2018

COMMUNICATIONS SYSTEMS
INTEGRATION AND MODELING
TECHNICAL COMMITTEE (CSIM-TC)

NEWSLETTER

Christos Verikoukis (Chair)
Burak Kantarci (Vice-chair)
Nizar Zorba (Secretary)

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ABOUT CSIM

The Communications Systems Integration and Modeling technical committee focus its activities on simulation, analytical tools and measurement of communications links and networks. CSIM has been sponsoring activities on traffic modeling, performance and integration of next generation wireless and wireline networks.

CSIM sponsors its traditional bi-annual workshop CAMAD, as well as special issues in the IEEE Communications Magazine and in the IEEE Journal on Selected Areas in Communications. CSIM is very active in ICC and in GLOBECOM and was one of the co-founders of MILCOM. CSIM has its roots on the Communications Systems Engineering Technical committee and its past chairs are:

2015-now – Christos Verikoukis

2013-2015 – Stefano Giordano

2011-2013 – Harry Skianis

2009-2011 – Fabrizio Granelli

2007-2009 – Pascal Lorenz

2005-2007 – Nelson L.S. da Fonseca

2002-2005 – Mike Devetsikiotis

2000-2002 – Mohammad Ilyas

1999-2000 – Hussein Mouftah

1996-1999 – Guy Omydar

1994-1996 – Bill Tranter

For more information about CSIM, please visit: http://csim.committees.comsoc.org/

1. Short Courses / Invited Talks / Awards / Tutorials by CSIM Members

1.1 ComSoc Director of Education Services from CSIM
Organizers: Dr. Fabrizio Granelli (University of Trento)

Dr. Granelli as the former ComSoc Director for Online Content in 2016-17 has been promoted to the ComSoc Director of Education Services (2018-19). Congratulations!.

1.2 IEEE INFOCOM 2018 Best Paper Award
Winner: Dr. Berk Canberk (Istanbul Technical University)

Dr. Berk Canberk, Assoc. Prof. in Computer Engineering Dept. at Istanbul Technical University (ITU) , as well as Adjunct Assoc. Prof. in Electrical and Computer Engineering Dept. at Northeastern University (NEU), has received the *"Best Paper Award"* among 1606 submitted papers in 37th IEEE INFOCOM (IEEE International Conference on Computer Communications) that was held in Honululu, USA on 15-19 April 2018, for the paper entitled "WiFED: WiFi Friendly Energy Delivery with Distributed Beamforming". This paper was produced as a joint work of researchers from ITU and NEU. The other authors are, Subhramoy Mohanti (NEU), Elif Bozkaya (ITU), M. Yousof Naderi (NEU), and Prof. Kaushik Chowdhury (NEU).

Short Info About the Paper:
The paper entitled "WiFED: WiFi Friendly Energy Delivery with Distributed Beamforming" proposes the first effort in merging the RF energy transfer functions within a standards compliant 802.11 protocol to realize practical and WiFi-friendly Energy Delivery (WiFED). The WiFED architecture is composed of a centralized controller that coordinates the actions of multiple distributed energy transmitters (ETs), and a number of deployed sensors that periodically request energy from the ETs.

Info About INFOCOM:
IEEE INFOCOM is a top ranked conference on networking in the research community. It is a major conference venue for researchers to present and exchange significant and innovative contributions and ideas in the field of networking and closely related areas. IEEE INFOCOM covers both theoretical and systems research. For INFOCOM 2018, the conference includes a main technical program, a number of workshops, a keynote speech, panels, a student poster session, and demo/poster sessions. For more information, visit http://infocom2018.ieee-infocom.org/awards

1.3 Seminar on Smart Infrastructures for Safe and Prompt Crowd Management
Organizer: Dr. Nizar Zorba (Qatar University)

Qatar National Research Fund (QNRF) organized a Research Outcome Seminar (ROS) on "The Built Environment" on 18th April 2018 Marriott Marquis City Center Hotel, Doha, Qatar, and Dr. Nizar Zorba was invited to give a talk on recent advances on Crowd Sensing and Management. The objective is to realize a smart infrastructure that is directly aimed at crowd management. A key emphasis in the seminar is the robust and reliable scalability that provides sufficient flexibility to manage a mixed crowd. The infrastructure also spans

various population settings (e.g.., roads, buildings, game arenas, etc.). A foundational approach is adopted with a clear and practical aim of a large-scale product prototyping and implementation.

At the core of the smart infrastructure realization is a closed-loop sense-process-act cycle. This core relies heavily on state-of-the-art advances in sensing, computing and telecommunications/networking, and proceeds with considerations for both evolutionary setups (i.e.., smartening-up traditional infrastructures) as well as new infrastructure implementations. Recent advances are presented on the development and implementeation of a testbed for the WorldCup 2022 city in Qatar.

1.4 Invited talk at IEEE Workshop on Spatial Stochastic Models for Wireless Networks (SpaSWiN)
Organizer: Dr. Justin Coon (Oxford University)

The workshop is held in conjunction with WiOpt 2018, Shanghai Jiao Tong University, China, May 7th, 2018, where Dr. Coon will be presenting the plenary talk with the title "On the Conditional Entropy of Wireless Networks" and with the following abstract: The mathematical formalism of graph entropy is a powerful tool that can be used to study network structure and complexity and wireless systems. In this talk, we will explore a number of key results that relate to the entropy of wireless networks. In particular, we will derive upper and lower bounds on network entropy, focusing on the latter, which follow from conditioning on subgraphs and node positions. We will also discuss some complications that arise due to geometry and present methods of controlling network complexity in the limit of a large number of nodes. Finally, we will present some ideas for how engineers might exploit this entropic framework to design practical systems.

