



SMART CITIES¹⁶

DESIGNING PLACES & URBAN MENTALITIES



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New insights



Welcome to the Summer School »Smart Cities: Designing Places and Urban Mentalities« and welcome to the Technical University of Vienna. We are here together, in a city known as a showcase example of smart urban development, to find successful formulas for Smart Cities. Cities that are environmentally and eco-friendly, economically successful, and socially fair. In this context, the latest technical infrastructure linked to the effective use of digital information and communication technologies - albeit formulated in a traditional way - should be sustainable. Over the next 8 days, this high-calibre international Summer School will explore the development of sustainability in the life process of cities.

Needless to say, each one of us has particular ideas about the ingredients and preparations for a sustainable city. To stress this point, we have participating PhD students from 20 different cities in 13 different countries. While being shaped by different personal experiences, your perspectives arise from diverse disciplines such as Social Sciences, Computer Science, Environmental Management, Urban Informatics or Urban and Regional Planning. This is further evidence that urban research goes far beyond technical, quantitative or rationally justified analysis of urban social formations.

So who considers themselves to be smart? A majority of people would hesitate or wouldn't even dare trying to precisely define the term »Smart City« and what it holistically comprises. That's peculiar, because by now we all „ought“ to be smart citizens. Using smart grids. Being smart users. Living in a Smart City. Now already, or at least in the next five to ten years. By then we and our cities should all be very smart. Who is and what is smart about living in a city? What makes a city smart? And what defines a city being smart?

Some may call it a trend, fashion, marketing tool for city branding. Some others may call it the inevitable way further technological innovations and the ongoing digitalization of our world are driving us. But – and here is one of the core questions – is technology

and digitalization rather driving and leading us, or are we pushing it and are we still in control? Is technologization shifting society and through this urban ways of life and how cities develop and grow? We need new tools and highly interdisciplinary approaches to meet new challenges in urban development and new forms of urban spaces.

By trying to understand what characterises Smart Cities, we shall find somewhat surprising elements and processes. These days, in particular the explicit, regulatory and direct control of urban societies through technology often appears as a helpless attempt to shape future challenges. Our current society is largely influenced by a profound (digital) technological dominance of the social and urban areas. Therefore, we must favour urban processes and social developments in our considerations. These studies are all the more marked by the so-called serendipity principles: In this sense, urban mindsets and local cultures can be explored by chance, observations be made of things which have not been initially sought. In doing so, we shall uncover new and unanticipated realities. It is indeed our hope that this 8-day academic exchange and the discussions to be held will yield some unexpected discoveries for all of us.

Hence, the Summer School »Smart Cities – Designing Places & Urban Mentalities« embraces the aspiration of interdisciplinary cooperation, scientific exchange and bringing together new insights both from and for various disciplines, ranging from urban planning to sociology, to technical planning and computer science. →

from various disciplines



The title »Designing Places & Urban Mentalities« addresses the need for local demand-based planning and development. Is there really one model for »The Smart City« that can be used like one single brand, copy-pasted around the world? The Summer School is not only aimed at new (digital) technologies, which definitely shape and change urban planning and the human habitus. It also aims at local, specific planning habits, mentalities, identities that shape the planning culture and the culture of technology-driven development, and how the term »Smart City« is being understood and developed. A highly qualified exchange on these topics seems like an urgent and highly relevant discourse, that has to take place to ensure and strengthen the future of our cities, of our own and our descendants' lives.

Think about it: What if the essence of what we refer to as Smart Cities would simply be a novel connection between art, society and space? For our purposes, novel is to be understood as a behavioural development in mobility, housing, work and leisure, which brings about a change in the state of society. On the one hand, this change would yield better informed groups via pervasive access channels to data, information and knowledge. On the other hand, selective access to modern technologies would accelerate social and spatial divisions. For these reasons, it seems relevant to stir the debate not only about implementing digital »hard« infrastructure, such as smart grids, smart meters or digital networks, but also about the associated, modified forms of social behaviour, urban planning and the various cultures of planning. Initially, we should discuss whether and to what extent do such changes put social cohesion at risk. What new uncertainties appear in dealing with Big Data? Where are urban structures most vulnerable?

What opportunities can we identify for the further development of liveable cities, in which all residents can feel deeply involved?

Questions about issues that concern us all, and which we cannot answer definitely within these days

of broad international exchange, but on which we should share our views, creating thus a basis for further international cooperation.

The need for answers to these pressing issues, appears to be very large in society and science. More than 60 particularly qualified students have applied to our Summer School, from which we could only select 26. Our interdisciplinary claim and approach is a first within the Austrian scientific Smart City discourse. The outcome of this Summer School being a highly interdisciplinary, as well as highly-qualified setting was only possible due to fruitful cooperation between us, Department for Spatial Planning, Section Urban Studies, and Geraldine Fitzpatrick, Head of HCI Human Computer Interaction, Faculty of Informatics, to whom we would like to herewith express our deepest gratitude.

Moreover, the strong support enjoyed from partners and sponsors in financing and organizing the series of events, provides further evidence of the brisk demand for interdisciplinary discussion and a holistic approach in the Smart Cities debate. On that note, we would like to express our deep gratitude for the support of WWTF, TINA Vienna GmbH, Mayor Dr. Michael Häupl, Wiener Linien GmbH, the Austrian Ministry for Transport, Innovation and Technology (bmvit), the U.S. Embassy Vienna, Ulreich Bauträger GmbH, IC Development GmbH and the Urban Forum.

Oliver Frey & Esther Sophie Blaimschein

Interdisciplinary Centre of Urban Studies,
Department of Spatial Planning, TU Wien

Technology alone is not sufficient



The promise of the Smart City is seductive. The European Innovation Partnership on Smart Cities and Communities argues there are opportunities for »linking and upgrading infrastructures, technologies and services in key urban sectors (transport, buildings, energy, ICT) in a smart way [that] will improve quality of life, competitiveness and sustainability of our cities«. The City of Vienna too has embarked on an ambitious Smart City Wien initiative e.g., as exemplified in the Smart City Seestadt Aspern project.

Perhaps because technology is the key enabler, Smart City rhetoric often presents itself as a technology-dominated utopian vision, with a focus on the sensors, ICT devices, pervasive displays, communication networks, protocols and Big Data that make up the technical infrastructure of the Smart City. But a Smart City is a socio-technical innovation, not just a technical innovation. What such a technical vision hides are the many choices made in technology development that fundamentally shape the lived experience of a Smart City – what the impact could be on privacy, identity and data protection for individuals and, more fundamentally, what sorts of applications people want, how social interaction and civic engagement are transformed, and what new forms of community are enabled. The Smart City is as much about the people and everyday life in urban environments as it is about technological innovation and devices.

Thus technology alone is not sufficient for realising »good« societal transformations that serve the people of the city. The input from diverse disciplinary perspectives is needed to understand what technologies are needed and how are they best designed, what applications will be useful, what new forms of city governance are required and so on. Too often though, research on Smart Cities takes place within disciplinary and even sub-disciplinary silos.

We are very excited therefore to be able to bring together some of the leading thinkers and researchers on Smart Cities, from across the globe and from across disciplines, to share their perspectives. We are also very excited to be able to bring together the future leaders and researchers from across the globe and from across disciplines as student participants and active contributors in this Summer School. If we are to build Smart Cities that we want to live in and that enhance quality of life, we need to work out how to bridge across our disciplinary divides, to understand what each contributes, and to work together to shape future technological and societal transformations, understanding how they shape and inform each other. It is our hope that the dialogues, understandings, and connections made here continue beyond the Summer School and influence all our work to create to Smart Cities for living in, that put people first.

Fitzpatrick Geraldine

Institute of Design and Assessment of Technology,
Human Computer Interaction (HCI Group), TU Wien

Thoughts outside the box



The discourse about the Smart City and everything that goes with, it has become an interdisciplinary hot-debated discussion. What is a Smart City? What shapes and makes a city being smart, and how is smart being defined?

The first international Summer School at the TU Wien addressing the topic on »Smart Cities – Designing Places & Urban Mentalities« dares to think outside the box, not limiting the term of the »Smart City« to only technological innovations and the implementation of technologies, nor just seeing it as a new brand for urban development. As the Dean of Studies of Spatial Planning, I sincerely welcome the approach of this Summer School, being interdisciplinary within the faculties of Architecture and Planning and the Faculty of Informatics, addressing various topics that seem to be at the pulse of time.

It also meets the pulse of time, to withdraw from silo-like thinking within specified disciplines, but to open up, meet and embrace scholars from various disciplines, get into exchange, share different and new point of views and through this strengthen future planning and development.

I wish the students, lecturers and interested public a fruitful and successful week, with new impressions, insights and gained knowledge.

Arthur Kanonier

Dean of Studies,
Department of Spatial Planning, TU Wien

Facilitating interdisciplinary networking



Vienna Science and Technology Fund WWTF sincerely welcomes all students and lecturers of the »Smart Cities – Designing Places and Urban Mentalities« Summer School 2016, in particular those who come from abroad.

WWTF is a non-profit fund that promotes science and research at Viennese research institutions since 2003 in selected funding areas such as life sciences, ICT, mathematics and cognitive sciences. Social sciences and humanities including art-based research is also one of our programme priorities. WWTF provided more than 8m Euro to this research area since 2008. This programme was financed by the City of Vienna.

In 2015 WWTF issued a call for summer schools in the area of social sciences and humanities. Out of more than 25 applications, an international jury of renowned experts selected the six most innovative summer schools.

The idea behind the summer schools was to facilitate interdisciplinary networking across all areas of the social sciences and humanities but also beyond it – including natural sciences and engineering. Furthermore, the summer schools should display as an open space for research by involving both international students and lecturers.

