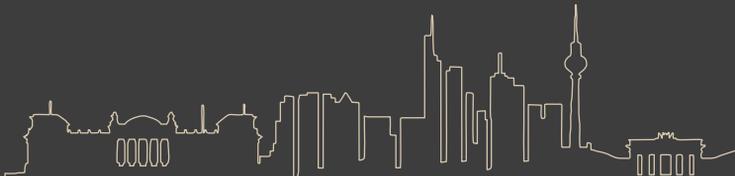




The German House for Research and Innovation
Deutsches Wissenschafts- und InnovationsHaus - **DWIH** New Delhi presents

INDO-GERMAN CONFERENCE



CITYSCAPES

29 Sep - 1 Oct 2016	Silver Oak Hall, India Habitat Centre, New Delhi
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TABLE OF CONTENTS

Message:	4
Heike Mock Chairperson, DWIH New Delhi Director, DAAD - German Academic Exchange Service	
Concept Note	
DWIH Indo-German Conference: CityScapes	5
Programme	6
Keynote Addresses:	
Prof. Dr Frauke Kraas	10
Prof. Dr AbdouMaliq Simone	12
Session 1	
Public Lecture: Privacy and Security in Online Social Media (PSOSM)	14
Session 2	
Smart Energy & Construction	16
Session 3	
Impact of Urbanisation on Environment	24
Session 4	
Smart Cities: Industry Perspective	30
Session 5	
For a Future Sustainable Peri-Urban India	38
Session 6	
Cities and Migration: Perspectives from Politics and Economy	46
Session 7	
Cities and Migration: Citizens' Participation	54
Session 8	
Panel Discussion: Mapping Human Skills	60



MESSAGE



Indo-German bilateral cooperation in the field of science and technology dates back to the 1950s. A number of German funding organisations, research institutions and universities have established their offices in India to encourage and facilitate academic exchange, scientific collaboration and R&D projects. The German House for Research and Innovation set up in New Delhi in order to give a fillip to these is now completing its fourth successful year.

The year 2016 has seen a host of events organised by the consortium members of the DWIH in cooperation with Indian institutions, very much in keeping with the aim of the DWIH New Delhi to forge and strengthen the ties between the two countries.

The Falling Walls Lab India 2016 organised by DWIH together with the Indian Institute for Science Education and Research (IISER) Pune for budding researchers and entrepreneurs saw young talent competing for a chance to represent India at the prestigious international Falling Walls Conference in Germany.

The flagship initiative of the DWIH this year is the Indo-German conference CityScapes. Experts from both countries will share their thoughts on crucial themes such as Smart Energy & Construction, Impact of Urbanisation on Environment, Migration, Privacy & Security in Urban Spaces etc. from the technological and socio-political perspectives. We are confident that this conference will act as an effective platform for creating new networks and linkages to take the academic and scientific relations between the two countries to unprecedented heights.

Heike Mock

Chairperson, DWIH New Delhi
Director, DAAD - German Academic Exchange Service

Concept Note:

DWIH INDO-GERMAN CONFERENCE: CITYSCAPES

In the past few decades, promising economic opportunities and living conditions have fuelled migration of human population from rural to urban areas. As per the UN estimates, 70% of the world population will be dwelling in cities by 2050. This continuous 'human' influx in cities has had an unprecedented impact on the existing resources such as land, water, energy and overburdened 'man-made' infrastructures. Together with natural calamities such as floods and cyclones, unrestricted population explosion in urban set-ups compromises the intricate balance of the ecosystem. There is an urgent need to develop harmonious solutions to tackle these global challenges of sustainable urbanisation.

To maintain the dynamic equilibrium of increasing world population with that of its immediate environment efficient, low carbon energy alternatives need to be developed and utilised for various industrial, agricultural, housing and transportation applications. Another aspect of urban living that requires attention is the 'world of internet' that has not just redefined human communication in the last two decades but has immensely contributed to development of cutting-edge technologies the world has so far witnessed. This 'cyber space', that contains sensitive personal and Governmental information provides framework of digital networking for various applications including transportation, communication and scientific research, needs to be protected from cyber vandals for ensuring national security.

Apart from pressing issues such as energy, environment, cyber security etc. the theme of cities and migration throws up a host of other social and political questions. As the world urban population is expected to double by 2050, Steven Vertovec, Director, Max Planck Institute of Study of Religious and Ethnic Diversity, asks how people with ever more diverse characteristics can live together in the rapidly expanding cities of the world. The focus lies here on the dynamics of diversification that requires asking how people of different nationalities, ethnicities, languages, gender etc. are creating new patterns of coexistence and where these patterns might lead to conflict. Some of this conflict potential can be witnessed in Europe today, especially in Germany, where the refugee crisis fuelled by war and poverty in other parts of the world is creating enormous challenges for urban governance. In India rural migration to urban centres is leading not only to a breakdown of urban infrastructure, but is also creating a growing social polarization in large cities. Migration is to be viewed here as a part of broader social transformations with their socio-spatial inequalities and/or social cohesions. Trends of labour migration towards emerging and developed markets are yet another interesting aspect of sociology of cities and migration that impacts the policies shaping economy, societal and sustainable development.

The above issues will be addressed in form of lectures and panel discussions at the Indo-German Conference CityScapes.

Thursday, 29 September 2016

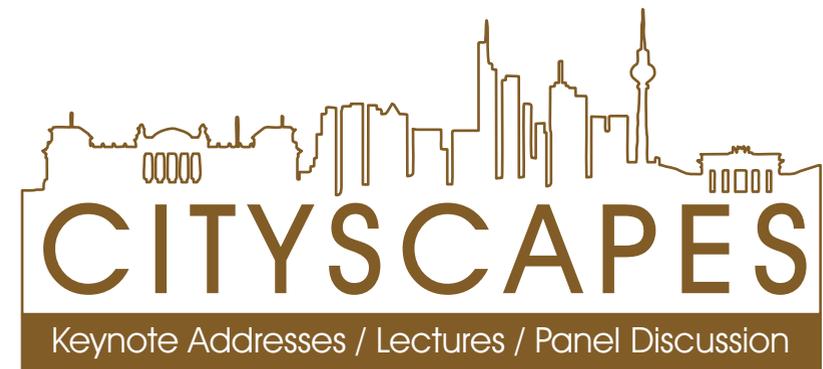
14:00 h – 15:00 h	Registration
15:00 h – 17:15 h	<p>Inaugural Session</p> <p>Inaugural Address, His Excellency Dr. Martin Ney, German Ambassador to India</p> <p>Award Ceremony and Project Presentations:</p> <ul style="list-style-type: none"> • BMBF Initiative “City of the Future” • DWIH CityScapes Poster Competition <p>Keynote Addresses:</p> <p>Prof. Dr Frauke Kraas, University of Cologne</p> <p>Prof. Dr AbdouMaliq Simone, Max-Planck Institute for the Study of Religious and Ethnic Diversity, Göttingen</p>
17:15 h	High Tea
17:45 h – 18:45 h	<p>Session 1: Public Lecture <i>(Coordinated by Dr Proteeti Bhattacharjee, MPG)</i></p> <p>Privacy and Security in Online Social Media (PSOSM)</p> <p>- Dr Ponnurangam Kumaraguru, IIT Delhi</p>
19:00 h	Dinner

Friday, 30 September 2016

09:00 h – 11:00 h	<p>Session 2: Smart Energy & Construction <i>(Coordinated by Mr Ashwani Arya, Forschungszentrum Jülich and Dr Amol Kulkarni, National Chemical Laboratory, Pune)</i></p> <ul style="list-style-type: none"> - Prof. Dr Thomas Gries, RWTH Aachen University - Jun.-Prof. Dr Amitabh Banerjee, University of Cologne - Dr Tsvetelina Merdzhanova, Forschungszentrum Jülich GmbH - Dr Dipayan Sanyal, CSIR-Central Glass and Ceramic Research Institute, Kolkata - Dr Solomon Agbo, Forschungszentrum Jülich GmbH
11:30 h – 13:30 h	<p>Session 3: Impact of urbanisation on Environment <i>(Coordinated by Dr Proteeti Bhattacharjee, MPG)</i></p> <ul style="list-style-type: none"> - Prof. Dr Shamita Kumar, Bharati Vidyapeeth University, Pune - Prof. Dr Jürgen-Friedrich Hake, Forschungszentrum Jülich GmbH - Dr Kirsten Jörgensen, Freie Universität Berlin - Prof. Dr B. R. Gurjar, IIT Roorkee
13:30 h	Lunch
14:30 h – 16:00 h	<p>Session 4: Smart Cities: Industry Perspective <i>(Coordinated by Ms Anandi Iyer, Fraunhofer Gesellschaft)</i></p> <ul style="list-style-type: none"> - Mr Eric Hauptstein, Chief Project Officer, Mahindra Lifespaces Developers Ltd. - Mr Dhiraj Wali, Vice President, Bosch India - Mr Jagan Shah, National Institute for Urban Affairs - Mr Frank Samol, GIZ
16:30 h – 18:30 h	<p>Session 5: For a future sustainable peri-urban India <i>(Coordinated by Ms Hanna Kriebel, Technical University of Munich and Mr Radu Carciumaru, Heidelberg University)</i></p> <ul style="list-style-type: none"> - Prof. Dr Sudhir Chella Rajan, IIT Madras - Dr Christoph Woiwode, IIT Madras - Prof. Dr Peter Struss, TU München - Dr Sumetee Pahwa Gajjar, Indian Institute for Human Settlements - Prof. Dr N. Sridharan, School of Planning and Architecture - Dr Franz Donhauser, GIZ - Prof. Dr Ashwani Kumar, CEPT University
19:00 h	Dinner

Saturday, 1 October 2016

09:00 h – 11:00 h	<p>Session 6: Cities and Migration: Perspectives from Politics & Economy (Coordinated by Mr Radu Carciumaru, University of Heidelberg and Ms Sanju Kumari, Freie Universität Berlin)</p> <ul style="list-style-type: none"> - Prof. Dr AbdouMaliq Simone, Max-Planck Institute for the Study of Religious and Ethnic Diversity, Göttingen - Dr Andreas M. Wüst, University of Mannheim - Dr Rumi Aijaz, Senior Fellow, Observer Research Foundation - Dr Wolfgang-Peter Zingel, Heidelberg University - Dr Sumeet Mhaskar, University of Göttingen - Dr Clemens Greiner, University of Cologne
11:30 h – 13:30 h	<p>Session 7: Cities and Migration: Citizens' Participation (Coordinated by Mr Radu Carciumaru, University of Heidelberg and Ms Sanju Kumari, Freie Universität Berlin)</p> <ul style="list-style-type: none"> - Prof. Dr Frauke Kraas, University of Cologne - Dr Lars Klein, University of Göttingen - Prof. Dr Christiane Brosius, Heidelberg University - Ms Roberta Mandoki, Heidelberg University - Prof. Dr Arunava Dasgupta, School of Planning and Architecture, New Delhi - Prof. Dr Sucharita Sen, Jawaharlal Nehru University, New Delhi
13:30 h	Lunch
15:00 h – 17:00 h	<p>Session 8: Panel Discussion: Mapping Human Skills (Coordinated by Dr Amol Kulkarni, National Chemical Laboratory, Pune)</p> <ul style="list-style-type: none"> - Dr Amol Kulkarni, National Chemical Laboratory, Pune - Mr Ashutosh Pratap Singh, IASC Sector Skill Council - Mr Wolfgang Leidig, GIZ India - Ms Sonia Prashar, Deputy Director General, IGCC
17:00 h	Closing Session



Keynote Addresses:

The Transformative Power of Cities. Challenges and Opportunities for India

29 September, 15:00 h - 17:15 h

Popular Urbanism in the Global Shift: On the Make + Shift

29 September, 15:00 h - 17:15 h

Sessions:

Session 1: Privacy and Security in Online Social Media (PSOSM)

29 September, 17:45 h - 18:45 h

Session 2: Smart Energy & Construction

30 September, 09:00 h - 11:00 h

Session 3: Impact of Urbanisation on Environment

30 September, 11:30 h - 13:30 h

Session 4: Smart Cities: Industry Perspective

30 September, 14:30 h - 16:00 h

Session 5: For a Future Sustainable Peri-Urban India

30 September, 16:30 h - 18:30 h

Session 6: Cities & Migration: Perspectives from Politics & Economy

1 October, 11:30 h - 13:30 h

Session 7: Cities & Migration: Citizens' Participation

1 October, 11:30 h - 13:30 h

Session 8: Mapping Human Skills

1 October, 15:00 h - 17:00 h



KEYNOTE ADDRESS

29 September 2016 | 15:00 h - 17:15 h

THE TRANSFORMATIVE POWER OF CITIES. CHALLENGES AND OPPORTUNITIES FOR INDIA



Prof. Dr Frauke Kraas

University of Cologne

Abstract: The dynamics and complexity of the current urbanisation processes and their impacts upon the reorganisation of global spatial, socio-cultural, economical and political-institutional relationships belong to the greatest challenges of our time. Historically, the transformation connected with today's urbanisation surge can only be compared with the profound changes that occurred as a result of the Middle European and North American industrialisation of the 19th and 20th century – if their importance is not clearly exceeded, especially with respect to the enormous mega-urbanisation dynamics in the populous countries of South, East and Southeast Asia and the global shift of production and services.

