

SS1: Big Data in Intelligent Transportation Systems

■ Call for Papers

The special session focuses on the application of Cloud Computing to Intelligent Transportation Systems (ITS). Advances in Information and Communication Technology (ICT) increase transportation data availability, provide convenient multi-modal electronic fare collection systems, and allow real-time connection between travellers and operators. ICT-based transportation data includes conventional AVL-based information about bus locations, APC-based traveller counts, and general traffic conditions, as well as new sources coming from travellers (smart phones), and vehicles (probe data). The question of how to efficiently collect, use and share transportation-related data is still an open research issue. Handling such data without violating privacy requires new methods and tools. Also its availability presents new opportunities to provide more efficient transportation systems. Cloud computing has great potentials in dealing an efficient way with such data. The objective of this session is to explore challenges and opportunities related to collection and sharing of big data related to transportation, ranging from traffic control to public transport.

The session covers all related topics, including but not limited to:

- Cloud computing for ITS
- Application of wireless communications technologies for ITS
- Information and communications technologies as an enabler for smart ITS
- Advanced public transportation management
- Big data for transportation management and planning
- Real-time passenger information
- Multi-modal ITS
- Human factors, travel behaviour
- Driver and traveller support systems
- Cooperative traffic information systems
- Security and privacy issues in ITS
- Mobility modelling, prediction and control
- Connected vehicle technology

■ Important dates

Paper Submission: June 30, 2015

Notification of Acceptance: August 3, 2015

Final Paper: August 17, 2015

■ Session organizers

Dr. Marcin Seredynski received his M.Sc. (2004) from the Warsaw University of Technology (Poland). In 2009 he defended his PhD thesis with the University of Luxembourg and Polish Academy of Sciences. He is currently working as a senior R&D engineer at the Luxembourg Institute of Science and Technology (former CRP Tudor) in Luxembourg. He is a member of International Association of Public Transport (UITP), where he serves as a steering board member of the academic network. His research interests include intelligent transportation systems, traffic management, urban public transport, and vehicular ad hoc networks.

Dr. Dzmitry Kliazovich is a Research Fellow at the Faculty of Science, Technology, and Communication of the University of Luxembourg. He holds an award-winning Ph.D. in Information and Telecommunication Technologies from the University of Trento (Italy). He served as general and TPC chair in a number of high-ranked international conferences, including the IEEE International Conference on Cloud Networking (CLOUDNET 2014). Dr. Kliazovich is the author of more than 100 research papers and Editorial Board Member of the IEEE Communications Surveys and Tutorials. His main research activities are in the field of energy efficient communications, cloud computing, and next-generation networking.

Dr. Jun Pang is a senior researcher at the University of Luxembourg. Dr. Pang received a Ph.D. in Computer Science from Free University Amsterdam, based on his research performed at CWI in Amsterdam as a junior researcher. His main research interests lie in the area of security and privacy, with a focus on applying formal techniques to security and privacy in large and distributed systems. He has been working on security and privacy issues in several different application domains, and developing algorithms and techniques to support their reasoning and analysis. More recently, his research focuses on quantitative and statistical aspects of privacy. He has published more than 100 publications in international competitive conferences/workshops and prestige journals. For his achievements in research, he has won an outstanding paper award at CODASPY 2013 and a best paper award at ARES 2014.

Prof. Francesco Viti is Associate Professor and head of the MobiLab Transportation Research Group at the University of Luxembourg. His research covers a broad range of topics from travel behaviour to multimodal network modelling and ITS, carried on at both the University of Luxembourg and at KU Leuven as Visiting Professor. He teaches various courses on Traffic Engineering, Infrastructure Design, Transport Systems Analysis, and Supply Chain and Logistics, also as guest lecturer at KU Leuven. He acts as Expert for the European Commission and as advisor for several EU-funded projects. He has over 100 scientific publications with about 40 articles in journals with Impact Factor. Currently he is recipient of a Marie-Curie Career Integration Grant and supervises 5 PhD projects, which cover mobility analysis and network modelling, develops complex network-wide travel demand and traffic management solutions.