Call For Papers

Knowledge Discovery from Mobility Data for Intelligent Transportation Systems

Special Issue on **IEEE Transactions on Intelligent Transportation Systems**

The recent technological advances on telecommunications create a new reality on mobility sensing. Nowadays, we live in an era where ubiquitous digital devices are able to broadcast rich information about human mobility in real-time and at a high rate. Such fact exponentially increased the availability of large-scale mobility data which has been popularized in the media as the new currency, fueling the future vision of our smart cities that will transform our lives. The reality is that we just began to recognize significant research challenges across a spectrum of topics. Consequently, there is an increasing interest among different research communities (ranging from civil engineering to computer science) and industrial stakeholders on build knowledge discovery pipelines over such data sources. However, such availability also raise privacy issues that must be considered by both industrial and academic stakeholders on using these resources.

This special issue intends to bring together transdisciplinary researchers and practitioners working in topics from multiple areas such as Data Mining, Machine Learning, Numerical Optimization, Public Transport, Traffic Engineering, Multi-Agent Systems, Human-Computer Interaction and Telecommunications, among others. The ultimate goal of this venue is to evaluate not only the theoretical contribution of the data driven methodology proposed in each research work, but also its potential deployment/impact as well as its advances with respect to the State-of-the-Art/State-of-the-Practice in the domains of the related applications.

This special issue will be published in **IEEE Transactions on Intelligent Transportation Systems** **entitled** *Knowledge Discovery from Mobility Data for Intelligent Transportation Systems.*

Special Issue scope (not restrictive):

- Different transportation modes and their interactions (road, rail, air and water-based);
- Intelligent and real-time public transport control and operational management;
- Transportation planning and management;
- Trajectory mining and related applications;
- Failures detection and preventive maintenance;
- Distributed and ubiquitous transport technologies and policies;
- Travel demand analysis and prediction;
- Advanced traveler information systems;
- Intelligent mobility models and policies for urban environments;
- Automatic assessment and/or evaluation on the transport reliability (planning, control and other related policies);
- Human mobility mining and pervasiveness applications;
- Privacy in collecting, storing and analyzing pervasive mobility/transportation data;
- Traffic control and demand forecasting for high-speed roadways;
- Pedestrians traffic analysis, prediction and safety issues;
- Social impact, land-use and trend analysis;
- Transit assignment and Activity-Choice models;
- Human Risk Factor Mining on Driving;

Important Dates (tentative):

- IEEE T-ITS Special Issue - First Submission Deadline: **30th November 2017**
- IEEE T-ITS Special Issue - Notification of First Decision: **28th February 2018**
- IEEE T-ITS Special Issue - Notification of Final Decision**: 30th April 2018**
- IEEE T-ITS Special Issue - Camera Ready Deadline: **31st May, 2018**
- IEEE T- ITS Special Issue - Issue of Publication: **October, 2018**
- (KnowMe Workshop day: **22nd September, 2017**)

Thank you for your contribution.

Important note: Selected papers from the KnowME workshop – held at ECML/PKDD 2017 held in conjunction with this call, will likely appear in this issue. However, submissions are open to all, independent of participation in the KnowME workshop.

Guest Editors:
Luis Moreira-Matias – NEC Laboratories Europe, Germany
Rahul Nair, IBM Research Ireland
Roberto Trasarti, KDD Lab ISTI-CNR, Pisa, Italy
Cristina Olaverri - Technikum Wien, Austria
Joao Gama – University of Porto