IEEE Systems Journal

Special Issue on "Hybrid Intelligence for Internet of Vehicles"

CALL FOR PAPERS

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SCOPE

Internet of Vehicles (IoV) refers to dynamic mobile communication systems that communicate between vehicles and public networks using vehicle-to-vehicle (V2V), vehicle-to-road (V2R), vehicle-to-human (V2H) and vehicle-to-sensor (V2S) interactions. It enables information sharing and the gathering of information on vehicles, roads and their surrounds. Moreover, it features the processing, computing, sharing and secure release of information onto information platforms. Based on this data, the system can effectively guide and supervise vehicles, and provide abundant multimedia and mobile Internet application services.

The next generation IoV is an emerging field that crosses multiple disciplines including automotive, intelligent transportation, information technology, communications, energy, etc. In the recent years, there are more and more system technologies and system intelligence being used to make transportation more clean, efficient, connected and safe. Given that transportation represents one seventh of the world's economy, the IoV will play as an important part of the wisdom city in the future.

This special issue aims to foster the dissemination of high quality research in complex systems and systems of systems for enabling Internet of Vehicles. Original research articles are solicited in all aspects, including vehicle behavior model, environment awareness, autonomous vehicles and system, telematics, swarm intelligent computing systems, social economics systems, new communication systems, and experimental prototypes or tools realizing IoV.
Topics of interest at system level include, but are not limited to:

1. Complex systems and systems-of-systems for IoV
   Techniques and methods implementing hybrid intelligence in complex system architectures for IoV applications, encompassing client systems, connection system, and cloud systems. Examples include intelligent sensor, ubiquitous communications, heterogeneous networks, real-time systems, intelligent transportation, mobile Internet, big data and information processing, recommendation, personalization and adaptation, optimization, smart services and systems. Innovative techniques and method are considered only if presented for compelx systems or systems-of-systems in IoV applications.
2. Theory, technology, methodology, tools and applications for hybrid intelligence in IoV
   Architectures, interoperability, modeling, analysis, development tools and environments for system intelligence in IoV applications based on complex systems and systems-of-systems. Examples include network and information services, data visualization systems, cooperative systems, machine learning, awareness, statistical techniques, cognitive models, social implications and standards. Theory, technology, and tools are considered only if presented for complex systems or systems-of-systems in IoV.
3. Case studies of IoV
   Real-world experiences that demonstrate the value of incorporating systems intelligence and IoV in transportation and mobility applications. Presentation of the system perspective is required.

Papers should always address the above specific topics from the system perspective in order to be considered for this special issue.

SUBMISSION GUIDELINES

Authors are invited to submit original research contributions by following the detailed instructions given in the "Information for Authors" at http://ieeesystemsjournal.org. In the cover letter, authors should explicitly state that the paper is submitted to the "Special Issue on Hybrid Intelligence Internet of Vehicles". Questions about the special issue should be directed to the Guest Editors.

SCHEDULE

Paper submission deadline:	Sept. 30, 2014	Minor revision deadline:	Mar.. 15, 2015
Notification of the first review:	Dec. 25, 2014	Final notification:	Apr. 30, 2015
Revised paper submission:	Jan. 31, 2015	Final manuscript:	May. 15, 2015
Notification of the re-review:	Feb. 28, 2015	Expected publication:	Early 2016