Leibniz Universität Hannover

Leibniz Forschungszentrum Energie 2050

Initiative Urbane Logistik Hannover

USE fUL

Zentrum für digitale Innovationen Niedersachsen

**Doctorial-Workshop with Prof. Dr. Harri Ehtamo,
Aalto-yliopisto, Systeemianalyysin laboratorio, Espoo, Finland**

Smart and Green Cities: Simulation, Optimization, and Information Systems

**September 9, 2019, 9:30 a.m. – 5:30 p.m.
Leibniz Universität Hannover, room 1501-442**

"Smart City" is a buzz word for holistic concepts to make cities more efficient, technologically advanced, clean & green and socially inclusive. These concepts address technical, economic and social innovations. Technological innovations include advanced Decision Support Systems (DSS), Artificial Intelligence (AI), Blockchains, Augmented- und Virtual Reality, Internet of Things (IoT) and sensors, and Big Data Analytics and Visualization.

Our workshop is focused on renewable energy, new mobility, and new logistics applications. We discuss Decision Support Systems, simulation and optimization models and methods, and Information and Communication Technologies (ICT). Methods include mathematical modelling, stochastic and deterministic optimization, agent-based simulation, and software engineering.

Schedule

9:30 a.m.: Welcome and Introduction (Harri Ehtamo, Michael H. Breitner)

9:40 a.m.: Evacuation Research: Social Dynamics for Pedestrian Motion, Models for Pushing and Overtaking Others, and Real-life Examples (Harri Ehtamo)

10:20 a.m.: Sustainable Last Miles: E-Grocery Deliveries in Urban Areas (Max Leyerer, Marc-Oliver Sonneberg, Max Heumann)

11:00 a.m.: Coffee Break

11:20 a.m.: Car Sharing and Ridepooling Services: Optimization and User Acceptance (Marc-Oliver Sonneberg, Oliver Werth, Max Leyerer)

12:00 p.m.: "Agent-based Simulation of Commercial Traffic" (Lasse Bienzeisler, IVS@TUBS)

12:40 p.m.: Lunch Break

1:30 p.m.: Nano Energy System: Models, Simulation, Optimization, Transformation, and NESSI Software Engineering (Tobias Kraschewski, Tim Brauner, Sarah Eckhoff)

2:10 p.m.: Smart Home Technologies: ICT for Energy Management, Assisted Living, and the Challenge of Intrusive Surveillance (Oliver Werth, Jana Gerlach)

2:50 p.m.: Domain-specific Chatbots for Smart Cities: A Vision and First Ideas (Antje Janssen, Davinia Rodríguez Cardona)

3:20 p.m.: Coffee Break

3:40 p.m.: Clean and Quiet Urban Mobility: A Vision and First Ideas (Michael H. Breitner)

4:10 p.m.: Elevator Dispatching Problems with Destination Control and its Performance Analysis (Harri Ehtamo)

4:50 p.m.: Lessons Learned: How to Publish an Excellent Operations Research Paper, e.g. in EJOR (Harri Ehtamo, Michael H. Breitner)

5:10 p.m.: Feedback and Conclusions (all)