

Call For Paper – 3rd International Workshop on Intelligent Public Transport at IEEE ITSC

Today, everything is being built up taking advantage in **sensor's data**. **Public Transport** 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 computer scientist worked isolated on their *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. This scenario changed dramatically in the recent years. The availability of these type of data (e.g. smartphones, traffic light sensors, APC/AVL, fare-based, etc.) on a large-scale drifted the way that both Civil and Computer Scientists faced the problematics around Public Transportation. 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** in general?

Nevertheless, there is still a gap for a venue which holds these specific research interests, opening space to build fruitful collaborations between transportation experts and data scientists in general within this scope. Hereby, we propose to help on filling this gap by organizing an workshop at the **IEEE ITSC** (<http://www.itsc2017.org/>): "**The Second International Workshop on Intelligent Public Transports – Toward the Next Generation of Urban Mobility**". The organization of this workshop is composed by me (Dr. Luis Moreira-Matias), Dr. Lijun Sun (MIT Media Lab, USA) and Prof. Oded Cats (Transport and Planning Group, TU Delft, Netherlands). Our intention is to ignite the discussion on where and how are we going on this emerging topic by bringing together researchers with different backgrounds that share an interest for these topics. Our last edition held a full room (40 attendants) and a total of 11 research works + 2 Keynotes (Prof. Marcela Munizaga and Prof. Shlomo Bekhor) which resulted on a fruitful discussion, as well as further collaborations.

We know that you fit on this profile. **This e-mail is to invite you to submit a contribution to enrich the quality of our workshop**. The members of your department/research lab, your students and other co-authors of yours are also invited to do the same. The research work does not need to be novelty on the field but it must stick to our scope. We are building now a tentative presenter list and **we want you to contribute to it**. To do so, please respond to this e-mail by March 15 confirming (or declining) your presence on the workshop (in a tentative fashion). Below, you can find the important dates.

Important Dates (IEEE ITSC 2017):

- Tentative Presence/Submission Confirmation: **March 15, 2016**
- Regular Paper Submission: **March 15, 2017**
- Workshop Paper Submission: **June 30, 2017**
- Notification of acceptance: **July 30, 2017**
- Final paper submission deadline (Both regular and Workshop Paper): **August 15, 2017**
- Workshop day: **October 16, 2017**
- Conference days: **16-19 October 2017**

Workshop scope (not restrictive):

- intelligent and real-time public transport control and operational management (bus bunching, transfer coordination, corrective actions);
- public transportation planning and management (route definition, schedule planning, duties definition and/or assignment) using Big Data;
- mobility-based data analytics and machine learning applications;
- different modes of public transport and their interactions (road, rail, air and water-based);
- artificial public transportation 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 and 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 public transport reliability (planning, control and other related policies);

Thank you for your contribution. We look forward to see you in the Yokohama (Japan) next October!