HEALTHY CITIES 2019:

URBANISATION, INFRASTRUCTURES & EVERYDAY LIFE

BOOK OF ABSTRACTS

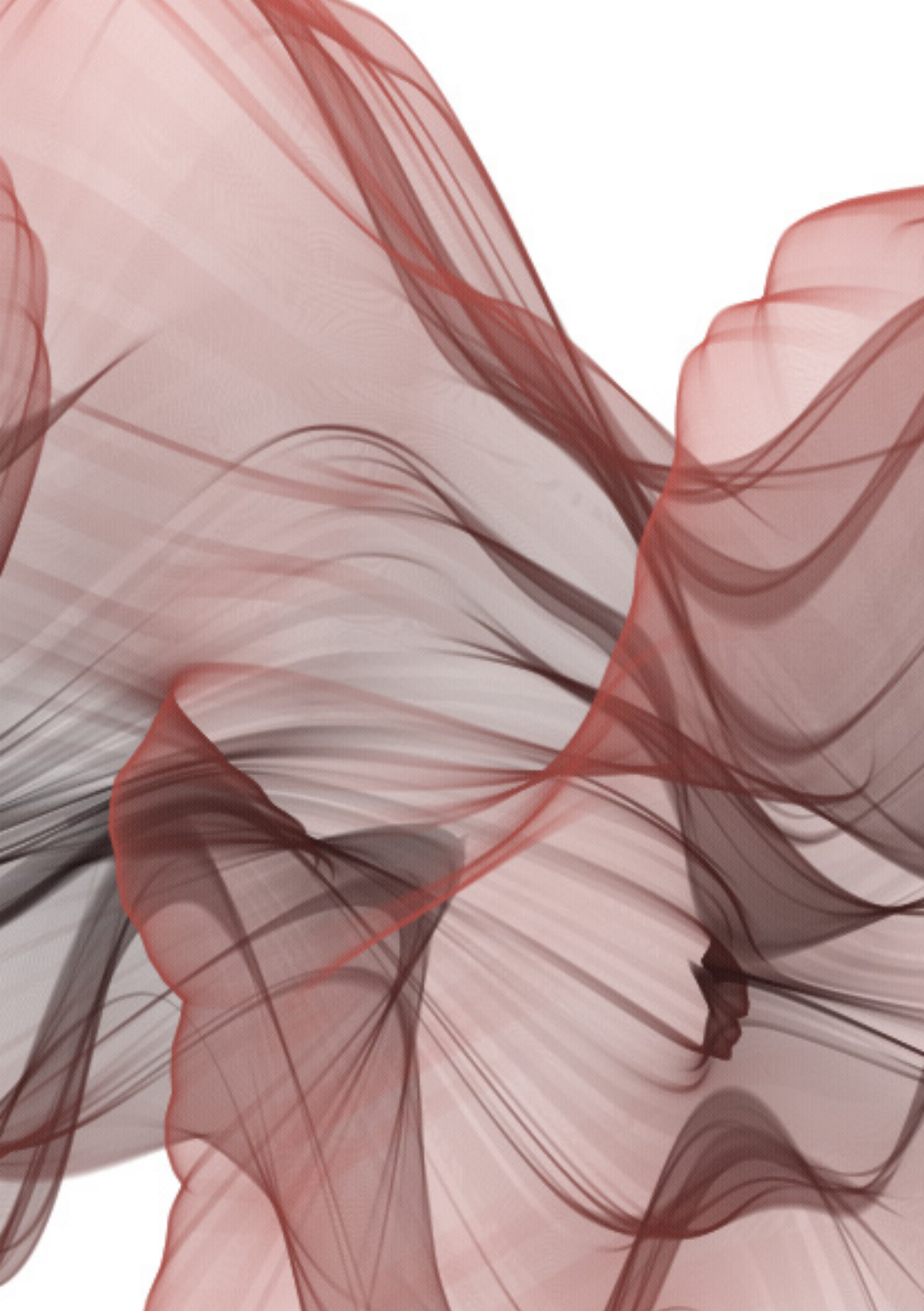HEALTHY CITIES 2019:

URBANISATION, INFRASTRUCTURES & EVERYDAY LIFE

1-3 MAY 2019, UNIVERSITY OF MANCHESTER, UK

WELCOME MESSAGE

Welcome to Manchester and the Healthy Cities 2019 conference!

To our all of our UK and international guests – it is an absolute pleasure to host you in Manchester!

We are a diverse and international set of participants, with the conference attracting scholars from over 23 countries, including Australia, Austria, Bangladesh, Belgium, Brazil, Canada, China, Germany, Hungary, India, Iran, Iraq, Israel, Japan, Malaysia, Mongolia, Philippines, Singapore, South Korea, Sweden, Switzerland, the UK and USA.

The global and disciplinary diversity of the Healthy Cities conference participants is a testament to how necessary global, comparative and inter/transdisciplinary research and policy approaches are to understanding the intersections between infrastructures and everyday lives in the context of rapid urban socio-environmental transformations.

We are excited to have this three-day opportunity to bring together some of the most creative minds working in these spaces. We would like to extend a particular welcome to all our PhD and ECR scholars who are participating in the event. Our hope was that the conference sparks supportive collaboration and deep exchange across national and disciplinary boundaries, as well as across career stages. Our conference organising team has tried to support and encourage deep collaborative and interdisciplinary exchange through our PhD and ECR bursaries, the ECR research proposals session, morning networking coffee and the provision of child care.
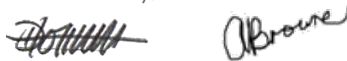
We would like to take this opportunity to acknowledge the generous financial and administrative support we have received from the University of Manchester (Hallsworth Conference Fund; Confucius Institute; Sustainable Consumption Institute); Complexity Planning and Urbanism (CPU) at Manchester Metropolitan University; and Beijing Normal University.

We also offer sincere thanks to the ECR committee, Coordination Team, Complexity Planning and Urbanism Team and Scientific Advisory Board and all the staff, students and volunteers who have helped us bring the conference together. A very special thanks to CPU's Dr May Bassanino!

Finally, we hope our guests also take some time either before or after the conference to explore the City of Manchester. Some favourite places in the city include the Whitworth Gallery, Science & Industry Museum and People's History Museum. If it's not raining, or you aren't afraid of getting wet, you can easily catch a train and head to the hills!

Yours Sincerely,

Dr Deljana Iossifova & Dr Alison Browne,
University of Manchester

CONFERENCE THEMES

Countries undergoing rapid urban transformations experience shifts in various infrastructural systems. However, there are explicit tensions between the apparent need to develop national infrastructures and the possible implications that this may carry for human health, social relations and environmental sustainability. For instance, unequal access to urban infrastructure – from sanitation to communication – can lead to stratified health outcomes. Differing everyday practices associated with competing coexisting infrastructures can result in exclusion and isolation of already marginalised groups. Resource-intensive and polluting modern infrastructures can trigger the degradation and loss of ecosystems and their services. This conference has contributions concerned with:

• the design, planning, implementation, maintenance and use of urban infrastructures (including, but not limited to, sanitation, transportation, health care and education);

• the social meanings underpinning infrastructural systems and their processes;

• the wider environmental effects of urban infrastructures; and

• the human well-being outcomes of urban infrastructural transitions (public health in particular)

We will engage with systems approaches and perspectives that place everyday life at the centre and take into account multiple scales (from the human body to the global climate), critical resources and human social systems to understand and address infrastructure challenges.

The conference will explore research, policy and praxis on all aspects of infrastructures, their development and outcomes, including – but not limited to – the following themes:

• Urban infrastructures and the Sustainable Development Goals (SDGs): e.g., water, sanitation, waste, or related systems across varying spatial scales

• Uses and experiences: everyday practices, individual and group experiences, well-being outcomes

• Design and planning: circulating knowledges, policy mobilities, development paradigms, cultural bias, global/local relationships, politics and power

• Implementation and maintenance: finance, resources, models

• Transdisciplinarity: conceptual frameworks, research design and methodologies

• Perspectives on urban socio-technical relations which exceed, or bring together, individual infrastructural sectors and systems (transportation, water, etc.)

• East Asian and comparative case studies: historic and contemporary accounts

• Activist and community praxis, including decolonising approaches to infrastructural development, urban change, and resource/waste management

• Education and dissemination: strategies, tactics and lessons learned

KEYNOTE SPEAKERS

DR MANISHA ANANTHARAMAN, SAINT MARY'S COLLEGE OF CALIFORNIA, USA

Manisha Anantharaman is an Assistant Professor of Justice, Community and Leadership at Saint Mary's College of California, USA, where is also affiliated with the Global and Regional Studies and Earth and Environmental Science programs. She is currently serving as the Alba Viotto Invited Professor in Sociology at the University of Geneva. A multidisciplinary problem-driven social scientist, she studies the potential for, pathways to, and politics of socially-just urban sustainability transitions, applying participatory and ethnographic methodologies. Her commitment to critical sustainability research emerges from and informs her community-engaged research praxis, enacted primarily through her work with Hasirudala, a waste-picker cooperative in Bangalore, India.

Manisha's research contributes to scholarship in sustainability studies by examining the ways in which sustainability initiatives and environmental movements reinforce or dismantle interlocking systems of oppression. Drawing on her research in India, her recent publications have argued that sustainability researchers should explicitly examine questions of identity, recognition, inclusion and representation, a gap in this literature that frequently frames sustainability as

purely a technical, managerial and behavioural challenge. Her work was recognized with an Early Career Scholar Award from the Sustainable Consumption Research and Action Initiative in 2016.

Manisha is a founding member of the Global Research Forum for Sustainable Consumption and Production. Her publications include an upcoming edited volume on The Circular Economy and the Global South (Routledge, UK). Her current research project, funded by the Swiss Network of International Studies, examines the role of green public spaces in supporting sustainable and inclusive well-being in Asian cities.

PROFESSOR EMERITA CLARA GREED, UNIVERSITY OF THE WEST ENGLAND, BRISTOL, UNITED KINGDOM

Clara Greed is Professor Emerita of inclusive urban planning at the University of the West of England, Bristol. She is now semi-retired but is still active in research, writing and campaigning. She is a member of the Royal Town Planning Institute and other built environment professional bodies.

Greed's activities are focused upon the built environment, architecture, planning, urban

design and urban social issues. She has become infamous for her research and publications on the importance of public toilet provision within the context of urban design, women and planning issues and the social aspects of planning. She has written and edited over 12 books on urban planning, surveying and urban social issues, many journal articles, newspaper items and toilet documentaries. She has often been invited to be a guest speaker at international conferences, especially in China and other parts of East Asia, most recently in Xi'an.

Greed is a member of the four British Standards Committees BS6465, Parts 1-IV, on Sanitary Installations. These set the government requirements for the levels of provision, design, location and technical details. Currently, she is investigating the effects upon women of proposals to desegregate public toilets in the UK and the creation of Gender Neutral Toilets.

PROFESSOR MICHAEL KEITH, PEAK URBAN, UNIVERSITY OF OXFORD, UNITED KINGDOM

Michael Keith is Director of the Centre on Migration, Policy and Society at the (COMPAS) at the University of Oxford, co-ordinator of Urban Transformations (The ESRC portfolio of investments and research on cities), co-Director of the University of Oxford Future of Cities network and the Director of the PEAK Urban Research programme. His research focuses on migration related processes of urban change. His most recent work is the monograph China Constructing Capitalism: Economic Life and

Urban Change (2014). His next will be a book for Cambridge University Press, entitled: Power, Identity and Representation: Race, Governance and Mobilisation in British Society (with Les Back and John Solomos). He has experience outside the academy working in the community and voluntary sector and as a politician for twenty years in the east end of London, working initially in organisations focusing on racism and the criminal justice system and more recently as the co-founder and chair of the Rich Mix Cultural Foundation, a major cross cultural arts centre in Bethnal Green.

PROFESSOR DIANA MITLIN, UNIVERSITY OF MANCHESTER, UNITED KINGDOM

Professor Diana Mitlin is Professor of Global Urbanism in the Global Development Institute at the University of Manchester and also Principal Researcher at the International Institute for Environment and Development. Since 2015, Diana has been the Managing Director of the Global Development Institute.

Diana completed her first degree in 1983 at the University of Manchester with joint honours in economics and sociology. After working as a public sector economist with the Forestry Commission (1983-6) and the Monopolies and Mergers Commission (1986-8), Diana completed a Masters in Economics at Birkbeck College (University of London). Diana then joined the International Institute for Environment and Development (IIED) in London in 1989 to work in a multi-disciplinary team working

within the Human Settlements Programme. Development has remained the major focus of Diana's work since that date with a particular interest in urban inequality and poverty in towns and cities in the Global South. In 1996, Diana worked part-time for the London School of Economics to set up a Masters in NGO Management. In 2001, after completing her PhD at the London School of Economics, Diana worked part-time at the Institute for Development Policy and Management (IDPM, now GDI) at the University of Manchester, whilst continuing with a senior research post at IIED. In 2012, Diana became a Professor at the University and Director of the Global Urban Research Centre (GURC). The work of this Centre has now been taken up by the Manchester Urban Institute.

Diana's work focuses on urban poverty and inequality including urban poverty reduction programmes and the contribution of collective action by low income and otherwise disadvantaged groups. Diana has a particular research focus on issues of urban basic services, tenure and housing, and studies urban social movements and their strategies of confrontation and collaboration with state agencies. For the last 20 years, Diana has worked closely with Shack/Slum Dwellers International, a trans-national network of homeless and landless people's federations and support NGOs; and with the Asian Coalition for Housing Rights, a network of civil society groups focussing on urban poverty and exclusion. This collaboration enables her to learn from the experiences of grassroots organisations in addressing social injustice, poverty and inequality.

PROFESSOR NIKOLAS ROSE, KING'S COLLEGE LONDON, UNITED KINGDOM

Prof Nikolas Rose is Professor of Sociology in the Department of Global Health and Social Medicine at King's College London. He originally trained as a biologist before switching to psychology and then to sociology. After ten years at Goldsmiths College, where he was Head of Sociology and Pro-Warden for Research, he joined the London School of Economics in 2002 and was Convenor of the Department of Sociology from 2002 to 2006 and Martin White Professor of Sociology. He founded the BIOS Centre for the Study of Bioscience, Biomedicine, Biotechnology and Society at LSE, and was its Director since its inception in 2003. He joined King's in January 2012 to establish the new Department which aims to bring the approaches of social medicine to bear on contemporary biomedical research and clinical practice, especially in the world's poorest regions.

Nikolas Rose has published widely on the social and political history of the human sciences, on the genealogy of subjectivity, on the history of empirical thought in sociology, on law and criminology, and on changing rationalities and techniques of political power. For the last decade, his work has focussed on the conceptual, social and political dimensions of the contemporary life sciences and biomedicine. His current research concerns biological and genetic psychiatry and behavioural neuroscience. His study of the social implications of the rise of the new brain sciences, written with Joelle Abi-Rached, was published by Princeton University Press in 2012 as Neuro: The New Brain Sciences and the Management of the Mind. Other recent books include Powers of Freedom: Reframing Political Thought (Cambridge University Press, 1999), The Politics of Life Itself: Biomedicine, Power, and Subjectivity in the Twenty-First Century (Princeton University Press, 2006) and (with Peter Miller) Governing the Present. His long overdue book Our Psychiatric Future: The politics of mental health will be published by

Polity in October 2018. He is currently working on a book on urban mental life and mental health, with Des Fitzgerald, to be published as Vital City: metropolitan life, mental health and the urban brain Princeton University Press, 2019.

Nikolas Rose is a longstanding member of the Editorial Board of Economy and Society and co-editor of BioSocieties: an interdisciplinary journal for social studies of the life sciences. He has worked closely with several advisory groups including the Nuffield Council on Bioethics, the Royal Society and the Academy of Medical Sciences. He is Chair of the European Neuroscience and Society Network, a unique interdisciplinary collaboration of social scientists, philosophers, lawyers, neuroscientists and psychiatrists.

a co-founder of the Urban Health Research Network for Latin America and the Caribbean (LAC-Urban Health) and a commissioner on the Tsinghua-Lancet Commission for Healthy Cities in China and continues to work closely with the Future Earth Urban and Health Knowledge-Action-Networks (KANs). As a research fellow at the UN University International Institute for Global Health (2014-18), he led an urban health research focus, convening the global urban health community at meetings like the 9th World Urban Forum and Habitat III. Dr. Siri was previously a researcher at the International Institute for Applied Systems Analysis (IIASA), an associate editor for the PAHO Journal, and a consultant for the International Council for Science (ICSU), helping to plan and develop their global interdisciplinary programme on Systems Science for Urban Health.

