

# **INTERNATIONAL WORKSHOP ON COOPERATIVE SENSING FOR SMART MOBILITY (COSSMO)**

15h September 2015, Las Palmas de Gran Canaria, Spain

<http://www.av.it.pt/es/cossmo/>

Co-located with the 18th International IEEE Conference on Intelligent Transportation Systems

<http://www.itsc2015.org>

## **THEME AND TOPICS OF INTEREST**

Transportation systems have received widespread attention from scientific community and emerged towards Intelligent Transportation Systems, where there is closed loop interaction between vehicles/drivers and the transportation infrastructure empowered by cooperative V2X communications, cellular networks and wireless sensor networks. Cooperative applications with data sensing, acquisition, processing and communication provide an unprecedented potential to improve vehicle and road safety, passenger's comfort and efficiency of traffic management. In order to support such visionary scenarios, applications running in the vehicles are required to communicate with other applications in the vehicle or with applications deployed in the back office of the emergency services, road operators or public services. These applications run unattended, reporting information and taking commands from counterpart applications in the vehicle or network, and are therefore referred to as Machine-to-Machine applications. Current standards do not fully address scenarios in which mobility of entities are involved; such as the case of vehicular network nodes roaming through a network of various RSUs connected to M2M gateways. A cooperative system for smart mobility is a pervasive system based on wireless sensor networks and vehicular networks composed by control centers, RSUs, OBUs and personal handled devices.

This workshop will bring together academic and industrial stakeholders to identify and discuss technical challenges, and be a venue for disseminating innovative solutions in the field of cooperative sensing for smart mobility applications. These solutions will encompass all aspects of ITS associated with cooperative sensing: from wireless network infrastructure and mobility, to physical layer transmission techniques, middleware, M2M architectures, data models and real life implementations. Specific topics include, but are not limited to:

- Cooperative sensing for autonomous vehicles
- Smart sensors
- Cooperative sensing for automatic incident detection and recovery
- Reliability of cooperative sensing
- Validation and certification of smart mobility applications
- Ubiquitous traffic monitoring
- M2M in the scope of ITS
- New paradigms for smart mobility
- Safety aspects of smart mobility
- Software agents for cooperative sensing
- Personal handled devices as sensing peripherals
- Cooperative parking lot monitoring
- Protocols for vehicular cooperative communications
- Data distribution platforms
- Cooperative sensing for the dynamic prediction of traffic flows
- Public transport prioritization

- Field trials

## CONTRIBUTIONS

We welcome relevant contributions in the following forms:

- Technical papers describing original theoretical or practical work;
- Experience/Industry papers describing practitioner experience or field study, addressing an application domain and the lessons learned;
- Project papers describing goals and results of ongoing projects;
- Prototypes/demonstrators from academia or industry.

## IMPORTANT DATES

- Paper submissions: May 15, 2015
- Notification of acceptance: June 15, 2015
- Registration deadline for authors: July 1, 2015

## SUBMISSION

Papers can be submitted at <http://itsc2015.exordo.com/> via 'Submit a Paper' -> '1. Step Track' -> 'Industry Track & Workshop Papers'.

Further details at: <http://www.itsc2015.org/submit-your-paper>

## ORGANIZERS:

- Joaquim Ferreira, University of Aveiro, Portugal
- Matteo Petracca, CNIT, Italy
- Elena Cordiviola, INTECS, Italy

## KEYNOTE SPEAKERS

**Prof. António Casimiro**, University of Lisbon, Portugal.

- António Casimiro graduated and has a Master in Electrotechnic and Computers Engineering (1995), by the Instituto Superior Técnico de Lisboa (IST). He has a PhD in Informatics (2003), by the University of Lisboa. He is currently an Associate Professor at the Department of Informatics (DI) of the University of Lisboa Faculty of Sciences, where he joined in 1996. Previously he was teaching at IST and was a researcher at INESC. He is a member of the LASIGE research laboratory of the DI, where he leads the Navigators group research line on Timeliness and Adaptation in Dependable Systems. He was the coordinator of the KARYON (FP7) and the TRONE (CMU|Portugal) projects. Previously he was involved and contributed to several national and international projects, such as HIDENETS, CORTEX, CaberNet and TACID. His research focus is on: Dependable architectures for distributed systems; QoS and adaptation in distributed and real-time systems; Fault tolerant communication protocols; Cloud infrastructures monitoring; Real time and dependable wireless sensor networks; Safety in cooperative networked systems. António Casimiro has more than 50 publications in the area of distributed, fault-tolerant and real-time systems. He is a member of the IEEE, ACM, IFIP WG10.4 on Dependable Computing and Fault Tolerance, and of Ordem dos Engenheiros.

**Prof. Javier Gozalvez**, from Miguel Hernández University, Spain.

- Javier Gozalvez received an electronics engineering degree from the Engineering School ENSEIRB (Bordeaux, France), and a PhD in mobile communications from the University of Strathclyde, Glasgow, U.K. Since October 2002, he is with the Miguel

Hernández University of Elche, Spain, where he is currently an Associate Professor and Director of the UWICORE laboratory. At UWICORE, he leads research activities in the areas of vehicular networks, multi-hop cellular networks, heterogeneous networks, and wireless industrial communications. He has published over 110 papers in international conferences and journals. He is an elected member to the Board of Governors (2011-2017) and Executive Vice President of the IEEE Vehicular Technology Society. He is an IEEE Distinguished Lecturer for the IEEE Vehicular Technology Society. He currently serves as Mobile Radio Senior Editor of IEEE Vehicular Technology Magazine, and on the Editorial Board of the Computer Networks journal. He is the General Co-Chair for the IEEE VTC-Spring 2015 conference in Glasgow (UK), and was General Co-Chair of the ACM VANET 2013, ACM VANET 2012 and 3rd ISWCS 2006. He also was TPC Co-Chair for 2011 IEEE VTC-Fall and 2009 IEEE VTC-Spring. He is also the founder and General Co-Chair of the IEEE International Symposium on Wireless Vehicular communications (WiVeC) in its 2007, 2008, and 2010 editions.