



The Third International Workshop on Intelligent Public Transports – Toward the Next Generation of Urban Mobility

Luis Moreira-Matias - NEC Labs Europe, DE (*Member, IEEE*),
Oded Cats - Department of Transport and Planning, TU Delft, NL,
Lijun Sun - MIT Media Lab, USA,
Francesco Viti - University of Luxembourg (LU)

Today, everything is being built up taking advantage in **sensor's** data. **Public Transport (PT)** is not an exception. By being highly dependent on the dynamics of the human behavior (drivers, passengers and other travelers), it is intrinsically connected to the **data** derived from them as well. In the past, this was completely utopic. The Data Miners worked closed on their labs with their futuristic and useless algorithms (as there was no data to apply them) while the Civil Engineers aimed to model such dynamics assuming stochastic and/or optimistic scenarios which comprise a fair but still inaccurate approach to such dynamic behavior.

Nevertheless, the current large-scale availability of these types of data (e.g. smartphones, traffic light sensors, APC/AVL, fare-based, etc.) changed the way that both Civil and Computer Scientists faced the problematics around PT. It enables a whole new bunch of possibilities which are still far by being fully explored. On the other hand, it also brings novel issues regarding each individual's and/or company's privacy that are worthy to be discussed and analyzed. Where are we going? Where do we want to go? Which are the current trends? How can we explore these data to improve the public transportation? Which can be done to improve the schedule coverage? How about the taxi dispatching? The bus lanes? The stands/stops location? The subway's timetables? Preventive Maintenance? The **Planning and The Control of Public Transportation?** The **Human Mobility** in general?

These problematics are addressed by this workshop's scope. The researchers/engineers are encouraged to participate and take advantage of this opportunity to exchange ideas and to share their R&D findings/experiences.

I. SCOPE

The technical areas include but are not limited to the following:

- intelligent and real-time PT control and operational management;

- public transportation planning and management using Big Data;
- mobility-based data analytics and machine learning applications;
- different modes of PT and their interactions (road, rail, air and water-based);
- artificial PT systems and simulation;
- trajectory mining and related applications;
- data-driven preventive maintenance policies;
- analysis of smart card data and mobile phone data to improve public transport reliability;
- distributed and ubiquitous public transport technologies and policies;
- travel demand analysis and prediction;
- advanced traveler information systems using homogeneous/heterogeneous data sources;
- intelligent mobility models/policies for urban environments;
- smart architectures for vehicle-to-vehicle/vehicle-to-infrastructure communications;
- agent-based models of public transport systems;
- complex network theory applications in public transport;
- automatic assessment and/or evaluation on the PT reliability;

II. VENUE

The workshop will be organized within IEEE ITSC 2017 at Yokohama, Japan. Submissions should follow IEEE conference format (max. 6 page length). Accepted papers will be published in IEEE Explore.

III. IMPORTANT DATES

- **Paper Submission Deadline: June 30th, 2017**
- Notification of acceptance: July 30th, 2017
- Camera Ready deadline: August 15, 2017
- **Workshop day: October 16, 2017**
- Conference days: 16-19 October 2017