City Center מרכז העיר

TAU Research Center for Cities and Urbanism | המרכז לחקר העיר והעירוניות באוניברסיטת תל אביב

Call for Papers:
International Conference on Smart Cities:
Potentials, Prospects and Discontents
Tel Aviv University, September 12-14, 2017

"Cities were always smart. In every era, advanced technologies and innovative thinking have developed in cities; from the written word 5000 years ago; to the revolutionary Greek concepts of democracy and citizenry; to Renaissance art and architecture; to the factories of the industrial revolution; to today´s post-industrial age of high technology"[1] In light of this, it is hard to see why a fuss is nowadays being made regarding the introduction of ICT (information-communication technology), IoT (internet of things) and the likes into cities. Where, if not in cities, are high technologies to be applied and implemented, especially since more than 50% of the world's population currently lives in cities - and numbers in the West are even higher, at over 80% - and especially since trends and predictions indicate that in the near future these percentages will be even higher? Why do cities become "smart"?

A possible answer to these questions is that we are on the threshold of a fourth industrial revolution [2] the essence of which is smartification – an integration between the real and virtual worlds by means of artificially intelligent (AI) artifacts that imitate and simulate cognitive capabilities such as learning and rational decision making. Similarly to how the first industrial revolution entailed the industrial city, so the fourth industrial revolution has the potential to revolutionize the dynamics and structure of our cities, as well as our life within them.

Current smart cities' discourse and studies [3] are to a large extent an attempt to expose the various facets of such a revolution – to clarify 'the good, the bad and the ugly' about smart cities [4], and the potential and positive prospects of the smartification of cities as well as discontents and negative prospects. On the one hand, we see great enthusiasm that ICT and IoT, with their big data and data mining methodologies, will make the control, planning and governance of our cities more efficient, just, sustainable and resilient than ever before and will thus solve chronic urban problems such as traffic jams, environmental pollution and the like. On the other hand, there is skepticism on whether over-efficient urban planning and control will transform our cities into an Orwellian nightmare. This dystopian vision can already be observed in the smartification of some cities which leads "the rich to get richer" and widens the gap between smart cities (or smart quarters of cities) that house the 'creative classes' [5] and 'dumb cities' (or urban quarters) and their non-creative classes.

The first aim of this international conference is to discuss comparatively the above aspects of smart cities, and thus explicate their potentials, prospects and discontents in general, and in the specific reality of Israeli society.

In addition, smart cities are currently discussed in the context of CTC (complexity theories of cities) – a domain of research that applies the various theories of complexity as a means to study and model the dynamics of cities [6,7]. Here, smart cities with their massive use of ICT and IoT are considered the source of *big data* "providing us with novel data sets that suggest ways in which we might plan better, and design more sustainable environments" [8], and are thus a central way to cope with the growing complexity of cities [9]. What is still missing, however, in the general smart cities discourse as well as in the context of CTC concerns the implications to urban dynamics; namely, a response to questions such as how can smart artifacts that partly imitate learning and rational decision-making affect the various urban processes? How to model such a real-virtual city? What is an 'urban agent' in such a context? Can the 'things' of IoT be considered agents? Answering these and similar questions is **the second aim** of this conference.

Confirmed Guest Speakers (Partial list)

•**Michael Batty,** CASA (Center of Advance Spatial Analysis), University College London • **Assaf Biderman**, MIT Senseable City Lab • **Charles Catlett** The Urban Center for Computation and Data, University of Chicago and Argonne National Laboratory

Confirmed TAU Speakers (Partial list)

• **Isaac Ben-Israel**, Security Studies • **Itzhak Benenson**, Geography and the Human Environment • **Efrat Blumenfeld-Lieberthal**, Architecture • **Daniel Deutsch**, Computer science • **Iris Ginzburg**,, MBA Program in Technology, Innovation and Entrepreneurship • **Joachim Mayer**, Industrial engineering • **Tova Milo**, Computer Science • **Juval Portugali,** Geography and the Human Environment • Tal Raviv, Industrial Engineering • **Orli Ronen**, Environmental Studies • **Shulamit Volkov** , History

You are cordially invited to submit an abstract for a 30 minute presentation

Deadline for abstracts: April 1st, 2017

Submitters of abstracts that have been accepted will be asked to provide a short paper (2000 - 3000 words) by July 31st , 2017.

Please send abstracts to taucitycenter@gmail.com

References

[1]Portugali, J. (2016). Interview in Lisa Kremer: „What's the Buzz about Smart Cities?". Tel Aviv University.

[2]Schwab, K. (2016). *The Fourth Industrial Revolution*. Kindle Edition. World Economic Forum, Switzerland.

[3]Townsend, A. (2013). Smart Cities: Big Data, Civic Hackers, and the Quest for a New Utopia. Norton, NY.

[4]Batty M. in: http://events.unimelb.edu.au/recordings/221-future-cities-the-good-the-bad-and-the-ugly

[5]Florida R L, (2004). *Cities and the creative class* (Routledge, London).

[6]Portugali, Complexity, Cognition and the City (Springer, Berlin/Heidelberg/New York, 2011)

[7]M. Batty, (2013). The New Science of Cities (The MIT Press, Cambridge, MA.

[8]Batty M. Ed. (2016). "Big Data and the City." Special issue of *Built Environment*. 42,3.

[9]Haken H., Portugali J. (2017). Smart cities: distributed intelligence or central planning? In Pardalos P. M. and Rassia S. T. Eds. Smart *City Networks: Through the Internet of Things.* Springer.

[10]*Technology and the future of cities* - Report to the president. Executive Office of the President President's Council of Advisors on Science and Technology, February 2016.