The Smart Cities summer school at the Vienna University of Technology is one of selected highly original and international summer schools. It addresses a topic that has become increasingly important for Vienna over the last years. While providing many answers to issues that cities currently face, the idea of Smart Cities also points to the need for continued engagement of citizens, sciences, and politics with the question of future urban environments.

We wish all participants interesting lectures and vibrant discussions and hope that many interesting thoughts and ideas are born.

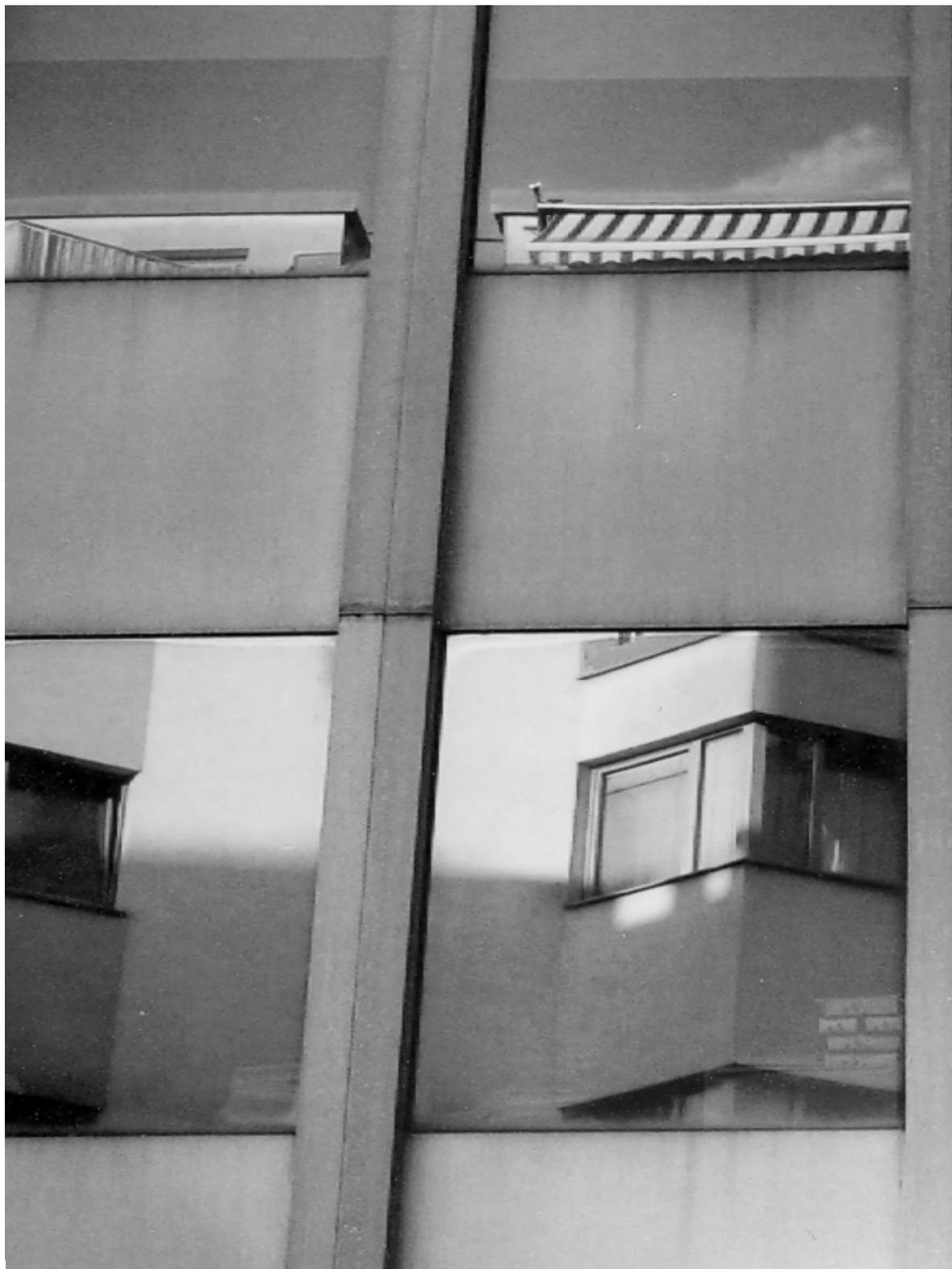
Michael Strassnig

Programme Manager

Vienna Science and Technology Fund, WWTF



LECTURERS





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CHRISTIAN BLASKOVITS

Christian Blaskovits is project manager at IC Development who is charged with the topic of City Quarter Certification, which VIERTEL ZWEI gained as a first in the Viennese Smart City innovation context. Blaskovits outlines and describes the scope of City Quarter Certification by using the example of VIERTEL ZWEI, a developing area we visit during the course of the Summer School.



JENS S. DANGSCHAT

First of all, there should be reflected about the distinct situations of cities worldwide. Spectacular are the developments in China, India and some African states – not only because of their demographic dynamic, but because of the time squeeze of processes which gave European cities time to develop over one century and not within a decade. Secondly, from the perspective of European cities, the increase of socio-economic inequalities and the new division in cultural codes of life-styles and social milieus which comes to ground in remarkable segregation will shake urban societies and will lead to lesser solidarity. Third aspect will be technological change, which does not impact cities alone like automotive driving, 3-D-printing or the internet of things (IoT).



FRANCESCO FERRERO

I believe that this summer school is very exciting for the mix of different competences that will be represented. I am especially eager to discuss the pros and cons of urban »smartness«.

Today we live in an era in which information, computational power and algorithms are abundant, and almost free. This gives the opportunity, for the first time in history, to realize accurate models of complex problems, such as urban problems, and to take evidence-based decisions instead of instinct-based ones.

On the other hand, this very abundance is at the hearth of disruptive innovations, like Uber, Airbnb, and the self-driving vehicle, to name a few. These innovations, which on the one hand bring benefits to the users, on the other hand are putting into question the foundation of urban development, i.e. urban value capture, and are having a disruptive impact on jobs, competition, taxes, safety etc.

This is a challenge for authorities at every scale, from district to the globe, and the answer they will give to that challenge will influence the social acceptance of »smart cities« by the people.



MARCUS FOTH

1. TRANSDISCIPLINARITY

What are the foundations of smart cities scholarship? Participants should get an appreciation of why it is imperative to be transdisciplinary working across social, technical, and spatial/material research domains: people, place, technology.

2. GRANULARITY

What are the main concepts relevant to smart cities scholarship and how are they layered? For example, Bratton (2016) calls it The Stack. Participants should practice their agility of being able to navigate different levels of granularity, from the low level (data, sensors, IoT), via mid levels (cities as platforms, cities as interface), to the higher levels (governance, ownership, engagement, polity).

3. SCALABILITY

What are the different circles of influence at stake in not just smart cities scholarship but also any smart cities projects in local government, industry, civil society, activism? What are the mechanisms of scale-making that enable facilitators and strategists to expand their circle of influence and the impact and reach of their initiatives?

4. CRITICALITY

What are best practices for smart cities scholarship to connect with and contribute to critical, that is, significant issues, challenges but also opportunities of our times, and how do we identify those? And how do we ensure we apply criticality to our smart cities scholarship, that is, reflection and evaluation across a spectrum from contested to desirable future scenarios.



KOEN FRENKEN

Questions I would like to see addressed is: isn't smart city technology not a solution in search for problems? How they we make sure that smart technologies empower citizens and benefits primarily the marginalized. What about privacy issues? What about the Uberization/Airbnbization of the economy, and the resulting problem regarding data access for government which makes enforcement of regulation so hard?



RUDOLF GIFFINGER

Due to global challenges of urbanization and impacts of climate change the idea of a Smart City concept emerged some years ago. It has been widely discussed from different point of views showing different understandings and conceptualizations in respective urban planning contexts. In front of many strategic efforts and also project implementations across (European) cities from the point of view of Regional Science or of Strategic Planning following questions should be dealt with: »How can cities use and implement technical innovations in the urban fabric?«, »Which adequate technologies should be implemented on the local level meeting challenges in an effective and sustainable way?« or »Do technical innovation have an exclusive power?« or »How can we strengthen urban innovations which avoid unintended negative socio-environmental rebound effects?«.



WALTER HAMMER- TINGER

Walter Hammertinger is Managing Director of IC Development, a Real Estate Developer who dares new, smart and innovative approaches. He joins the planning Director of the City of Vienna, Thomas Madreiter, and the procurator of TINA Vienna, contributing the view of a private Developer and their standpoint towards Smart City agendas and strategies.



ROBERT KLOOSTER- MAN

Liveable cities can only be sustained on a more durable basis if they meet three very basic, strongly interrelated structural preconditions. First, cities should be able to provide the conditions for efficient and competitive production and reap the economies of agglomeration based on the quintessential urban characteristics of critical mass, density, and diversity. Secondly, cities are not only about wealth creation but also about the capture of that wealth and its subsequent distribution. A high level of social inequality may endanger the competitiveness of a city. A third condition for liveable cities can be found in the physical infrastructure and the environmental impact. These conditions are anything but evident outcomes of unfettered market allocation. Long-term liveable and resilient cities require institutionalised forms of collective action. The scope for forms of collective actions are both time and place-specific as they are inserted in local and national institutional frameworks. As cities and urban actors seem to become more important in promoting economic growth and social equity and, in addition, combating climate change, urban research should focus on which socio-political configurations enable which forms of collective action



VASSILIS KOSTAKOS

Smart cities can be considered as the next wave of computing. The notion of smart cities serve both as as a conceptual metaphor for developing new technologies, as well as an application domain for providing value with our technologies. During this summer school, it is important to highlight what new and emerging mobile computing technologies can achieve, and how these technologies can be incorporated in smart cities.



