

Next Colloquial Talk at our department - online ZOOM meeting.

Title: Towards the Digital City: methods and applications of urban network analysis and AI
Speaker: Stanislav Sobolevsky

Time: Wednesday, 12 May, 2021, 4 pm.

Dr. Stanislav Sobolevsky will present his prior research as well as the project to start at our department under a recent MASH award, see the [invitation link](#).

Abstract:

The growing scale, complexity, and dynamics of urban systems pose tremendous challenges within urban planning and operations. At the same time, the increasing pervasiveness of digital technology in facilitating urban activities generates a vast amount of data. This big urban data creates fresh opportunities to respond to urban challenges and gain an unparalleled understanding of complex urban systems. And recent network analysis and AI techniques help to address the complexity and interconnectedness of the urban data.

I will introduce the network analysis techniques used by my teams at NYU and MIT to study the spatio-temporal transactional data on human mobility and interactions, as well as their applications to smart urban planning and smart transportation solutions.

I further present the proposed cross-disciplinary research program I look forward to implementing at MUNI: the Digital City Engine - a unified, scalable analytic framework for multi-layered urban data and its methodological core - Urban Network AI - a novel fusion of network science and deep learning techniques. We shall discuss the methodological foundations of Urban AI as well as applications to predictive modeling and detection of patterns, impacts, and emergent phenomena in spatio-temporal networks of urban activity.

Záznam přednášky [ZDE](#)