Against this background the paper aims at reflecting key challenges and opportunities for urban India, taking into account that the spread of conventional urbanization on a global scale must be stopped and a urban paradigm shift seems necessary. The intention of the paper is to summarise challenges and opportunities and to point out areas where fundamental modifications and system changes should be considered. Three levels will be examined: Transformation at the micro-level will look into example cities, urban stakeholder groups and city dwellers. At the meso-level transformative action fields, i.e. areas of urban development are promising the greatest potential leverage effects for a successful urban transformation towards more sustainability, will be dealt with. And at the macro-level the question of regional urban systems will be addressed.

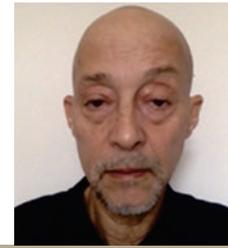
Frauke Kraas studied geography, biology, ethnology and philosophy at the Universities of Bochum and Münster, Germany (1987) and was a research associate at the Geographical Institutes at the Universities of Münster and Bonn (1998). In 2000, she received Heisenberg Fellowship from the German Research Foundation. Since 2000, she is Professor at the University of Cologne, Germany. Her academic disciplines are natural sciences/ engineering/ agricultural sciences and her area of specializations are Human geography: Urban and social geography of Southeast Asia (Myanmar, Thailand, Vietnam), India, China, Switzerland. Her Research interests are megacities, urban and regional development, migration, dynamics of development, governance, informality, preservation of natural resources, water supply, processes of transformation, risk and conflict research, cultural heritage, urban health, urban economies. She has exclusively worked in Bangkok, Yangon, Guangzhou/Pearl River Delta, Hong Kong, Delhi, Pune, Mumbai, Jakarta, Ho Chi Minh City.



KEYNOTE ADDRESS

29 September 2016 | 15:00 h - 17:15 h

POPULAR URBANISM IN THE GLOBAL SOUTH: ON THE MAKE+SHIFT



Prof. Dr AbdouMaliq Simone

Max-Planck Institute for the Study of Religious and Ethnic Diversity, Göttingen

Abstract: The enormous transformations of the built environment and the enhanced possibilities of consumption that have marked even the most marginal of the world's cities should not detract from acknowledging just how dependent the majority of the urban residents in the so-called "South" are on constantly putting together some workable form of income and inhabitation. The makeshift character of much of what this majority does is quite literally "make"+ "shift". Whatever they come up with rarely is firmly institutionalized into a fixed set of practices, locales or organizational forms.

This doesn't mean that relationships and economic activities do not endure, that people do not find themselves rooted in the same place and set of affiliations over a long period of time. Rather, these stabilities inhere from a constant recalibration of edges, boundaries, and interfaces. Whatever appears to be stable largely depends upon its participation in a series of changing relationships with other activities, personnel, and sites. Whatever is made then shifts in terms of its availability to specific uses and users, as well as its exposure to new potentials and vulnerabilities. At the same time, in order for any "make+shift" to work, it has to embody generosity, reciprocity, a sense of openness and experimentation in order to keep affective energies, information and cooperation flowing. Spaces of such experimentation often require intricate deals, accommodations and dissimulation. As Ravi Sundaram has pointed out, the large-scale popular appropriation of various tools of social media has both responded to and accelerated the dissipation of postcolonial compacts. Instead of adhering to particular regimes of moral conduct and verification, urban inhabitants are producing their own scenarios, evidence, and realities through the widespread dissemination of images, texts, and tweets, aggregated in various forms and targeted for specific purposes and audiences.

As such there is a substantial shift in the operations of the make+shift as it also finds new modalities and venues for circulation. The key question is how these new conjunctions between long-honed popular, relational economies and technological innovation can reshape urban spaces and life in ways that curtail exclusion and segregation, and maximize the capacities of inhabitants of all backgrounds.

AbdouMaliq Simone is an urbanist with particular interest in emerging forms of collective life across cities of the so-called Global South. He has worked across many different academic, administrative, research, policymaking, advocacy, and organizational contexts in Africa and Asia. Simone is presently Research Professor at the Max Planck Institute for the Study of Religious and Ethnic Diversity, Visiting Professor of Sociology, Goldsmiths College, University of London and Visiting Professor of Urban Studies at the African Centre for Cities, University of Cape Town. Key publications include, *In Whose Image: Political Islam and Urban Practices in Sudan*, University of Chicago Press, 1994, *For the City Yet to Come: Urban Change in Four African Cities*, Duke University Press, 2004, and *City Life from Jakarta to Dakar: Movements at the Crossroads*: Routledge, 2009, *Jakarta: Drawing the City Near*: University of Minnesota Press, 2014, and the forthcoming *City Secrets: polemics for emerging global urbanisms*, Polity.



SESSION I

29 September 2016 | 17:45 h - 18:45 h

Coordinating member: Dr Proteeti Bhattacharjee (MPG)

PUBLIC LECTURE: PRIVACY AND SECURITY IN ONLINE SOCIAL MEDIA (PSOSM)



Dr Ponnuram Kumaraguru

Associate Professor, Indraprastha Institute of Information Technology (IIIT-D)

Abstract: Urban living today is defined by the “World of Internet”. In cities especially, there is an exponential increase in dependence on the Internet for day to day activities ranging from online grocery ordering to booking flights for vacations. Social media websites like Facebook, Google+, YouTube, Twitter and Flickr have changed the way Internet is being used. There is a dire need to investigate, study and characterize privacy and security on online social media and other forums from various perspectives, including cultural, sociopolitical, psychological and computational. Real world scalable systems need to be built to detect and defend security and privacy issues on online social media and internet based applications for sustainable development of cities and monitoring migration.

The focus of this talk is on the following: (1) Twit-Digest: A tool to extract intelligence from Twitter which can be useful to security analysts. Twit-Digest is backed by award-winning research publications in international and national venues. (2) MultiOSN: A platform to analyze multiple OSN services to gain intelligence on a given topic / event of interest (3) OCEAN: Open source Collation of eGovernment data and Networks, shows how publicly available information on Government services can be used to profile citizens in India. This work was presented at Security and Privacy Symposium at IIT Kanpur, 2013. (4) In Finding Nemo, given an identity in one online social media, the digital foot print of the same user in other social media services is detected, known as the digital identity stitching problem. This work is also backed by award-winning research publication. All research work listed above is already made available through tools or online services for public use.

Ponnuram Kumaraguru (“PK”) Associate Professor, is currently the Hemant Bharat Ram Faculty Research Fellow at the Indraprastha Institute of Information Technology (IIIT), Delhi, India. PK is the Founding Head of Cybersecurity Education and Research Centre (CERC). PK is one of ACM India Eminent Speakers. He received his Ph.D. from the School of Computer Science at Carnegie Mellon University (CMU). His research interests include Privacy, e-Crime, Online Social Media, and Usable Security, in particular, these days he has been dabbling with complex networked systems (e.g. social web systems like Twitter, Facebook, and telephone logs). He is also very passionate about issues related to human computer interaction.

As Principal Investigator, PK is currently managing research projects of about 2 Crores INR. PK is a Co-Principal Investigator in a project approved at the Europe Union FP7 which is about 5.3 million Euros. PK has received research funds from Government of India, National Science Foundation (NSF), USA, industry bodies in India, and International Development Research Centre. He is serving as a PC member in prestigious conferences like WWW, AsiaCCS and he is also serving as a reviewer for International Journal of Information Security and ACM's Transactions on Internet Technology (TOIT). PK's Ph.D. thesis work on anti-phishing research at Carnegie Mellon University has contributed in creating an award winning start-up Wombat Security Technologies wombatsecurity.com. PK founded and manages PreCog, precog.iiitd.edu.in a research group at IIIT-Delhi.

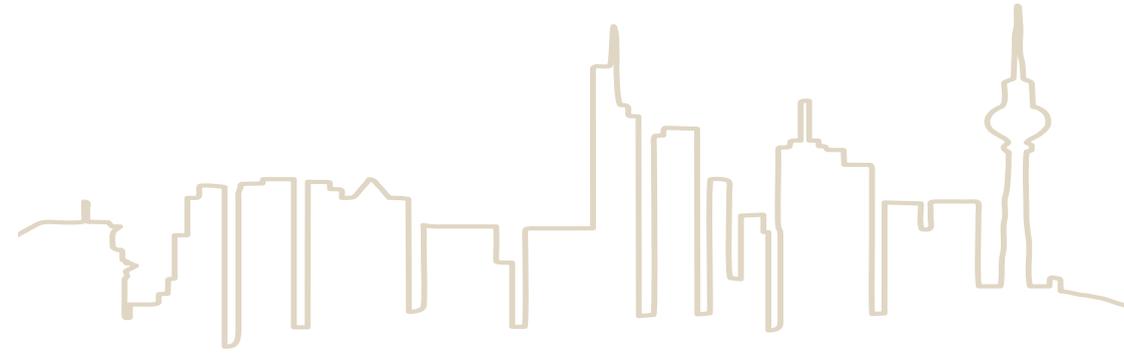
SESSION 2

30 September 2016 | 09:00 h - 11:00 h

*(Coordinated by Mr Ashwani Arya, Forschungszentrum Jülich
and Dr Amol Kulkarni, National Chemical Laboratory, Pune)*

SMART ENERGY & CONSTRUCTION

It is needless to say that our energy needs will continue to increase from time to time. Availability of energy from the fossil fuels will remain for very long time, however the need to switch to alternate or renewable energy will force the human beings to become more responsible towards our planet. This particular session will focus on our energy needs and an approach to meet them. On the other hand, since most of the energy needs in expanding cities come from in-door facilities and living, the construction of future cities needs to be based on maximization of available energy utilization and minimum use of wire-transmitted energy. This would impose the need for local or distributed energy generation systems i.e. dependence on the solar and wind energy along with smart and efficient batteries. So the second part of the session will deal with energy friendly constructions.



INNOVATIVE GREEN BUILDING MATERIALS FOR BUILDING ENVELOPES IN INDIA

Abstract: Building Materials are been extensively researched to come up with new, greener and sustainable solutions. Among the applications, building envelopes is one of the latest trends in the Indian context. The building envelope looks into various aspects ranging from comfort and functional attributes to aesthetic appeal of buildings. The building envelope consists of the outer wall also known as a facade and roof. Like the human outer skin and clothing, the building envelope fulfills numerous functions, such as heat-, cold and glare protection, ventilation and the provision of visual contact between the inside and outside of the building, expression of emotions and moods etc. The talk highlights the latest of technologies and building materials which focus on three aspects viz. Facades as means of communication, Facades as functional elements and facades as aesthetic building components.



Prof. Dr Thomas Gries

Institutsleiter und Lehrstuhlinhaber
Institut für Textiltechnik (ITA), RWTH Aachen University

Prof. Gries born in Cologne, Germany in 1964, studied at the RWTH Aachen University, Germany. He received in 1989 his diploma degree in mechanical engineering, in 1992 his diploma degree in economics and in 1995 his doctorate in mechanical engineering. He is married and has two children.

From 1995 to 2001 he worked at Lurgi Zimmer AG, Frankfurt am Main, Germany at the Department of Technologies for Fibres and Textiles in leading positions.

From April 2001 onwards he is Director of the Institut für Textiltechnik der RWTH Aachen (Department of Textile Technologies and Textile Machinery at the RWTH Aachen University).

ORGANIC SOLAR CELLS AND CURRICULUM INNOVATION

Abstract: Solar cells, whose functional elements are based on semiconducting organic materials (small molecules or specific polymers) instead of metalloids like silicon, are related to organic electronics. This is no longer a vision, it's an inherent part of our everyday life. This kind of electronics is already being used in smartphones, curved-TVs and transparent solar panels. Moreover, in future it is going to play a major role in our living environment.

An aim of science education should be the integration of current topics of industrial and scientific research into school and university curricula. An example for this are the semiconducting polymers for use in organic photovoltaic cells (OPVs).

This contribution provides hands-on experiments and multimedia teaching tools for the curricular integration of semiconducting polymers into science classes and laboratory trainings.

INTEGRATED SOLAR-BATTERY SOLUTION FOR SELF-SUSTAINING ELECTRONICS

Abstract: The potentials of monolithic integration of thin-film silicon solar cell and lithium ion storage cell in a simple cell-to-cell integration without any control electronics will be explored. The present approach provides scalable and compact power solutions for portable electronic devices. To demonstrate this we used triple-junction thin-film silicon solar cell connected directly to a lithium ion battery cell to charge the battery and in turn discharge the battery through the solar cell. Our results show that with appropriate voltage matching the solar cell provides efficient charging for lab-scale lithium ion storage cell.

A comparison of the charging and discharging rate suggests that cell-to-cell integration is feasible with minimal losses after appropriate matching of the JV characteristics of the solar cell to the charge-discharge characteristics of the storage cell. A simple method to find the optimal conditions for the integrated PV-battery device will be presented. Maximum power point and average solar energy-to-battery charging efficiencies of 8.5% and 8.0% were obtained respectively. The maximum power point efficiency is equal to the efficiency of the standalone solar cell which indicates loss-free energy transfer to the battery.