HARVEY MOLOTCH

How does the social connect with the material? What's the »interface« – moment-to-moment and face-to-face as well as across history and technologies? In what ways does technology create the social or vice-versa? We will exploit some sociological studies and concepts, but also reach across the social sciences for insights and illustrations.

We will ask how humans approach »form« – the shape of things with their eyes, fingers, and thoughts and what that has to do with the utility of the stuff they encounter. What »counts« for more – the aesthetics of form or the utility of function? And what about art? Is that just form? Is that function too? We will explore just how all the artifacts, the designs, the stuff – are both form and function, aesthetics and utility, across the board and 24-7. What explains how some things succeed and others fall by the wayside?

What about troubles, like environmental crisis and world conflict? How can better stuff come about that maximizes pleasure and minimizes pain? How can cities, including their systems and artifacts, be smart enough to foster the right outcomes?



BERNHARD MÜLLER

Events like the Summer School »Smart Cities – Designing Places & Urban Mentalities« are an excellent additional educational offering, to the regular academically development. I am happy that this very important topic will have the attention of this presentation, to get deeper into the matter and put it closer in the focus of society. A deeper analysis, of what a city makes actually smart or just pretends to be, is needed. Our institution »Urban Forum« occupies with the city as the subject of the future and living space.

Overall, we are proud to be a partner of this auspicious Summer School in Vienna.



STEFAN NASTIC

In the contemporary Smart City, the citizens are mostly put into a passive role, in the sense that they are not actively involved in the development and daily management of the city. The current stage in Smart City development can be denominated as »representative-smart«, as opposed to »collective-smart« – one of the terms that can be used to describe the future vision of cyber-human smart cities. The Smart City of the future should involve a rich and active interplay among different stakeholders (primarily citizens, local businesses and authorities), effectively transforming the currently passive stakeholders into active ecosystem actors. Moreover, Smart City is a rich, self-sustaining ecosystem that facilitates both production and consumption of added values for all the involved participants, ranging from humans to smart devices. Opening up of the contemporary siloed view of Smart City would allow more horizontal integration and creation of added values. Therefore, Smart City should promote architecture of values, where at the top of the pyramid is the value generation, relying on the »city capital« to fuel the generation of novel values and enhancement of traditional ones. Achieving this goal and reaching towards the aforementioned vision, requires an interdisciplinary effort, which will provide multiple views and advancements to streamline and align the abundance of the Smart City capital and as such should be one of the main topics addressed in the Summer School »Smart Cities - Designing Places and Urban Mentalities«



ALLEN J. SCOTT

Urban studies today significantly lacks any meaningful definition of the city as an object of theoretical analysis. A primary task therefore is to seek to clarify this mystery. Is the city just a shorthand term for modern society? Or does it have a specific empirical substance and relational dynamics that identify it as a sui generis phenomenon? These questions are critical for academic reasons as well as for the purposes of urban policy. For example, are cities everywhere generically similar, or do we need different concepts to analyze different kinds of cities? Is poverty an urban problem or is it rooted in other kinds of social processes? To what degree are national production systems simply aggregates of urban production systems? Is creativity an attribute of urbanization or of some other set of processes? There are no clear answers to these questions, but as we attempt to clarify our thoughts about them we can greatly sharpen our capacities both for effective research and for a deeper understanding of the possibilities and limits of urban policy.



AGNIS STIBE

Quality of life in cities can be improved through reshaping and advancing urban spaces with seamless persuasive and socially influencing strategies, thus empowering communities to succeed in achieving sustainable wellbeing. This vision aims at helping people to acquire healthy and sustainable everyday routines through persuasive urban interventions that facilitate health behavior change at scale. Ultimately, this research seeks to create socially engaging environments supporting wellbeing and innovation through reshaping behavioral patterns, intelligent outdoor sensing, interactive public feedback channels, designing responsive neighborhoods, and fostering adoption of novel experiences in future cities.



MARK TEWDWR- JONES

What will our cities look like in the future? How should research methods and policy intelligence improve to take account of possible future threats, or by intelligence not flowing to the right sectors timely? At an uncertain time for cities, long term city foresight is now being used by many cities as a method to bring together universities and the cities within which they are located. Following our work here in the City of Newcastle upon Tyne, in the UK, where we used the city to pilot a new dialogue, we have put forward a case to develop a new approach to foster spatial intelligence, where municipal government, businesses and universities can together discuss how to develop reviews, visualisation, systems thinking and scenario development methods in a series of city-wide public engagement initiatives as informed storylines in the evolution of places. We can demonstrate that there is a strong case to develop a much more strategic and synoptic approach using futures methods and city-wide participatory processes to think about city futures and create innovative delivery projects. Universities, possessing expertise across all subject areas, can work more proactively with and for the cities in which they are located, and use both creative techniques and their expertise to foster civic and business engagement with politicians. But how do we overcome institutional sclerosis and vested interests in cities to think and act differently?



THOMAS MADREITER

Addressing the topic Smart City from all angles is crucial. Smart City Wien stands for a holistic approach to meeting the challenges that cities are facing today. The focus of our work is at the cross-section of the city, covering all areas of life, work and leisure activities and their influence on urban development. The main goal is to achieve the best quality of life for all inhabitants of Vienna, while minimizing the consumption of resources.



PAMELA MÜHLMANN

TINA Vienna is since 2011 active in the field of »Smart City Vienna«, is one of the Summer School's partners and generous sponsor, who also contribute with substantial contents. TINA Vienna provides expertise, do analyzation and coordination, collect and inform, plan and implement and support the City of Vienna in terms of Smart City and Energy topics.



DOMINIC WEISS

As the theme of this year's Summer School states, designing a smart city is not only about the places, it's also about people and the mentalities. Involving the citizens in the initiative is important, but a challenge at the same time. As a long-term and holistic initiative the Smart City Wien project can only function if it is developed and shared with the citizens. After all, they are the ones that are affected by the city's development in their daily lives.

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ABDALLAH ALI ZAINELABDEN ABDALLAH IBRAHIM

Master Information and Computer Science,
University of Luxembourg



Abdallah Ali is a teaching assistant of computer sciences at Suez Canal University in Egypt. Abdallah has worked as a researcher assistant in SnT-Interdisciplinary Centre for Security, Reliability and Trust, University of Luxembourg. His research with Netlab, SECAN-LAB: SECURITY AND NETWORKING LAB and Vehicular lab Under the project MAMBA-Multimodal MoBility Assistance which deals with Networking, Internet computing and Data visualization to build a mobility models to different countries like Senegal and Ivory Coast through the D4D Orange Challenge in Africa. He is currently working with the Parallel and grid Computing and Optimization Group (PCOG) in University of Luxembourg.

Abdallah received his Bachelor of Information and Computer Sciences from Suez Canal University in 2010 and his pre-master in computer sciences from Suez Canal University and his master degree in information and computer sciences from University of Luxembourg in 2015; he is currently a PhD student preceding his doctoral degree of information and computer sciences in Communication Systems, Computer Networks and Cloud Computing at University of Luxembourg. Abdallah is a CISCO instructor in the Suez Canal University CISCO Academy in Ismailia, Egypt. And he was the head of the academy, also he was the network administrator for the Faculty of Computers and Information network. He worked as ORACLE instructor and used Oracle development to design and develop some database applications.

AMIT ASHKENAZY

PhD Technology Policy and Management,
University of Technology Delft



I am a PhD candidate at the TU Delft Department of Technology, Policy and Management in the Netherlands. I specialize in environmental policy, a field which he has studied and worked on for more than ten years. In my research, I aim to simulate policy process through agent based modelling, so as to better reflect the social and political dynamics that shape the emergence of policy, and the interaction between these dynamics and the technical elements (physical/infrastructural/technological) of the systems in which they operate. I graduated my Master's degree from Yale University in 2012, and have worked with cities, government ministries, parliament members, and civil society organizations to promote environmental policies in the local, national and international arenas. In the summer school I hope to explore how my own experience and research can contribute to promoting urban sustainability policy planning, using the new tools and participatory processes embedded in smart city concepts.



BEATRICE MONASTERO

PhD in the Department of
Computer Science,
Aalto School of Science

Hello, I am Beatrice, originally from Italy and now a second year PhD student in the Department of Computer Science at Aalto University (Finland). My research is interdisciplinary, situated in the field of Urban Interaction Design, and draws its main contributions from embodied interaction and place-making theories. More specifically I study how public interactions with situated environmental and social information (i.e. the physical spatial qualities of the place, or human activities occurring in it) affect individuals' attitudes towards the inhabited space. This in order to design of novel interactive media that fit and improve urban livability.

I am glad to join the summer school to deepen my cross-field knowledge on the relation between people-place-technology and contribute with my expertise in urban embodied interaction, my creativity and human-centered focus.

BEATRIZ PINEDA REVILLA

PhD at the Department of Urban Planning,
University of Amsterdam

Beatriz Pineda Revilla is a PhD candidate at the Urban Planning Department of the University of Amsterdam. She is originally from Spanish where she studied Architecture (BA) and Urban and Regional Planning (MA). In 2008, she moved to Amsterdam where she worked for several years as an urban planner and urban designer. Later, she enrolled in the MSc Urban Studies program at the University of Amsterdam. Her MSc thesis focused on the resilience of self-organised processes, within the field of sustainable food planning. Beatriz conducted fieldwork in New York City, Amsterdam and Berlin analysing multiple community gardens. For her current PhD research, she is analysing the potential role of data-driven learning and lifestyle adaptation feedback loops for reducing energy consumption in urban communities, topic which brings her to this Summer School where she would like to continue developing her research ideas surrounded by a community of inspiring participants.