HIGHLIGHT TALK

DR JOSE SIRI, WELLCOME TRUST, UNITED KINGDOM

As the Senior Science Lead for Cities, Urbanization and Health for the Wellcome Trust's Our Planet Our Health Programme, Dr. José Siri helps manage the programme's portfolio of urban research and build strategic engagement to advance the field of planetary health. Dr. Siri has worked to develop and apply systems approaches to urban health, focusing on leveraging science for healthy development, developing simple systems tools to catalyze better decision-making, and improving understanding of complex challenges. He was

PROGRAMME OVERVIEW

	RENOLDS BUILDING	FRIENDS' MEETING HOUSE			
	01-MAY	02-MAY		03-MAY	
09:00-10.30	ARRIVAL	S01 (F12)	S02 (F13)	S09 (F12)	S10 (F13)
10:30-10:45		COFFEE BREAK		COFFEE BREAK	
10:45-12:15		S03 (F12)	S04 (F13)	S11 (F12)	S12 (F13)
12:15-13:30	REGISTRATION (LOBBY RENOLD BUILDING)	LUNCH		LUNCH	
13:30-14:00		S05 (F12)	S06 (F13)	S13 (F12)	S14 (F13)
14:00- 15.00	OPENING & KEYNOTES PROF ROSE AND DR ANANTHARAMAN (E7)				
15:00-15:15		COFFEE BREAK		COFFEE BREAK	
15:15- 15:45		S07 (F12)	S08 (F13)	S15 (F12)	S16 (F13)
15:45- 16:00	COFFEE BREAK				
16:00- 16:45	KEYNOTES PROF DIANA MITLIN AND PROF EM CLARA GREED (E7)				
16:45-17:00		COFFEE BREAK		CLOSING (F12/13)	
17:00-17:45		KEYNOTE PROF MICHAEL KEITH AND HIGHLIGHT DR JOSE SIRI (MAIN HALL)		DEPARTURE	
17:45-18:05	RECEPTION (FOYER)				
18:05-19:00		ROUNDTABLE DISCUSSION (MAIN HALL)			
19:00-19:15	WALK TO DINNER	FREE DISPOSAL			
19:15-21:15	CONFERENCE DINNER (SAMSI)				

DAY 1 – 1 MAY 2019

REGISTRATION

ECOLOGIES OF URBAN MENTAL HEALTH

Professor Nikolas Rose, Department of Global Health and Social Medicine, King's College London

How should we understand the evidence concerning the distribution of mental health problems in urban environments? In this paper, I argue that we need to be much more specific about exactly what in 'the experience of living in cities' shapes mental health and mental distress. I suggest that we build upon 'ecosocial theory' (Krieger) by developing some basic ecological concepts, such as that of the 'ecological niche' through work on the Umwelt (von Uxküll), affordances (Gibson), cognitive ecology (Smith), mental mapping (Lynch, Milgram), extended bodies and brains (Clarke), atmospheres and exposomes to think of niches as dynamic biosocial pathways navigated in various modes of urban life. Connecting such an approach with insights from neurodevelopment, notably stress and inflammation pathways and their modes of action, we may come closer to giving some specificity to the now clichéd question of 'how adversity gets under the skin'.

sustainable consumption: a research agenda' (Anantharaman, 2018). In this paper, Anantharaman draws on research examining sustainable consumption in India to present an argument for a new direction in sustainable consumption research that prioritizes a critical perspective and is grounded in critical social theory. Anantharaman argues that sustainable consumption researchers need to look at relational and structural power within sustainable consumption efforts to see how these efforts challenge or reinforce existing patterns of oppression and marginalization and outline a 'critical sustainable consumption' disposition to permeate sustainable consumption study and practice. The talk will expand on the paper by problematizing the promise of (neo)-liberal inclusion (following theorists of decoloniality, such as Maldonado-Torres 2011 and Mignolo 2007) as a mechanism for just urban transitions. Drawing on field research in Bangalore, Anantharaman will demonstrate how and why simply including structurally-oppressed groups into existing sustainability initiatives that operate under the logics of efficiency, responsibilization and managerialism will not necessarily produce just transitions.

COFFEE

THE POLITICS OF INCLUSION IN URBAN SUSTAINABILITY TRANSITIONS: COUNTER-STORIES FROM BANGALORE, INDIA

Manisha Anantharaman, Saint Mary's College of CA/ Université de Geneve

The talk will cover key arguments from a recently published paper 'Critical

THE PERVASIVE LEGACY OF NEO-LIBERALISM IN WATER AND SANITATION: AND WHAT WE CAN DO IT CHANGE IT

Professor Diana Mitlin, University of Manchester, United Kingdom

This paper argues that the shift away from the privatization of water is misleading in terms of

indicating a shift away from neoliberalism. The emphasis on the market has been embedded into ongoing practices, regardless of the formal ownership or management of water and sanitation services. Language obfuscates the extent of neoliberal practices, and has contributed to a shifting away of the sector from addressing the water needs of the lowest income and most disadvantaged citizens. Taken-for-grant assumptions are equipping the sector to behave like a market, even when that is neither the stated objectives nor the desired culture of the provider of water and sanitation. I discuss this through three themes. First, the extent to which low-cost has become conflated with affordability, producing water services that are too expensive to ensure that people can access the amount required for their daily needs. Second, the lack of recognition of the costs of intermittent water on health, well-being and livelihoods, and a response to water scarcity that is driven by the need to recover non-revenue water. Third, the orientation, to technology and individualised responses to the urban water and sanitation crisis and a reluctance to recognise that these services have to be considered as public goods – in the broader use of the term – in an urban context.

PLANNING FOR EVERYDAY LIFE: PUBLIC TOILETS – THE MISSING LINK

Professor Em Clara Greed, University of the West England, Bristol, United Kingdom

In this presentation, it is argued that public toilets policy is a town planning issue, crucial to creating sustainable, efficient, accessible and equitable cities. Ways of integrating toilet provision into city-wide strategic planning policy and into local urban design are discussed. The paper first reviews global sanitation issues with particular reference to the needs of girls and women in respect of toilet provision, and such practical issues as menstruation, pregnancy, incontinence and disability. Over two billion

people lack adequate toilet provision and women are particularly badly affected. 50% of the world's population is urbanised and of those, over 50% of urban dwellers live in shanty towns and unplanned settlements, most of which are without adequate sanitation at home, at work and in schools. 50% of school girls in Africa leave school when menstruation starts because of lack of school toilets thus undermining education and development goals. Then comparisons are made with the public toilet situation in the West with particular reference to inadequate provision in the United Kingdom, and in the East with reference to the revolutionary struggle for better toilet provision that has been taking place in China. Historically women have been given fewer facilities than men, but arguably their need is greater. Lack of toilets has implications for health and wellbeing and restricts the mobility of the elderly, those with disabilities and children, and undermines sustainability, transportation, and inclusive urban design and regeneration policies. In conclusion mention is made of new toilet issues that are emerging such as the move towards gender neutral toilets, and male/female toilet desegregation, and the impact upon women who have far less provision than men, and still have to queue.

RECEPTION & DINNER

DAY 2 – 2 MAY 2019

S01 (ROOM F12) CAREER SKILLS FOR EARLY CAREER RESEARCHERS (ECRS)

Host: Dr Alexandros Gasparatos, University of Tokyo, Japan

Alexandros Gasparatos is Associate Professor of Sustainability Science at the Integrated Research System for Sustainability Science (IR3S), University of Tokyo. Before joining IR3S he conducted research at the University of Oxford (2011-2013), the Institute of Advanced Studies of the United Nations University (UNU-IAS) (2008-2011) and the University of Dundee (2006-2008). During this period he held a Marie Curie Research Fellowship, a James Martin Research Fellowship, a JSPS-UNU Postdoctoral Fellowship, a Canon Foundation Research Fellowship and an EPSRC-funded Researcher position. As an ecological economist he is interested in the development, refinement and application of sustainability assessment and ecosystem services valuation tools. He has engaged in many international and interdisciplinary projects on bioenergy, food/energy security, energy policy, green economy, and urban metabolism, in geographical contexts as diverse as Brazil, Ghana, Indonesia, Japan, Kenya, Malawi, Mozambique, Philippines, Swaziland and the UK. He regularly reviews research proposals for major funders around the world.

Writing Funding Proposals

Attracting and managing research funding is an important task at all levels of academia, from graduate students to experienced faculty. A good funding track record has gradually become one of the most important elements of a strong academic CV. At the same time the competition to obtain funding has reached an all-time high. Many research calls are oversubscribed with hundreds of proposals being submitted for just a few grants. Acceptance rates below 10% or even 5% are becoming the norm for many major funders.

Beyond the quality of the research topic, there are many other important considerations that can make a proposal appealing and competitive. Issues ranging from good engagement with the call criteria, to the flow of information, accompanying figures, language and overall planning can make a difference on how a proposal makes an impression to reviewers. This session will outline some of the main issues that need to be considered when writing research funding application. It will highlight and discuss some of the good and bad practices in funding proposals. The main focus will be on individual fellowship proposal (e.g. Marie Curie fellowships) and proposals of standard collaborative grants (e.g. UK Research Council grants).

S02 (ROOM F13): BREAKFAST NETWORKING

Breakfast Club: Small group collaborative discussions on conference themes

Host: Dr Ali Browne, University of Manchester

The intention of this session is to create an open space within the conference programme for small groups of people to come together, share some breakfast and participate in small discussion groups. During this time, we will work collaboratively to deepen our discussions around the conference themes, and by the end of the session have a better sense of the vast knowledges, expertise and points of interconnection across the conference

participants.

Participants will be asked to reflect upon the following topics, and participants can also propose their own discussion points.

• What are the essential tensions for us to consider in the development of national infrastructures and the possible implications that this may carry for human health, social relations and environmental sustainability?

• How do these tensions lead to unequal access to urban infrastructure, and with what effect on stratified health outcomes?

• How might we best understand the resource-intensive and polluting modern infrastructures within our cities, and how they trigger degradation and loss of ecosystems and their services?

• What does it mean to put everyday life at the centre of these systems dynamics, and what resources (theoretical, methodological, networks) might we need to take into account multiple scales (from the human body to the global climate), critical resources and human social systems to understand and address infrastructure challenges?

The session will provide a platform for future research collaboration and exchange amongst this network. Tea, coffee and small refreshments will be provided.

COFFEE

S03 (ROOM F12): ACTIVIST & COMMUNITY PRAXIS

Artificial Intelligence – An Invisible Urban Infrastructure A Structure-less, Hierarchy-less, Architecture-less and Location-less Transdisciplinarity of 21st Century Japan

Danyal Ahmed, Tohoku University, Japan

'Evolution is not a process of progressive improvement but only constant recalibration in response to environmental pressures' confesses Ito as he continues that since the 1980's Japanese are living simultaneously in a 'City-as-Substance' and a 'City-as-Phenomenon'. While the former follows the traditional social organization of individual-family-regional community-nation, the latter encompasses an informational city, a microchip with insubstantial and incessant flows of information, images and media permeating the city's atmosphere which we may subconsciously perceive with our intensified haptic or auditory senses that consequently compel us to become androids breathing in a sophisticated technological environment. These Saran-wrapped City Nomads then create temporal cities through the trails of their bodies adjusting themselves in the simulated (commercial entities replicating household cozy and enjoyable spaces) instead of the real ones. In this age of superficially accelerating economic growth, technological development and globalization, what bridges the dynamism of the consumerist society with the stabilized human nature is a device that does not exist as phenomena itself but is a substance that produces and enables it. It is architecture as a self-generative system that is completely devoid of any formal expression of itself that generates landscape, visualizes the flows of invisible information, hints at human activities and generates programming.

With the advent of Artificial Intelligence (hereinafter AI) technological advancements are attempting not only to think and act humanly but also rationally. With inspirations from tremendous transdisciplinary revolutionizing debuts in the two largest economies of East Asia – Japan and China, in the sectors of transportation, logistics, safety and resilience, healthcare, education, culture and technology, this paper attempts to identify the implications of AI in the discipline of architecture by studying Sendai Mediatheque as a proto-type of the self-generative architecture that hypothetically depends on AI – both as a substance and as a phenomena – for its evolution. Afterwards, this paper questions that

starting from our home, street, neighbourhood, town, district and eventually to a city, what kind of urban socio-technical spaces we are going to inhabit in the structure-less, hierarchy-less, architecture-less, location-less and ephemeral artificially intelligent environment with advanced technological sophistication and infrastructure?

Green Wedges of Warsaw: Towards an infrastructure of withdrawal in a polluted city

Jana Hrckova, Central European University, Hungary

The paper discusses the almost lost socialist-modernist green corridor infrastructure as a focal point of urban struggles amid air pollution crisis in Warsaw. Over the past decades, the radial green ventilation corridors have been disappearing at an alarming rate amid new construction. However, recently this has been problematized as the smog scare revealed them as sites of contention that bring together municipal, national and global processes. The disastrous air pollution can be understood a result of materialization of all-encompassing policy tendencies in contemporary Poland – state-sponsored support of coal industry and automobile culture. The struggle over preservation of the remaining wedges has become a powerful symbol channelling the desired forms of urbanity and environmental policy making. The paper investigates the centrality of the citizens' request for a withdrawal, lack of construction, and even abandonment within the remaining green space of the corridors, something that however must be ensured by the authorities' active interventions. As such, the infrastructure of the wedges possesses a unique, negative nature that remains deeply modernist and yet relies on no technology or upkeep whatsoever; one that I would like to call an infrastructure of withdrawal. In a way, it is thus mimetically linked to the activists' refusal of the extractionist policies that stand behind the pollution crisis in Poland in the first place. Similarly, it can be understood as a call towards a greater engagement of the citizens in the urban development processes.

The infrastructure of social power - inclusion, exclusion, and eviction in Chinese unevenly developed cities

Yang Song, King's College London, United Kingdom

During the past three decades, China has witnessed a rapid urbanisation accompanying with extensive investments in urban infrastructural systems. Despite a large body of literature addressing the positive function of the urbanisation regarding the infrastructural development in major cities, much less work has explored the possible exclusion and marginalisation that caused by the uneven development during the process of urban infrastructural transformation. This research aims to address the neglect based on a case study looking at the experiences of evicted urban migrants and local displacees in a Chinese major city. The paper refers to the concept of 'uneven development' amidst the Chinese urbanism to examine the inclusion and exclusion that emerge during the uneven development of urban infrastructural systems. This paper argues that the Chinese state-dominated urbanisation in relation to the infrastructural transformation has been deeply influenced by neoliberal ideologies since the urbanism is transformed as a method for capitalisation while the reproduction of infrastructural development is deployed as a strategy for accumulation. This process is contextualised by the significant nature of uneven development which – persisted by unequal power relations – leads to uneven social distribution making urban migrants become more marginalised and fail to reach the benefits of local infrastructural innovations, meanwhile, local displacees – entitled with local citizenship – can negotiate with the government for compensations and being included into the new infrastructural system. Therefore, the process of uneven infrastructural development intensifies social polarisation and leads to social tension between migrants and the locals. Keywords: infrastructural development; uneven

development; social justice; urban migrants; Chinese urbanism

The politics of inclusion in the circular economy: insights from Bangalore, India

Manisha Anantharaman, St Mary's College of California, USA

The circular economy is the "new kid on the block" in the arena of technological and managerial responses to intensified waste production and resource shortages. Circular economy strategists seek to apply technical and design solutions to improve infrastructure, resource efficiency, reuse, and repurposing, hoping for new waves of economic growth even in times of crisis. Critical engagement with circular economy ideas and practice is of essence, especially as the concept has recently gained prominence as a global sustainability strategy attractive to policymakers and businesses. In this eagerness to realize the "win-win" solutions that the circular economy promises, the socio-spatial practices that comprise circularity occur in the shadows of the excited claims of sustainable development and consumption, eliding the politics of expertise and practice embedded in urban re-cycling work. In this paper, I offer some preliminary thoughts on how waste gleaning/picking and recycling activities in the so-called "informal sector" are articulating with new urban structures under the banner of circular economy. Specifically, through empirical research in Bangalore, India, I argue that waste pickers and other informal sector waste workers are deploying circular economy "language" as a way of legitimizing their vernacular sustainability practices in neoliberal cities. However, the express "un-circularity" of waste streams often leaves them literally holding the garbage, with no options for recourse. I argue that critical research that examines how informal sector actors are responsibilized and rendered infrastructure is necessary to ensure that these logics do not produce disguised forms of dehumanization in sanitation work.

