADAPTIVE DESIGN OF MEDIUM- AND SMALL-SCALE RESIDENCES
Meng Xueying, Ouyang Wen

236 HOUSING TYPOLOGIES: TOWARDS A SOCIALLY MIXED AND DIVERSE URBAN DEVELOPMENT
Eliana Rosa de Queiroz Barbosa, Patrícia Capanema Álvares Fernandes

237 (RE)BUILDING COMMUNITY ‘OTHERWHERE’ – ARCHITECTURE IN AN AGE OF RADICAL TRANSFORMATION
Iain Low

238 SUSTAINABLE USES OF SMALL-SIZED HOUSES
Yan Liu

238 EFFECTS OF HOUSING QUALITY ON PEOPLE LIVING IN THE CORE AREA OF OGBOMOSO NORTH LOCAL GOVERNMENT, OYO-STATE, NIGERIA
Adeoye Dorcas O, Toyobo E Adigun

239 A SUSTAINABLE BUILT ENVIRONMENT – THE PROCESS OF SHAPING OUR CITIES: TOWARDS VIVID PUBLIC SPACE. PRAGUE CASE STUDIES
Jan Jehlik, Jaromir Hainc
PAGE  ABSTRACT TITLES AND AUTHORS

240  HOUSING THE STRANGER: SOCIAL RESILIENCE IN POST CONFLICT AREAS
Beril ÖZMEN MAYER, Ugo K. Elinwa

240  RESIDENTIAL RESEARCH OF SPATIAL DISTRIBUTION IN GUANGZHOU, CHINA
Liming Tang, Xiaomei Pang, Di Cen

241  FRAMEWORK FOR SUSTAINABLE BUILDING IN SOUTH AFRICA
Tom Sanya

241  STUDY ON BASIC CHARACTERISTICS OF LIVING SPACE IN ELDERLY INSTITUTIONS - TAKE THE INSTITUTIONAL ELDERLY FACILITIES IN DALIAN AS EXAMPLES
Hongyi Wang, Xiang Wang

242  EXPLORATION ON RENOVATION AND TRANSFORMATION OF BEIJING COURTYARD BASED ON POPULATION PRESSURE RELIEF
Wen Ouyang, Miao Xia
PAGE ABSTRACT TITLES AND AUTHORS

244 TRANSFORMING WATERFRONTS: FROM URBAN RENEWAL TO RESILIENT DEVELOPMENT - A CASE STUDY OF WUHAN
Yang Shu, Jiaming Qin

245 LANDSCAPE ARCHITECTURE SOLUTIONS FOR ENVIRONMENTALLY VULNERABLE AREAS
Emilio Tomás Sessa, Nora Ponce, Cristina Carasatorre, Valeria Pagani, Susana Tuler, Vanina Iturria, Florencia Carrica, Pablo Ruiz, Leonardo Rosa Pace

246 AN INNOVATIVE HOUSING MODEL FOR THE SHIFTING ECOSYSTEM IN KERANIGANJ, A SUBURBAN AREA OF DHAKA CITY
L. Hossain

246 OPEN ARCHITECTURE USED IN POST-DISASTER RECONSTRUCTION
Jianmin Wu

247 WATER AND ARCHITECTURE FOR SOCIAL AND ENVIRONMENTAL RECONCILIATION IN COLOMBIA
Juan Pablo Aschner Rosselli

247 LESSONS FROM SWAHILI COASTAL ARCHITECTURE FOR THE FIRST GENERATION OF RWANDAN ARCHITECTURE STUDENTS
Nerea Amorós Elorduy, Tomà Berlanda

248 THE REGENERATION OF VLADIVOSTOK’S WATERFRONT: ENHANCING RESILIENCE THROUGH URBAN INTERFACES
Carlos R. Zeballos Velarde, Sergei A. Mostovoi

249 ENVIRONMENTAL DESIGN CRITERIA FOR A MARITIME LANDFILL IN FLORIANÓPOLIS, BRAZIL
Juan Antonio Zapate

249 URBAN EDGE: ECOLOGICAL, SOCIAL, AND RESILIENT DESIGN APPROACHES TO NEW YORK CITY’S COASTLINE INFRASTRUCTURE
Kevin Erickson

250 LIVING AND SUSTAINABLE EGYPTIAN SHORELINES AS A TOOL TO MITIGATE NATURAL HAZARDS AND SEA LEVEL RISE
Rana Adel Zaki, Sarah Mohamed El Chafei, Rasha Sayed Mahmoud
<table>
<thead>
<tr>
<th>SPONSORS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>International Union of Architects</td>
<td></td>
</tr>
<tr>
<td>South African Institute of Architects</td>
<td></td>
</tr>
<tr>
<td>Department of Public Works</td>
<td></td>
</tr>
<tr>
<td>eThekwini Municipality</td>
<td></td>
</tr>
<tr>
<td>Durban Tourism</td>
<td></td>
</tr>
<tr>
<td>South African Council for the Architectural Profession</td>
<td></td>
</tr>
<tr>
<td>KwaZulu-Natal Institute of Architects</td>
<td></td>
</tr>
<tr>
<td>PPC Cement</td>
<td></td>
</tr>
<tr>
<td>Italtile</td>
<td></td>
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<td>Barrisol</td>
<td></td>
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<tr>
<td>HP</td>
<td></td>
</tr>
<tr>
<td>Intel</td>
<td></td>
</tr>
</tbody>
</table>
### SUPPORTERS

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Studio</td>
<td>Floornature</td>
<td>Silvaman</td>
</tr>
<tr>
<td>Open Architecture</td>
<td>Design Society Development</td>
<td>Institute for Landscape Architecture in South Africa</td>
</tr>
<tr>
<td>Graduate School of Architecture University of Florida</td>
<td>Architecture Education Forum</td>
<td>CCN</td>
</tr>
<tr>
<td>AutoSpec</td>
<td>Institute Francais South Africa</td>
<td>Goethe Institut</td>
</tr>
<tr>
<td>Architecture Africa Film Festival</td>
<td>Durban International Film Festival</td>
<td>Social Housing Focus Trust</td>
</tr>
<tr>
<td>People Building Better Cities</td>
<td>Urban Waterways / Fluvial Urbanism</td>
<td>Public Health Group (UIA-PHG)</td>
</tr>
</tbody>
</table>

### MEDIA PARTNERS

<table>
<thead>
<tr>
<th>Architecture South Africa</th>
<th>Building Africa</th>
<th>Designing Ways</th>
</tr>
</thead>
<tbody>
<tr>
<td>Journal of Facilities Management</td>
<td>SA Roofing</td>
<td>Timber IQ</td>
</tr>
<tr>
<td>Urban Green File</td>
<td>Earth Works</td>
<td>Concrete TV</td>
</tr>
<tr>
<td>Architect and Specifier</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>