

INTERNATIONAL JOURNAL OF COMMUNICATION SYSTEMS

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*Special Issue on **Smart Communications for Autonomous Systems in Network Technologies***

Scope

The explosion of Smart Communications in Network Technologies has resulted in the growing smart communications fields embedded in complex systems for a wide variety of applications in the future generation of network and cloud computing technologies. Indeed, autonomous systems embedded in complex configurations and dynamic environments have rapidly expanded from classical applications where different modular devices, actuators and sensors interact closely. This has considerably affected the control of a given system in a centralized manner. Current trends are to propose new autonomic architecture schemes that manage and control future emerging networks: sky of clouds, Internet of things, Smart Grids, Smart Cities, smart industry, etc. The evolution of Internet usages appeals for more quality guarantees in order to support stringent services. Aligned to these trends, the Open Data initiative fuels novel development scenarios, business opportunities and markets. In this context, for example, Healthcare and wellness applications such as helping elderly people, assisting dependent persons, habitat monitoring in a smart environment constitute some of the potential scenarios of convergence between autonomous systems and smart network technologies. These applications, which are based on high-level commands, accomplish some specific tasks, reveal new challenges regarding mechanic design, portability, acceptability, power support and efficiency, control theory, cost, economic aspects, scalability, security, etc.

The Special Issue focuses on the most recent advances in smart communications and Information Communication Technology networks impact not only on network technologies (protocols, equipment, algorithms, power, etc.), but also on creating collective and individual awareness about the multiple sustainability threats which our society is facing nowadays at social and environmental levels. This Special issue will bring together researchers from diverse fields and specialization, such as communication engineering, computer engineering, computer science, information technology, bio-medical and mathematics. We invite researchers from industry, academia and government organization to discuss challenging ideas and novel research contributions, demonstrate results, and share standardization efforts on the smart communication embedded in autonomous systems and related areas.

Topics of interest include, but not limited to the following:

<ul style="list-style-type: none">• Autonomous Systems in Networks<ul style="list-style-type: none">○ 5G wireless technologies and Virtualization○ Cloud-based 5G mobile architectures○ Spectrum utilization and Massive MIMO Communications○ NGN for smart cities○ Service oriented networks○ Routing innovation for smart communications○ Software-defined networking○ Device-to-Device Communications and networking○ Cloud and Mobile Edge Computing○ IS security• Smart industry, Autonomic and Robot based Networks<ul style="list-style-type: none">○ Design modeling and control of autonomous robotic systems○ Monitoring and security of autonomous systems in intelligent environment○ Assistive robotic technology○ Autonomous manipulation using service robots○ Network based transmission architecture for controlling autonomous systems○ Pervasive communication in autonomous application fields○ Energy optimization of autonomous systems	<ul style="list-style-type: none">• Autonomous Systems for Ad hoc, Sensor and Vehicular Networks<ul style="list-style-type: none">○ Internet of things○ Techniques of sensing, actuation and recognition○ Architecture and protocol for wireless based sensor networks○ Context awareness using sensor networks○ Vehicular applications of autonomous behavior○ Networks of Unmanned Aerial vehicles○ Energy optimization○ Real-time network based structure using sensors, actuators and transducers○ QoS-related topics○ Software Engineering and networking.• Applications<ul style="list-style-type: none">○ E-Health, Telemedicine, Oil and Gas industries○ Data mining /Image processing in networks○ Rural/Underwater applications○ Context-awareness and ubiquitous applications○ Rehabilitation robotics, exoskeletons, smart textile clothes and wearable robots applications○ Network Big data analysis○ Secure, scalable and low cost network paradigms applications○ Digital social platforms○ Numerical Transformation, Digitalisation
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Instructions for Manuscripts

Submitted articles must describe original research which have not been published or currently under review by other journals or conferences.

Submissions must be directly sent via the IJCS submission web site at

<http://mc.manuscriptcentral.com/ijcs> and select Special Issue: "Smart Communications for Autonomous Systems in Network Technologies" as manuscript type during step 1 of the submission process.

Paper submissions must conform to the layout and format guidelines in the International Journal of Communication Systems. Instructions for Contributors are in: <http://www3.interscience.wiley.com/journal/5996/home/ForAuthors.html>

Important Dates

Submission Deadline (Full Paper): 30 November 2018

Final paper production deadline: 30 February 2019

Notification of Acceptance/Revision: 15 February 2019

Tentative Publication Date: expected in: 2nd part of 2019

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