Jun.-Prof. Dr Amitabh Banerjee

University of Cologne

Jun.-Prof. Dr Amitabh Banerjee was born in India and grew up in Germany. He studied chemistry and computer science at the Freie University of Berlin. After a two years teachers training he joined the group of Prof. Tausch at the Bergische University of Wuppertal as a PhD-fellow. In 2011 he was awarded with the Manfred-and-Wolfgang-Flad prize for his development of teaching experiments and educational concepts in the field of organic electronics. Another award in 2013 certified him excellent contributions in science communication. Since 2014 Amitabh Banerjee holds the position of an Assistant Professor (Junior professor) at the Institute of Chemistry Education of the University of Cologne.



Dr Tsvetelina Merdzhanova

Group Leader, Institute of Energy and Climate Research, IEK-5 Photovoltaics, Forschungszentrum Jülich GmbH

Dr Tsvetelina Merdzhanova received her Ph.D. degree in physics in 2005. After that she joined the Max-Planck Institute for Solid State Research in Stuttgart as a post-doc. From 2007 until 2009 she has worked for Solar Cell Company Malibu GmbH & Co. KG. Since 2013 became a leader of a group at IEK-5: Photovoltaics in Forschungszentrum Jülich with focus on device development of thin-film solar cells based on a-Si:H and μ -c-Si:H deposited by large-area PECVD technique. Dr Merdzhanova has been involved in several publicly funded, national and European projects. She published 53 ISI cited publications with 631 citations.



LARGE AREA SUBSTRATE TEXTURING FOR THIN FILM SOLAR PHOTOVOLTAICS

Abstract: Smart and clean energy production is being sought globally to meet rising energy demands without concomitant environmental pollution. Thin film solar photovoltaics based on amorphous silicon, micro-crystalline silicon, CIGS and perovskites has been among the focus of accentuated research investment over the last couple of decades. In spite of the widespread acceptability of the crystalline silicon solar cell technology, thin film solar cell technology bears great promise for achieving optimal cost/performance ratios.

In thin film solar cells, the challenge lies in enhancing the efficiency of the solar cell by band gap engineering with novel semiconducting materials which can be made available at low cost and by creating micro/nano-textured substrates which would lead to optical trapping of the incident photons within the substrate or superstrate of the solar cell. For achieving enhanced efficiency, various interesting and innovative routes have been attempted all over the world including CSIR-CGCRI. In this institute, efforts are underway for fabricating textured substrates using a combination of solvothermalnanotexturing, electrospinning, inkjet printing, nano-imprint lithography and novel laser based maskless lithography techniques. In the present paper, we shall present a panoramic overview of large area texturing of substrates towards achieving efficiency enhancement in thin films solar photovoltaics.



Dr Dipayan Sanyal

Ph. D, Chief Scientist and Head
CSIR-Central Glass and Ceramic Research Institute
Non-oxide Ceramics & Composite Division

Dr Dipayan Sanyal is a Chief Scientist and Head, Non-oxide Ceramics and Composite Division at CSIR-Central Glass and Ceramic Research Institute(CSIR-CGCRI), Kolkata, India. He graduated from Jadavpur University, Kolkata, India in 1984 with University Gold Medal for securing first rank in B.Ch.E examination. He obtained his M. Tech in from IIT, Kanpur, India in 1986 and PhD in from IIT, Kharagpur, India in 2004. During 1995-96, Dr Sanyal worked in the University of Tokyo as a JSPS RONPAKU fellow.

Dr Sanyal joined the CSIR family as a Scientist at National Metallurgical Laboratory (CSIR-NML), Jamshedpur, India in 1989. Since 2002, he has been working in the CSIR-CGCRI, Kolkata and has been leading, since 2010, a team of national and international researchers at IIT Delhi, IIT Madras, IISc Bangalore, CSIR-CMERI, Durgapur, India, Fraunhofer IPT, Germany, CRIBC, Belgium, CEA LITEN, France, ForschungszentrumJülich, Germany, TU Delft, Netherlands, Northwestern University, USA, Michigan State University, USA as the Indian coordinator of India EU collaborative FP7 projects and Indo-US projects on replicative forming of glass optics, thin film solar photovoltaics and structural health monitoring, respectively.

THIN-FILM SILICON SOLAR CELL PERFORMANCE UNDER DIFFERENT ILLUMINATION CONDITIONS

Abstract: Thin-film silicon single-and multi-junction solar cells are currently finding relevance in such applications as water splitting and battery charging where their high voltage at maximum power point are used to provide the needed voltage for water splitting and for battery charging in a monolithically integrated photoelectrochemical set-up. Integration of PV with battery will provide a robust power solution for low-power portable electronic devices hence making such devices self-sustaining. For such photoelectrochemical application, it is important to understand how the solar cells behave under different light spectra and intensities other than the standard AM1.5.

This will help in accessing the performance and potentials of photoelectrochemical devices under different light conditions which till now is scarcely reported. In this work we report on the performance of thin-film silicon solar cells under different light sources and illumination intensities. The light sources used are incandescent lamp, LED and fluorescent lamp as most relevant and common indoor illumination sources. The overall effect of the different light spectra and illumination intensity on the solar cell efficiency is also presented. Our results demonstrate that thin-film silicon solar cell operation under artificial light holds potential for indoor energy harvesting in combination with electrochemical storage for instance.

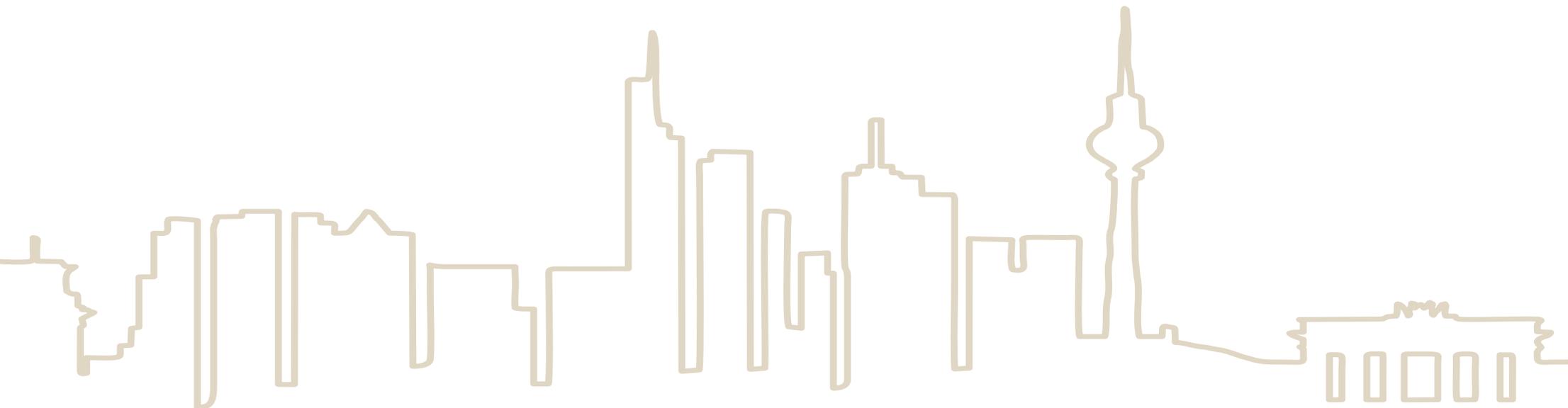


Dr Solomon Nwabueze Agbo

Alexander von Humboldt Postdoctoral Fellow
Institute of Energy and Climate Research, IEK-5
Photovoltaics, Forschungszentrum Jülich GmbH

Dr Solomon Agbo worked on thin-film silicon solar cells at the Delft University of Technology for his Ph.D degree which he obtained in March 2012. From April 2012 till February 2013, he worked as a research fellow and head of the photovoltaic unit of the National Centre for Energy Research and Development, University of Nigeria, Nsukka. He joined the University of West Bohemia as a postdoctoral fellow from March 2013 till August 2014.

Since January 2015, Dr Agbo works with IEK-5: Photovoltaic, Forschungszentrum Jülich as Alexander von Humboldt Postdoctoral fellow where he develops monolithic integrated storage device involving thin-film silicon solar cell and lithium ion battery. He is also involved in investigating thin-film solar cells performance under different light sources and intensities with the aim of exploring low-light intensity performance of thin-film silicon cells for indoor applications. He has authored several articles both in local and international journals.



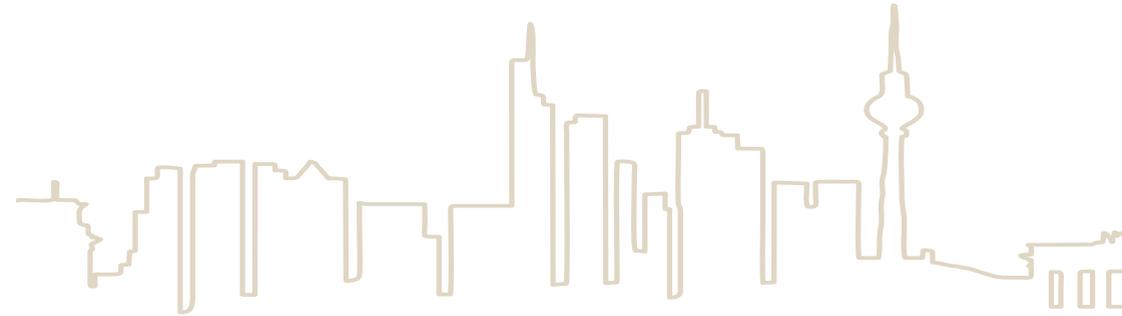
SESSION 3

30 September 2016 | 11:30 h - 13:30 h

Coordinating members: Dr Proteeti Bhattacharjee (MPG)

IMPACT OF URBANISATION ON ENVIRONMENT

The world at large is going through a rapid transition and we all are witnessing rapid changes in the climate and associated effects. Industrial revolution is unavoidable and essential to ensure progress of human being. However this cannot happen at the cost of our environment. Our environment will include the directly connected and indirectly connected nature. Impact of mining, energy consumption, new modes of energy supply, our desire to reduce the physical efforts, etc. is having impact on the surroundings. This particular session will take a microscopic and macroscopic view of this impact and with special focus on how it can be mitigated even under expanding cities. The Session will aim at having a brainstorming on the impact of growing cities on local as well as global environment. It will also see the impact on animal lives, their migration, etc. Cities will need resources, viz. buildings, energy, food, etc. while it will also reduce the fertile lands. So, its impacts on agriculture in the areas near cities will also be critically evaluated. Cities cannot afford to expand at the cost of fertile land and hence some policy related issues will also be evolved.



CHALLENGES AND OPPORTUNITIES FOR CONSERVING URBAN GREENS IN INDIAN SMART CITIES

Abstract: Biodiversity conservation in India, a global biodiversity hotspot and also home to one sixth of the world's human population on 2.4 percent of the global landmass is an immensely challenging task. India is stated to have 87 metropolitan cities by 2031 up from 50 in 2011 with 600 million people living in its cities by 2030. Considering this, today it is developing 100 smart cities and 500 Amrut cities in its bid for sustainable development. While Protected Areas continue to remain the cornerstone of biodiversity conservation, cities will play an important and increasing role in achieving our biodiversity targets. This talk will focus on changing paradigms of urban green conservation in Indian cities highlighting the opportunities that exist in the smart cities with case studies and the challenges that need to be overcome.



Prof. Dr Shamita Kumar

Professor and Vice Principal Institute of Environment
Education and Research, Bharati Vidyapeeth University, Pune

Dr Shamita Kumar holds PhD in Environment Science with geoinformatics specialization. She also has in her credit PG Diploma in Geoinformatics. Her expertise lies in Landscape ecology, conservation biology, remote sensing, spatial analysis, environment education, environment interpretation. She has 17 years of teaching experience at undergraduate and postgraduate level. Her present research projects are on An environment education program for sustainable development for schools in the Maval and Mulshi taluka, Pune district funded by the Tat Power Companies (2012-2015), Strengthening capacity building through developing a unique portal for Geospatial Education and Training funded by the Department of Science and Technology, Government of India (2012-2014), Modelling the impedance and mortality locations of wildlife using geoinformatics along highways in Maharashtra State for improvement of EIA, SEA and BIA techniques in India funded by the Department of Science and Technology, Government of India (2011-2014), DNA Clubs Program, funded by the Department of Biotechnology, Government of India (2007-2012). She also holds position as Guest Professor in University of Cologne (Winter Semester 2014-2015). She is a member of the steering Committee Geospatial chain, Department of Science and Technology, Government of India.

URBANIZATION – OBSERVATIONS FROM THE SYSTEMS PERSPECTIVE

Abstract: Together with population growth urbanization will remain a major global trend. In this context, megacities represent the ultimate challenge. They increase by number and size. As a result, the demand for basic factors like food, energy, and water (FEW) will grow substantially. Infrastructures play a fundamental role in urban development; they provide the means that supply can meet demand. Quantity and quality of services have to be addressed at the same time. For the shape of infrastructures, additional boundary conditions arise from legislation for environmental and climate protection. More generally, waste management has increasingly become important. Infrastructures for transport and communication belong to the core group of a modern system of basic infrastructures, too. According to the high level of interconnection, deficiencies in one subsystem may easily spread out and slow down the performance of the entire system.