S04 (ROOM F13): USES AND EXPERIENCES: URBAN HEALTH

Walkability Assessment of Inner Harbour Area, Macau SAR at Macro and Meso Levels

Anna Weng Ian Au, TU Wien, Austria

Macau SAR is a small and crowded city (30.8 km2; 653,100 capita; 21,100 / km2) located at the southern coast of China. Similar to most highly developed countries, lifestyle-related diseases are also prevalent in Macau. Besides, a 2015 Happiness Index Research indicated that Macau residents did not have a high level of subjective well-being. This is a reflection of ineffectiveness of health promotion in Macau. Due to the lack of research in health promotion settings (especially the built environment) in Macau, it is of the author's interest to conduct a study on the neighbourhood walkability in an area in Macau. The site, Inner Harbour Area, is selected due to its consistent sidewalk grades and high population density. The status of its walkability at macro and meso levels is determined by adopting "Walkability for Health" evaluation framework. Results show that Inner Harbour Area has great walkability potential at macro and meso scales. The public spaces, including public open spaces, public libraries, and historic buildings, could better be connected to improve pedestrian satisfaction. This study also lays a foundation for research on flood mitigation in Inner Harbour Area. A more comprehensive walkability view of Inner Harbour Area could be produced with micro level assessment and photo survey in the future.

Creating Age-friendly Informal Settlements? Challenges to enabling health for older people in Informal Urban Harare

Busisiwe Chikomborero Makore, Salford University, United Kingdom

An increasing number of older persons are living in informal conditions lacking critical basic infrastructure and services. These poor urban housing conditions, significant distances from health services, unsafe neighbourhoods, and limited access to water and sanitation put an additional burden on older people who, within households and communities, play contributory roles such as childcare provision and community leadership. While cities can be disabling and threatening at any age, the urban environment (macro and micro) for older people can have an increased impact on health and well-being, social participation, and maintenance of urban citizenship. Images of a healthy, active and fully contributing older cohort construct older people as a homogenous group often ignoring societal and physical impacts on their well-being. Is there potential for informal spaces to be re-imagined and re-planned to "enable" older people, providing them with greater autonomy and choice? Using two informal settlements in Harare, Zimbabwe as case studies, this paper re-conceptualises "age-friendliness" as defined by The World Health Organisation's age-friendly cities model (2007) within the context of informal settlements in a global South city. Findings will be discussed from 69 semi-structured interviews carried out with older residents in two informal settlements with an additional 15 key informant interviews undertaken with local government officials, civil society representatives, academics and urban practitioners.

The built environment, walking and socioeconomic inequalities

Anna Kenyon, University of Sheffield, United Kingdom

Lack of physical activity is a pressing public health concern. The World Health Organisation estimates that globally approximately 3.2 million deaths each year are attributable to insufficient physical activity. With an ever-increasing proportion of people living in urban areas, the potential of urban build environments to support an active lifestyle is crucial. Walking is identified as a key method whereby people can take part in physical activity as part of everyday life in urban areas and research into associations between the built environment and walking has mushroomed in the past 10 years. However, questions remain about associations between the BE and walking, particularly differences in associations for different groups, such as different age groups, genders and socioeconomic statuses. Social ecological theory can help elucidate these relationships, indicating how complex relationships between people and places and inequalities may exist in as part of a dynamic system. This study applies social ecological theory in an examination of how urban built infrastructure may impact on everyday walking practices by examining whether characteristics of the built environment are associated with the walking activity of residents in urban Scotland. Using a quantitative, cross sectional design, key features of the built environment are correlated with walking behaviours and outcomes compared for different socioeconomic groups, with results showing inequalities in walking outcomes between different social and economic groups. This type of evidence can be used to inform policies aimed at increasing well-being in urban environments by demonstrating how and for whom built environments may support walking.

Health Risks in the Urban Environment of Ulaanbaatar, Mongolia

Daniel Karthe, German-Mongolian Institute for Resources and Technology, Mongolia

The Mongolian capital Ulaanbaatar has not only experienced an unprecedented population growth over the past three decades, but also a massive deterioration of its environment (Fan et al. 2016). The following aspects are particularly noteworthy: 1) Massive air pollution, which during the winter months significantly exceeds the WHO standards for fine dust, sulphur compounds and oxides of nitrogen (resulting mostly from coal combustion in peri-urban ger districts and road traffic) (Cavanaugh 2017)

2) Accumulation of toxic substances in the urban environment (e.g. in soils or vegetation), mostly due to dry and wet particle deposition and environmental legacies (Kasimov et al. 2011; Perlinger & Urban 2018; Sorokina et al. 2013) 3) Numerous challenges regarding water supply, such as under-consumption in ger districts, a threatening water scarcity, and risks related to water pollution with pathogens and heavy metals (Karthe et al. 2015)

City vitality and green space quality: Based on the empirical analysis of LBS data in Wuhan inner city area

Yuping Dong, Huazhong University, China

City vitality contributes to promoting healthy city development. Therefore, series of studies gradually focus on the factors that have the potential to generate and enhance such vitality. However, most of them pay attention to the impacts of land-use and transportation, on the contrary, few from the perspective of green space planning. Hence, in this paper, we insist on the issue of the relationship between green space and city vitality by taking Wuhan inner city area as a case study. Based on the study unit (sub-district), Location Based Service (LBS) data – WeChat Yichuxing - are collected to assess the population density of each sub-district to indicate vitality index. Meanwhile, Normalized Difference Vegetation Index (NDVI), percentage of green space, and the ratio of arbor to shrub are used to measure the green space quality within each unit. Then we apply Getis - Ord Gi* and Geographically Weighted Regression (GWR) in Arcgis 10.2 to analysis the spatial distribution of city vitality and impacts of green space quality respectively. That can not only figure out the association between green space quality and city vitality, but also provide practical advice for health city, in the degree of green space planning.

LUNCH

S05 (ROOM F12): URBAN INFRASTRUCTURES: COHESIONS AND INTERSECTIONS 1

Chair: Dr Niranjana Ramesh, University of Cambridge

This two-part session reflects our interest in approaches to infrastructures which exceed narrow sectoral perspectives on the socio-technical arrangements of cities. The session aims to generate productive discussions across geographies and methods, in order to explore how studies of water, mobility, land, among others, can benefit from attending to their theoretical and empirical intersections with diverse infrastructures.

A river of clean water flows to Beijing: The politics of interbasin water infrastructure

Sarah Rogers, University of Melbourne, Australia.

When residents of Beijing turn on the taps in their homes they are likely consuming water that has come from the Danjiangkou Reservoir 1000km away. To ensure a relatively clean and reliable supply of water to Beijing and other cities in North China, the Chinese government has built a massive interbasin transfer scheme (the South-North Water Transfer Project), including a canal and set of supporting infrastructures that move water from a tributary of the Yangtze River in Henan/Hubei to the outskirts of Beijing. In this paper I will examine the politics of constructing and maintaining this interbasin transfer by centring the infrastructure itself at several points along the Middle Route: a wastewater treatment plant at the Danjiangkou Reservoir, the Taocha canal head, and Beijing's network of water pipes. By exploring the work done by each piece of infrastructure and the groups enrolled in this work, I will argue that the effects of this spectacular urban water supply project are far reaching and deeply uneven.

The simultaneity of mobility and consumption

in urban Japan: A qualitative report on the interrelation of public transport networks and shopping malls

Stefan Fuchs, University of Melbourne, Australia.

In Japan in the last few decades many major railway station buildings have been transformed into shopping malls. The purpose of this paper is to consider how this connection between public transport and retail centres influences everyday commuting and shopping practices and social relations. Based on ethnographic fieldwork in a shopping mall in a Tokyo suburb, in this paper I examine different processes by which repeated activities of shopping and leisure become embedded into everyday commuting routines. Using data from observations and interviews, I suggest that within this system of public transport and retail the boundaries between commuting and consumption are blurred and for passengers the shopping mall in the train station becomes a highly integrated, palpable part of their daily routes and routines. By analysing the actual lived experiences of people in shopping malls, this paper contributes to what has been termed as the "mobility paradigm" (cf. Sheller and Urry 2006) in two ways: (1) by arguing that research must take into account the simultaneity of mobility and consumption, and (2) by pointing out that a system of public transport and retail as seen in urban Japan entails a distinctive experience of moving and consuming that can have a positive effect on human interaction and communal relations; and that the significance of the automobile has thus far been overstated in the research on mobility.

Interactions of Urban Spaces with Wellbeing; A Mixed methods case study from Udon Thani, Thailand

Steve Cinderby, Stockholm Environment Institute Centre at the University of York

Urban planners and policy makers, together with environmental and health experts, need to maximise the opportunities cities offer to create good health and wellbeing alongside economic and business opportunities by making them people centred, liveable, equitable, sociable, and enjoyable. These elements are core to the commitments made in the New Urban Agenda (United Nations 2017) and are linked to urban Sustainable Development Goals. Arguably the biggest challenge – and opportunity – for achieving these health and wellbeing benefits will be in countries with fast-growing city populations, often in informal and/or peri-urban settlements. We will report on findings from two-city case studies (one in Kenya, the other in Thailand) (www.sei.org/publications/the-sei-initiative-on-city-health-and-wellbeing/) investigating the interaction of environmental quality and wellbeing . Our case study cities were chosen as they are rapidly growing and have a mixture of environmental, social and infrastructure challenges. We will report on aspects of our multidisciplinary study which has included gathering perceptions of space and their relationship to social activity using participatory mapping. This data is supported by subjective wellbeing and stress survey data alongside information on environmental conditions from a large sample of participants across an urban transect in each city. The transects included a mixture of economic, social and environmental conditions. This combination of perception and psychological information helps reveal the effects of urban conditions on resident wellbeing and the live-ablity of rapidly developing cities.

"We usually have a bit of flood once a week": Conceptualising urban floods from Manila across three infrastructures

Anna Plyushteva and Tim Schwanen, Vrije Universiteit Brussel, Belgium

Flooding in densely populated urban areas can severely undermine life, health and livelihoods, with the most vulnerable groups typically most severely affected. An urban flood can be understood as an excess of water which disrupts a pre-defined normality. However, framing floods as discrete and extraordinary events of disaster can obscure the on-going-ness of flood risk and

flood risk management in the everyday life of affected people and places. To offer a relational account of the way flooding works across pre-given spatial and temporal categories, this paper theorises urban floodwater from the perspective of intersecting infrastructural systems. Based on qualitative interviews with inhabitants and officials from four low-income neighbourhoods in Malate, Manila, we examine the way flooding connects the infrastructures of transport, domestic waste collection and drainage, transforms them through disrupting, amplifying and modifying their circulations, and is transformed in turn. We argue that socio-hydrological and cross-sectoral understandings of floodwater as situated interactions between different systems, will become increasingly important in light of the increasing frequency and severity of urban flooding resulting from climate change.

S06 (ROOM F13): USES & EXPERIENCES: WATER & SANITATION

Addiction to pollution, tolerance to violence

Indrawan Prabaharyaka, Humboldt Uni Berlin, Germany

Whereas urbanisation has been notoriously explained through grand theories that emphasize its capitalist and postcolonial character, here in this paper I attempt to sketch the urban from an observation of everyday life of a toilet-raft, on and around which multiple practices (bathing, washing, swimming, pooping, peeing, smoking, chatting, etc) coalesce in one segment of Ciliwung river, Jakarta, which is often touted as the dirtiest city on Earth. This is hardly a unique phenomenon, for such an entanglement of dirty city life occur in different degrees and manifestations various urban areas, to the extent that the dirt and the city resonates to each other. The question is then, how to make sense that, though the citizens are aware of the ways in which their practices are polluting and harming both themselves and their environment, they keep on doing them collectively and regularly in daily basis? Thus, following this

question, as uncomfortable as it may be, can it be the case that there is a certain degree of addiction to pollution? Such an attention to addictive character of pollution implies that, rather than simply a matter of uneducated mass, the addiction is meticulously designed and engineered such that it is infrastructurally ingrained and imprinted in the everyday life, to the point that the complexity of design and engineering work is taken for granted as a matter of fact. The time is indeed high to make sense of the dirty and often violent urbanisation in the advent of the Anthropocene.

Understanding the negotiations around access to sanitation in marginalised communities of Mumbai

Purva Dewoolkar, Tata Institute of Social Sciences, India

The government of India launched the Swachh Bharat Mission with the aim of making the country Open Defecation (OD) free by 2019. This was to be accomplished through universal access to toilets including a subsidy for construction of individual toilets. Since its launch, local governments have been on an overdrive to declare their cities OD free with or without the provisioning of toilets. In a limited sense, OD free is being understood merely as defecating in a closed space. M/E ward, one of the administrative wards of Mumbai, which had 4 OD sites on 31st Dec 2016, was declared OD free overnight on the 1st of Jan 2017. The magic wand used to do this was deployment of police (marshals) who fined people defecating in the open. People have attempted to use the Government's Resolution towards provisioning of toilets to get individual toilets constructed. However, this has ended up in a seemingly futile wait of two years. Defecation is a basic human need and in the absence of government action to ensure access, to preserve their dignity, people have come up with different strategies. These people have used innovative ways to create toilets in their dwellings with the faecal matter being either treated with an organic substance

in the pit, released in septic tanks or directly into open drains. The paper draws on the research conducted by 'Transforming M-ward project' of Tata Institute of Social Sciences on the strategies used by the people to negotiate access to sanitation. It will highlight the actions, agencies, and relationships of residents who navigate their needs in the absence of government provisioning of this important infrastructure. This paper will also delve into understanding the definitions of OD and the infrastructure required to address it.

Products, practices, and infrastructures: changing menstrual socio-material cultures in urban Malawi

Cecilia Alda Vidal, University of Manchester, United Kingdom

Cultural beliefs and taboos associated to menstruation and the lack of affordability of commercial products have limited the choices for absorbents of many women and girls in the global South. Women have traditionally used locally available materials as cloths, rags, leaves, cotton, or mud among others. However as we show in this article using the case of Lilongwe (Malawi), menstrual socio-material cultures are rapidly changing. In the past ten years new absorbents have popularising and the demand for commercial sanitary pads has increased exponentially, especially in places such as Lilongwe's LIAs. As this happens women see the need to adapt their practices of handling menstrual absorbents or incorporate new ones to their routines with different implications for the infrastructures or the environment. Most of the literature dealing with menstrual hygiene in global South contexts have focused on access and choice of absorbents paying little attention to decisions and practices of disposal and their interactions with sanitary systems (Elledge et al., 2018; Sommer et al., 2013). Drawing on extensive ethnographic fieldwork including participant observation, semi-structured and walking interviews, photography and group discussions, we show how different practices of handling absorbents emerge in relation to broader changes in socio-material menstrual cultures and how these practices differently help women to meet their needs for privacy, hygiene and dignity in a particular cultural and infrastructural context.

Everyday Cleanliness in Mysore, India: Materialities, Conventions, Consumption

Tullia Jack, Lund University, Sweden

As India modernizes rapidly, more everyday conveniences are becoming accessible for wide swathes of the growing population. Access to modern conveniences in turn pave the way for increased consumption of energy and water resources, and as India is on-track to becoming the world's most populous nation, this has significant sustainability implications. This presentation aims to understand the relationship between access to infrastructures, globalising conventions and consumption in everyday lives. We take the case of cleanliness in Southern India, Mysore, and look at how increasing access to 24 hour water supply, cleaning products and other materialities that compose cleanliness infrastructures, combined with long-standing and new discourses of cleaning, affect water and energy consuming practices in everyday life. We draw on qualitative interviews with 28 people living in Mysore, about how they perceive cleanliness and how they organize cleaning in their everyday lives. We find that modernized devices (e.g., washing machines) are increasingly common, yet many households still employ domestic help and this combination resulted in more intensive cleanliness routines and greater resource use. In some cases women's shift to the work force equalized domestic relationships with more men cleaning and performing domestic duties at home. We reflect on empirical insights into how these changing cleanliness cultures are experienced and new conventions constructed in everyday life negotiations. Overall, our analysis highlights how an exploration of modernizing materialities of daily life (from cleaning products, household technologies, to policies such as Swachh Bharat shaping hygiene practices within cityscapes) alongside consideration of

social stratifications across lines of race and class, reveals that in the globalizing cleanliness cultures of Mysore those who already have responsibilities to clean, tend to have to clean more. To what extent can changing cleanliness cultures, and materialities, really equalize roles and responsibilities in urban Indian contexts, particularly as domestic labour is still commonly employed? We reflect on whether infrastructures and policies that are purported to increase quality of life and help provide basic human rights through increasing cleanliness within homes and cities, actually inadvertently contributes to increased resource consumption, as well as deepening social inequalities.