CARLA MARIA KAYANAN

PhD Urban and Regional Planning,
University of Michigan

I am a doctoral student in urban and regional planning at the University of Michigan. I am motivated by the landscape of the city and the actors behind its urban form. Drawing on my multidisciplinary training in the social sciences, my dissertation traces the emergence of spaces designed to harness innovation and deconstructs the rhetoric used to differentiate between what is categorized as innovative versus non-innovative. In my current research, I see how the Smart City rhetoric actively guides development of the Detroit Innovation District. Detroit's uneven landscape of a growing downtown

juxtaposed with population decline in the remainder of the city greatly complicates the implementation of this growth-dependent strategy. Creating privileged sites for knowledge production in the urban fabric of our day-to-day lives requires careful consideration and a healthy degree of skepticism. My aim with the Vienna Summer School is to explore the boundaries between skepticism and conviction and to tap into an international network of individuals seeking to improve our understanding of emerging relationships between society, technology, and the changing conceptions of urban life.



CHEE KEONG KHOO

PhD Architecture and Civil Engineering,
City University of Hong Kong

Hi, I am CK Khoo. I come from Malaysia and currently enrolled in PhD of Architecture and Civil Engineering, City University of Hong Kong. My research areas are »Smart Cities« and »Green Technologies« and I am studying the influences of smart cities affecting the city inhabitant, from various perspective of economy, social and environmental. I am looking forward to participate in this summer school because it will be attended by many knowledgeable scholars researching the smart cities. In addition, the summer school consists of the professional workshops, lectures and discussion groups. This is definitely a very good opportunity to explore and learn the state-of-the-art development in smart cities around the world.

CHRISTIAN EICHENMÜLLER

PhD at the Institute of Geography,
Friedrich-Alexander-Universität Erlangen-Nürnberg

Christian Eichenmüller is a PhD student at the University of Erlangen-Nuremberg since November 2015. Born in Eastern Germany he has a long-standing interest in surveillance issues and critical theory. He has a Diplom in Geography from the University of Mainz and has also spent two exchange semesters in Istanbul. Christian was a youth activist of the European Students' Forum, AEGEE-Europe, from 2005 to 2011, and in 2010/11 he also worked for the Heinrich-Böll-Stiftung in Istanbul. Subsequently he worked (and taught) at a liberal arts college in the United States. His current interest in smart cities rest on their promise of efficiency and participation, however he has questions in regards to surveillance and governance. His PhD project is likely to be a comparative empirical study of a smart city in Europe and India.





DENNIS DREIER

PhD in Energy and Environmental Systems,
KTH Royal Institute of Technology

My name is Dennis Dreier and come from Hamburg, Germany. I hold a Bachelor of Science degree in General Engineering Science from the Hamburg University of Technology, Germany, 2013, and a Master of Science degree in Sustainable Energy Engineering from KTH, the Royal Institute of Technology in Stockholm, Sweden, 2015.

I have been working as a PhD Candidate at the Energy and Climate Studies Unit at KTH since August 2015. My research focus is on the analysis of city buses with advanced powertrains and fuel pathways of alternative fuels. The aim is to quantify and to evaluate particular benefits and impacts of low emissions buses for the city of Curitiba in Brazil.

The research is carried out as part of the on-going Swedish-Brazilian project »Smart city concepts in Curitiba – innovation for sustainable mobility and energy efficiency« which includes collaboration between academia, industry and the local government.

I am looking forward to discuss social and technological topics in the urban context with students from around the world that will lead to both a variety of discussions and knowledge exchange. The multifaceted demands of sustainability require cross-sectional solutions to promote robust and resilient urban systems, and I am confident that we can go a considerable step together in this direction at the Vienna Summer School 2016 at the TU Wien.

ELISA GERBSCH

Master in Social and Economic Geography of
East-Central Europe and Urban Spaces,
Universität Leipzig

My name is Elisa Gerbsch and I am currently living and studying in Leipzig. 2009-2013 I was studying European science with focus on eastern and East-Central Europe. Since 2013 I have changed to Human geography at Münster university and Leipzig university. In cooperation with the, Helmholtz Center For Environmental Research. I am doing my master thesis about risks, chances and regional spatializations of smart cities against the backdrop of the globalization phenomenon. As I understand my research as a hybrid between human and natural science, I am highly interested in an interdisciplinary shaped Summer school, where different approaches and complex discourses about Smart Cities will be negotiated in many varied ways.





IRINA ANASTASIU

PhD at the Urban Informatics Research Lab,
Queensland University of Technology

Irina Anastasiu is currently a PhD Candidate at the Urban Informatics Research Lab, Queensland University of Technology in Brisbane, Australia. Under the tagline »Humanising the Smart City«, Irina's research is setting people at the core of urban smartness, investigating the concept of urban innovation hubs as a means for systemic change in citymaking, towards stronger collaboration between top-down and bottom-up and empowering citizens to become active agents of change. Originally from Romania, Irina has an interdisciplinary background covering computer science, HCI and UX Design, communication science and technology management, having worked and studied in Germany, Italy and Australia. As part of the summer school, she is particularly looking forward to strong discussions and insights on how we can move on from the technocentric discourse on Smart Cities to developing transdisciplinary frameworks and approaches that benefit us all.

JOAO MEIRELLES DE MIRANDA

Master in Complex Systems Modelling,
École polytechnique fédérale de Lausanne

I am an Environmental Engineer with a MSc in Complex Systems from University of São Paulo. I had worked as a Data Scientist at PENSA, the big data team at Rio de Janeiro. I had just started a PhD on dynamics of the urban metabolism at EPFL. My research interests orbit around Data Science, Complex Systems and Cities, mainly focused on the relation between urban systems and the environment. I think the Smart Cities Summer School will be a great experience to get in touch with researchers with similar interests.



JOAO SOARES DE OLIVEIRA NETO

PhD in Electrical Engineering,
University of São Paulo - Paris Saclay University

João Soares de Oliveira Neto is a PhD candidate in a co-thesis program between the Electronic Engineering Department of University of São Paulo (Brazil) and the Department of Informatics of Paris Saclay University. He conducts research at the intersection among Human-computer interaction (HCI), Accessibility and Internet of Things (IoT). His research focus is on investigating how IoT and ICT as a whole can improve the user experience of persons with disabilities in the urban space, specially concerning to Smart City projects. In this vein, he is conceiving the Inclusive Smart City initiative.



JOSEPH CHAMBERS

PhD in Power Networks,
University of Manchester

Hello everyone. I am currently starting my second year of my PhD at the University of Manchester in geography. My field of research is to do with the governance and democracy of smart cities, with a particular interest in the role of urban infrastructure on these aspects. I am currently living in Manchester in the United Kingdom, but was born near Cambridge towards the east. My aim from attending the summer school is to gain a greater understanding about current work in various areas of smart cities research and develop a better understanding about urban development from different global perspectives.



LAURA SIDONIE MAYR

Master Spatial Planning,
TU Wien

I am Laura Sidonie Mayr, 23 years old and living in Vienna. I moved here five years ago to study spatial planning at the University of Technology Vienna. Since I finished my Bachelor Degree in 2015 I continued to study spatial planning and currently I am in my third semester of my Master Program. In my opinion the topic of »Smart City« is very important, because it is touching so many different aspects of life and will definitely have an impact on our future way of living. During my Master Program I visited some courses related to this topic, but there is still so much more to know. Therefore I am excited to gain further knowledge on Smart City and contribute to the discussions with my own perspective on the topic.



LUKAS FRANTA

PhD in Urban Studies,
TU Wien

Lukas Franta is a PhD-candidate at the Department of Spatial Planning at the TU Vienna. He studied »Urban and Regional Planning« (BSc) at TU Vienna, followed by the Research Master »Urban Studies« (MSc) at University of Amsterdam. His master thesis analysed the import of urban space to counter cultures and protest at the example of »Occupy Wall Street«. This research is based on fieldwork in New York City and Amsterdam. All current research projects he is involved in focus on neighbourhood mobility patterns (smart urban mobility) and how social class and social milieu interact with mobility patterns. His interest lies in an understanding of the social selectiveness technological innovations.

MAFALDA DA SILVA

Phd in Sustainable Energy Systems,
Faculdade de Engenharia da Universidade
do Porto



Mafalda Silva is a PhD student in Sustainable Energy Systems (MIT Portugal Program) at the Faculty of Engineering, University of Porto. She is developing a high-resolution methodological framework for estimating energy demand for buildings and transports based on urban form indicators. Research interests include urban sustainability and urban metabolism. Prior to being enrolled in the PhD she completed a BSc. in Environmental Sciences and a MSc. in Ecology, Environment and Territory; and performed research in urban planning for over three years. This summer school is believed to represent an important contribution for advancing knowledge on the field of smart cities and constitute an inspiring debate platform.

A black and white photograph of Manh Khoi Ngo standing outdoors. He is wearing a dark jacket over a light-colored shirt. In the background, there is a body of water, a cityscape with buildings, and a church spire under a cloudy sky.

MANH KHOI NGO

PhD at the Geo-C Joint Doctorate program,
Universitat Jaume I

My name is Ngo Manh Khoi, from Vietnam. Currently I am a PhD candidate and researcher at Institute of New Imaging Technologies (INIT), Universitat Jaume I, Spain. I got my Bachelor degree from Budapest University of Technology & Economics, Hungary. I got my Master degree from the Erasmus Mundus Joint Master Degree (EMJMD) PERCCOM. My research interests include communication network, eHealth, Smart Cities and mobile crowdsourcing. Thanks to the multi-disciplinary theme of the Summer school, I will get a more diverse knowledge on different aspects of the studies on Smart city, especially the social and political aspects which are directly related to my research topic of a participatory sensing framework.