Institutional aspects most likely make a major difference between “successful” and “unsuccessful” development. Investors look for business opportunities. The local people and communities expect appropriate participation in the political decision making. Examples from the past have shown that missing public acceptance would delay projects or lead to a complete stop. Last but not least, the shaping of developments requires visions, guiding principles and goals. For the successful implementation of these concepts, urban planning and urban design have to incorporate multidisciplinary expertise ranging from political and social sciences to natural sciences and engineering. Even with this new form of team building a fundamental dilemma remains: While the scientific analysis of systems with increased complexity requires more time, political decision makers feel the pressure for immediate response.

THE POLITICS OF TRANSITION: ANALYZING THE IMPLEMENTATION OF INDIA'S SMART CITIES MISSION THROUGH THE LENS OF STRATEGIC ACTION FIELDS

Abstract: Not least due to its huge energy consumption and material impact, urban metabolism will have to be transformed if a low-carbon society is to be realized. This is particularly challenging for urban areas in fast emerging economies such as India, where urbanization processes have so far been unsustainable. Taking into account various research approaches to transition processes in cities, we are following their call for more empirical evidence, our unit of research is India's Smart Cities Mission. The multi-level governance lens and the strategic action field (SAF) approach will help us to conceptualize transition dynamics and to shed light on the underlying power relationships and governance structures in India's cities.

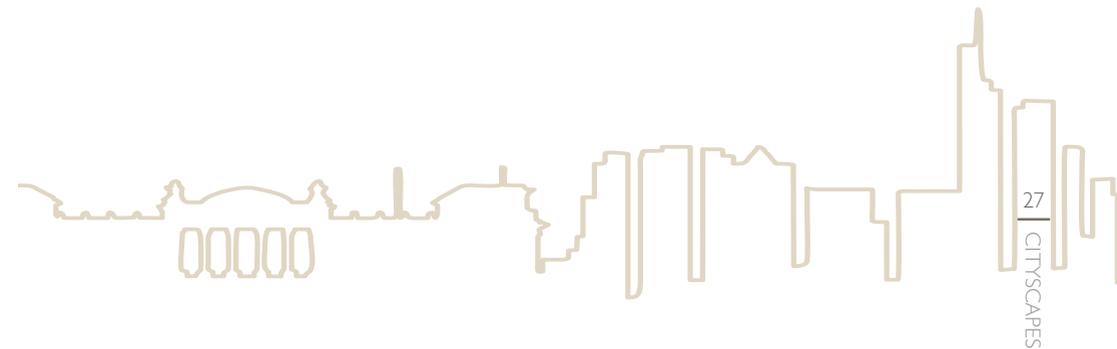
We aim to explore three conditions shaping the performance in India's cities: First, multilevel governance dynamics including the central government, India's states, city



Prof. Dr Jürgen-Fr. Hake

Head, Institute for Energy and Climate Research, Systems Analysis and Technology Evaluation; Professor for Energy Policy and Energy Economy, Aachen University of Applied Sciences; Lecturer, Bonn University, Forschungszentrum Jülich GmbH

Prof. Juergen-Fr. Hake studied Mathematics and Physics at the University of Bielefeld. He is director of „Systems Analysis and Technology Evaluation“ at the Research Centre in Juelich, Germany, as well as professor for Energy Policy and Energy Economy at the University of Applied Sciences Aachen and lecturer at the University of Bonn.



Dr Kirsten Jörgensen

Teaching Director, Room 3.3, Department of Political and Social Sciences; Otto Suhr Institute of Political Science, Freie Universität Berlin, Environmental Policy Research Centre

Kirsten Jörgensen is senior lecturer at the Department of Political and Social Sciences. She received her Ph. D. in 1996 at Freie Universität Berlin. Kirsten Jörgensen was a member of the Berlin Parliament from 1987 to 1989. Since 1992 she has lectured at diverse universities, including TERI University, New Delhi, India, Moscow State Institute of International Relations of the MFA of Russia, MGIMO and University of Maryland, College Park, USA. She was a Research Fellow at the American Institute for Contemporary German Studies, Johns Hopkins University, Washington D.C. Her primary fields of interest include German, European and Indian environmental and climate policy as well as the role of subnational climate governance. She initiated the German-Indian Sustainability and Climate Change Dialogue and is coordinator of the Indian-European Multi-level Climate Governance Research Network. Since 2013 she is a member of the Indo-German Expert Group on Green and Inclusive Economy.

governments and the private sphere; second, innovations as major drivers and third, conflict between challengers and incumbents as main obstacles to transformation. Building on documentary analysis and expert interviews (spring 2016), the paper will discuss a few observations and formulate assumptions in regard to cities' potentials for experimenting and pioneering in the context of implementing India's Smart Cities Mission.

AIR QUALITY AND PUBLIC HEALTH ISSUES IN MEGACITIES: CHALLENGES AND OPPORTUNITIES IN THE INDIAN URBAN ATMOSPHERIC ENVIRONMENT

Abstract: Keeping pace with rapid growth of Indian economy, the industrialization and urbanization have also increased in India with a very high rate. This has resulted in large amount of anthropogenic emissions of urban air pollutants, which have adverse human health impacts. Indigenous models for estimating anthropogenic emissions from various sectors and their associated health effects are sparse in Indian context.

To fill this gap, research efforts have been made at IIT Roorkee. Prof. Bhola Ram Gurjar will present some of these indigenous models that have been developed by his research group to estimate emissions from transport sector and thermal powers plants. Also, the Ri-MAP model, which is a simple spreadsheet model to compute health risks due to human exposure to air pollutants, would also be discussed during the presentation. He will also present the future possible trajectory of urban growth in Indian context and its implications in terms of air quality and public health issues.



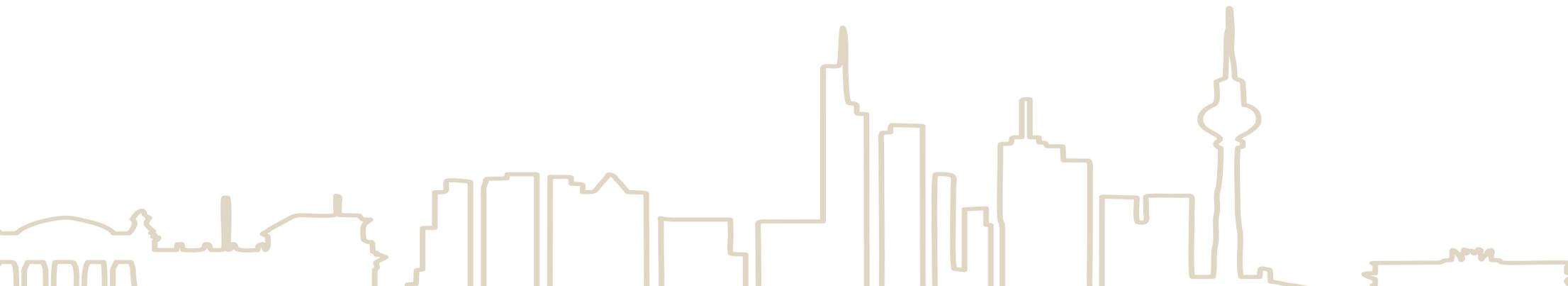
Prof. Dr Bhola R. Gurjar

PhD, Professor in Civil (Environmental) Engineering, and Head, Centre for Transportation Systems (CTRANS) Indian Institute of Technology (I.I.T.) - Roorkee

Dr Bhola Ram Gurjar is a Professor in Civil (Environmental) Engineering and Head of Centre for Transportation Systems (CTRANS) at India's premier technological institution, Indian Institute of Technology – IIT Roorkee. He holds a PhD in the area of Environmental Risk Analysis from I.I.T. Delhi followed by Postdoctoral research at the Max Planck Institute in Mainz (Germany).

He has about 25 years' progressive professional experience in industry, teaching, training, research, and consultancy. His present research interests focus on Air Pollution (Emissions, Air Quality and Health Impacts) in Megacities. Professor Gurjar has (co)authored / (co)edited 9 books and more than 130 articles. He has received several awards and fellowships including the prestigious Advanced Postdoctoral Research Fellowship of the Max Planck Society (Germany) (2002-2005), UKIERI Grant to visit Univ. of Surrey (U.K.) (Dec. 2012-Jan. 2013), and the American Society of Civil Engineers' State of the Art of Civil Engineering Award for the year 2014 on the co-edited book "Climate Change Modeling, Mitigation, and Adaptation". The Institution of Engineers (India)'s National Design and Research Forum (NDRF) has awarded him the National Design Award for Environmental Engineering 2011.

Recognizing his significant contribution in the discipline of Environmental Engineering, the Environmental Division Board of the Institution of Engineers (India) has conferred on him the Award of Eminent Environmental Engineer for the year 2015.



SESSION 4

30 September 2016 | 14:30 h - 16:00 h

(Coordinated by Ms Anandi Iyer, Fraunhofer Gesellschaft)

SMART CITIES: INDUSTRY PERSPECTIVE

Global Urbanisation and the Smart City Challenge

One of the greatest challenges of the 21st Century is the growing urbanisation, digitalisation and the measures that city administrations and governance have to take to deal with the ever increasing demands on urban spaces, increasing complexity and pace of changes juxtaposing the legitimate need for a good quality of life for its citizens. Achieving sustainable development of the urban sphere is one of the most challenging endeavours of our time. Both creating and managing the city of the future will require new ways of thinking. Conventional products and solutions oriented to single consumers or single markets will be replaced by integrated approaches that treat urban systems in a holistic fashion.

These challenges will not only have an impact on the respective cities but on the world as a whole as the global boundaries are crunching and the global population has to deal with access to depleting natural resources shared by the Planet as a whole. Hence the subject of Smart Cities is a core subject of specific administrations albeit not limited to geographical borders, sectors or stakeholder groups. Consequently tackling this requirements and challenges acquires much larger dimensions that Governments have to address and find sustainable and cross-cutting solutions to.

Global Urban Population in Developed and Developing Countries

In 2030 – in 16 years – already 5 billion people will live in cities, with the largest share of them being located in today's emerging economies.¹ It is being expected that cities worldwide will expand their area by the factor 2.5 - leading to the sealing of up to 7% of the globally available fertile ground. Cities account for 60-80% of global energy use and for a similar share of global greenhouse gas emissions² - although cities bare the highest potential for gains in efficiency and minimizing the ecological footprint of individuals. Also cities are the places of global value creation: between 2010 and 2025 the GDP of the 600 largest cities worldwide will increase by over 30 trillion US\$, accounting for 60% of global economic growth³. In the same time span an additional amount of floor space has to be built, equaling 85% of today's globally existing floor space⁴.

»Global urban infrastructure and usage expenditures in dwelling and transportation for the next three decades will exceed \$350 trillion (...) or seven times the current global GDP«.⁵

We increasingly face global challenges such as climate change, scarce resources, and the exploitation of ecosystems that go beyond the planetary boundaries. If we are not to witness unprecedented shifts in our lifestyles forced upon us by external shocks, we have to prepare to push a type of urban development that leads towards shaping sustainable cities.

The Economic Opportunity

On the other hand, over the next decade, a massive wave of urbanisation across the emerging world will quadruple the size of the global "consumer class" and result in emerging markets driving as much as three-quarters of world economic growth. This is clearly an exciting prospect for business leaders searching for new growth opportunities. However, as businesses allocate resources and develop strategies, the concept of "emerging markets", or even groups of high potential countries such as Brics (Brazil, Russia, India and China), is no longer particularly helpful. Executives need to develop a more granular view of the world, one that goes beyond broad groupings — or even individual Cities are where the growth is occurring. By 2025, urban consumers could spend an additional \$20tn a year — not counting an extra \$10tn of physical capital investment to meet the needs of expanding urban populations.

The pace and scale is historic: China and India, with a combined population of more than 2.5bn, doubled their GDP per capita in 12 and 16 years respectively. By comparison, Britain started its industrial revolution in the 18th century with less than 10m people and took more than 150 years to double its GDP per capita. While it is true that emerging markets is where the growth is, the term emerging markets is not a helpful unit for resource allocation strategies.

Research by the McKinsey Global Institute indicates that 440 emerging market cities — very few of them "megacities" — will account for close to half of expected global GDP growth between now and 2025.

Agenda

- 14:00 h Welcome and Presentation on the Fraunhofer Global Smart Labs Initiative by Mrs Anandi Iyer, Director, Fraunhofer Office India.
- 14:15 h Smart Cities and the Indian Challenges/Strategies by Mr Jagan Shah, Director National Institute of Urban Affairs.
- 14:30 h Industry Initiatives for a Smarter World: by Mr Dhiraj Wali, Vice-President, Bosch.
- 14:45 h Appropriate solutions from an Indian Industry perspective: by Mr Eric Hauptstein, Chief Project Officer, Mahindra Lifespaces Developers Ltd.
- 15:00 h German Support to the Indian Smart Cities Mission: Climate Smart Cities by Mr Frank Samol, Director, Indo-German Environment Partnership on Urban and Industrial Development – IGEP-UID.
- 15:15 h Q & A
- 16:00 h Close of session

¹{Angel 2005 #174}

⁴ibid.