COFFEE BREAK

S07 (ROOM F12): URBAN INFRASTRUCTURES: COHESIONS AND INTERSECTIONS 2

Chair: Dr Anna Plyushteva, Vrije Universiteit Brussels

Resource Utilisation in Open System Network: Land use as useful resource intake

Ling Min Tan, University of Sheffield, United Kingdom

Cities are often described as complex open systems where the intake of resources is heavily dependent on flows imported from regions outside cities. The question is, how well the quality of the resource flows is being used in cities? The contributions of these imports are maximised when the usefulness of the energy available, also known as exergy, is fully utilised through energy transformation processes which inevitably destroy exergy to produce useful work locally or exported to other regions in exchange for capital flows into the city. In our case study for Singapore, one of the most developed cities in the fast-growing region of Asia, OSNEA (Open System Network Effectiveness Analysis) is introduced to evaluate the effectiveness of

an open system by modelling the resources flow connections between the socio-economic sectors within the city. The structure of network allows open system to cycle energy in long chains among the components to promote more transformations through cascading processes. In addition to energy and material resource input, land use area for each sector is also considered as a useful resource intake. The flow network is tagged onto the geographical master plan of the city based on the types of economic activities to represent the availability of resources and investigate the impacts of spatial properties on resources distribution. This novel assessment method gives an insight into cities' performance on resource management grounded in a scientific understanding of sustainability and assist urban stakeholders in the implementation process of environmental policies for effective use of resources.

Blue Green Infrastructure, sustainable water management, health, well-being

Anna Kenyon, University of Sheffield, United Kingdom

Blue green infrastructure (BGI) comprises blue space (e.g. ponds, rivers), and green space (e.g. vegetation, grass). This study focuses on sustainable drainage related BGI (frequently called SuDS – Sustainable Urban Drainage Systems) which form blue-green elements within an urban drainage system. These blue-green elements contribute to a dynamic system of interacting influences on, for example, social well-being, health, climate adaptation and economic development operating at different societal scales from the individual, local, national and global. Despite its inherently multifaceted nature, BGI is frequently governed in the context of technical water management at local government scale. It is potentially this mismatch between governance and scope of BGI that mean, despite its well-known benefits, uptake has been sluggish, often taking place in siloed governance contexts with connections between potential stakeholders not always

made. In particular, the involvement of health agencies is lacking despite strong evidence of health and well-being benefits of blue and green space. Different governance contexts leverage different norms of practice. Using discourse theory to critically examine multidisciplinary narratives of governance, this research explores the governance context of BGI and the potential role of public health in the relationship between Governance, people and BGI through a case study comparison of BGI projects in Bradford (UK) and Dordrecht (the Netherlands). By exploring the complex, interconnected nature of BGI and the social meanings underpinning systems of governance of BGI, the evidence generated from this study aims to support policy and praxis in the design and planning of BGI for sustainable water management.

Planning 'Portopolis': Melaka, Malaysia and the (de)politicization of urban infrastructure

Creighton Connolly, University of Lincoln, United Kingdom

This presentation will analyze the development of a series of artificial islands near the city of Melaka, Malaysia, known as Melaka Gateway, which will house cruise ship infrastructure, leisure facilities and a deep sea port. Part of China's One Belt One Road (OBOR) initiative, this project to (re)position Melaka as a key hub connecting Southeast Asia with East Asia and Europe. Slated to be the largest man-made island project in Southeast Asia, the Melaka Gateway project poses considerable socio-cultural, economic and environmental consequences for the city and its residents. This includes impacts on the local Kristang (hybrid Malaysian/Portuguese) community and their sea-based livelihood, as well as the marine life and coastal ecology of the affected areas. There are also (geo)political concerns related to China's increasing political and social influence in Malaysia through such infrastructural and development projects. This presentation will investigate the actual socio-environmental sustainability of the project - and Melaka itself - which has been marketed as

'world class' and 'culturally sustainable'. For instance, what are the competing visions for the future of Melaka, and what implications would these have for local residents, the environment, and broader urban landscape? Overall, the presentation highlights the need to develop urban infrastructure projects in a way that reflects on and respects local environmental, cultural and social values of landscapes and communities in striving towards more sustainable forms of urbanization in the emerging economies.

A civil infrastructure: multiple epistemologies of engineering and connecting people across time

Niranjana Ramesh, University of Cambridge, United Kingdom

When Graham & Marvin (2001) proposed their thesis of splintering urbanism, arguing that the privatisation and bundling of infrastructures has led to a fundamental disintegration of urban life, scholars of the global south rightly pointed out that infrastructural multiplicity and fragmentation had always been a feature of southern cities. Building on recent calls to 'world' the study of such infrastructures (Furlong & Kooy 2017), this paper considers how southern cities navigate their apparent disjunctions and build dynamic forms of cohesion that may not fit within northern norms. It takes the figure of the civil engineer – often critiqued for being a technocrat or agent of neoliberal urbanisation – and follows the negotiated and affective work of infrastructure-building done by them. It draws on ethnographic fieldwork in the south Indian city of Chennai, where a layered and interconnected ecology of multiple water access mechanisms exists to be navigated by residents and water management professionals. The case it focuses on is the socio-technical work done by engineering contractors in housing development to repurpose a water filtering unit in complex spatio-temporal combinations by exercising seemingly technoscientific rationalities. Building on this case, it argues that infrastructures are assembled in multivalent and relational ways by bringing people and shared materialities together

in a distinctly urban sociality. While there are certainly socio-spatial hierarchies and inequities engendered by this network, the epistemology of water engineering that this paper outlines opens up a reimagination of the public-ness of urban infrastructures.

S08 (ROOM F13): DESIGN & PLANNING: REGENERATION, REMEDIATION AND URBAN DEVELOPMENT

Remediation, Regeneration and Regional Restructuring: A social value case study of the coalfields infrastructure legacy in Greater Manchester

Cara Mulholland, University of Manchester, United Kingdom

There is growing interest in the social value of infrastructure, particularly in post-industrial cities adapting to changing needs. With decades of work into post-industrial regeneration projects there have been many approaches to infrastructure management and development decisions of replacing older infrastructure with new as the city changes functions. However, there has been less focus on how the social value and cultural legacy of infrastructure and subsequent socio-technical changes have successfully helped shape cities today. Therefore, this paper investigates the social value of coalfield infrastructure evolution across Greater Manchester focusing on the time since the coal pits have closed. A rich social value account is presented using a qualitative case study research design of semi-structured interviews, site observations, industry document review and supporting data. The social value has been mapped spatially and temporally to compare how it varies across the region, compared to the initiatives which have driven the changes, and how this has resulted in shaping infrastructure. Outcomes of the case study have shown that infrastructure changes have emerged through technical decisions in remediation, social schemes and impact of regeneration, and political aims within regional restructuring. This study

is significant in moving forwards with Greater Manchester development and its role in the Northern Powerhouse whilst acknowledging the industrial legacy which shaped the region. On a wider scale, this study contributes to knowledge on the success of holistic regeneration projects.

Private Borrowing and Bank Loans for House Reconstruction: Evidence from Wenchuan Earthquake

Jianwen Wei, Beijing Normal University, China

House reconstruction is one of the most essential aspects for disaster recovery during the post-disaster period. Private borrowing and bank loans are two important channels in support house reconstruction in rural China area. My research address three questions as following, Firstly, do the households repay the private borrowing and bank loans? Secondly, what are the factors affecting their repaying behavior? Besides, for those getting money from both channels, which one will they repay first? The data was collected by the research group from CASTED and Fafo in 2018.4950 households covering 30 counties (county-level regions) of Chengdu, Mianyang, Guangyuan and A'ba in Sichuan Province. The findings include: 1) Private borrowing is more popular than bank loans for house reconstruction in rural area. 2) Effects on repayments for private borrowing and bank loans are different: Human capital, economic capital, disaster recovery and debt amounts are important for repayments for both channels; However, disaster loss, household disadvantage only affects the repayment for private repayments. 3) For the repayment order, only the debt structure has a major impact. Households will repay the debt of which the amount is less early.

Big Data and City Infrastructures: Exploring Airbnb's Digital Urban Disruption

Mahmud Tantoush, Ulysses Sengupta, Alex Macbeth, and Raden Norfiqri, Manchester Metropolitan University, United Kingdom

The deluge of new sources of ground truth data Big Data (such as user-generated and Internet of Things data) and new ICT technologies are changing the way we use, plan and understand cities and their infrastructure. New kinds of knowledge and insights are becoming increasingly possible from the analysis of such new data sources. These new possibilities shed new light on urban transformations and processes, and makes use of the growing digital infrastructures in cities. This project investigates the new opportunities offered by such data for studying urban transformation in cities, with particular attention given to the digital sharing economy disruption on the properties rental market located on the Oxford Road corridor in Manchester. The literature strongly suggests that Airbnb, a digital sharing economy platform for short-term subletting, causes gentrification by increasing rental values of the Airbnb listed properties. This, in turn, affects the housing prices and long-term rental prices within the neighbourhoods within which the Airbnb listings appear. This project investigates this problem using temporal and geo-located data that have been obtained through online sources and Application Programming Interfaces: from the short-term sub-letting digital sharing economy platform Airbnb and the long-term properties market data from the Zoopla website. These data are visualised to enable interpretation, analysed for knowledge discovery and then extrapolated using simulation in a business-as-usual future scenario. The spatial analysis and simulation results indicate that the distribution and location of Airbnb listed properties have significant effects on the rental and housing prices as suggested by the literature. Furthermore, this project presents an alternative simulation-based methodology for researching such problems in a spatial and temporal manner, and the value of utilising new sources of ground truth digital data for new kinds of knowledge discovery using data analytics and simulation.

Fengmao -- China's exploration of the theory of built environmental protection and development

Yu Yan, Tianjin University, China

"Fengmao" is a popular word in the fields of urban planning, human geography, and landscape in China in recent years. At present, there is no exact translation of fengmao in western academia. In fact, the connotation of this comprehensive vocabulary is also at the centre of research and discussion in Chinese academic circles and related fields in recent years. This paper tries to explore the role of the word fengmao in the urban and rural construction field in China's nearly 40 years of reform and opening-up period, including the origin of the semantic meaning of fengmao, the period of its emergence and its signifier and signified, its subtle evolution of meanings from the perspective of semantics, and how the fengmao semantics gradually became popularized under the guidance of the government. There is also analysis of the common people's perception condition of this top-down word in China countryside by means of logistic regression in this paper.

Border Crossing: The Green Infrastructure in Promoting Urban Development

Camila Gomes Sant' Anna, Federal University of Goiás, Brazil

The concept of green infrastructure (GI) applied to the assessment and planning of land use has been the subject of academic discourse and political strategies, such as the new approach to reach a balance between city and nature used by different governments and to achieve comprehensive and inclusive urban planning. The drafting of green infrastructure plans emerges as a way to build a common urban developing future for countries, overcoming the issue of drainage and the balance of the water cycle. Together these countries can promote cross-disciplinary strategies approaches of green infrastructure, rethinking landscape planning practice in order to deal with urban water management in cities of unequal urbanization. These strategies approaches will promote and guarantee the

protection of the ecosystem services for water supply and regulation that the city needs for its operation. The present work contributes to identify the key green infrastructure planning solutions associated with ensuring these ecosystem services. As a result, a framework is presented, showing the main analytical and methodological steps, based on the ecosystem services involved in applying the concept to the land use plan.

COFFEE BREAK

HEALTHY CITIES? PRIVATE FUTURES, PUBLIC HEALTH AND COMPLEX SYSTEMS

Professor Michael Keith, PEAK Urban, University of Oxford, United Kingdom

In this lecture I shall consider the ways in which the systems of systems at the heart of urban change generate dynamic changes, dilemmas, opportunities, trade offs and ethical challenges in making sense of emergent interventions in public health. Drawing on both personal experience in local government and primary healthcare governance in the UK and globally comparative urban scholarship the lecture argues that only by synthesising an understanding of the technological possibilities of our innovation in public health with the social and cultural dynamics that shape the implementation of new urban sciences can we make sense of the city as both a 21st century commons and the urban as a universal domain inflected by globally diverse historicities and spatialities, speeds of change and cartographies of settlement.

HIGHLIGHT TALK

The Urban Face of Planetary Health

José Siri, Senior Lead for Cities, Urbanization and Health, Wellcome Trust Our Planet Our Health Programme, United Kingdom

The new paradigm of planetary health is based on a recognition that our health is extensively influenced by the complex interplay of human activity with natural systems. As the dominant human habitat, cities are the mechanism for a lion's share of humanity's impact on the environment and consequent health risks. Indeed, the environmental crises we face as a civilization—both at a planetary scale and in their many regional and local incarnations—are inextricably linked to the decisions we make about designing, planning, building and managing cities. The Wellcome Trust's Our Planet Our Health programme aims to foster solutions-oriented research into planetary health challenges with a special focus on cities, urbanization and health. This talk will touch on the urban face of planetary health, highlighting some of our work in this area, and pointing to priorities for this emergent field.

ROUNDTABLE

Healthy Cities: A Provocative Panel

4 x 5 minute provocations including Purva Dewoolkar, Tata Institute of Social Sciences; Asa Roast, University of Leeds; Dr Marlyne Sahakian, University of Geneva and Jim Walker, Walk21

Panel: Purva Dewoolkar, Tata Institute of Social Sciences; Prof. Michael Keith, University of Oxford; Prof. Diana Mitlin, University of Manchester; Asa Roast, University of Leeds; Dr Marlyne Sahakian, University of Geneva; Jose Siri, Wellcome Trust; and Jim Walker, Walk21;

PURVA DEWOOLKAR, TATA INSTITUTE OF SOCIAL SCIENCES, INDIA

Purva Dewoolkar currently works as a program coordinator for the Transforming M East Ward Project, an action research project of Tata Institute of Social Sciences (TISS) that seeks to create a model of inclusive urban development in M East Ward, the poorest municipal ward in Mumbai. She is an Architect with a Master's in

Urban Design from Kamla Raheja Vidyanidhi Institute of Architecture, Mumbai. She also teaches Urban Design at Dr. D Y Patil College of Architecture and is deeply involved in the people's campaigns on Right to water and the Development Plan of Mumbai 2014-2034.

ASA ROAST, UNIVERSITY OF LEEDS, UNITED KINGDOM

Asa Roast is an urban geographer, ethnographer and PhD student at the University of Leeds. His research explores the intersection the economic, cultural and ecological reconfigurations of urban space in relation to modernity. His doctoral fieldwork was conducted in Chongqing, southwest China, where he examined how housing, urban imaginaries and informality are affected by rapid urbanisation and state-led infrastructure construction.

Examining the legacies of the populist 'Chongqing Model', his research looks at the construction of public housing on the periphery of the city, and the informal adaptation of property and land which accompanied state-led development. His research practice encompasses audio-visual methodologies and collaboration with documentary makers.

He has an MA in Chinese Studies from SOAS, and an MA in Social and Cultural Geography from University of Leeds. He was visiting researcher at Southwest University, Chongqing, from 2015 to 2017.

DR MARLYNE SAHAKIAN, UNIVERSITY OF GENEVA, SWITZERLAND

Marlyne Sahakian is Assistant Professor of Sociology at the University of Geneva, where she brings a sociological lens to consumption studies and sustainability. She gained a PhD in Development Studies from the Graduate Institute (2011), and co-founded SCORAI Europe in 2012 – a network for sustainable consumption research and action. Her research interest is in understanding everyday practices in relation to environmental promotion, social equity and social change. She coordinates research projects on household energy and food consumption, and wellbeing, working with interdisciplinary teams – and often focused on the cities of South and Southeast Asia. She publishes in journals related to sociology, sustainability, and community development. Her books include Keeping Cool in Southeast Asia: energy consumption and urban air-conditioning (Palgrave Macmillan, 2014) and Food Consumption in the City: Practices and patterns in urban Asia and the Pacific (Routledge Studies in Food, Society & the Environment, 2016).