MANUEL PORTELA

PhD in Geoinformatics,
Universitat Jaume I

Manuel Portela is an Interactive Designer and Researcher at GEO-C PhD Programme, interested in fields related to SmartCities and HCI. He coursed a Msc on Urban Studies at Universidad Nacional General Sarmiento in Argentina. He have been researching in the Instituto Superior de Urbanismo at the Universidad de Buenos Aires. And, over the last years, he worked at Gobierno de la Ciudad de Buenos Aires as an advisor in SmartCities and digitalization. He also developed several projects oriented to civic engagement and participation in Latin América.

His research topic is »Methods to observe and evaluate interactions with everyday context-aware objects« and intends to augment the possibilities of interact with objects in urban space thru promoting empathic relations with them.

MARIE GRÜNER

Master in Media and Communication Sciences,
University of Vienna

My name is Marie Grüner, 25 years old student of University Vienna, politician, scholarly person and assistant of a Research Institute for Urban Science, located in Lower Austria. As I am working on my Master thesis right now, I am happy to join this Summer School focusing Smart Cities and Urban technologies, to deepen my knowledge and exchange ideas and experiences with other students. The aim of my research angle is to take a closer look at the risky and negative social aspects of this urban development, as the »Smart City« definition is always pictured as a very positive concept in the news coverage. I am looking forward to participate with experts from diverse disciplines and getting to know their point of view of how Social Life and the living together will change in the long run.



MONIKA KUSTAR

PhD in Urban Transformation and
Global Change Laboratory,
Universitat Oberta de Catalunya

I graduated from University of Warsaw (BA in Spatial Planning), Warsaw University of Technology (MSc in Spatial Planning and Management) and Blekinge University of Technology (MSc in European Spatial Planning and Regional Development). Currently I am a researcher and a PhD candidate at Open University of Catalonia and a member of Urban Transformation and Global Change Laboratory. I was a visiting researcher at the Innovative City Unit at Warsaw School of Economics. My research is focused on smart cities, ICT solutions and urban technologies. Presently, I am investigating how strategic planning is shaped by the smart city model in new urban environments, especially CEE.

SEBASTIAN PROST

PhD in Digital Civics,
Newcastle University

My name is Sebastian Prost, born Austrian. From September on I will be a MRes and PhD student at the Centre for Doctoral Training in Digital Civics at Newcastle University, UK. I graduated in computer science and sociology and most recently worked as an HCI researcher for environmental sustainability and Smart Cities. In my PhD I want to explore the role of technologies in the relations between citizens and local governments, cultural institutions, and businesses in a Smart City. Attending the Smart Cities Summer school is a great starting point for my PhD project. I want to connect the fields of technology, sociology, economics, and urban planning to both understand the technological and societal transformations taking place and actively shape and design such change.



SIMONE LA GRECA

PhD in Smart Energy Systems and
Sustainable Urban Development,
Technical University of Denmark

Hi, it is Simone La Greca here from Venice, Italy. My educational background is on Environmental and Natural Resources Economics with a MSc from Copenhagen University (KU), Denmark. Driven by my strong interest in urban environments and sustainable development, I am continuing my studies with a PhD at the Danish Technical University (DTU), where I am focusing on developing innovative valuation tools for assessing the societal benefits brought about by smart cities development, emphasizing the role of urban energy systems in this transition. I am looking forward to participating in the Smart Cities Summer School at TU Wien, as I believe I could gain valuable insights in the Smart City discourse by sharing such an experience with colleagues from all over the world and from such a variety of disciplines and research fields but pooled around a common interest for the future development of cities.

SUNIL RODGER

PhD at Open Lab,
Newcastle University



I am a first year interdisciplinary PhD student in Digital Civics at Open Lab, Newcastle University, with an academic background in political science and history. Prior to my PhD, I spent several years working on international rare disease research projects, in which patient organisations played a pivotal role alongside doctors and scientists. This left me with an abiding interest and commitment to involving communities themselves in research.

My work focuses on the experiences of people with neuromuscular conditions in the built environment, with a focus on how technology might enable experiences to be collected, shared and re-used to improve accessibility. I am very much looking forward to working alongside and learning from colleagues from a wide range of disciplines at the Summer School, and benefitting from the diversity of perspectives on Smart Cities that they will provide.



VALENTINA PALERMO

PhD in Evaluation and mitigation
of urban and land risks,
Università degli studi di Catania

Valentina Palermo comes from Catania (Italy) she is an Architectural Engineer who is developing a research in urban planning. She attended a second level postgraduate course on the integration of land-use and transportation planning and she collaborated on the review of the city masterplan of Catania and with the municipality of Sofia during her internship at Sofia Energy Agency (Bulgaria). Valentina is currently PhD student at Ph.D. course »Evaluation and mitigation of Urban and Land Risks« at University of Catania in Italy. Her research interests focus on the evaluation of the role of urban areas to face climate change towards sustainability through Co2 mitigation and energy efficiency of neighbourhoods.

She is particularly interested in the relationships among energy intensive factors and the processes that occur in cities, through an interdisciplinary approach that she explored at CESER in Newcastle University (UK). The concept of Smart City is close to her research interests since it links infrastructures, technologies and services in key urban sectors, allowing to improve both the comprehension of their relationships and the implementation of modern and innovative strategies to address sustainability in urban areas. Nowadays, the support of technology is crucial in every activity developed in urban contexts and the study of how integrate technology smartness and sustainability in cities cannot be postponed.



SMART CITIES¹⁶

DESIGNING PLACES & URBAN MENTALITIES

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SUNDAY

WORKSHOP

01

Kontaktraum TU Wien

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16:00–18:00

The aim of the opening Workshop 01 is that the students present themselves, their research profile and work. Within the Summer School there are so many different disciplines represented, hence it is really interesting and necessary to get an overview of the obroad disciplinary spectrum represented within the Summer School. Therefore every participant prepared a short presentation. In this presentation the participants are introducing themselves and their field of research, their main interests and their motivation. To get further knowledge about your colleagues the room will be decorated with posters introducing the participants and their work. After the presentation we will start a workshop which is called »Marshmallow project«, where you get to know your fellow participating students, raise and discuss first questions and research interests for the upcoming week of Summer School.



21.08.

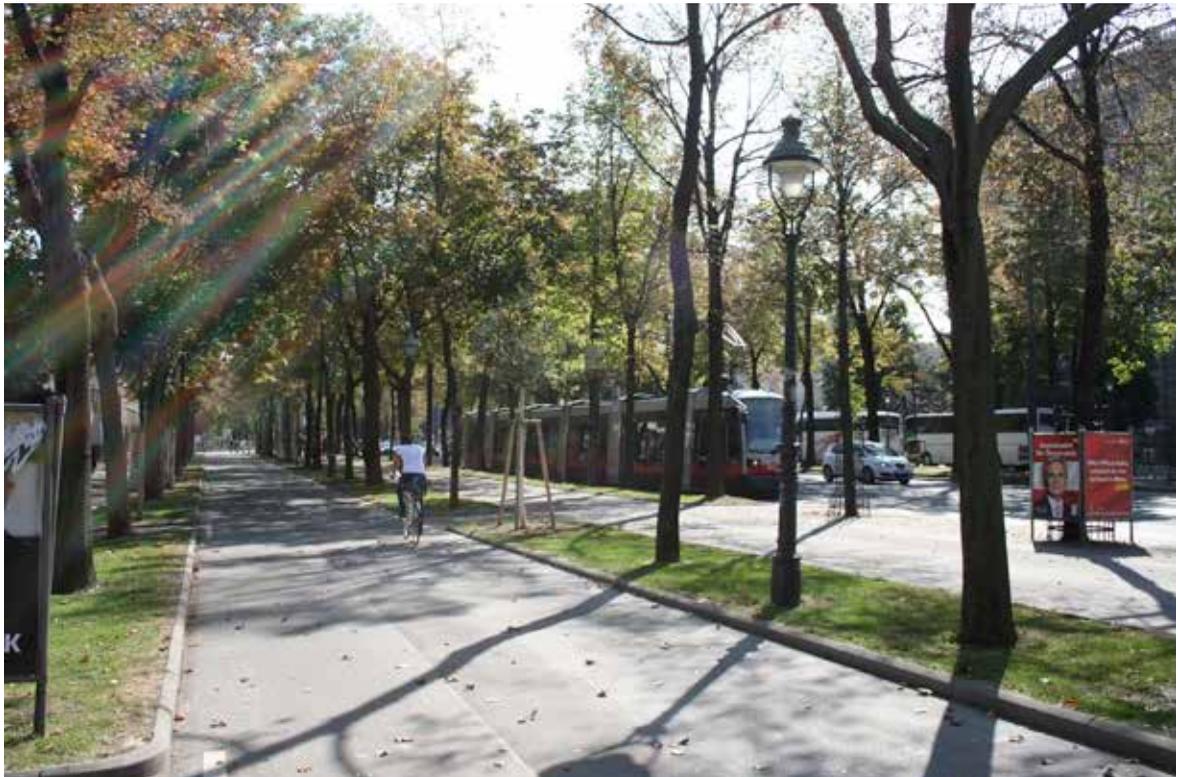
WELCOME RECEPTION

Restaurant Heuer

-

19:00–21:00

Being welcome in Vienna means also to find reliable places for drinks with colleagues or friends. This place is tucked away on the far side of Karlsplatz and TU Wien, yet still in the very heart of Vienna. It has a nice big terrace outside as well as a comfortable dining area inside. It's a spot to sit and relax after a long distance journey to Vienna. The one week with lectures in Vienna will also not be dominated by only pure academic learning hours, there should be enough time to exchange within the group, to get into open discussions for the various interdisciplinary perspectives and also to chill out a bit in town. So please feel invited for a very warmly welcome in Vienna!