²{OECD #180}

⁵{WWF 2010 #181}

³{McKinsey Global Institute June 2012 #153}

This session seeks to look at the economic opportunities that Smart City Initiatives are throwing up, and the strategies that Business Leaders are adopting to address the challenges and the opportunities. Business Leaders from both countries will present but also dialogue on how Industry is positioned to support and fast track technology solutions for a smarter world.



Mr Eric Hauptstein

Chief Project Officer,
Mahindra Lifespaces Developers Ltd.

Urs Eric Hauptstein is Head of Projects for Mahindra Lifespaces. He is responsible for oversight and the establishment of work processes and procedures for project management, quality & safety, engineering, procurement and construction. In addition, he is responsible for Sustainability and the worker skill development initiative.

He has 20 years' experience in construction and was previously associated with Sobha Developers Ltd. as Vice President, Contracts. His responsibilities included management of quality & safety Department, oversight of projects and operation and construction resources. Prior to that he worked as Project Manager for companies such as Walter Construction Group, Goldbeck Construction and Kling Consult. Clients included prestigious companies like Puma, Siemens, Audi, BMW, Infosys and Dubai International Real Estate. His projects range from mixed use Developments, residential, commercial, shopping malls and hotels, infrastructure projects such as tunnelling and industrial buildings.

Mr Hauptstein holds a Master of Engineering in Civil Engineering and Construction from the University, Kassel, Germany and a Degree in Business Management from the University Kassel, Germany. He additionally attained a degree as Solar Technician from the School of Science in Felsberg, Germany.

GERMAN SUPPORT TO THE INDIAN SMART CITIES MISSION: CLIMATE SMART CITIES

Abstract: The German government is committed to support the Smart Cities Mission of the Government of India, with a focus on the three cities of Bhubaneswar (Odisha), Coimbatore (Tamil Nadu) and Kochi (Kerala). New technical cooperation projects will support further detailed planning and implementation of selected projects identified by the Smart City Plans of the three cities. Special attention will be paid to smart urban mobility projects and other projects with a potential to reduce greenhouse gas emissions. Mobilisation of German know-how and experience, both in the public and private sector, in developing smart urban infrastructure and in promoting sustainable urban development will be a key feature of these technical cooperation projects. They will develop and provide platforms for networking and exchange of experience between all relevant actors and stakeholders in Smart City Projects, thus providing space and opportunities for partnerships with German industry, technology leaders and service providers.



Mr Frank Samol

Director, Indo-German Environment Partnership for Urban and Industrial Development (IGEP-UID)

Frank Samol is an architect and urban planner with more than 30 years of experience in international development cooperation. He has long-standing and profound working experience in the fields of sustainable urban development, environmental planning and management in different countries and continents of the Global South, as well as in Germany and Europe. Since July 2015, Mr Samol is the Director of the "Indo-German Environment Partnership for Urban and Industrial Development (IGEP-UID)". IGEP-UID that comprises more than 10 technical cooperation projects with a total funding volume of around EUR 35 million.



Mr Jagan Shah

Director, National Institute of Urban Affairs (NIUA)

Jagan Shah is the Director of National Institute of Urban Affairs, the premier thinktank associated with the Ministry of Urban Development, Government of India. The institute conducts research, policy and evaluation work for the Ministry and is presently also executing projects supported by the Cities Alliance, ADB, World Bank, Rockefeller Foundation, Bernard van Leer Foundation, the Tata Trusts, the Bhubaneswar Development Authority and the City & Industrial Development Corporation of Maharashtra.

Shah has 20 years of professional work experience in various aspects of urban development in India. He studied Architectural Design from School of Planning & Architecture (SPA), New Delhi and Architectural History & Theory from the University of Cincinnati and Columbia University in New York. He has served as the Director of Sushant School of Architecture, Gurgaon and has taught at the School of Planning & Architecture (SPA) from 1998 till 2006. From 2007 to 2010, he was the Chief Executive of Urban Space Consultants, providing consultancy in policy formulation, spatial planning, heritage conservation, transportation and livelihoods development.

Shah has advised the revision of the Regional Plan 2021 for the National Capital Region, has devised intervention strategies for the India Foundation for the Arts and the Sir Ratan Tata Trust, and has executed large scale urban design assignments such as 27 stations for the Regional Rapid Transit System for the NCR and the Master Plan for the Mizoram University campus in Aizawl. He is presently a Member of the Committee set up by the Ministry of Urban Development to amend the Delhi Development Act 1957.



SMART CITY

Abstract: The communication and integration of technologies delivers the smart city evolution. These smart technologies achieve significant improvements in efficiency with relatively small levels of investment. They allow infrastructure to work harder, giving additional benefit that would not otherwise be achievable. We call this additional benefit through smart technology 'the Smart 30%'. Smart technologies are able to optimize energy generation and distribution, make buildings operate smarter and keeps the traffic flowing.

Smart infrastructure uses advances in sensors, controls, and software. This allows cities, service providers and citizens to access the full potential of both existing and new urban infrastructure systems by enabling:

1. Increased intelligence and transparency – providing the right information at the right time in order to make informed decisions.
2. Integration – so that information can be shared across systems and organizations to eliminate silos and optimize performance.
3. Automated processes to boost efficiency and reduce costs.



Mr Dhiraj Wali

Vice President, Bosch India

Mr Dhiraj Wali is the Vice President in Robert Bosch Engineering and Business Solutions effective July, 2012.

Prior to that he was the Managing Director of Bosch Chassis Systems India Limited, Pune

Mr Wali is an engineering professional with around 28 years of work experience!

Mr Wali is convent educated and holds an Engineering Degree (1985) from Regional Engineering College (Kashmir University) in Electronics & Communication stream. He also has completed Robert Bosch Kolleg Executive General Programme from IIM, Bangalore (2012).

SESSION 5

30 September 2016 | 16:30 h - 18:30 h

(Coordinated by Ms Hanna Kriebel, Technical University of Munich and Mr Radu Carciumaru, Heidelberg University)

FOR A FUTURE SUSTAINABLE PERI-URBAN INDIA

Peri-urban areas bring up new issues that move across disciplinary but also governance and institutional boundaries. The peri-urban, which used to be treated as a transitional zone between the urban and rural in rapidly developing areas, is now being recognised as a separate socio-spatial configuration with distinct challenges of sustainability (Adell 1999; Simon 2008).

In South Asia, peri-urban areas are also regions where access to services (water, energy, transport, housing) is becoming increasingly fragmented as result of the development of gated communities and Special Economic Zones (SEZs), along with resource constraints and the consolidation of power –all conveyed largely in terms of social and political drivers rather than only physical ones (Homm 2014). Normative elements of social and environmental justice in the context of ecological disruption need to be more foregrounded.

In India, these areas are typically the sites of fastest growth outside metros and the larger Tier-II cities (World Bank, 2012). In the face of climate change, it has become imperative to assess and steer the development process in these regions in order to ensure their sustainability and resilience.

Objective:

Main purpose of this panel is to shift the focus of peri-urban development towards issues of their future perspectival development pathways. In the light of climatic change, it is essential not only to understand past and current drivers of urbanisation but also to identify various options of future scenarios, their implications and how they might be put to practice. By virtue of the interdisciplinary character, speakers from diverse disciplines are proposed to be invited.

Organisation:

The Panel will be organised as a dialogue session. Each speaker will be given max. of 15 mins time to present their topic. This will be followed by a moderated panel discussion of 20 mins. Afterwards a Q & A session is opened to the audience.

Chair:



Prof. Dr Sudhir Chella Rajan

IGCS Centre Coordinator, IIT Madras

Professor Sudhir Chella Rajan teaches at the Department of Humanities and Social Sciences at IIT Madras. He is also the Coordinator of the Indo-German Centre for Sustainability. He obtained an inter-disciplinary doctorate in Environmental Science and Engineering from the University of California Los Angeles and has worked in government, research consultancies, NGOs and academia. His broad interests have been at the interface of political theory and the environment, in particular, on the new challenges that enter political discourse within democratic societies in the face of complex social and environmental challenges. He has worked on emergent policy dilemmas in automobile pollution regulation in California, the politics of power sector reform in developing countries, conflicts in relation to energy access and climate change policy, the patterns of social change needed in transport in the United States for fair climate policy, ethical approaches to addressing climate change and sea level rise, new interpretations of the resource curse in resource-rich developing countries, changes to periurban landscape in South India and the shifting meanings of corruption in environmental and political discourse. He is currently working on a manuscript on a 'big' history of corruption in India.



REVISITING CHARACTERISTICS OF THE PERI-URBAN SPACE IN INDIA: AN EXEMPLIFICATION BASED ON CHENNAI

Abstract: What is the peri-urban space? This is the central question underpinning this talk. Furthermore, is there a peri-urbanisation process typical for India, and if so what are the specific characteristics? The discourse about the characteristic features and dimensions has resulted in various propositions to define or conceptualise peri-urbanisation as a process as well as a spatial category. For some scholars it is more of a transitory phenomenon of rural places being absorbed and integrated with a larger urban context, or it is viewed as part of the rural-urban continuum, while for others it is a spatial category in itself which may become permanent to some extent as part of the globally emerging conurbations, being in flux and displaying dynamically changing conditions without losing some of its rural character. Chennai's metropolitan region will be used to exemplarily highlight some of these spatial dialectics and interdependencies. The city has been expanding fast in all directions in the past two decades, especially along several industrial corridors. These activities are primarily promoted by the Government of Tamil Nadu through industrial development policies and infrastructure projects. Particularly the notion of development corridors raises questions whether such developments create new spaces 'in-between' - neither rural, nor urban -, urban fringes with some permanency, or whether this is indeed part of an urban expansion process.

COMPUTERISED MODELLING FOR PERI-URBAN REGIONS WATER RESOURCES MANAGEMENT

Abstract: We make a case for exploiting advanced modeling and reasoning techniques developed in Artificial Intelligence in order to support planning and decision making. The contribution presents first results in preparing the application of the approach in the context of peri-urban development with a focus on issues of water management. This is associated with research on the development in the Sriperumbudur region near Chennai that is conducted by the Indo-German Center for Sustainability at IIT Madras. We describe and illustrate the chosen approach, which is based on establishing a library of models of the relevant physical, technical, social, economic, and governance processes relevant to the problem domain and then using it for both predictive and explanatory tasks.



Dr Christoph Woiwode
IGCS-Visiting Professor, IIT Madras

Christoph Woiwode is a Visiting Professor in sustainable landuse and urbanization at the Indo-German Centre for Sustainability, Indian Institute of Technology Madras. He holds a PhD in Planning Studies from the University of London, and degrees in urban and regional planning as well as social anthropology. Christoph has been working in India and South Asia for more than fifteen years. His current research focuses on peri-urbanization and development, climate change, governance, and socio-cultural transformation to sustainability.



Prof. Dr Peter Struss
TU München

Prof. Dr habil. Peter Struss obtained a Diploma in mathematics from the University of Göttingen and a Ph.D. in computer science from the University of Kaiserslautern and accomplished his habilitation in computer science at the Technical University of Munich. From 1978 to 1992, he worked in the Corporate R&D division of Siemens Corp., where he was in charge of the knowledge-based systems group. He stayed as a guest researcher at the Xerox Palo Alto Research Center several times and also at the International Computer Science Institute in Berkeley. In 1992, he joined the Technical University of Munich as a Professor of Computer Science where he heads the Model-based Systems and Qualitative Modeling (MQM) group. His research interest is in Artificial Intelligence with a focus on the development of foundations and environments for modeling and model-based problem solvers, esp. automated diagnosis, testing, failure-modes-and-effects analysis. Professor Struss is a Fellow of the European Association for Artificial Intelligence (formerly ECCAI), an associate editor of the Artificial Intelligence Journal, and an editorial board member of the International Journal of Prognostics and Health Management. From the International Workshop Series on Principles of Diagnosis, he received the first Lifetime Achievements Award in 2014.

IS VULNERABILITY TO CLIMATE CHANGE SPATIALLY DIFFERENTIATED? THE CASE OF THE PERI-URBAN IN BANGALORE

Abstract: Bangalore is a dominant economic center in South India, supporting the regional economy. The city has recently undergone rapid socio-economic transitions, and faces severe environmental challenges. Climate change related events induce a range of direct and indirect impacts on the urban ecology (warmer regional micro-climate due to the urban heat island effect, disturbed ground water cycle due to flooding or drought-induced water scarcity) and on urban systems (damage to infrastructural networks and disruption of public services during extreme temperature or precipitation events). Each of these impacts translates into lived aspects of ‘vulnerability as experienced’ by people residing in different locations across Bangalore.

Due to particular forms of development, land acquisition behaviors and patterns of urban expansion; coupled with locational choices made by migrant labour and urban elite, peri-urban areas are spaces where vulnerability to the impacts of climate change are experienced differently to the city core. Sites in peri-urban Bangalore around Jakkur and Rachenahalli Lakes substantiate geo-spatial analysis of the city’s growth patterns and changes in availability of natural resources including water, forestry and grazing land, as well as bulk infrastructure and transport networks. The environmental characteristics of these sites were correlated to occurrences of climate related stressors and shocks, in order to test whether vulnerability to climate change is indeed spatially differentiated, or not.