JIM WALKER, WALK 21, UNITED KINGDOM

Jim is an international policy advisor and special projects manager focused on enabling more people to walk and ensure they have safe, attractive and accessible environments to walk in. He founded Walk21, the international conference series, 20 years ago and since then his advice has helped 13 of the top 20 places to be independently accredited as the most liveable places in the world. He specialises in developing national policy and quality standards to benefit pedestrians as well as managing national campaigns and sustainable transport, active health and accessible recreation projects. His current walking project portfolio is active in 83 countries.

Host: Dr Ali Browne, University of Manchester

The structure of this 60 minute session is to first listen to a series of short 5 minute provocations from conference attendees, host a panel discussion to these provocations, with the panel and the audience contributing to a wider set of conversations and debates about the themes of the conference.

The session will cover the interconnections and

junctures across a diverse range of empirical topics and national boundaries. The speakers will present on a range of topics including walkable cities, health, and the urban; understanding everyday needs in the context of urban change; urban inequalities; water and sanitation. The short provocations from our speakers - from a range of disciplinary, sectoral and global backgrounds – will speak to the following questions:

• What are the essential tensions for us to consider in the development of national infrastructures and the possible implications that this may carry for human health, social relations and environmental sustainability?

• How do these tensions lead to unequal access to urban infrastructure, and with what effect on stratified health outcomes?

• How might we best understand the resource-intensive and polluting modern infrastructures within our cities, and how they trigger degradation and loss of ecosystems and their services?

• What does it mean to put everyday life at the centre of these systems dynamics, and what resources (theoretical, methodological, networks) might we need to take into account multiple scales (from the human body to the global climate), critical resources and human social systems to understand and address infrastructure challenges?

The panel will then respond to these provocations and questions from the floor. Further speaker details will be available on the conference website as soon as they become available.

S09 (ROOM F12): IMPLEMENTATION & MAINTENANCE: WATER & SANITATION

Urban Innovation, Sanitation Facilities and Smart Cities: Case of Allahabad City, India

Arun Pratap Mishra, University of Delhi, India

The future of mankind lies in cities. The Current situation and trends of urbanization have become more miserable and challenging across the globe including developing country like India. With rapid and unplanned urbanization, proposed smart cities in India are characterized by dense population, traffic jams, high pollution, urban sprawl and slums, high cost of livings, corruption, irresponsible governance, poor health care and educational facilities, frequent power cuts, water shortages and inadequate sanitation facilities. Adequate sanitation is the core feature of smart city. A smart city would be sustainable only when we take significant sanitation facilities into consideration such as access to community toilets, safe management of human excreta and solid waste, and waste water treatment. Most of the proposed smart cities are characterized by insufficient sanitation facilities and low on Swachh Bharat (Clean India) Ranking announced by Government of India. The study is an attempt to assess the current status of sanitation facilities in proposed smart cities with special reference to Allahabad city and to analyze the role of improved sanitation facilities in Allahabad smart city transformation. The study is based on both primary and secondary data. Multi-criteria decision analysis is used as a method to produce consolidated score against each parameter. Consolidated score enables to understand current status of sanitation facilities in Allahabad city and their potential contribution towards making it smart city. In terms of sanitation

facilities, Allahabad city has a consolidated score of 4.93 out of ten, which is a low score. The study will provide future strategies to make Allahabad smart city with smart sanitation facilities.

Private Sector Participation for Sustainable Urban Waste and Sanitation Services in Bangladesh

Rafiul Islam, CARE Bangladesh, Bangladesh

Private sector participation in the urban sanitation and waste services are common in Bangladesh. Small and Medium Enterprises (SMEs) are engaged with sanitation and waste collection services for last few decades. Unfortunate, their role is not recognised enough as the formal business and the business ecosystem is not conducive enough for these SMEs. SMEs are providing sanitation services ranging from selling toilet units to delivering pit emptying and the waste service is limited only to the collecting waste from households. Very few SMEs are involved in producing waste based composts and linking with urban fringe agriculture. However, the SDGs targets in sanitation and environment open-up a wide scope for the SMEs in these sectors. Although the Urban Local Government Institutions (ULGIs) have limited experience on private sector engagement, some pilot initiatives are on-going for delivering these services by SMEs. Central Government is positive and already took some initiatives to facilitate private sector engagement in this sectors. It identified that there is a capacity constraints of ULGIs for delivering such services by themselves. In this context, private sector engagement as well as shaping-up the circular economy require a system approach with necessary policy interventions, financing mechanism, supporting

market creation and engaging at ULGIs level. To facilitate a conducive environment for private sector engagement in urban services delivery requires institutional reform. This study reviewed existing policies, pilots and propose a set of mechanism for effective delivery of such services to facilitate the development of circular economy as a whole.

Managing Urban Sanitation: Everyday Experiences of Female WASH CBO Leaders in Dhaka, Bangladesh

Sally Cawood, University of Leeds, United Kingdom

The 'contracting out' of urban sanitation provision and management by Non-Governmental Organisations (NGOs) to Community-Based Organisations (CBOs) in low-income settlements, is well documented. Less is known, however, about the everyday experiences of female CBO leaders and members, tasked with cost-sharing, construction, operation and maintenance. What are the incentives for participation? How are tasks distributed? Is participation beneficial, or a burden? If so, to whom? To deepen our understanding, this paper draws on findings from ethnographic fieldwork in three low-income settlements in Dhaka, Bangladesh, where government 'neglect', unwillingness or inability to deliver services has led to an apparent 'proliferation' of NGO-initiated Water, Sanitation and Hygiene (WASH) CBOs at the settlement level. Two key findings are highlighted. Firstly, while CBO participation can be highly beneficial to leaders, members and the wider community (such as health and wellbeing, status and confidence), it can also be a source of stress, anxiety and conflict, especially in relation to the (unequal) distribution of roles and responsibilities, resources or 'nasty talk' from non-members. Secondly, participation is often unstable and dynamic, with many female CBO leaders being 'dropped' from elected leadership positions (during or post-project) by local, male political leaders. A 'mismatch' is ultimately identified between the everyday experiences,

expectations of, and insecurities faced by female CBO leaders, and the agenda promoted by WASH NGOs, who must make compromises to deliver time-bound projects. The paper calls for greater attention to these everyday experiences, and underlying financial, social, political and tenure insecurities, to enhance equitable, and sustainable service provision.

Supporting technical advisory in sanitation: an interface that values people's everyday spatial practices

Ana Paula Baltazar, Universidade Federal de Minas Gerais, Brazil

This paper presents the findings of a data collection regarding sanitation in Glaura, a Brazilian community (district of Ouro Preto) located at the very beginning of one of the main watersheds in Brazil (Rio das Velhas). It shows that in Glaura there is no sanitation infrastructure provided by the State. It also shows the residents' perception: on the one hand, part of those living in the main road believe they are connected to a sewage infrastructure provided by the municipality (but in fact it is just a pipe connected to the tributary of Rio das Velhas); on the other hand, the great majority living everywhere else are conscious that they are not properly served with sanitation infrastructure, but many people still believe they are "treating" the sewage themselves, by sending it to a hole in their backyard. The research also shows that the old houses used to separate toilet water from grey water, but nowadays, with a process of gentrification in course (about 30% of the houses are occupied by besiegers), this culture is no longer present in the constructions of those who sell their homes for weekend users and build new homes in the periphery. Faced with such a problem, we are developing an interface for technical advisory on sanitation. This paper concludes with the discussion of such an interface, which proposes a dialogical process that values people's everyday spatial practices, while making technical knowledge available and avoiding community's dependency on the

technical team.

Role of Public Financing Addressing Urban Faecal Sludge Management (FSM) Services in Bangladesh

Mowshumi Sharmin, Bangladesh Institute of Governance and Management (BIGM), Bangladesh

Prior to adopting SDG, Bangladesh has achieved 100% access to sanitation by 2015 mostly by on-site sanitation systems (OSSs). The major drawbacks of the OSSs are the deposition of the Faecal Sludge (FS) in underground and environmental pollution due to the indiscriminate disposal of FS. As an over populated country, 40% out of 162 million people live in urban areas. However, national planning process; the Five-Year Planning (FY 2016-20) did not put emphasis on the Faecal Sludge Management (FSM). Major policies also did not address FSM though there are various policies relevant to promote safe sanitation. Against this backdrop, it is difficult to manage the second-generation sanitation challenge like, FSM services for the enormously growing urban population. However, to achieve the target of sustainable sanitation (SDG 6.2) the country needs much attention to address the FSM services with a huge public investment to build necessary infrastructures and initiate service delivery by involving stakeholders. This study investigated the role of public finance in addressing urban FSM services in two urban centers: Dhaka and Faridpur. The current public financing addressed FSM service for 39% inhabitants in Faridpur; while in Dhaka, FSM service is very negligible and DWASA is facilitating only the emptying service by engaging the private enterprises and NGOs shows resource gap for FSM financing. Lack of institutional coordination, role clarity on service delivery, service provisioning, capacity, leadership and inappropriate resource sharing among the utilities are the key challenges. The study has drawn a set of public financing mechanisms to achieve urban FSM service.

S10 (ROOM F13): DESIGN & PLANNING: (RE)GENERATION & CULTURAL INFRASTRUCTURES

Chinese rural-urban migrant integration and urban public space: A theoretical framework

Chen Qu, University of Cambridge, United Kingdom

In the context of global urban sprawl and mobility, Chinese internal rural-urban migration has caught scholars' attention, with these migrants' integration, linked with their settlements and urban life, as a core in migrant studies and political discourse. This paper firstly reviews the research on migrant integration, which shows the migrants usually face various challenges in cities, but primarily elucidates the integration sociologically, lacking an exploration of the role of urban environment, especially urban public space, although such space is of importance to residents' democratic life and cities' cultural diversity as a type of infrastructure and spatial resources. Thus, the features of urban public space and its connections with social cohesion/integration are subsequently presented, according to which integration is argued to be redefined, described and interpreted from a perspective of human-place nexus, and understood by focusing on migrant everyday life and urban experience. Finally, a theoretical framework is provided based on urban experience theory in different (mainly western) traditions to understand the influence of built environment and post-human components on dwellers' behaviour and affections as well as to guide future research that might connect, in addition to social and structural factors (e.g., Chinese household registration system), material components and spatial characteristics in urban public space to migrant everyday urban experience and then migrants' multi-dimensional integration, particularly the place -based integration. This research may make a contribution to a new approach to addressing migrant integration issues, and political debates surrounding migrant access to urban public space

and rights to the city.

The Cultural Infrastructure Boom in Hong Kong and the Pearl River Delta in the 2000s

Jane Zheng, Carolyn Cartier, University of Technology Sydney, Australia

The 2000s witnessed a "cultural infrastructure boom" in Hong Kong and the Pearl River Delta, in which the state invested urban landscapes with iconic architecture and leisure destinations. This significant yet unwritten urban phenomenon has implications to understanding urban governance in China. A comparison of cities in the Pearl River delta region, including Hong Kong and cities in Guangdong province, examines the role of the state in building culture in the city. The analysis juxtaposes development of the monumental West Kowloon Cultural District in Hong Kong with the construction of 'cultural facilities' in the cities of Guangdong to evaluate the emergence of 'culture' as the leitmotif of the urban economy in relation to heightened emphasis on 'cultural security' in China. The construction of cultural facilities under state socialism demonstrates how state-sanctioned cultural content are located, organized and displayed, and how they are engaged in global dialog with the cultural economy as a force of urban growth and regional restructuring. Moreover, they are working in material-ideological capacities to renew state-society relations. These include the party-state's claim on serving the people, in the role of the city-as-state as provider of citizen services. This heralds rising state ideological interest in moulding the citizen subject, as reflected by embrace of a branch of mainland China's foremost national museum in Hong Kong and a scene of monumental landscapes that symbolically and materially ground the power of the state in Pearl River Delta in the subsequent transformational continuities in construction of material sites in contemporary China.

Theatre architectures and performance spaces in transformation. A case study on Beijing

Anna Stecher, LMU Munich, Germany

Theatre, people say, is a mirror of the society. But where is it exactly, that the theatre is going on in contemporary China? If we take a look at Western publications on Chinese theatre, we might think that all innovation happens at the border of the big cities where European style avant-garde festivals take place. However, if we walk through the centres of Chinese cities, we might remain stunned in front of gigantic opera houses, where the newest high-technology is used for staging One-Belt-One-Road pieces. In order to shed some light on the multiplicity of theatre spaces in contemporary China as well as its recent development and future tendencies, I aim at tracing a history both of theatre architecture and performance spaces, focusing on the city of Beijing during the last 40 years. By combining the study of historical accounts with the examination of theatre journals and dramatic works, I will pay special attention to the interactions between theatre spaces, producers, authors, works, and audiences.

Place attachment and mental well-being in the context of neighbourhood regeneration

Michael Lomas, University of Salford, United Kingdom

Regeneration of the built environment is an important focus of policy across the European Union (EU), and at any one time, numerous projects are being delivered across member states. However, despite its pervasiveness, very few studies have explored the underlying processes involved with residents' interpretation of changes brought about by neighbourhood regeneration. Studies of neighbourhoods and communities have highlighted the significant role of the physical environment in life and how the existing residents cope with changes to their socio-spatial environment should be taken into account. The current study employed semi-structured interviews and interpretative phenomenological analysis to explore the lived experiences of nine long-term residents of

an area in the Northwest of England, which was undergoing extensive neighbourhood regeneration. The findings demonstrate how the removal of resources, landmarks, and changes to the road structure has led to the symbolic formation of a new location and a sense of dislocation. Also highlighted were potential consequences for mental well-being, with regeneration efforts being associated with reduced levels of control and a sense of powerlessness, social isolation, and issues relating to self-image. Despite such drawbacks, however, the results suggest potential for regeneration initiatives to address public health issues, and offer insight to enable future projects to be implemented in a more strategically intelligent manner. Through acknowledgement of the provided guidance, it is hoped that those implementing such initiatives become increasingly successful in addressing public health issues, whilst minimising the negative outcomes frequently associated with the approach.

COFFEE BREAK

S11 (ROOM F12): URBAN INFRASTRUCTURE: WATER SUPPLY

Maintaining water supply in Mexico City: working against the looming threat of scarcity

Alejandro de Coss Corzo, London School of Economics, United Kingdom

Recent scholarship on urban infrastructures has highlighted the role of repair and maintenance in its daily operation (Anand, 2015; Alda-Vidal, et al., 2018; Baptista, 2018). This growing body of scholarly work has shown that repair and maintenance are necessary to sustain broader socio-material orderings, ranging from the urban to the regional and nation-state scales (Carse, 2014; Anand, 2017; Barnes, 2017). Particular emphasis has been placed on the role of ingenuity and improvisation in the work of infrastructure

repair and maintenance, showing its centrality in sustaining the everyday life of cities and its inhabitants (Graham & Thrift, 2007). Repair and maintenance, therefore, have been decidedly placed at the centre of our understandings of the role that infrastructures have in producing urban life and its many inequalities. In this paper, I will explore another facet of maintenance work. Drawing on ethnographic data gathered during a one-year fieldwork period in a public water utility, the Mexico City Water System (SACMEX), I aim to analyse the role of futurity and threat (Zeiderman, 2016) in shaping everyday infrastructure repair and maintenance in Mexico City. Against the looming threat of water scarcity and urban collapse, SACMEX workers perform their work as a way to keep the city not only healthy, but alive, in a moment of time in which this very fact seems to be in peril. By focusing on their daily work, I claim that everyday adaptations and innovations are crucial in sustaining urban life, and in imagining more just, equal, and sustainable cities.

Lane 49: Collective infrastructure, collective action?