MONDAY

URBAN MANAGEMENT & DIGITAL SERVICES

Kontaktraum TU Wien

-
10:00–13:00

If smart cities run on big data and algorithms that channel only »relevant« information and opinions to us, how do we maintain the diversity of ideas and possibilities that drives truly smart cities? In this lecture, Professor Marcus Foth will discuss issues arising from an algorithmic culture of like-mindedness, and examine the diversity advantage of cities. The talk will use examples to illustrate the merits of getting lost and getting to know strangers, and conclude with the role of cities in a deliberative democracy

Marcus Foth

Major cities around the globe are currently struggling to cope with a number of increasing demands. These might relate to improving public transport, or delivering better public services in an era of financial pressures, or coping with fluctuations in population and changing demographics. Some cities have weak economies and business closures, and face ongoing uncertainty about global trade. Others are riding high, success stories that attract investors and visitors but are increasingly expensive places to live. Across many nations, there is a belief that citizens – at the heart of coping with change in cities – need to play a greater role in understanding and shaping places, both in the decisions made that affect people's everyday lives, and in the design and delivery of services. With the enormous public uptake of digital technologies including broadband internet, smart phones, laptop and tablet computers, and the associated »big data« agenda, there are opportunities to create more representative and sustainable forms of local engagement and service provision both within and for cities. How do universities shape this debate and create platforms for innovation? Can social science broker links between social and economic needs, and digital capabilities? Can we identify new research opportunities that benefit universities and the place in which they are located; and assist in the design and delivery of demonstrator projects that benefit citizens across the city?

Mark Tewdwr-Jones

URBAN TRANSFORMATION

If we reflect urban development(s) first of all the great difference in the dynamic and content of development is relevant, which only can be described by regional differences. By and large the interest of globalization gives every city a distinct role which cannot always be triggered down for the sake of local interest. Foreign direct investments, technological change and in lesser degree cities environmental aspects as well as – again to a lesser degree – social cohesion will be and has to be put on the agenda in the triangle of »smart city«, »entrepreneurial city« and »just city«.

Jens S. Dangschat

Kontaktraum TU Wien

-
14:00–16:00

In this session, we will look at how cities cope with structural change. More specifically, we will focus on how shifts in the sectoral composition of the urban economy may affect different groups in terms of their labour market position. We will first assess the resilience of the urban economies of Amsterdam and Rotterdam by exploring their pre- and post-crisis employment trajectories. We will then look at the relationship between long-term economic change and labour market outcomes in the Amsterdam. Finally, we will zoom in on how a particular group of migrants tries to find its way in post-industrial (Dutch) cities by starting their own businesses.

Robert Kloosterman

SMART CITY AS COMPLEX SYSTEMS

Kontaktraum TU Wien

-
16:00–18:00

Title of my paper: Why do Smart Cities need a place based understanding of urban innovation?

Against more data driven and ICT-focused understandings in this paper I argue that the Smart City is not a technical device but a complex system of different key fields with corresponding but often conflicting interests of stakeholders. Starting from this understanding the Smart City development is regarded as a learning process of stakeholders and actors. Hence, local evidence on assets and deficits in urban development have to be detected and strengths and weaknesses to be identified as a pre-condition for Smart City urban innovations. Such urban innovation have to be understood not only as a technical innovation but an integrative initiative. Chances and risks of such an approach will be discussed based on experiences in several projects.

Rudolf Giffinger

Smart City is a rich, interdisciplinary ecosystem which assumes a coherent urban development strategy seeking to plan and align management of various city's infrastructural assets with an objective to improve the quality of life for its citizens in the long-run. At their core Smart Cities are ever stronger developing and evolving Cyber-Physical Systems that blend in variety of ICT technologies, such as Internet of Things (IoT), network elements, Cloud services and humans. This results in complex, city-scale ICT infrastructures that need to be dynamically provisioned and governed throughout their entire lifecycle. This talk aims to provide an ICT-centric view on the Smart Cities, with a main focus on the IoT. It provides insights in contemporary advances and discusses the main challenges in managing large-scale Smart City IoT infrastructures and applications.

Stefan Nastic

DAILY ROUNDUP

Kontaktraum TU Wien

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18:00–19:00

We outline, summarize and reflect on the daily outcomes of our lectures. We do discuss the main questions and topics, scrutinize the core issues and reflect on them.



TUESDAY

THE MATERIALITY OF SOCIOLOGY

Kontaktraum TU Wien

10:00–13:00

I would explain how materiality has been largely ignored in sociology versus classical anthropology where it was not ignored at all. I would trace the way materiality would change sociology, how the research could be done, and so forth. I'd call on my recent studies in security systems (like at airports) and public restrooms (!) to carry forward the examples.

Harvey Molotch

VIENNA SMART CITY STRATEGIES

Kontaktraum TU Wien

14:00–16:30

Smart City Wien started in 2011 as a long-term initiative by the City of Vienna to improve the design, development and perception of the city. The initiative identified great potential in bringing together the relevant stakeholders with the objective of utilising, continuously building on and internationalising the city's strengths. Thus, the City of Vienna pushed for the definition of the Smart City Wien Framework Strategy, which was adopted by the Vienna City Council on 25 June 2014. Smart City Wien stands for a holistic approach to meeting the challenges that cities are facing today. The focus of our work is at the cross-section of the city, covering all areas of life, work and leisure activities and their influence on urban development. Consequently, main focus areas of the initiative are energy, mobility, buildings and (ICT-) infrastructure. The main goal is to achieve the best quality of life for all inhabitants of Vienna, while minimizing the consumption of resources.

Thomas Madreiter/Dominic Weiss

City development needs a vision and a systematic holistic approach, always focusing on people's needs. Architecture and open space, mobility and energy, diversity and room for organic growth are important aspects that must be taken into account. A city and its districts affect how we move, behave and feel. This means great responsibility for developers. VIERTEL ZWEI in Vienna creates inspiring spaces and provides answers and solutions to the requirements of new, urban housing and working.

Walter Hammertinger



FIELD TRIP 01

Nordbahnhof und Viertel Zwei

-
17:00–19:00

We visit and explore the quarter »Nordbahnhof« in the 2nd district, one of the biggest urban development areas in Vienna. Until 2025 in stages 20.000 new residents will find a new home here. We will then proceed to »VIERTEL ZWEI«, which is a very interesting development area in Vienna. IC Development GmbH dares to try a completely new approach, developing an area which was and still is a horse trotting course, by engaging and including the local neighborhood.



FUTURE CITIES (Public Lecture)

It has become increasingly recognised that achieving good qualities of life in nations depends in large part on a good future for cities. Challenges can be identified for the here and now, but it is clear that to meet these, investment is needed that will have impacts in the long run. We are all conscious of the pace of technological change and so we not only need to seek to meet our future aspirations but to future-proof to the best of our current abilities. Most thinking about future cities is concerned with the relatively short run.

Tribünen Trabrennbahn Krieau

-
19:00–21:00

The task of looking 50 years ahead is seriously challenging. Our understanding of cities – the science – provides a foundation but there are too many uncertainties to provide forecasts. This lecture tells the story of »Newcastle City Futures«, an ambitious collaborative and trans-disciplinary platform set up in 2014 between government, universities, businesses and communities to identify, promote and develop innovative projects in one city region using universities in the city as »anchor institutions«.

Mark Tewdwr-Jones

WEDNESDAY

SHARING ECONOMIES

While the sharing economy is growing and apparently here to stay, there is a critique of monetised services such as Airbnb, that they are becoming increasingly driven from a profit motive and have lost touch with some of the initial idealism and motivations around these services. Some of these motivations included promoting sustainability and collaborative consumption of resources, and promoting social connectivity and community building. For many people, the more altruistic and community/sustainability oriented motives still hold and exchange services such as time banking and food sharing are also the gaining increasing attention as people explore new possibilities for civic engagement, collaborative consumption and welfare structures. A key feature of these services is their focus on the local community level. Another key feature is that exchanges are not monetized but valued in other ways. It would be more accurate here then to talk about the sharing community rather than the sharing economy. But how to »do« such new services well, and how to design technologies to best support such services is still a matter of trial and error and reflection and the shift from the idealist rhetoric of »sharing and community« to the day-to-day realities of making such a service work is non-trivial. This presentation will focus on not-for-profit and non-monetised exchange services and explore the issues entailed in establishing and running these new forms of exchange, how technologies are being used as enablers, and what lessons can be learnt to date.

Geraldine Fitzpatrick

Kontaktraum TU Wien

10:00–13:00

The sharing economy generally has become defined as an economic system based on sharing underused assets, for free or for a fee, through peer-to-peer Internet platforms. I will start by providing a traditional technology assessment by first sharply defining sharing economy, discussing all the (little known) economic, environmental and social impacts and how these impacts affect different social groups to different extents. I then explain why policies for the sharing economy are currently under-informed, because we witness what I call a »process of reverse technology assessment« where governments are forced to react quickly to the fast-scaling platforms and to come up with ad-hoc measures that are aimed to balance the winners' interests (esp. platforms and their users), and losers' interests (esp. incumbents business, home-share neighbours) on the other. The normative discussion and scientific research that is desired to supports such a political process, however, is largely lacking due to the pace of the process as well as the very limited access to platform data granted to politicians and scientists. This poses a new challenge for urban and national governments as well as for academics alike how to deal with revered innovation processes.

Koen Frenken



INTERACTION BETWEEN TECHNOLOGY & URBAN SPACE

Kontaktraum TU Wien

14:00–16:00

Future visions of our present society largely revolve around technology-driven social change. Not surprisingly, research focuses on the associated risks and opportunities for individuals and social milieus. The instrumental value of technology for future developments taints the Smart City rhetoric with an overwhelmingly technical vision of social developments. Such visions conceal the diverse development paths that lie behind technological developments, and that largely shape how socio-spatial change unfolds. The goal is to understand design decisions regarding the interaction between social actions and behaviour, between social and community structure, between types of housing and neighbourhoods - i.e. community and individual, and a new technology (using the example of the Smart City technologies and Smart Living networks). Our main concern should be the different perspectives on technological-social interactions in urban areas. The spatial effects of technological changes alter the traditional integration / exclusion process, very much like the forms of socialisation and community building. In this context, how are patterns of individual use of space and spatial behaviour evolving? How radical is the characterisation of urban mindsets, identities and the technology habits of individuals, and the social environment arising from digital culture techniques?