PERI-URBAN AREAS AND THE SUPPLY OF FRUITS AND VEGETABLES TO BENGALURU – MARKET FORCES AND GOVERNMENT POLICIES

Abstract: Peri-urban areas play an important role in supplying fresh produce to urban dwellers. In accordance with spatial theory, major fruits and vegetables producing zones are situated around Bengaluru and provide an estimated 1,500 to 2,000 tons of fresh food day by day to metropolitan area. The supply chain is heavily determined by policy intervention. Starting in the 1960s, the Indian Government has established a system of market yards managed by Agricultural Produce Market Committees (APMC) as a monopoly channel through which farm produce had to be sold by farmers. After criticism of obvious inadequacies and inefficiencies, the APMC system has been reformed in many states from 2003. Still, the policy interventions continue to be strong. Horticultural producers in peri-urban zones around Bengaluru could benefit from a policy, which withdraws from direct intervention and puts a focus on setting an adequate regulatory and infrastructural framework for efficient marketing.



Dr Sumetee Pahwa Gajjar

Indian Institute for Human Settlements (IIHS), Bangalore

Sumetee is Lead – Practice with IIHS with almost 15 years’ experience at the interface of sustainability, climate change and urbanization. Sumetee has two core enquiries that draw from her personal journey as an interdisciplinary researcher in South Africa and India. The first enquiry relates to vulnerability as it is experienced in rural, urban and particularly peri-urban areas in India. Sumetee’s current engagement on the CARIAA research programme allows her to delve into dynamic rural and urban connections and vulnerability in semi-arid regions, in the context of a changing climate. The second enquiry relates to sustainable development trajectories available to societies as we respond to climate adaptation and mitigation challenges. Sumetee writes from a social ecological systems framework, and hopes to contribute to critical thinking and literature on climate adaptation, urban challenges and the sustainability solution space in India.



Dr Franz Donhauser

GIZ

Dr Donhauser is an agricultural economist with experience in international agricultural development in Eastern Europe, former Soviet Union countries, Asia and Africa. A special focus of his work are agricultural markets where his aim is to improve the regulatory and infrastructural framework as well as to enhance the capacities of market participants to improve their performance in a competitive setting.

SPATIAL INEQUALITY AND THE POLITICS OF URBAN EXPANSION

Abstract: Metropolitan regions in India act as growth engines and propel conurbation processes. Within metropolitan regions, there are strong 'spatial juxtapositions' (that is, spatial and economic development processes moved to urban peripheries to create agglomeration economies, competing with the existing city). Using the concepts of 'second capability', that is, 'the formation of a state bureaucracy for extracting revenue' defined by Sassen (2006, p. 72) in a modified way of rent seeking (that are outside the 'standardized taxation' and includes politicians and not just state bureaucracy as outlined by Sassen), and 'regulatory fractures'—defined by Sassen as 'in-between spaces that do not comply with regulation and yet not in violation' (Sassen, 2006, p. 392)—the present article explains how spatial, legal, administrative, political, social and economic inequalities occur in the development process. The article shows that non-compliance to the 74th Constitutional Amendment Act (74th CAA) in setting up Metropolitan Planning and District Planning Committees to manage the affairs of the periphery of the metropolitan cities have resulted in spatial inequalities in Indian cities. It reveals how the political economy equations within a state dictate the type of urban expansion that causes inequalities as evidenced through various case studies. This article analyzes such uneven spatial expansions and their consequences in terms of spatial, economic and social inequality, taking case studies of Hubli–Dharwad, Surat and Indore.

ENVIRONMENTAL SUSTAINABILITY IN INDUSTRIES LED PERI-URBAN DEVELOPMENT: CASE OF NARODA (AHMEDABAD, GUJARAT)

Abstract: Indian cities often referred as 'engines of economic growth' rapidly expanded their economic zones in peripheral stretches having weaker jurisdictional controls, socially vulnerable population and productive land. This resource intensive development which consumes land, soil, water, energy etc. causes vulnerability including physical (housing condition, sanitation and basic facilities), social (mixed migrated population) and economic (nature employment, unskilled labour force) nature. The pilot work on 'Climate Change Adaptation for Naroda Industrial Estates (NIE)' is a unique work demonstrating application of sophisticated technology including remote sensing, GIS, SPSS and comprehensive surveys for multi-disciplinary vulnerability assessment. The Naroda IE - established five decades back in alluvial plains of the river 'Sabarmati' in periphery of Ahmedabad (Gujarat) today houses about 1200 industries employing 70,000 persons and spreads over four villages. Over the last two decades, residential areas grew five times indicating rapid urbanization engulfing agricultural lands and surrounding the estate. Considering the climate change scenario, simulations of flood hazards and landuses, it is likely that in coming years higher climate variability, rising temperatures and increased frequency of floods will be common.



Prof. Dr N. Sridharan

School of Planning and Architecture

Dr N. Sridharan is currently working with School of Planning and Architecture, New Delhi as a Professor in Regional Planning. Prior to this he was Director of SPA-Vijayawada. Dr Sridharan has more than 33 years of experience in the field of Urban and Regional Planning. He has Master's in Economics, Urban and Regional Planning, Town & Country Planning (Poland) and Financial Management apart from a Doctoral Degree from RMIT, Australia in the field of Urban Planning. He has published widely in national and international journals in the fields of Peri-Urban Development, Urban Governance, rural development and Spatial Data Infrastructure. Dr Sridharan has been honoured by many Indian and foreign universities on many occasions. His area of interest includes Peri-Urban Development, Rurban Cluster Planning, Corridor Development and Urbanisation, Urban Land Markets, poverty and sustainability, urban governance, and, Spatial Data Infrastructure. Currently Dr Sridharan has been working on: Smart Cities and Urban Governance; Historic Cities of India and its implications for the future Urban Regions of ancient, medieval and modern India, and, Peri-Urban Development and Rurban Cluster Action Plans in India.



Prof. Dr Ashwani Kumar

CEPT University, Navrangpura, Ahmedabad

Ashwani Kumar - an environmental sustainability expert holds the degree in Civil Engineer from Indian Institute of Technology, Kanpur and Master in Planning. He worked national environmental regulator with Central Pollution Control Board (CPCB), Delhi and presently working as faculty at Department of Planning, CEPT University (India) and teaches subjects including environmental planning, environment management, environmental infrastructure, impact assessment, cities and climate change. He has supervised the research studies on climate resilient development, climate change action Plans and GHG emission assessment for industrial area. His work on 'Climate change adaptation plan for Naroda Industrial Estate (Gujarat)' well received among the researchers and policy makers. This work laid foundation for escalating successfully for states of Andhra Pradesh and Talangana. He has been part of international assignments including ASIA-URBs programme of EU, Indo-German (GIZ) programme and most recently as fellow of Urban Knowledge Network Asia (UKNA) Grant of EU.

SESSION 6

| October 2016 | 09:00 h - 11:00 h

(Coordinated by Mr Radu Carciumaru, University of Heidelberg and Ms Sanju Kumari, Freie Universität Berlin)

Under the overarching theme of 'City and Migration', DWIH intends to organize three panels (each panel will consist of four speakers and will be chaired by an expert from either Germany or South Asia), covering two broad categories: Politics and Society. The first category will include such topics as policies, economy, labour migration, security, law and order, skill development, unemployment, political rights and duties (i.e., political integration) etc.; whereas the second will include such topics as education, citizens' participation, inclusion/integration vs gentrification/ghettoization, youth and ageing in urban South Asia, etc.

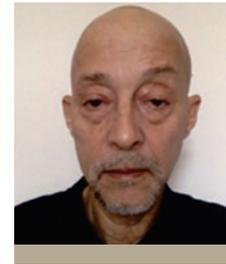
The panels will consist of experts from Germany, India as well as other South Asian countries. The panellists will share their professional expertise, ongoing research and best-case scenarios. Ideally, the panellists will search and detect both similar and different challenges, and will jointly seek mutually beneficial, innovative solutions in solving or managing these challenges and achieving sustainable, inclusive, safe and resilient cities.

Organisation:

The Panel will be organised as a dialogue session. Each speaker will be given max. of 10 mins time to present their topic. This will be followed by a moderated panel discussion of 30 minutes. Afterwards a Q & A session is opened to the audience.

CITIES AND MIGRATION: PERSPECTIVES FROM POLITICS AND ECONOMY

Chair:



Prof. Dr AbdouMaliq Simone

Sociology, Urbanism, Max-Planck Institute for the Study of Religious and Ethnic Diversity, Göttingen

AbdouMaliq Simone is an urbanist with particular interest in emerging forms of collective life across cities of the so-called Global South. He has worked across many different academic, administrative, research, policymaking, advocacy, and organizational contexts in Africa and Asia. Simone is presently Research Professor at the Max Planck Institute for the Study of Religious and Ethnic Diversity, Visiting Professor of Sociology, Goldsmiths College, University of London and Visiting Professor of Urban Studies at the African Centre for Cities, University of Cape Town. Key publications include, *In Whose Image: Political Islam and Urban Practices in Sudan*, University of Chicago Press, 1994, *For the City Yet to Come: Urban Change in Four African Cities*, Duke University Press, 2004, and *City Life from Jakarta to Dakar: Movements at the Crossroads*: Routledge, 2009, *Jakarta: Drawing the City Near*: University of Minnesota Press, 2014, and the forthcoming *City Secrets: polemics for emerging global urbanisms*, Polity.

THE REFUGEE CRISIS AND BEYOND: CHALLENGES TO GERMANY'S IMMIGRATION AND INTEGRATION POLICIES

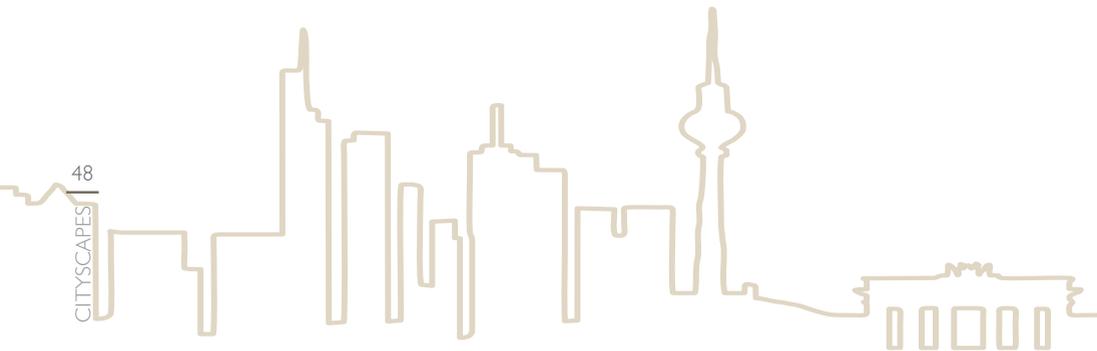


Dr Andreas M. Wüst

External Fellow of the MZES, University of Mannheim

Abstract: Europe and Germany, in particular, has been facing various challenges resulting from an unprecedented number of refugees immigrating in 2015. The talk will reconstruct the circumstances and conditions under which refugees have been admitted. Subsequently, the factors behind German chancellor Merkel's decision to suspend the Dublin Agreement will be discussed. Finally, the impact and policy challenges of the most recent immigration of refugees for Germany will be analyzed.

Andreas M. Wüst has received an M.A. (1996) and a PhD (2002) of the University of Heidelberg. His research focus is political sociology, especially voters, parties, parliamentary candidates and members of parliament. Wüst's special interest is on the population of immigrant-origin on which he has published both nationally and internationally. He has been a researcher and later research fellow of the Volkswagen Foundation at the Mannheim Center for European Social Research (MZES) from 2002 until 2011, and an external fellow of the center MZES since 2011. In 2011, Andreas M. Wüst has joined the state ministry for integration in the state of Baden-Württemberg where he had been unit director for integration monitoring and research. He has then been responsible for refugee admission during the 2015 refugee crisis (September 2015 until April 2016). His publications include: *The Political Representation of Immigrants and Minorities: Voters, Parties and Parliaments in Liberal Democracies*, ed. with Karen Bird and Thomas Saalfeld (London, 2011); with Hajo G. Boomgard "Religion and Party Positions towards Turkish EU Accession," *Comparative European Politics* 10, no. 2 (2012): 180-197; "A lasting impact? On the legislative activities of immigrant-origin parliamentarians in Germany," *The Journal of Legislative Studies* 20, no. 4: 495-515; *Immigration into Politics: Immigrant-origin Candidates and Their Success in the 2013 Bundestag Election*, *German Politics and Society* 32 (3), 1-15; *Incorporation beyond cleavages? Parties, candidates, and Germany's immigrant-origin electorate*, *German Politics* 25 no. 3 (online first).



IMPROVING THE LIVES OF POOR MIGRANTS IN INDIAN CITIES



Dr Rumi Aijaz

Senior fellow, Observer Research Foundation

Abstract: Migration to cities and urban agglomerations is a common phenomenon in India and people will continue to migrate from rural areas, small and medium towns. Varying impacts of this phenomenon are seen. Cities benefit by way of higher GDP growth, whereas migrants find greater access to opportunities. However, rapid deterioration in quality of life, especially of the poor migrant population, is emerging as a major issue.