Harrie Larrington-Spencer, University of Manchester, United Kingdom

This paper contains an ethnography of 'Lane 49'; a residential community of 10 buildings (four red brick houses dating back to the Republican era and six concrete apartment buildings constructed during the Mao era) situated in Jing'an district, Shanghai. The residents of Lane 49 identify their community as laogongfang (old-style public housing), a reference to housing constructed or converted for purpose by the communist government in which multiple families would share kitchen and bathroom facilities. Whilst much residential accommodation in China was privatised after the 1988 National Housing Reform Plan, residences with shared kitchen and bathroom facilities were exempt. This means that Lane 49 remains - with the exception of some households who achieved private ownership by additionally purchasing

neighbours' accommodation and thus no longer sharing facilities - public housing with public facilities. The residents of Lane 49 are currently undertaking a campaign seeking to visibilise the living conditions of their community – including both the shared kitchen and bathroom facilities as well as their poor condition – and gain (re) commitment by the local government to the development of the Lane. Within this paper I will first explore how the buildings, space and shared facilities of Lane 49, as relics of Socialist housing ideals, support the community to collectivise and campaign against their conditions of living, as well as against their being 'left behind' in a rapidly developing megacity. This will be followed by a discussion of the type of development anticipated by the residents of Lane 49 and the (perhaps contradictory) implications of such development on the very conditions that support their collective action.

Shared sanitation for a healthier Mumbai

Prathibha Ganesan, Tata Institute of Social Sciences, Mumbai, India

A slum where sanitation is unaddressed remains unhealthy. Around 41.3% of the population in Mumbai lives in the slums without adequate sanitation facilities. Lack of toilets, congestion in the existing toilets, accidental deaths, and incomplete sanitation value chain are some of the sanitation-related woes in Mumbai. Shared sanitation has been the only choice the households have to relieve themselves. However, shared sanitation is not considered to be a safe sanitation facility as per the Joint Monitoring Programme sanitation ladder. But, cities like Mumbai with severe space crunch do not have many options than the shared sanitation facilities. As the city expands, at the peripheries the demand for shared sanitation increases. People struggle and have adapted themselves over the years in many ways to such a situation. What have been their adaptive strategies? How effective is the shared sanitation, and how can it be made sustainable? Using a qualitative approach this research explores the shared sanitation facilities

in Mumbai's urban slums. At first, a typology of shared toilets was prepared, and researchers visited these types of facilities in 5 different wards. Data were gathered from different stakeholders like users, contractors, politicians, and NGO representatives employing in-depth interviews and focus group discussions. The usage pattern, adaptive strategies, technologies, socio-economic aspects were studied and analysed. The study found that communities involved in toilet construction with or without government support often entered into constant conflict with additional new users from households. Ignorance of technologies and lack of regular maintenance have been major issues with the government sanitation facilities which cost the lives of the slum dwellers. Incomplete sanitation value chain is the reality across the wards making urban sanitation unsustainable.

Myths of/in the healthier city: intersections between infrastructure, practices and knowledge in water supply

Susana Neves Alves, University of Cambridge, United Kingdom

In Bafatá, like in many other cities across Africa, most residents rely on a variety of technologies – piped network, hand pumps, buckets, water carriers – and sources – underground water, rivers, rain – in order to meet their water needs. Drawing on extensive ethnographic research carried out in a small secondary city in West Africa (Bafatá, Guinea-Bissau), this paper examines everyday water practices as well as narratives underpinning these practices in order to understand how people navigate variegated water sources and technologies on a daily basis. It thus unveils the ways in which city residents balance distance, cost, technology and water availability and quality. It then focuses particularly on how perceptions of water quality circulate within the city and influence people's strategies. This research support ongoing critiques of international policies that measure access to safe water by focusing merely on type of infrastructure. Related to this, it is argued that

debates on water infrastructure need to move beyond a narrow focus on infrastructure and pay more attention to quality of water. This is particularly the case for smaller cities in poorer contexts where the concomitant use of a variety of water sources and technologies is, and will remain, a key strategy. In addition, this paper discusses how everyday water practices shape infrastructure, and how perceptions of water quality (as well as the ability to influence such perceptions) can heavily influence the possibility for water systems and healthy cities.

Tackling Water Challenges in Smart Ways – Smart Water City Project in Paju City, South Korea

Yookyung Lee, Korea University, South Korea

The study appraises Smart Water Management Technologies (SWMTs) in South Korea focusing on the 'Smart Water City (SWC)' project in Paju City (2014-2016). The SWMTs indicate technologies that utilize real-time and automated data in order to resolve water challenges. The data managed through the SWMTs are distributed between service providers and users so that the efficiency and governance of water resources management can improve significantly. The case of Paju City is the Korea's first attempt to apply the SWMTs to an entire city and was initiated by Paju City and K-water. The SWMTs increased the percentage of Paju citizens who drink water directly from the tap substantially from 1 to 36.3% and improved the average water flow rate by 13.4% in three years. Community trust on the quality of drinking water was also enhanced. However, the project was unsuccessful in promoting interactive communication between service providers and users. Although Paju citizens receive the information from K-water, they do not actively provide feedback on the services. This phenomenon is attributed to the government's approach to project planning and implementation without consideration of public participation. Public participation in the SWMTs is an essential factor that enables service providers to understand people's needs and provide proper

solutions based on the two-way information sharing. It is concluded that the SWMTs in the city have resulted in improving the efficiency of water use and operation and have served as a new platform to empower citizen participation for water democracy.

S12 (ROOM F13): SYSTEMS THINKING & URBAN CHANGE

Systems thinking and simple models for healthy cities

David T. Tan, UNU IIGH, Malaysia

Complex problems can often be addressed using simple models in transdisciplinary engagement. Indeed, simple models can be more powerful than highly complex ones, insofar as they identify critical feedback relationships and are mutually understandable by stakeholders operating at different places in a causal system. In such contexts, they can lead to surprising insights, better communication, and more effective action. Through the "Systems Thinking and Place-Based Methods for Healthier Malaysian Cities" (SCHEMA) project we have used and disseminated such tools to advance urban health. We have engaged local actors in the Malaysian context, using systems thinking tools to co-develop case studies on a wide range of issues—from policies that impact nutrition in schools to urban rejuvenation efforts—that are important influences on urban health and wellbeing. We engaged the actors in a process of exploring feedback relationships and causal systems. The collaborative construction of causal loop models situates seemingly linear problems in a systemic context. Such reconceptualised problem paradigms create new understandings and suggest potential actions. Additionally, framing the problem narrative in simple causal loop models has enabled visual communication of complex issues in an easily accessible manner to a wide audience. Finally, the process and outputs have led to new collaborations and opportunities to extend the network of systems

thinking practitioners. The paper will cover the process of generating the case studies, some of the insights developed, and how this approach fits together within a larger scope of transdisciplinary engagement linking health and the urban environment.

Smart City and Urban Management in China

Ran Peng, University of Edinburgh, United Kingdom

China is committed to the idea of Smart Cities. Currently, the Chinese Smart Cities project has four characteristics: Smart lifestyle (transportation, medical service, and bill payment), Smart urban administration (monitoring system and urban management), Smart economy (IT industry), and Smart governmental service (Internet +public service). While some Chinese cities have embraced the Smart City project, the results have been disappointing and characterised by unclear theoretical guidance, poor technology application, and uneven urban administration. This research focuses on the development and implementation of the Chinese national strategy of constructing Smart Cities between 2012 and 2020. My paper will outline Chinese Smart City policies and practice. I will use Taiyuan and Xi'an as examples to show the practice of constructing Smart Cities in China. Smart cities construction is supposed to be sustainable and flexible. In this paper, I will analyse how local governments achieve this. The paper will address how these two Chinese cities use information technology and collaborate with partner companies. Through this analysis the relationship between local governments, enterprises, and the implementation of Smart Cities will be sketched out. This will allow for some initial conclusions to be made regarding the development and implementation of Smart City policies at the local level.

Population Change Index: An Approach to Indicate Suburbanization

Suman Chatterjee, Jadavpur University, India

Suburbanization or peripheral expansion of cities has become a prominent phenomenon of developed and developing nations. Accordingly, the high growth rate is shifting from the main city towards the peri-urban area. Many Indian cities are not an exception to this phenomenon. Durgapur, a large but young urban agglomeration of West Bengal, started to form since the 1960s and has become second largest Municipal Corporation of West Bengal. Subsequently, several small settlements have formed surrounding the main city. In this work, a composite index indicating suburbanization has been introduced by integrating a new indicator – i.e. changes in non-agricultural workers to the Population Change Index (PCI). Therefore, the current index is comprised of two indicators i.e. total population change and changes in non-agricultural workers, each having two dimensions of change (i.e. absolute and relative). The index has been computed for 114 micro administrative units (MAUs) of Faridpur Durgapur, Andal and Pandabeswar block of Burdwan district, West Bengal for the period of 50 years (1961-2011). High PCI value of Tetikala, Durgapur Municipal Corporation, Kumarkhala is seen, indicating the possibility of becoming aspiring urban centers in the region.

A system dynamics study of lifecycle energy use in buildings in urban China

Wei Zhou, University of Cambridge, United Kingdom

Rising energy consumption and emissions from buildings present a critical challenge to China's pledge in the Paris Agreement to peak overall emissions by 2030. Strategically, China's building sector needs to undergo a transition towards low-carbon development whereby the increase of building energy consumption and emissions begins to decelerate. This urgently calls for a sector-specific policy and regulatory framework targeting both new and existing buildings and consisting of reasonably

aggressive targets, sustained and effective policy instruments and assertive actions, tailored to the broader policy settings in China. This study seeks to develop insights into the complexities and dynamics associated with energy use of buildings in urban China by examining relevant sectoral policies. It is not intended to explore building energy saving potentials from building physics perspectives. Rather, the overarching purpose is to add a policy evaluation perspective, with the emphasis placed on examining the importance of embodied energy relative to operational energy of the dynamically evolving building stock under various scenarios. Applying a System Dynamics approach, a highly aggregated model is developed where building stock evolution is treated as a continuous process of introducing new cohorts which decay over time, thereby capturing the dynamic interplay between new construction, demolition and renovation. Operational energy and embodied energy are modelled as co-flows of the building stock. It is expected that the study will lead to an enhanced understanding of the general behaviour characteristics and dynamic tendencies of China's building energy stock over time, which will contribute to informing sectoral policy design and evaluation.

A system approach to study well-being outcomes of rapid urbanisation in China

Ying Chang, Xi'an Jiaotong University, China

According to estimations by members of the Chinese Social Science Academy, urbanisation in China has resulted in 40 to 50 million landless farmers, and it is predicted that this figure will reach 110 million by 2030. From the latest census, it is estimated that there are 9 to 18 million elderly population moved from rural to urban area between 2010 and 2025. They are featured with rapid aging and health issues, which will cost substantial resources of public health. This paper had two main parts. First, to develop a conceptual framework of built environment and health study of landless farmers. This will be achieved through intensive literature review on later life relocation, involuntary relocation,

built environment and aging studies, and empirical evidence from existing studies in China. Second, a case study from fieldwork in one rapid urbanising area of Yangtze delta to exemplify the framework. The empirical work includes household surveys and interviews from 2012 to 2016. Household surveys include 100 landless farmers living in walk-ups, 100 in high-rise neighbourhood, in 2013 and a follow up survey of high-rise dwellers in 2017. Survey questions include social capital, neighbourhood interactions, and self-reported health conditions. Interviews include change of lifestyle and adaptations. This paper will enrich the theory of 'person-fit' and 'press-competence' model of adapting and aging with empirical evidence in rapidly urbanising context of China.

LUNCH

S13 (ROOM F12): USES & EXPERIENCES: EVERYDAY SPACES, PRACTICES, POLITICS 1

Resisting the hegemonic shopping mall: Alterity and leisure spaces in Philippine cities

Czarina Saloma, Marlyne Sahakian, Eric Akpedonu, Ateneo de Manila University, Philippines

The physical environment of Metro Manila, with its tropical heat and humidity, unattractive and unwalkable streetscape, and colonized public spaces, has undoubtedly contributed to the appeal of sanitized and air-conditioned mall culture in this megacity of about 11.7 million people. This paper considers specific sites for alternative leisure activities in Metro Manila's public spaces (i.e., plaza, park, neighborhood street, children's park, and cultural venue) to examine conditions of alterity that privilege the hitherto marginal and subterranean aspects of a capitalist and globalized world order. It defines these alternatives as any activity that resists

the hegemony of the shopping mall as the sole space for leisure. The discussion examines data from interviews with individuals who engage with these spaces for their leisure activities and those who played a key role in either establishing or promoting these alternatives, as well as participant observations, toward the end goal of contributing to the thinking and re-thinking of leisure in relation to global taste, resource consumption, social innovations, and their various intersections. Using a practice approach, and focusing on social innovations, the paper demonstrates that (un)sustainable leisure consumption and class-specific tastes, as well as predisposition to non-national cultural products and genres, can be modified by a society's competencies, cultural resources, and social experiences and practices.

Cool by design: Social practices around air-conditioned microclimates in Metro Manila

Marlyne Sahakian, University of Geneva, Switzerland

What could be more common than a trip to a shopping mall in most Southeast Asian cities? In Metro Manila, people often "go malling" to escape the outdoor heat and humidity. While air-conditioning is not a norm in most homes in Metro Manila, it is fast becoming normality: people expect artificially cool air in indoor commercial spaces and workplaces, and air-conditioning is increasingly seen as the most desirable way of achieving a comfortable indoor microclimate. How normality evolves over time in relation to air-conditioned microclimates has been explored in depth by Gail Cooper and Marsha Ackermann in the United States. In Metro Manila, expectations around the microclimate have changed over time in relation to social norms governing hygiene, comfort, fashion and building design – and in the interrelation between norms, expectations and material dimensions of consumption. For this paper, air-conditioned microclimates in Metro Manila are placed in relation to social practices in the home and workplace, drawing attention

to how everyday practices shape, and, in turn, are shaped by indoor cooling. This contribution presents a chapter in the forthcoming edited book, The Urban Microclimate as Artifact. Towards an Architectural Theory of Thermal Diversity (Sascha Roesler and Madlen Kobi, eds., in press).

The rise of "Wenyi Qingnian" in China: infrastructures, public spaces and everyday life

Chujia Cai, Shanghai University, China

The emergence and surge of the group of "Wenyi Qingnian" (or "Wen Qing" for short, literally means artistic youth) is a phenomenon which cannot be ignored in the overall landscape of China's urbanization and planning. The mushrooming of galleries, museums, independent bookstores and all other kinds of cultural infrastructures is partly a joint effort of capital and government to cater to, encourage and guide this trend. Wen Qing has always been referred to by western media as "hipsters in China", which is an inaccurate translation - for its paradoxical relationship (both intimacy and rebel) with the mainstream culture and consumerism. Because on one hand it is related to a swelling of middle class which is longing for accumulation of cultural capital and confirmation of class identity, while on the other hand it interweaves with a large population of youth who are struggling under pressure and always be seen by the society as losers hiding under the shell of the obsession with art and culture instead of confronting the real life face to face. This paper takes a look at this group and these related spaces to examine aspects such as: (1) the inclusion and segmentation involved (class-based or non-class-based); (2) social approval and social stigma attached, including gender issues; (3) relevant dynamics of lifestyles and everyday practices and (4) the possible implications for sustainability.

Brazilian municipalities in crises: emergency decrees and their social implications

Dr Norma Valencio, Arthur Valencio, Universidade Federal de Sao Carlos, Brazil, and Murilo S. Baptista, University of Aberdeen, United Kingdom

Brazilian municipalities have faced multifaceted crises resulting in the deterioration of the relationship between local public administration and citizens. One of these crises emerges as a result of disasters, characterized not only by the collective stress associated with multiple damages, but also by the controversial institutional practices for managing them. Although the dissemination and recurrent declaration of state of emergence across the country suggest disasters are out of control, these decrees may also indicate that a new kind of policy practice is being established, which in place quite regularly these exceptional legal and operational artefacts for events with a dubious genuine disaster character. The issues involved are more immediately related to the gradual split between the factual events and the bureaucratic modus operandi of the local administration leading to risks of loss of public credibility in civil protection policies. Considering this problem, our purpose is to present the spatiotemporal dynamics of these systemic crises in the Brazilian municipalities in the last years (2003-2018) as well as to test possible correlations and causal relations with other socioeconomic variables such as population, GDP, tax revenue, Gini index, and HDI. We have developed the Multithread Causality Toolbox, which was applied to evaluate the existence and strength of causal links by calculating the Transfer Entropy and Causal Mutual Information (CaMI). The results indicate that variables related to social inequalities are more relevant to explain this kind of ambiguity: a public administration practice originally designed to tackle exceptional circumstances being operated routinely.