Oliver Frey

In this talk I will discuss a technologist's view of smart cities. I will present ways in which personal technologies can inform us about how humans move, socialise, and behave on a city scale. By discussing case studies from our research, the audience will form an understanding of the potential for smart cities to capture, understand and cultivate human behaviour.

Vassilis Kostakos

WORKSHOP 02

Kontaktraum TU Wien

17:00–19:00

The aim of the Summer School is to highlight the importance of an interdisciplinary approach to Smart City-research: besides technology, research designs have to integrate different fields of analysis, such as social structures, planning institutions and place-specific characteristics of the modern city. Thus research needs to reveal the interrelatedness of technology, society and urban space.

The overall goal of the research designs in the Summer School is to highlight different aspects and angles of Smart Cities. The wide range of aspects and perspectives of the Smart City is reflected by the thematic focus of the Summer School and will be integrated in a research design to be developed in groups.

Your Task:

Form an interdisciplinary group of 4-5 students (not more than 2 representatives of the same scientific field if possible within one group). During the Summer School you should reflect on the topics and methods of the lectures, the excursions and the public discussions along the lines of your personal research interest. In Workshop 2, you will develop a research design, including 2-3 research questions plus possible research methods.

Geraldine Fitzpatrick

LECTURERS DINNER

Stomach, Seegasse 26, 1090 Vienna

20:00–22:00

THURSDAY

FIELD TRIP 02

Meeting point: TU Wien main entrance

-
09:00

Visitors Showroom (U2 Seestadt)

-
10:00–13:00

Our second Field Trip takes us to Seestadt Aspern in the 22nd district, one of the biggest urban development projects in Europe since 2010. Within a construction phase which stretches over 20 years, a new urban district is being developed.

Built on the former airfield Aspern, an airfield within the interwar period, 240 hectares are being obstructed. This is the same size as the 7th and the 8th district of Vienna together. 10.500 flats are going to be home to 20.000 people who will live there, as well as 15.000 workspaces.

SMART CITY – ICT, HOUSING & MOBILITY

Kontaktraum TU Wien

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14:00–16:00

In this talk I will present in-depth evaluation techniques for smart-city applications that consider i) smartphones, ii) online behaviour, and iii) human computation and crowdsourcing. The presentation will walk through evaluations we have conducted in diverse case studies, and identify important issues when conducting this type of research.

Vassilis Kostakos

The economic, social and most of all technological revolution that Kenney and Zysman describe as »The Rise of the Platform Economy« [1] is a mixed blessing for our cities, and for the »Smart Cities: ICT, Housing & Mobility« issue in particular. On the one hand, this revolution is having a disruptive impact on employment and the character of work, which is yet to be fully assessed. William Davidow and Michael Malone [2], and Erik Brynjolfsson and Andrew McAfee [3] explore this trend in more detail in their works. On the other hand, it affects in the same disruptive way the »value capture« mechanisms that were used for centuries to fund the maintenance and expansion of our cities and infrastructures (including housing and mobility). Some of the new services proposed by the big winners of the Platform Economy, such as Uber and Google (with their self-driving cars) are challenging the very foundations of the offer of public and private transport services and the way cities will have to be designed in a not-so-distant future [4]. These changes, and their amazing speed, put an enormous pressure on public authorities, who need to find new ways to fund the maintenance of existing urban assets and the deployment of new ones and to regulate the transnational challenges that are posed on job regulation, fiscal regulation, IP regulation, commercial regulation, etc. On the positive side, the current abundance of (almost) free

data, computing power and algorithms create for the first time in history the potential to adapt the existing urban services and to design the new ones on the basis of the real citizens' needs, and to predict the effect of choices before actually making them with unprecedented levels of accuracy. This creates the conditions for what we have called »Scientific Urban Management« [5] i.e. a time in which urban politics is getting closer to an »exact science«. In our work we tried to use some open source tools to simulate urban mobility on a real-world scale [6] and to equip urban decision-makers and operators of urban services with sophisticated Decision Support Systems [7] that should help them reduce the uncertainty that affects their investment and strategic choices. Last but not least, pervasive new technologies allow us to try and act with huge impact on the behavior of individuals, encouraging citizens to make more environment-friendly and healthier choices (e.g. for active mobility modes) in spite of investing huge amounts of money, that governments don't have by the way, in new infrastructures. This is the meaning of the support that we gave to the TrafficO2 project in Palermo [8], devised and realized by a group of young civic hackers, and of our attempt to extend that very approach to other local realities and challenges.

Francesco Ferrero

25.08.

CITY QUARTER CERTIFICATION

Kontaktraum TU Wien

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16:00–17:00

Today sustainability is a catchword, which is used more and more in the construction and real estate branch. What are Blue buildings and what does the paradigm change from Green building to Blue building mean?

What is the challenge of a city quarter development and how can provide a city quarter certification to reach the sustainable goals?

»Green buildings« are the first known sustainable buildings to us. During the conception of a Green building the main attention is focused on the ecology and energy efficiency of a building. Considering the three main pillars of sustainability (ecology, economy and sociocultural aspects) we may say that the social part is neglected.

»Blue Buildings« try to incorporate the sociocultural aspects into the conception of a building. Therefore, it gives priority to the user and his or her special needs. Blue buildings try to consider sustainability as a collective approach during the conception process.

»City quarter certification« helps to apply the principles of the »Blue Building system« for a whole city quarter. Therefore the basic certification system of »Blue Buildings« was modified in their single criterion for the aspects of a city quarter.

Developers have to design sustainable buildings and city quarters while developing awareness in the users. In recent years, increasingly more developers design projects focusing on the special needs of the users and try to follow a collective approach of sustainability in building and city quarter development.

Christian Blaskovits

CITY CULTURES - FROM GREENWICH VILLAGE TO ABU DHABI (Public Lecture)

Amerika Haus

-
18:00–20:00

Two great urban models now sweep the world. Greenwich Village in New York, as envisioned by the legendary Jane Jacobs is one of them. For her the city exists only through face-to-face neighborhood interaction and the serendipitous events – economic, social, political – to which it leads. The other great model of the 21st century, extreme in contrast, is a place like Abu Dhabi where a great city is being built through deliberate contrivance. I will show how Abu Dhabi works, through politics, kinship and – maybe above all else, consumption. Jacobs showed us how to learn from Greenwich Village; I will be showing what Abu Dhabi has to teach.

Harvey Molotch



FRIDAY

SMART CITY VERSUS FEAR CITY

Kontaktraum TU Wien

10:00–12:00

I will examine what is smart about a city and what is stupid about fear. How do they come together, for example in technological artifact or urban policy? What are some principles for advancing the city and human lives within them that respect pleasures of everyday life while building economic advance and acknowledging security concerns? I will present concrete examples from my own studies of urban infrastructure as well as larger research frameworks and technology history.

Harvey Molotch

ECONOMIES OF CITIES

Kontaktraum TU Wien

14:00–16:00

What is the city? How are the internal functions of the city organized? Why do cities grow? In this lecture I will seek to address these and allied questions by arguing for a basic theory of urbanization as an outcome of agglomeration processes. In order to achieve this goal we will need to consider issues of industrial organization, local labor market dynamics, and the logic of innovation. On the basis of these materials I will then present an analysis of the structure of the city as an assemblage of capital and labor. More generally, I hope to show not only how and why the city emerges out of the social and property of relations of capitalism, but also how and why the city represents a sine qua non for the continued viability of capitalism.

Allen J. Scott

ADDITIONAL COMMENTS

Kontaktraum TU Wien

12:00–13:00

Jens S. Dangschat and Allen J. Scott reflect on the subject of Smart City vs. Fear City from the sociological perspective as well as from the economical side.

Jens S. Dangschat/Allen J. Scott

URBAN FORUM – URBAN POLITICS AND URBAN GOVERNANCE

Kontaktraum TU Wien

16:30–18:00

Urban Forum is a non-profit association with the objective of enhancing the meaning of urban, municipal local affairs. It is about raising the awareness of the strength of city economy, promotion of the idea of regional and cooperative thinking, support of public economy and public enterprise (services for the public, sustainability, etc.), contributing a modern administrative reform and all with the emphasis on the values of the European Union.

Bernhard Müller

26.08.

URBAN PLACE, DESIGN AND TECHNOLOGIES

Kontaktraum TU Wien

-
18:30–20:30

Cities are smart when they enable citizens to be smart. In this lecture, Professor Marcus Foth will discuss urban place design and technologies to foster creativity and innovation in »in between spaces« such as coworking spaces, hacker spaces, maker spaces and living labs. He will speculate about a new notion of innovation space in smart cities he calls »skunkworks« or the Bauhaus 2.0.

Marcus Foth

Future cities will reshape human behavior in countless ways. Persuasive urban systems will play an important role in making cities more livable and resource-efficient by addressing current environmental problems and enabling healthier routines. In the future cities, good urban and building design (to encourage walking, biking, stair-use, etc.) will be combined with socially influencing systems to encourage healthy and sustainable behaviors at scale. The quality of life and the health of the individual and communities will be improved through the design and creation of persuasive cities, streets, buildings, homes, and vehicles.