Rumi Aijaz is senior fellow at the Observer Research Foundation, where he is responsible for the conduct of the Urban Policy Research Programme. His work focuses on building a superior understanding of the urban issues and producing new and correct knowledge for managing urban growth. Through his affiliations with numerous local and global institutions, he is exploring possibilities of how governments at various levels and non-State stakeholders could learn from each other and work towards creating better urban settlements. Some of his current and previous professional engagements include associate membership of the Institute of Town Planners, India (ITPI), visiting faculty at the School of Planning and Architecture (SPA), research staff at the National Institute of Urban Affairs (NIUA), and post-doctoral visiting fellowship at the London School of Economics and Political Science (LSE). He has received master's degrees in Geography (JNU, 1992) and Regional Planning (SPA, 1994), and a Ph.D. in Urban Governance (SPA, 2004). His writings and views have found place in leading journals and the media. He has to his credit two authored books, four edited books, and numerous research articles.

This presentation will begin with providing brief information about the intensity of, and reasons for, migration. India has legislations, policies, and schemes for the welfare of poor (including poor migrants), and hence, the second section will cover these aspects and describe key challenges. The case of three urban sectors, namely livelihood, housing, and education, will be explained to highlight the problems. The final section would offer suggestions on how the poor city migrants can lead a better life.

MEGACITY ECONOMIES IN SOUTH ASIA: RURAL EXODUS, LATE INDUSTRIALIZATION, SMART CITIES AND INFORMAL GOVERNANCE

Abstract: South Asia, the least urbanized region of the world, is also home to some of the largest, fastest growing, but also poorest cities. South Asia is also home to the largest number of people living in poverty and going hungry. Millions of small holders and landless peasants flee the rural areas, driven by miserable living conditions and a lack of perspective. However, South Asia missed the industrial revolution. Manufacturing nowhere in South Asia became the 'leading sector' and provided jobs for 'surplus labour'. Instead, services always have been the prominent sector. In the absence of large industrial employers, (city) governments not only have to provide public services like education, health, local transport, electric power, drinking water, sewerage and waste disposal, but also jobs for a growing number of urbanites. Therefore, the latest programme of the Indian government to retrofit 100 towns into 'smart cities' should be welcome. Albeit, the 'soft state' is better at planning than at implementing. What holds South Asian cities together and guarantees some functioning are 'informal' arrangements that do not lack their own formality, based on the cohesion of groups defined by language, religion, caste, baradari, tribe, descent or region of origin.



Dr Wolfgang-Peter Zingel

Heidelberg University

Wolfgang-Peter Zingel, Associate Member of the South Asia Institute (SAI) of Heidelberg University; studied economics, history and law. Diplom-Volkswirt (M.A. economics), Dr rer. pol. (PhD economics). Joined the SAI in the Department of International Economics in 1971. Worked in the fields of agricultural, applied, development, regional and urban economics with a focus on South Asian countries and SAARC. Representative of the SAI in Pakistan (1980-82) and India (1990-92). As a DAAD-fellow he taught public finance at Himachal Pradesh University, Shimla, in 1989 and economic history at the National Institute of Pakistan Studies (NIPS) of Quaid-i-Azam University, Islamabad, in 2011. Working on food systems of Dhaka within the DFG programme "Megacities-Megachallenge". Visiting Fellow at the Academy of International Studies, Jamia Millia Islamia, New Delhi, 2014-15. Published widely on South Asian economic, social and political affairs, e.g. Creative economy and the death of distance: The end of urbanization? In: M. M. Islam and M. Hossain (eds.): Sustainable Development. Dhaka 2015; Food security in Dhaka (with M. Keck, B. Etzold, H.-G. Bohle). In: F. Kraas et al. (eds.): Megacities. Dordrecht, 2014; Urban Food Security and Health Status of the Poor in Dhaka (with M. Keck, B. Etzold, H.-G. Bohle). In: A. Krämer et al.: Health in Megacities and Urban Areas. Heidelberg. 2011.

BEYOND THE RURAL-URBAN DIVIDE: A TRANSLOCAL PERSPECTIVE ON LABOUR MIGRATION

Abstract: Circulation between rural and urban areas remains a dominant pattern of migration throughout much of the Global South. What can a translocal perspective add to a deeper understanding of urbanization processes in this context? In this short contribution, I offer a translocal perspective as a framework, which enhances a more holistic understanding of livelihoods, belonging and investment decisions of rural-urban migrants in an increasingly mobile and interconnected world, where distinctions of rural and urban increasingly become blurred. Based on insights from South Asia and Africa, where for many city dwellers the rural home continues to feature a prominent point of reference in social and economic life, this contribution raises the question, if translocality provides a meaningful (complementary) perspective to understand processes of urbanization in India and beyond.



Dr Clemens Greiner

Academic Managing Director, Global South Studies Center (GSSC), University of Cologne

Clemens Greiner (clemens.greiner@uni-koeln.de) is the academic coordinator of the Global South Studies Center (GSSC), a Center of Excellence at the University of Cologne (UoC). Before he joined the GSSC, he was a post-doctoral researcher at the Department of Cultural and Social Anthropology at UoC. He was trained in Social and Cultural Anthropology and Geography at the University of Hamburg, where he received his PhD in Anthropology with a multi-sited ethnography on rural-urban migration in Namibia. In his current research, he focuses on agrarian change, the political ecology of resource conflicts, migration and translocality, and the transformation of pastoralism. His regional specialisation is on Eastern and Southern Africa, where he has conducted extensive fieldwork (Namibia, 2005-06 and Kenya, 2010-11).

REVERSE MIGRATION AND CHALLENGES OF INCORPORATION IN THE RURAL HABITAT A CASE STUDY OF MUMBAI

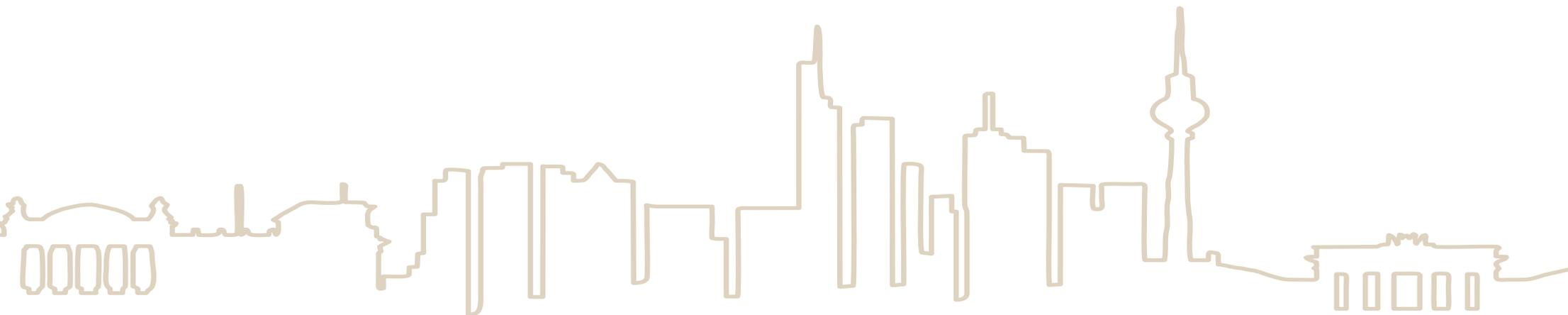


Dr Sumeet Mhaskar

Alexander von Humboldt Research Fellow Centre for Modern Indian Studies, University of Göttingen

Abstract: Rural-urban migration has historically constituted the most important source of labour supply to the urban industry in the Mumbai city. In most cases, migration took place within the networks of caste, kinship and village; these networks became much stronger in the city. Over a period of time strong links emerged between the city and the countryside. The Konkan region, a few districts of Uttar Pradesh, Gujarat, and Andhra Pradesh had similar patterns of migration to Mumbai. From these places, at least one male member of the household migrated to work in Mumbai. Not surprisingly, these were also the places that witnessed Mumbai's ex-millworkers' migrating back in substantial numbers once the textile mills began closing down at the end of twentieth century. An estimated 10,000 ex-millworkers have opted for reverse migration as a survival and coping strategy. The phenomenon of reverse migration, and ex-millworkers' challenges of incorporation into the rural habitat is the subject of investigation of this paper. This paper investigates following questions. Which groups of ex-millworkers opted for reverse migration? What are factors that led ex-millworkers to employ reverse migration as a survival and coping strategy? Did the reverse migrated workforce face any challenges in integrating into the rural milieu? If yes, what were the obstacles to integration? The reverse migrated ex-millworkers were politically mobilised by trade unions on the rehabilitation question. Has this mobilisation brought about any changes for the way reverse migrated ex-millworkers experience the rural milieu? To answer these questions, this chapter focuses on qualitative and quantitative survey data collected between August 2008 and August 2009, and from December 2010 to January 2011, and August 2013 to January 2014. The qualitative data comprises of semi-structured interviews, focus group discussions, and informal discussions conducted with reverse migrated ex-millworkers from western Maharashtra and Konkan region. The quantitative data consists of the survey data of 924 ex-millworkers based in the city of Mumbai, and 113 reverse migrated ex-millworkers.

Dr Sumeet Mhaskar is currently Alexander von Humboldt Research Fellow and he is based at the Centre for Modern Indian Studies (CeMIS), University of Göttingen. He also holds Junior Research Partner position at the Max Planck Institute for the Study of Religious and Ethnic Diversity (MPI-MMG), Göttingen. Previously, he has held Post-Doctoral position with Max Weber Stiftung's Transnational Research Group (TRG) on 'Education and Poverty in Modern India'. He has also held Visiting Scholar positions at the Center for South Asia, Stanford University and MPI-MMG. Sumeet holds a doctorate in Sociology from St. Antony's College, University of Oxford. He has obtained his B.A degree in History and Political Science from University of Mumbai and M.A and M. Phil degrees in Political Science from Jawaharlal Nehru University in New Delhi. Sumeet's research interests include labour studies, political economy, economic sociology, discrimination and exclusion at workplaces, Indian politics, urban transformation and social movements, and education of economically and socially marginalised groups.



SESSION 7

| October 2016 | 11:30 h - 13:30 h

(Coordinated by Mr Radu Carciumaru, University of Heidelberg and Ms Sanju Kumari, Freie Universität Berlin)

CITIES AND MIGRATION: CITIZENS' PARTICIPATION

Chair:



Prof. Dr Frauke Kraas

Geographisches Institut, University of Cologne

Refer to pg 11



Dr Lars Klein

Senior Lecturer, Erasmus Mundus Master's Programme „Euroculture – Society, Politics and Culture in a Global Context“, Georg-August-University Göttingen

“THE ‘REFUGEE CRISIS’ IN EUROPE: RENEGOTIATING BELONGING, CULTURAL INTEGRATION AND PARTICIPATION”

Abstract: Scholars have found many years ago already that the new hybridity in Germany asks too much of many of its citizens. The so-called “refugee crisis” in Europe has led more urgency to questions concerning this new hybridity that have long been on the agenda of public debates: ‘What kind of a society do we want to be’, has been asked, as well as ‘How to cope with diversity?’ Answers and respective strategies differed. In the course of the “refugee crisis”, cities like Goslar make an effort to win immigrants for their community, while in others houses for refugee are attacked. In order to get a better understanding of the underlying dynamics, the proposed paper is interested in how the social reality of a Germany in this context is created in the discursive interplay of “old” (traditional, familiar, known) and “new” (unknown, unprecedented).

Lars Klein is Senior Lecturer in the Erasmus Mundus MA ‘Euroculture – Society, Politics and Culture in a Global Context’ at Georg-August-University Göttingen, Germany. He holds a M.A. in North American Studies and Philosophy at the Freie Universität Berlin and a PhD in Modern and Contemporary History from Göttingen University. Visiting scholarships at the BMW Centre for German and European Studies at Georgetown University, IUPUI Indianapolis, Rijksuniversiteit Groningen and the University of Pune. His research interests include European identity, memory and citizenship, generational theories, as well as war and war reporting in the 20th century. Selected publications: ‘Teil eines kosmopolitischen Projektes? Mögliche Wege, einer “europäischen Identität” zu entkommen’ in M. Oberle (ed.), Die Europäische Union erfolgreich vermitteln. Perspektiven der politischen EU-Bildung heute. Wiesbaden: Springer VS, 2015, pp. 27-37; with M. Tamcke (eds.), Imagining Europe: Memory, Visions, and Counter-Narratives, Göttingen: Göttingen University Press, 2015; Die ‘Vietnam-Generation’ der Kriegsberichtersteratter. Ein amerikanischer Mythos zwischen Vietnam und Irak, Göttingen: Wallstein, 2011.

ART AS CRITICAL INTERVENTION? MAPPING THE 'OTHER' WORLD CLASS CITY

Abstract: Cultural productions like art are a good lens on the ways in which people make and engage with spatial and changing environments and imaginaries. Cities have become challenging arenas for the study of shifting art worlds and productions, for instance, when they move from the gallery space into the public realm of the street, squares, barren lands, narrow alleys - under particular conditions, and in a variety of ways. Public art in cities in the Global South pose interesting questions about new topographies of social spatialisation, the role of cultural heritage, natural resources, and social diversity. Several such initiatives in Delhi have surfaced in the new millennium, evolving around civil participation and access to the city, especially in the context of urban changes in light of economic liberalisation.