S14 (ROOM F13): URBAN INFRASTRUCTURES: TRANSPORT & MOBILITY

Speed Limit of Personal Mobility Devices on Footpaths

Hoong Chor Chin, National University Singapore, Singapore

In recent years, there has been an increase in the usage of personal mobility devices (PMD) in urban areas for first-and-last mile travel. While personal convenience has improved, there has also been a high number of injuries due to their collisions with pedestrians in public areas. To manage this hazard, speed limits have been set on PMD usage. When Singapore first passed the Active Mobility Act in 2016, the recommended speed limit for PMD was 15 km/h on pedestrian footpaths and 25 km/h for shared cycle paths. The high number of injuries, including serious and fatal ones, warranted a review of the recommendation and resulted in a new speed limit of 10 km/h on pedestrian footpaths to be enforced from January 2019. Although the reduced speed limit should result in lower collision risk, it is unclear if this change would be sufficiently effective because it appears that the setting of speed limit lacks scientific justification. This paper examines how the speed of a PMD will influence the probability of collision with a pedestrian on the footpath based on human reaction to the hazard. Using a case study, it presents the various conditions, (such as the PMD speed, the footpath width and the pedestrian movement), on which a collision is inevitable. The study suggests that even with a speed limit of 10 km/h, the chance of a collision may still be unacceptably high.

Development of an observation tool for measuring physical activity and other behavioural indicators of wellbeing in urban spaces: MOHAWk

Jack Benton, University of Manchester, United Kingdom

Direct observation of behaviour offers an objective method of measuring physical activity

and other behaviours important for wellbeing in urban spaces. However, existing observation tools are: (a) only suitable for assessing physical activity (and not other wellbeing-related behaviours); (b) only suitable for large urban spaces that attract high numbers of users, predominantly large parks; and (c) have not been validated outside the US. Method: We developed MOHAWk (Method for Observing physical Activity and Wellbeing): an observation tool for assessing three levels of physical activity intensity (sedentary, walking and vigorous) and two other evidence-based behavioural indicators of wellbeing (social interactions and taking notice of the environment). Six observers used MOHAWk to conduct observations in four sites in Manchester (a park, an urban square and two tree-lined streets) and one site in Belfast (an urban square) across three studies (over 200 hours of data). Findings: High inter-observer reliability has been established between pairs of observers (ICCs > 0.75). There is evidence of validity, with observed behaviours in line with hypotheses (e.g. more people taking notice in environments rated as having higher-quality green space). Discussion: MOHAWk is a reliable and user-friendly tool for observing physical activity and other behavioural indicators of wellbeing in urban spaces, which overcomes issues of response rates and subjectivity associated with self-reported measures. MOHAWk has recently been used to evaluate the impact of urban green space interventions in two separate studies in Greater Manchester, in partnership with a local housing association and a real estate investment company.

Moving Beyond the Romans: AI and Roadway Infrastructure Maintenance

Mark DeSantis, RoadBotics, USA

The presenter will discuss the profound impact AI and deep learning are now having on a vast array of inspection regimes, with a particular focus on infrastructure inspection and maintenance. AI has matured to the point where it is replacing many forms of human or 'manual' visual inspection and doing so with higher levels of precision, accuracy and objectivity with dramatically lower the cost. This new era of intelligent, automated inspection is changing the work of cities around the world. The speaker will use his own company as a point of reference and include other examples as well. The ancient Romans built a 50,000 mile network stretching from modern day London to the north coast of Africa. Some of those roads, like the Via Appia in Rome, are still usable today. One important feature of maintaining these roads was the importance the Romans placed on regular inspection, which often included a 'Liktor' or road inspector perched on the back of a chariot carefully making notes of problems and features he saw along the way. Incredibly, road inspection has changed little since that time, save for the fact the vehicle is often a Ford F150 or Toyota. RoadBotics automates the entire inspection process from data collection to analysis to presentation by combining a standard smartphone (with the RoadBotics app installed) and an AI cloud-based platform. The tech was developed at the Carnegie Mellon and serves +100 cities, towns, councils and counties in 4 countries. Recent press includes: https://www.wired.co.uk/article/reimaging-city-life-with-urban-x?utm_source=hs_email&utm_medium=email&_hsenc=p2ANqtz--EPaXfKIJy3x6bkSoq4xJQ8tYOSCW7GCrq6iS0V7XmrVpEaVK668ClWuTUhUFgBRtQV36R https://techcrunch.com/sponsored/this-company-created-a-high-tech-solution-to-a-2500-year-old-problem/ https://www.bbc.com/news/business-45652307

Exploring the concerns about Autonomous Vehicles in the public realm

Sigita Zigure, Solon Solomou, Eric Cheung, Ulysses Sengupta, Rob Hyde, May Bassanino, Mahmud Tantoush, Manchester Metropolitan University, United Kingdom

The transportation sector currently accounts for 33% of the final EU energy consumption and is expected to become the largest source of CO_2

emissions in the EU by 2030. The automotive industry is working towards developing fully autonomous transportation for futures cities contributing to environmental sustainability and enabling increased mobility for all. The UK government has stated that it expects self-driving vehicles to be on UK roads by 2021. However, there is a lack of clarity relating to the potential effects of such technology on urban environments and human wellbeing. While the industry remains optimistic about the benefits that autonomous vehicles (AVs) will bring, there are many valid unanswered concerns raised by others. This paper reports the findings of a study to identify the dominant concerns about AVs in public media online. The desk research method used to identify the concerns about AVs consisted of two parts: data collection and data analysis. For data collection, 'Google Search API' python based library was used for scraping Google Search results pages based on specific search terms. The content of each result (in predefined range) was then extracted. A latent Dirichlet allocation (LDA) topic model was used for data analysis. The desk research identified dominant concerns in 693 online articles in total which were then grouped into five categories of concerns. The categories are: efficiency; safety and policy; personal data and privacy; ethics and decision-making for AVs; market readiness and uptake of technology. The identified concerns were further explored and analysed with various groups of end-users. The above results will enable industry professionals, planners, and policymakers to better understand the current state of public opinion, thus addressing them will assist in developing a dialogue between the different groups and their agendas.

COFFEE BREAK

S15 (ROOM F12): USES & EXPERIENCES: EVERYDAY SPACES, PRACTICES, POLITICS 2

Health after displacement: urban food production, informality and infrastructure in Chongqing

Asa Roast, University of Leeds, United Kingdom

This paper examines the use of informal spaces for food production in the transforming built environment of an urbanising megacity in Southwest China. During Chongqing's rapid urbanisation over the past decade diverse groups of urban and rural residents were displaced through various practices of economic restructuring and state expropriation. Within the new fragmented landscape of the city, many of these groups made use of the large quantities of undeveloped land within the city as a space for informal urban food production. These informal practices centred around arable production, but also extended to poultry farming, food processing and a range of other practices associated with maintaining a healthy and self-sufficient existence within the changing terrain of the city. Drawing on long-term ethnographic fieldwork, it examines how various social configurations, discourses of health and practices of collaboration and differentiation emerge through informal farming in the city. It examines the changing relationships between ideas of health, restructured urban infrastructures of provisioning and notional categories of the rural and urban. Taken together, this paper argues that these practices constitute an effort to maintain bodily autonomy within the city in an informal urban commons, and prompts critical reflection on the interaction of bodily, cultural and political space in daily life.

Infrastructure and Everyday Practices at places of idol production in a Kolkata bustee

Debapriya Chakrabarti, University of Manchester, United Kingdom

The idol-making industry in the Kumartuli neighbourhood of Kolkata is a traditional cultural industry based in a slum area and attracting increasing employment. This historical

neighbourhood is associated with the caste-based practice of idol-making. The meaning and significance of the idol is changing based on the technical know-how, changing consumer pattern and branding potential as a subsequent promotion due to the local government tourism policy. The evolving practices that have shaped the working conditions of the idol-makers' community in the Kumartuli neighbourhood and the living condition of this community in this place for generations is the focus of this paper. The everyday social and cultural practices of a community overlap with the idol-making practice within similar spatial and temporal frames. The community which contributes to the majority of idols produced and worshipped in Kolkata and beyond; operates from different smaller units of production which have historically been the living and working spaces for families of idol-makers. The dynamics of operation of the industry in the place with regards to the natural and the built environment and the constant competition and cooperation shapes this study. The particularities of the production, or the precarious infrastructure, an inner-city location, qualify the place. Spaces are contested and often negotiated to accommodate coexisting practices. Everyday social and cultural practices have been shaped by the location and character of the neighbourhood. This paper conceptualises how practices are shaped by places and vice-versa and how the (non)existence of infrastructure challenges these everyday practices, studied through ethnographic fieldwork.

Formalizing Infrastructures, Civic Networks and Production of Space: Bedouin Informal Settlements in Be'er-Sheva Metropolis

Tomer Dekel, Ben-Gurion University of the Negev, Israel

With worldwide proliferation of impoverished informal settlements, scholars are paying increasing attention to related political struggles around issues of formalization and provision of social and physical infrastructures. By examining such struggles in informal Bedouin settlements in Be'er-Sheva metropolis, Israel, we contribute to this trend by explaining how complex trans-local civic networks become key agents in promoting such goals. We use Lefebvre's 'production of space' perspective as an outline to conceptualize the relations between interventions in perceived space (infrastructures), lived space (symbolic recognition) and conceived space (formalization) of informal spaces. As we show, the civic networks construct symbolism of suffering population and rights deprivations while establishing infrastructures as 'facts on the ground.' This research thus sheds new light on the way civic networks become increasingly prominent in the production of contemporary in/formal space.

Green public spaces in the cities of South and Southeast Asia: form social practices to societal wellbeing

Manisha Anantharaman, St Mary's College (USA), Antonietta Di Giulio, University of Basel (Switzerland), Marlyne Sahakian, University of Geneva (Switzerland), Czarina Saloma, Ateneo de Manila University (the Philippines) and Dunfu Zhang, University of Shanghai (China)

The significance of green public spaces towards "sustainability" is well documented in relation to social inclusiveness, human health, and biodiversity. Yet how green public spaces achieve what Ian Gough has termed "sustainable wellbeing" is less understood. This contribution presents initial results from a study of green public spaces in three mega-cities of South and Southeast Asia: Chennai (Republic of India), Metro Manila (Republic of the Philippines) and Shanghai (People's Republic of China). The conceptual framework brings together social practice theories with human development theories, with methodological implications for the study of park usage. Specifically, we set out to understand how parks satisfy fundamental human needs by studying practices as both socially shared meanings, and as "doings" or park activities which integrate three dimensions: material arrangements, people's dispositions,

and both explicit and implicit rules social norms. Central to the research design and sampling strategy is a desire to understand park-related practices in all of their diversity, involving possible tensions between different activities carried out by diverse groups of people. Initial results will be presented and discussed, as well as our conceptual framework and methodology, involving participant photography, observations and in-depth interviews.

S16 (ROOM F13): URBAN INFRASTRUCTURES: URBAN HEALTH

Drivers and impacts of Eco-Industrial Park development in China: Towards a set of indicators for assessing environmental and human health impacts

Hongru Franz Hong, University of Tokyo, Japan

Industry contributes to about one third of China's gross domestic product (GDP), and accounts for around 70% of the national energy consumption and 72% of its carbon emissions. Approximately 60% of the industrial output comes from industrial parks, with these parks often driving urbanisation due to the attraction of investment and workers, and the development of infrastructure and ancillary facilities such as restaurants, housing, and hospitals. On the one hand, industrial parks emit massive amounts of pollutants that affect human and ecosystem health; and on the other hand, workers might be exposed to substantial occupational hazards. Considering that most of the workers are migrants without a local household registration, their access to local healthcare facilities might be hampered. Due to the major economic role and environmental impact of industrial parks, the Chinese government embarked in 2001 in a programme to upgrade them into eco-industrial parks (EIPs). However, whether these efforts have had positive environmental and human health outcomes is not yet fully understood considering the scarce literature on this topic. If the development of EIPs does not cater for the needs of populous migrant workers, it is inconclusive that the industrial parks are improved. Based on an extensive literature review supplemented with expert interviews, this presentation will look into the drivers of EIP development in China, and outline some of the major environmental and human health impacts of EIP development, and identify possible indicators that can be relevant to evaluating the environmental and human health impacts of EIPs.

Chronic exposure to ambient air pollution and obesity among older adults in China

Nan Zhang, Lei Wang, Min Zhang, James Nazroo, University of Manchester, United Kingdom

Population ageing and air pollution have emerged as two of the most pressing challenges in China. However, little evidence has explored the influence of air pollution on obesity among older adults in China. The China Health and Retirement Longitudinal Study 2015—a nationally representative sample of middle-aged and older Chinese was linked to the air population data at the city level from Ministry of Ecology and Environment. Multilevel logistic models were fitted on obesity status among older people in relation to different air quality measures such as chronic exposures to severities of air pollution and pollutants. Air pollution was positively associated with increased risks of general obesity and abdominal obesity among older adults especially for those with disability. The marginal effects of overall air quality index (AQI) on obesity suggest that one standard deviation increase in AQI is associated with increased risks of central obesity by 2.9% (95%CI 1.8% 3.9%) and abdominal obesity by 6.2% (95%CI 4.4% 8.1%). The risk of chronic exposures to light (and moderate), heavy and severe pollution on obesity elevated in a graded fashion in line with the level of pollution. Durations of exposure to PM2.5 and PM10 were significantly associated with increased risk of obesity among older people in China. Chronic exposures to severe air pollution

and certain pollutants such as PM2.5 and PM10 raise the risk of obesity among older people in China and the effects were particularly strong for those with disability. Future policies that target these factors might provide a promising way of improving the physical health of older people.

The Intangibles of Informality: capturing the non-physical parameters of urban growth

Yahya Gamal, University of Manchester, United Kingdom

Approximately seventy percent of Egypt's capital city, Cairo, live in informal settlements. The city faces challenges in its spatial and urban infrastructure planning. Arguably, decision makers need to spatially predict the growing informal geometries to allocate infrastructure land plots before the growth occurs. However, predicting such growth is a complex challenging process which has spatial, social and economic dimensions. The socio-economic dimensions are arguably intangible aspects that directly or indirectly affect the spatial, tangible, growth. In fact, such intangible aspects include not only socio-economic parameters, but also socio-economic procedures which are valued in a manner that affects the spatial growth. Accordingly, this paper presents an approach that seeks to capture and understand the non-physical parameters and procedures that shape informal urban growth with a view of facilitating informed decision making towards well-planned urban infrastructure for formal and informal urban communities.

Construction of decentralized sanitation systems through community participation in Brazil

Ana Augusta Passos Rezende, Federal University of Viçosa, Brazil

Recognizing the precariousness of sanitation in Brazil, this project aims to raise awareness and disseminate, through community participation and partnerships, social technologies for

treatment of the domestic sewage and, consequently, the improvement of techniques seeking simplified projects, of easy construction, operation and maintenance. This has led to decentralized sewage systems that are more accessible and suitable to peripheral and rural areas. Through the mobilization of the communities themselves, it led to the construction of several units in different municipalities in the state of Minas Gerais. The search for a better quality of life was the main incentive for families to implement the process. In addition to health and environmental care, the possibility of access to the consumer market and public policies, aimed at family farmers. The main objective was the experimentation and dissemination of social technologies for the treatment of domestic sewage and consequently the improvement of techniques for simplified, easy to build, operate and maintain. To raise awareness about the issue of sanitation and, later, the recognition of processes and practices in which sanitary sewage is simplified, such as: septic tank followed by after treatment, septic tank biodigester, evapotranspiration tank and dry sanitary. The evapotranspiration tank sewage system presented greater acceptance among the decentralized systems of sewage treatment, being the most recurrent construction. Thus, the objective is to involve the subjects and disseminate the solutions presented to the issue of sanitation in peripheral and rural areas. In relation to technical research and systems monitoring, the return of results to the communities and users is an important step towards acceptance and credibility in relation to systems.

