



**INTERNATIONAL**

## INVITED SESSION SUMMARY

**Title of Session:**

The Urban-Social Layer: Digital Approaches to Social Dynamics in Cities

**Name, Title and Affiliation of Chair:**

Dr. Jesus Lopez Baeza (HCU Hamburg Digital City Science)

Prof. Dr.-Ing. Jörg Rainer Noennig (HCU Hamburg Digital City Science)

**Details of Session (including aim and scope):**

Driven by discourses on digital and smart cities, many data-based approaches have unfolded over the recent years targeting the comprehensive modelling of complex urban systems. Building on top of tools and methodologies like Space Syntax, Agent Based Modelling, or CityScope, while converging knowledge from research fields like from City Information Modelling, Geoinformation Science, and Digital Urban Twins.

While such approaches ever more successfully grasp the physical and material properties of urban environments (e.g. building structures, environmental conditions, energy and mobility flows) a major open question is the appropriate modelling of social dynamics. How can individual and collective human behaviour be digitally represented and embedded in the framework of digital cities? What can we learn from the study of social aspects of cities, using digital tools? Approaches like Social Network Analysis, Cultural Analytics, or Social Simulations may provide first entry points here.

In order to raise the investigation to an inter- and transdisciplinary level, the special session invites contributions from social sciences, computer science, urban planning and development, and related disciplines, in order to discuss approaches working towards digital city studies with social dynamics as the key feature.

It is envisioned to publish the results of the session in the format of a dedicated book.

**Main Contributing Researchers / Research Centres (tentative, if known at this stage):**

Dr. Jesus Lopez Baeza, HCU Digital City Science  
Dr. Jan Barski, HCU Digital City Science  
Dr. José Carpio-Pinedo, Complutense University of Madrid  
Prof. Chihung Chen, Chengkung University Taiwan  
PhD-candidate Damiano Cerrone, Tallinn University of Technology  
Dr. Angelos Chronis, Austrian Institute of Technology  
Dr. Arnauld Grignard, MIT Media Lab  
Dipl. Ing. Torsten Holmer, TU Dresden  
Prof. Yoshiharu Ishida, Toyohashi Institute of Technology  
Prof. Rob Kitchin, Maynooth University Dublin  
Prof. Pablo Martí, University of Alicante  
Dr. Rafael Medeiros, TU Berlin Prof. Almudena Nolesco, University of Alicante  
Prof. Jörg Rainer Noennig, HCU Digital City Science  
Dr. Oto Novacek, TU Bratislava  
Dr. Ariel Noyman, MIT Media Lab  
Prof. Jörg Rainer Noennig, HCU Digital City Science  
Dr. Paolo Santi, MIT Senseable Cities Lab  
Prof. Leticia Serrano-Estrada, University of Alicante  
PhD-candidate Maria Valesse, Sapienza University of Rome

**Website URL of Call for Papers (if any):****Email & Contact Details:**

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