Prof. Dr Christiane Brosius

HCTS Professor of Visual and Media Anthropology Karl Jaspers Centre for Transcultural Studies
Speaker, Research Area B "Public Spheres", Cluster "Asia and Europe" Karl Jaspers Centre for Advanced Transcultural Studies

Professor Christiane Brosius' research interests are in urban anthropology, diaspora studies, visual and media anthropology. She coordinates a research project entitled "Creating the 'New' Asian Woman. Entanglements of Urban Space, Cultural Encounters and Gendered Identities in Shanghai and Delhi" funded by HERA: Humanities in the European Research Area, a project on 'Rethinking Art in a Transcultural Context' and another one on Aging in a transcultural perspective, together with colleagues from Indology and Gerontology. In 1996, Sumathi Ramaswamy, Yousuf Saeed and Prof. Brosius founded "TasveerGhar/ House of Pictures: A Digital Network of South Asian Popular Visual Culture" (www.tasveerghar.net) and fostered a pilot project for the Digital Humanities initiative under our Heidelberg Research Area (Priya Paul Collection, Visual Pilgrim). Brosius is writing a book on Romantic love, media and urban youth cultures in India and conducts research on contemporary art, public space and transculturation in India and Nepal. She has initiated the Forum Urban Spaces, coordinated by Roberta Mandoki and collaboratively worked in "'Mobile Spaces. Urban everyday practices in transcultural perspective" with urban geographer Prof. Dr Ulrike Gerhard. Currently, she is a fellow of the Marsilius-Kolleg at Heidelberg University where she will continue collaborations with Gerhard on comparative urbanisms in the Global South and North.



Prof. Dr Arunava Dasgupta

Head-in-charge, Department of Urban Design
School of Planning and Architecture, New Delhi

INCLUSIVE URBAN DESIGN FOR A FUTURE INDIAN CITY

Abstract: 'Smart Cities would not be inclusive'...this is one of the most common anxieties that seems to be reverberating across the country where the recently unveiled Smart City Mission, as a panacea for all that is plaguing our cities today, has been put into hyper-action. Among all 'smart' attributes that historic Indian cities may stake claim to, including that of compactness, heterogeneity, climate responsiveness, robustness, etc, what the Indian city has surely not been, is being inclusive. Clearly, through the last seven decades after Independence, spatial planning mechanisms using borrowed land-use and resource allocation models have not been found effective enough in bringing about required cohesiveness in a complex, diverse society like ours that could allow at once, the recognition and articulation of difference while addressing at the other, multiple demands and aspirations of divergent and often, contesting claims on city spaces. How can the future city be more inclusive than that of the present? If smart technologies had an answer, the world today, at least where such technological prowess exists, would have shown signs of being together in more ways than one. This presentation dwells on the human interface that may be still of consequence for promoting inclusivity and uses co-design and collective engagement as a way forward to re-imagine our approach in deciding on the future of our urban environments.

Arunava Dasgupta is an urban designer and architect, presently heading the Department of Urban Design, School of Planning and Architecture, New Delhi. As founder member and former National Secretary of the Institute of Urban Designers – India, he is actively promoting the idea of holistic urban design proposals across the country. Arunava has been involved in multiple projects at urban scale for a range of Indian cities as adviser and consultant to various state and municipal government agencies and is a member of the Board of Studies in a number of architectural and urban design programs in our country. He has made presentations and lectured extensively in India and abroad including Germany, Spain, Switzerland, China, South Korea and Sri Lanka on issues of sustainable habitats, heritage and regeneration, city futures and educational paradigms. Within the academic arena, Arunava spearheads experimental design studio engagements that nurture exploration by students as citizen designers as well as community-centric applied research labs ranging from complex metropolitan conditions to changing rural habitations in the Himalayas

DOES URBAN PROXIMITY TRANSFORM THE GENDER DIVISION OF WORK? THE INDIAN EXPERIENCE

Abstract: The urbanization experience in India in the last two and a half decade has been mixed. On the one hand, it has been one of the central engines of growth in the country, but on the other, the rate at which it has generated employment is far from satisfactory. The overall work participation of women has fallen significantly over the past two and half decades in the country, and though there are some evidences of urban proximity bringing about a few positive changes, a previous work by the author points towards the multiple vulnerabilities that women face in the peri-urban regions, where rural-urban linkages are the strongest. Typically, the gender division of work is very sharp in the rural areas, though literature suggests that these are permeated in India in the urban areas too in less visible, but no less significant ways. This paper would seek to explore whether the gender division of work as well as the remuneration differentials have impacted women favourably as a consequence of the process of urbanization in neo-liberal India, where market opportunities are supposed to have expanded. The paper compares the peri-urban spaces with urban spaces on the one hand and the rural interiors on the other and takes up the six largest metropolitan cities of India as a case study. The two specific issues that the paper would deal with is 1) whether the spatial division of labour gets muted as one traverses from the rural interiors to the urban core and 2) whether the women in the same occupation, controlling for seniority and education, are more likely to earn wages comparable to men as an effect of urbanization.

SOUTH ASIAN CITIES IN FLUX: EXPLORING KATHMANDU'S AND DELHI'S 'ELDERSCAPES'

Abstract: From a global perspective, urbanization, migration and population ageing constitute the major societal dynamics of the 21st century (Phillipson 2010, Smith 2009). Albeit global initiatives like the WHO's concept of 'age-friendly' cities, there is a strong need to locally rethink urban design and policies in regard to these trends. This paper revisits the urban spaces of the rapidly urbanizing Kathmandu Valley from an age-sensitive angle where transcultural concepts such as 'active ageing' are locally negotiated. In this context, a comparative look to Delhi's spaces for older persons offers a fruitful perspective for understanding broader developments related to older age in urban South Asia. First, the paper scrutinizes emerging institutional 'elderscapes' (Katz 2009) for Nepal's and India's middle classes, e.g. new forms of day-care centres or private residential nursing homes. These 'elderscapes' represent novel spaces designed for or initiated by senior citizens themselves, and can be understood as a consequence of major shifts in family life. Migration and mobility of family members play a decisive role for the formation of these spaces since they crucially impact care practices. Second, this paper highlights how older individuals from the middle class adapt to these dynamics and engage with a rapidly expanding city. Through the lens of 'ageing in place' (Wiles et al. 2012), it explores how older persons position themselves in such an environment in flux, how they themselves understand and (re)define 'active ageing'. Eventually, the paper illustrates their agency in creating spaces according to their requirements, what Kruse (2013) calls 'Weltgestaltung', the process of shaping one's lifeworld.



Prof. Dr Sucharita Sen

Centre for the Study of Regional Development
Jawaharlal Nehru University, New Delhi

Sucharita Sen is a Professor in the Centre for the Study of Regional Development, School of Social Sciences, Jawaharlal Nehru University. She was a Nehru-Fulbright Fellow in 2009-10 and was associated with Ohio State University, Columbus, Ohio, USA during this period. She is an economic geographer and has published in areas of land resources, its acquisition and effect of dispossession on rural livelihoods, rural employment, on problematising the impact of watershed development programmes as a means for sustaining rural livelihoods. She is currently working on one major project other than the 'Gender Atlas' funded by the Department of Science and Technology (DST), which is the Inter University Consortium on Cryosphere and Climate Change (IUCCCC) project of 'Himalayan Cryosphere: Science and Society', also funded by the DST. Her recent engagement and publications are on rural labour and gender.



Ms Roberta Mandoki

PhD Scholar, Cluster of Excellence, Heidelberg,
Head, Project Elderscapes, Institut für Ethnologie

Roberta Mandoki studied Cultural and Social Anthropology, Political Science of South Asia and Modern South Asian Languages and Literatures at Ruprecht-Karls-University Heidelberg, Germany, and Delhi University, India. She graduated with a Magister degree in 2012. For her M.A. thesis "I am Tibetan' – Concepts of Cultural Identity among Tibetan Youth in India", Roberta conducted a short ethnographic field study among the Tibetan diaspora in Dharamsala, North India. Roberta has joined the Cluster in April 2013 as a member of the interdisciplinary research project "Perspectives on Ageing in a Transcultural Context" (B19). Her PhD project "Ageing in Urban Nepal – Perspectives of Senior Citizens on Migration, Urbanization and Social Change" (working title) looks at recent dynamics in the Kathmandu Valley regarding suburbanization and migrant mobility from the perspective of older middle-class people, and seeks to explain how they come to terms and engage with their changing social and spatial environments. From April 2016 onward, Roberta coordinates the Forum 'Urban Spaces' at the Chair of Visual and Media Anthropology.

SESSION 8

| October 2016 | 15:00 h - 17:00 h

(Coordinated by Dr Amol Kulkarni, National Chemical Laboratory, Pune)

The cities are expanding at an exponential rate and it is expected that in another 15 years, half of the world's population will reside in cities. Thus, expanding cities will bring a lot more job opportunities to as in general the cost of living as well as ability to meet the economic needs will continue to rise. In such a situation it is necessary to map the human skills in such large populations. Typically, the human skills relevant to the functioning of a city that we knew about two decades ago included, doctors, engineers, office bearers, teachers, plumbers, drivers, etc. Over last few years the impact of digital revolution has changed the lifestyles of individuals significantly. The same professions mentioned above have changed their approach and a lot more new professions have got generated. Further to this, in another decade, the avenues of new skills have changed, newer skills will be required with the implementation of Industry 4.0. The nature of education, approach, methods will change from time to time and it is going to be a tough challenge for the head hunters to find the necessary skill-set to run new generation industries that need unconventional skills. This specific Session will aim at taking a look at some of the following issues: (i) present status of the statistics of skills in India, (ii) what are the future requirements of skills and how to meet them in a systematic manner, (iii) who will do this skill development, (iv) what should be the short term and long term policies, (v) will there be a reverse migration from cities to smaller towns and further to have a uniform population distribution without affecting the lifestyle, etc.

PANEL DISCUSSION: MAPPING HUMAN SKILLS



Dr Amol A. Kulkarni

National Chemical Laboratory, Pune

Amol is a Scientist in the Chemical Engineering & Process Development Division at the National Chemical Laboratory (NCL), Pune. He is a chemical engineer by training. He did his post doctorate at the MPI-Magdeburg (Germany) as a Humboldt Fellow and was an IUSSTF Research Fellow at Massachusetts Institute of Technology (MIT), USA. He has been awarded with Swarnajayanti Fellowship of Govt. of India (2015), OPPI Young Scientist Award (2015), Scientist of the Year Award of NCL (2014), CSIR Young Scientist Award (2011), Young Associate of Indian Academy of Sciences (2011), INSA Medal for Young Scientists (2009), Young Engineer Award by the Indian National Academy of Engineering (2009). He has published 62 papers in international peer reviewed journals and filed over 15 patents. He is also the Regional Editor for Journal of Flow Chemistry and on advisory board of Reaction Chemistry & Engineering. He represents the Alexander von Humboldt Foundation in India as Humboldt Ambassador Scientist since September 2012.



Mr Wolfgang Leidig

Director Private Sector Development, GIZ

Wolfgang Leidig, presently Programme Director Private Sector at GIZ India, has worked within the German administration as well as in international cooperation. As Permanent Secretary of the Ministry of Finance and Economics of Baden-Wuerttemberg small and medium sized enterprises (SME) were a focus of his attention. He has worked on issues of technology policy for more than 10 years in the German Federal Ministry of Research and Technology as well as Sponsored Research Assistant at MIT, Cambridge USA. Recently he has worked with GIZ and the East African Community (EAC) on customs union and a single market in East Africa. Before that he was Lord Mayor of the City of SchwäbischGmünd, Germany. He holds a degree in Public Administration.





Mr Ashutosh Pratap Singh

IASC (Automation) Sector Skill Council

Deeply committed to youth skills and jobs with a focus on impact, efficiency and results. I have 12 years of on ground & strategic experience, having worked at grassroots with a Corporate, non-profit foundation, a parliamentarian, JPAL, a NSDC training partner and a Sector Skill Council. I have worked at the intersection of business, government and society, syncing them for shared goals. I like people centric, bottoms up, data driven approaches to problems with effective use of technology and innovation. I did my B.Tech in Computer Science (Madan Mohan Malaviya University of Technology and MBA (Strategy & Finance) from Indian School of Business (ISB) Hyderabad. I also did an exchange program for Public Policy at The Fletcher School, Boston with cross-registered classes at Harvard Kennedy School.



Ms Sonia Prashar

Deputy Director General, IGCC

Graduate in Science and Education (B.Sc. and B.Ed). Also Graduate in German Language.

Working with the Indo - German Chamber of Commerce (IGCC) for nearly 20 years. Present position as the Deputy Director General stationed in the Delhi office of IGCC since 1996. Have been responsible for Chamber's very active role at Indian Trade shows in all regions, promoting "Trade Fairs" as an effective tool for marketing, while looking out on new possibilities and making a judicious selection in the changing market.

Represented the Chamber at various national / international events. Effectively promoted collaborations and constructive communication between Indian and German companies to develop effective partnership with each other. Developed successful networking channels for the access, sharing and dissemination of information with leading Indian & German Industry Associations / Government Bodies.

Worked on special deputation at the Chamber's liaison office in Duesseldorf, Germany in 1999.

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