Agnis Stibe



SUMMER PARTY

Stallungen Trabrennbahn Krieau

-
21:00–24:00

It's still summer time and we do like to party. Together we celebrate our sophisticated discourse, have a few »Spritzwein« (wine with soda water) and revive the thing that Viennese people do best – celebrate. Thanks to our partners we can do this next to horses, carriages and Austria's most famous football stadium in the middle of the city.

SATURDAY



27.08.

TRANSFORMING CITIES (Panel Discussion)

Kuppelsaal TU Wien

14:00–17:00

A highly qualified exchange on these topics seems like an urgent and highly relevant discourse, that has to take place to ensure and strengthen the future of our cities, and of our own and our descendants' lives. In the Public Lectures highly distinguished international experts discuss the hotly debated topic of the »Smart City«, present recent discourses to a wider public and draw attention to recent debates on the challenges of the Smart City in a wider context of social, economic, cultural and political aspects about transforming processes of urban life.

Foth, Molotch, Scott, Stibe

PERSUASIVE CITIES FOR SUSTAINABLE WELLBEING (Public Lecture)

Kuppelsaal TU Wien

18:00–20:00

Persuasive Cities research aims at advancing urban spaces to facilitate societal changes. According to social sciences, any well-designed environment can become a strong influencer of what people think and do. There is an endlessly dynamic interaction between a person, a particular behavior, and an environment in which that behavior is performed. This knowledge enables engineering of persuasive environments and interventions for altering human behavior at scale. This research primarily focuses on socially engaging environments for supporting entrepreneurship and innovation, reshaping routines and behavioral patterns in urban spaces, deploying intelligent outdoor sensing for shifting mobility modes, enhancing environmentally friendly behaviors through social norms, introducing interactive public feedback channels to alter attitudes at scale, engaging residents through socially influencing systems, exploring methods for designing persuasive neighborhoods, testing agent-based models and simulations of behavioral interventions, and fostering adoption of novel urban systems.

Agnis Stibe

SUNDAY

INCLUSION & SMART CITY

TUtheSky TU Wien
-
10:00–13:00

Smart Cities are not only about being smart in the technological kind of way. They also have to address forms of social inclusion and challenge new ways of social cooperation. New medias and technologization form new ways of cooperation by themselves. How do we meet those within spatial and urban planning? How do bottom-up projects develop and new forms of financing shape our cities? We will gather ideas about how to get engaged within public spaces in the city and visit one of the most promising projects in the middle of the city, which is »Karls Garten«, an Urban Gardening research and observe project in the very heart of Vienna.

Esther Sophie Blaimschein

DAILY ROUNDUP

TUtheSky TU Wien
-
17:00–18:00

We outline, summarize and reflect on the daily outcomes of our lectures. We do discuss the main questions and topics, scrutinize the core issues and reflect on them.

WORKSHOP 03

TUtheSky TU Wien
-
14:00–17:00

In Workshop 3 at the end of the Summer School, you present and discuss your research design with either Flipchart or Powerpoint (or any other form of presentation; max. 15 min) to a jury. The jury will consist of one member from each group. This jury will assess the research design based on three aspects: research topic, research question, research methodology. A prize will be awarded to the group with the best research design. The group shall find a meaningful working title which also serves as specific distinctive group name.

The following core questions shall be addressed and further serve as assessment criteria:

- Relevance of research topic:
Why is this research relevant? How does the proposed research add to the Smart Cities-Discourse?
- Originality of research topic:
Which disciplines are combined? Why is an interdisciplinary approach important for this research?
- Research methodology:
Please outline 2-3 research methods (qualitative, quantitative or mixed-methods approach) you want to apply in your research to generate data and new knowledge.

Geraldine Fitzpatrick/Oliver Frey

FAREWELL HEURIGER

Fuhrgassl-Huber Wein & Buschenschank,
Neustift am Walde 68, 1190 Vienna
-
19:00–22:00

We close our Summer School at one of the most famous wine taverns in Vienna, a »Heuriger« as we call it. A »Heuriger« in Austria always produces its own wine and is one of the most typical things we have in Vienna. You maybe wouldn't expect that, but there is wine production on 612 hectares in Viennese areas, which makes Vienna the one and only metropole with considerable wine production in the world. We could even gain over our mayor who is sponsor of this farewell event, to whom we would like to express our serious gratitude.

28.08.

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SCHEDULE

	SU, 21.08.	MO, 22.08.	TU, 23.08.	WE, 24.08.
09:00				
10:00				
11:00		URBAN MANAGEMENT & DIGITAL SERVICES Foth/Tewdwr-Jones 2	THE MATERIALITY OF SOCIOLOGY Molotch 2	SHARING ECONOMIES Fitzpatrick/Frenken 2
12:00				
13:00				
14:00				
15:00		URBAN TRANSFORMATION Dangschat/Kloosterman 2	VIENNA SMART CITY STRATEGIES Madreiter/Weiss VIERTEL ZWEI 2	INTERACTION BETWEEN TECHNOLOGY & URBAN SPACE Frey/Kostakos 2
16:00				
17:00	WORKSHOP 01 Student Presentation 2	SMART CITY AS COMPLEX SYSTEMS Nastic/Giffinger 2	FIELD TRIP 01 Nordbahnhof & VIERTEL ZWEI 4	WORKSHOP 02 including local Stakeholders 2
18:00				
19:00		DAILY ROUNDUP 2		
20:00	WELCOME RECEPTION 3		FUTURE CITIES Tewdwr-Jones 5	
21:00				LECTURER DINNER (lecturers only) 9

- Lecture
- Workshop
- Public Lectures
- Lecture inc. interactive work
- Daily Roundup
- Social Event
- Field Trip

TH, 25.08.	FR, 26.08.	SA, 27.08.	SO, 28.08.
MEETING POINT 1			
FIELD TRIP 02 Showroom Seestadt Aspern 11	SMART CITY VS. FEAR CITY Molotch 2		INCLUSION & SMART CITY Blaimschein 8
	ADDITIONAL COMMENTS Dangschat/Scott 2		
SMART CITY – ICT, HOUSING & MOBILITY Kostakos/Ferrero 2	ECONOMIES OF CITIES Scott 2	PANEL DISCUSSION TRANSFORMING CITIES Foth/Molotch/ Scott/Stibe 7	WORKSHOP 03 Fitzpatrick/Frey Methodological Approach 8
ENERGY+HOUSING IC Development 2	URBAN FORUM - URBAN POLITICS AND URBAN GOVERNANCE Müller 2		DAILY ROUNDUP 8
CITY CULTURES: FROM GREENWICH VILLAGE TO ABU DHABI Molotch 6	URBAN PLACE DESIGN AND TECHNOLOGIES Foth/Stibe 2	PERSUASIVE CITIES FOR SUSTAINABLE WELLBEING Stibe (MIT) 7	FAREWELL Heuriger 10
	SUMMER PARTY 5		

PLACES

- 1.) TU Wien main entrance, Karlsplatz 13, 1040 Vienna
- 2.) Kontaktraum TU Wien, Gußhausstraße 27-29, Neues EI, 6th floor, 1040 Vienna
- 3.) Restaurant Heuer, Treitlstraße 2, 1040 Vienna
- 4.) Nordbahnhof und VIERTEL ZWEI, 1020 Vienna

- 5.) Krieauteure, Nordportalstraße 247, 1020 Wien
- 6.) Amerika Haus, Friedrich-Schmidt-Platz 2, Rathausstraße 7, 1010 Vienna
- 7.) Kuppelsaal TU Wien, Karlsplatz 13, 4th floor, 1040 Vienna
- 8.) TUtheSky TU Wien, Building BA, 11th floor, Getreidemarkt 9, 1060 Vienna
- 9.) Stomach, Seegasse 26, 1090 Vienna
- 10.) Fuhrgassl-Huber Wein & Buschenschank, Neustift am Walde 68, 1190 Vienna
- 11.) Showroom Seestadt Aspern, Seestadtstraße 27/13, 1220 Wien

LOCATIONS

KONTAKTRAUM TU WIEN

Neues EI
Gußhausstraße 27-29
6th floor
1040 Vienna

TUTHESKY TU WIEN

Building BA
Getreidemarkt 9
11th floor
1060 Vienna

KUPPELSAAL TU WIEN

Main Building
Karlsplatz 13
4th floor
1040 Vienna

LECTURERS DINNER

Restaurant Stomach
Seegasse 26
1090 Wien

RESTAURANT HEUER

Treitlstraße 2
1040 Wien

SEESTADT ASPERN SHOWROOM

Seestadtstraße 27/13
1220 Wien

NORDBAHNHOF UND VIERTEL ZWEI

1020
Vienna

TRIBÜNEN TRABRENNBAHN KRIEAU

Kriauteure
Nordportalstraße 247
1020 Vienna

AMERIKA HAUS

Friedrich-Schmidt-Platz 2
Rathausstraße 7
1010 Vienna

FAREWELL HEURIGER

Fuhrgassl-Huber Wein & Buschenschank,
Neustift am Walde 68
1190 Vienna



Impressum

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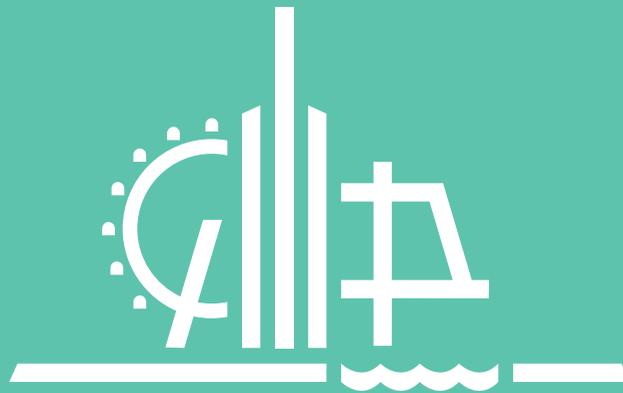
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