CLOSING

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Yuping Dong	Huazhong University	China

PRACTICALITIES

GROUND TRANSPORTATION FROM MANCHESTER AIRPORT TO IBIS HOTEL

Option 1:

See map on next page.
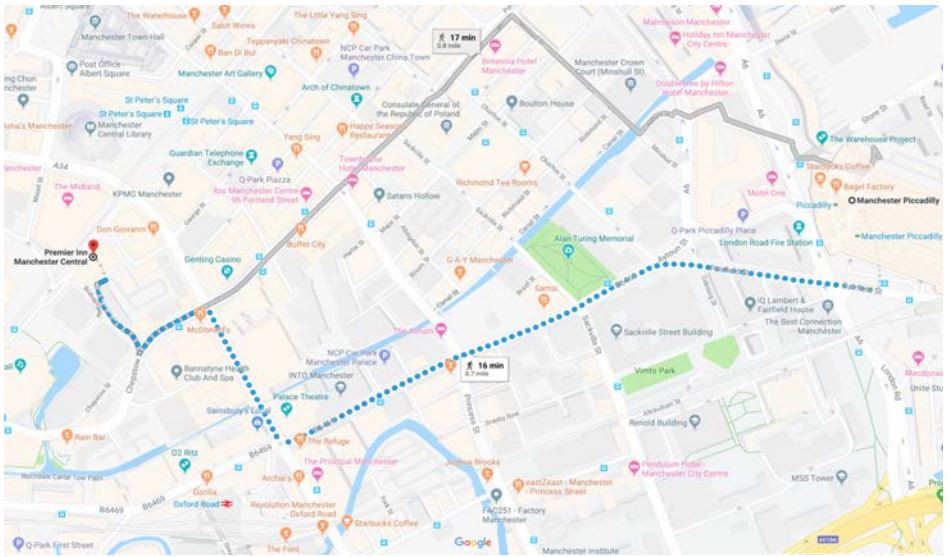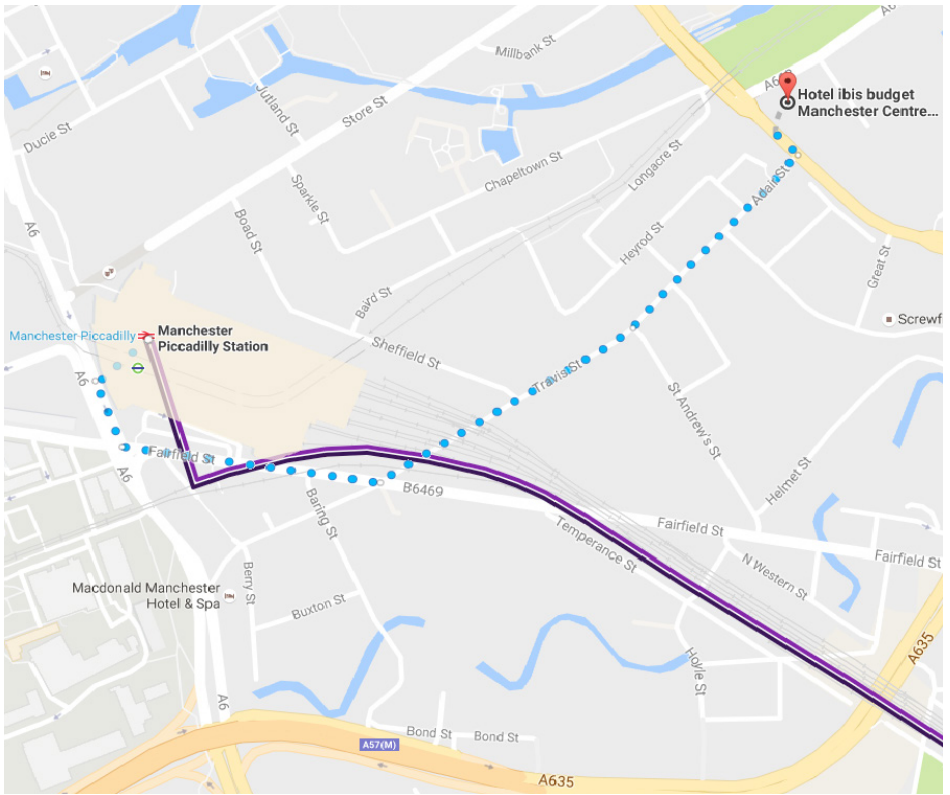
Train Service to Manchester Piccadilly Station. This is the cheapest option, which costs around £5. The destination you have to take varies as train services run 7 days a week through national train operators 'TransPennine Express' and 'Northern Rail'. Trains run every 10 minutes to Manchester Piccadilly, with an average journey time of 20 minutes. From Piccadilly Station follow the steps below:

- Upon arriving to the station, exit the station following the escalators down.
- Once outside the station, you will be at the junction of Fairfield Street and A6 London Road. You can either take a taxi (situated outside the station) or walk. Follow Fairfield Street east keeping Piccadilly station on your left. After walking under the railway arch, turn left onto Travis Street. Head straight until you reach the alt of Great Ancoats Street. The hotel is located opposite on the other side of the Street.

Option 2:

By taxi - As you get out of the terminal, you will see taxi services. There are black caps located on the sidewalk just outside the airport and you can pay with credit card. The ride from the airport to the hotel will cost around £25-30.

The hotel address is: 2 Pollard Street - Manchester - M4 7DB. The trip should take 25-30 minutes depending on traffic.

GROUND TRANSPORTATION FROM MANCHESTER AIRPORT TO PREMIER INN HOTEL

Option 1:

See map on next page.

Train Service to Manchester Oxford Road Station. This is the cheapest option, which costs around £5. The destination you have to take varies as train services run 7 days a week through national train operators 'TransPennine Express' and 'Northern Rail'. Trains run every 10 minutes to Manchester Oxford Road, with an average journey time of 20 minutes. From Oxford Road Station follow the steps below:

- Upon arriving to the station, exit the station through the turnstiles.
- Once outside the station, follow the down-slopping road down to the Palace Theatre junction. You can either take a taxi (situated outside the station) or walk. Follow Oxford Street north keeping the Palace Theatre on your right. After reaching Papa Johns restaurant, turn left onto Lower Mosley Street. Head straight until you reach the first the hotel is located on your left 100m down the road.

Option 2:

By taxi - As you get out of the terminal, you will see taxi services. There are black caps located on the sidewalk just outside the airport and you can pay with credit card. The ride from the airport to the hotel will cost around £25-30.

The hotel address is: Premier Inn Manchester Central, 7-11 Lower Mosley St, Manchester M2 3DW. The trip should take 25-30 minutes depending on traffic.

GROUND TRANSPORTATION FROM MANCHESTER AIRPORT TO NOVOTEL HOTEL

Option 1:

See map on next page.

Train Service to Manchester Piccadilly Station. This is the cheapest option, which costs around £5. The destination you have to take varies as train services run 7 days a week through national train operators 'TransPennine Express' and 'Northern Rail'. Trains run every 10 minutes to Manchester Piccadilly, with an average journey time of 20 minutes. From Piccadilly Station follow the steps below:

- Upon arriving to the station, exit the station following the escalators down.

- Once outside the station, you will be at the junction of Fairfield Street and A6 London Road. You can either take a taxi (situated outside the station) or walk. Follow Fairfield Street west, after reaching sackville park, turn right onto Sackville Street. Head straight through the vehicle barriers until you reach the alt of Portland Street. Turn left onto Portland Street, the hotel is located 300m down the road on your right before Tops Buffet.

Option 2:

By taxi - As you get out of the terminal, you will see taxi services. There are black caps located on the sidewalk just outside the airport and you can pay with credit card. The ride from the airport to the hotel will cost around £25-30.

The hotel address is: Hotel Novotel Manchester Centre, 21 Dickinson St, Manchester M1 4LX. The trip should take 25-30 minutes depending on traffic.

GROUND TRANSPORTATION FROM MANCHESTER AIRPORT TO TRAVELODGE HOTEL

Option 1:

See map on next page.

Train Service to Manchester Piccadilly Station. This is the cheapest option, which costs around £5. The destination you have to take varies as train services run 7 days a week through national train operators 'TransPennine Express' and 'Northern Rail'. Trains run every 10 minutes to Manchester Piccadilly, with an average journey time of 20 minutes. From Piccadilly Station follow the steps below:

- Upon arriving, exit the station through the exit located next to WHSmith

- Once outside the station, walk across the footbridge and down to A6 Picadilly Street. Once you reach a fork in the road, turn right onto Newton Street. Follow the road until the alt of A665 Ring Road. Turn left onto A665 and head straight for 50 metres. The hotel is located on your left.

Option 2:

By taxi - As you get out of the terminal, you will see taxi services. There are black caps located on the sidewalk just outside the airport and you can pay with credit card. The ride from the airport to the hotel will cost around £25-30.
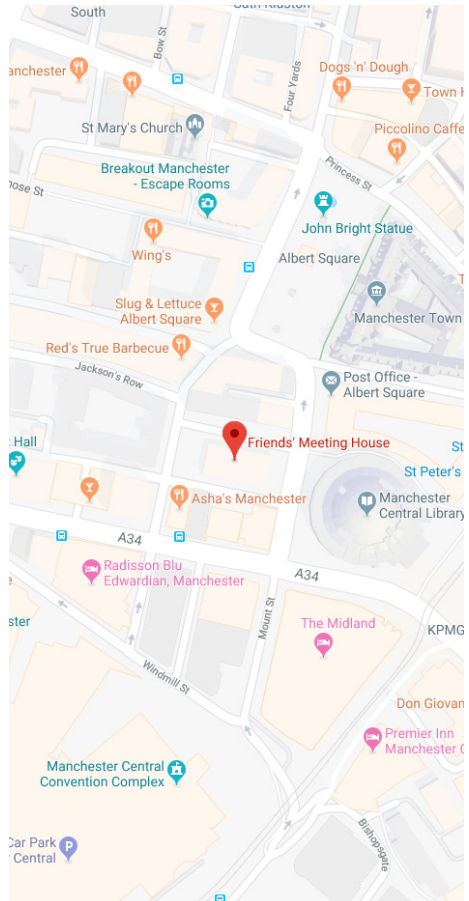
The hotel address is: Travelodge Manchester Ancoats, 22 Great Ancoats St, Manchester M4 5AZ. The trip should take 25-30 minutes depending on traffic.
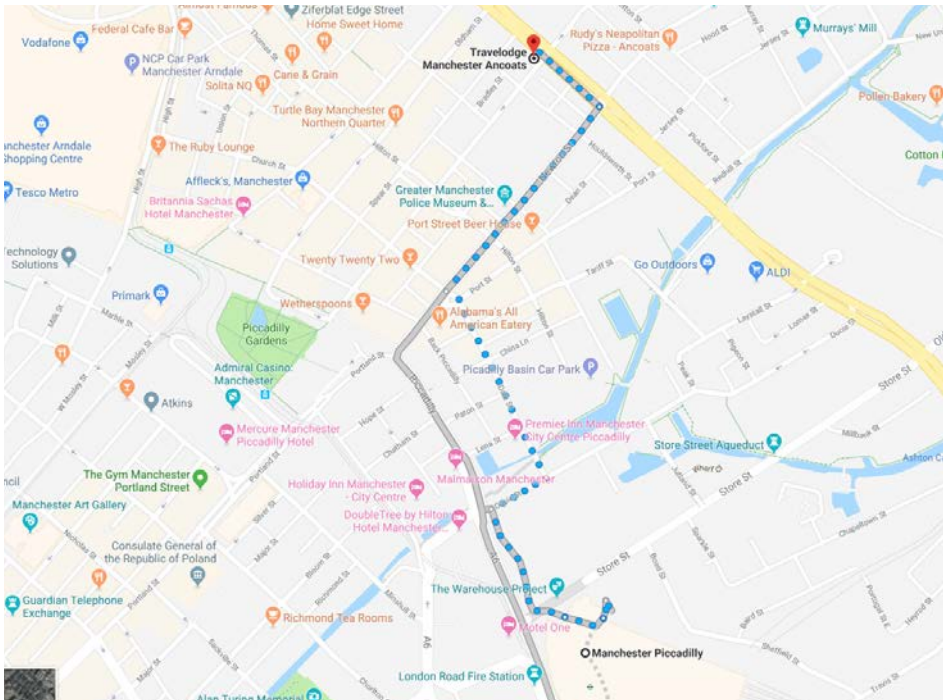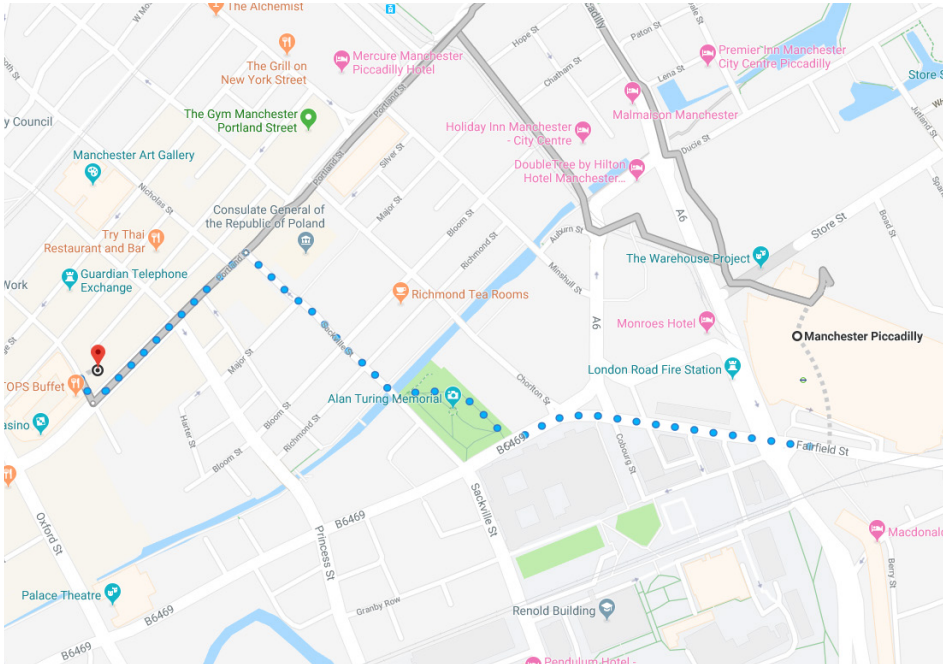
DAY 1 VENUE: RENOLD BUILDING, UNIVERSITY OF MANCHESTER, ALTRINCHAM ST, MANCHESTER M1 7JA
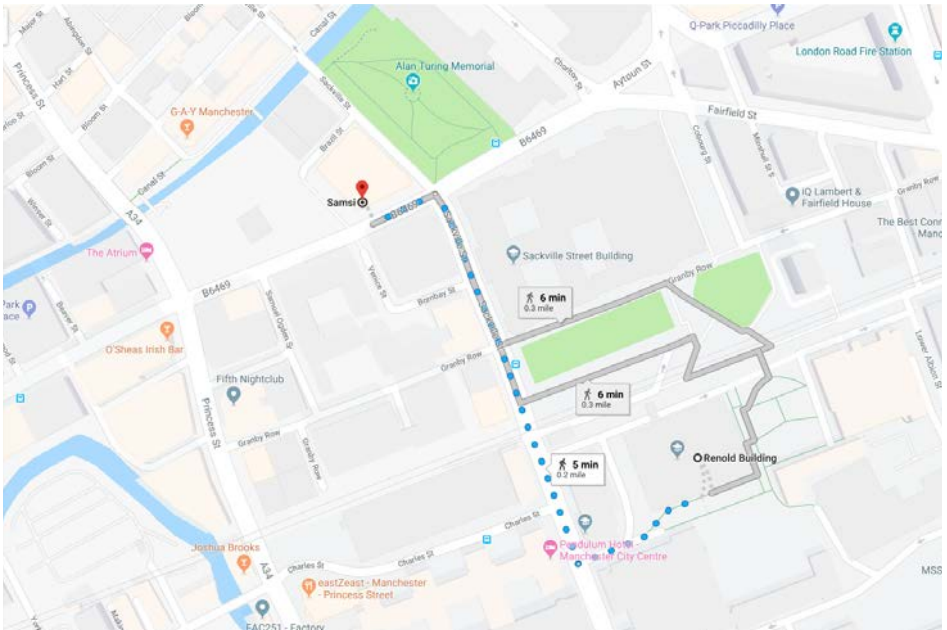
DAY 2 & 3 VENUE: FRIENDS' MEETING HOUSE, 6 MOUNT STREET, MANCHESTER M2 5NS

CONFERENCE DINNER VENUE

Samsi Japanese Manchester, 36-38 Whitworth
St, Manchester M1 3NR

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