2. IEEE ComSoc Events

2.1. Distinguished Lecturer tour in Canada
Organizer: Dr. Giorgio Quer (Scripps Research Insitute).

The tour will have the following presentations:
Mon May 7: Toronto University
Tue May 8: Kingston Military College
Wed May 9: Algonquin College in Ottawa
Thu May 10: Concordia University in Montreal

The talk will cover two topics: "Cellular and Device-to-Device Networks Coexistence" related to CSIM and "Machine Learning in Digital Medicine" related to e-Health.

Cellular and Device-to-Device Networks Coexistence

The coexistence of device-to-device (D2D) and cellular communications in the same band is a promising solution to the dramatic increase of wireless networks traffic load, in particular in the presence of local traffic, when source and destination nodes are in close proximity. Mobile nodes may communicate in a semi-autonomous way (D2D mode), with minimal or no control by the base station (BS), but they will create a harmful interference to the cellular communications.

To control this interference, we can adopt a distributed approach that allows the mobile nodes to acquire local information in real time, infer the impact on other surrounding communications towards the BS, and optimize mode and power selection performed with a network wide perspective. In a single-cell scenario, it is possible to develop a rigorous theoretical analysis to quantify the balance between the gain offered by a D2D transmission and its impact on the cellular network communications. In the more general case of a multi-cell scenario, we exploit a probabilistic approach with Bayesian networks to enable a smart, adaptive mode and power selection performed with a network wide perspective, where the selection is made autonomously by each D2D sources, with no need for a centralized scheduling.

As a practical application, we envision a network with one macro BS, multiple small cell BSs, and several mobile D2D users, where proactive caching can be used to take full advantage of this heterogeneity. In this scenario, we propose a robust optimization framework to derive a proactive caching policy that exploits all these communication opportunities and reduces congestion on the backhaul link.

The adoption of D2D technologies may save precious resources like spectrum and energy for future 5G networks by exploiting physical proximity between terminals, helping to counteract the increasing traffic demand in cellular networks.

More details in:

[1] F. Librino, G. Quer, "Dynamic Cellular and D2D Communications: a Coexistence Strategy relying on Context Awareness," in IEEE Transactions on Cognitive Communications and Networking, IEEE early access, 2018.

[2] F. Librino, G. Quer, "On the Coexistence of D2D and Cellular Networks: an Optimal Distributed Approach," in Information Theory and Applications Workshop, San Diego, CA, Feb., 2017.

[3] I. Pappalardo, G. Quer, B. Rao, M. Zorzi, "Caching strategies in Heterogeneous Networks with D2D, small BS and macro BS communications," in IEEE ICC 2016, Kuala Lumpur, Malaysia, May 2016.

3. Upcoming Events

3.1. IEEE Computer-Aided Modeling Analysis and Design of Communication Links and Networks

17-19 September 2018 – Barcelona, Spain
http://camad2018.ieee-camad.org/

IEEE CAMAD 2018 will be held as a stand-alone event at Barcelona. This year IEEE CAMAD will focus on Communication and Experimentation aspects of 5G Networking and beyond. IEEE CAMAD will be hosting Workshops and Special Sessions, bringing together a diverse group of scientists, engineers, manufacturers and providers to exchange and share their experiences and new ideas focusing on research and innovation results in the 5G domain. In addition to contributed papers, the conference will also include keynote speeches, panel and demo sessions

Important Dates

Paper submission: 31st May 2018
Author notification: 2nd July 2018
Camera ready: 31st July 2018

Areas of Interest

IEEE CAMAD is soliciting papers describing original work, unpublished and not currently submitted for publication elsewhere, on topics including, but not limited to, the following:
• Wireless PHY layers for 5G: design, analysis, and optimization
• Wireless MAC protocols for 5G: design, analysis, and optimization
• 5G IoT networks, Platforms, Integration and Services
• 5G Multitenant Networks and End-to-End Network slicing
• Adaptive content distribution in on-demand services
• Backhaul/fronthaul for multi-tier ultra-dense heterogeneous small cell networks
• Cognitive and Cooperative Communications
• Commercial and Societal Impact of Networks, Data, and Adaptive Services
• Context and location-aware wireless services and applications
• Cross-layer design for massive MIMO and multiuser MIMO networks
• Circular economy for ICT
• Software-Defined Networking (SDN) Architectures and Networks
• Machine-Learning and Artificial Intelligence

• Efficient integration of multiple novel 5G air interfaces
• Energy efficiency and Energy harvesting in wireless networks
• Mobile big data and network data analytics
• Mobile Edge and Fog Computing Systems
• Mobile social networks
• Security, Privacy and Trust by Design and Performance Evaluation
• Mobility, location, and handoff management
• Multimedia QoS, and traffic management
• Multiple access in machine-to-machine communication
• Network estimation techniques
• Optical Communications & Fiber Optics for 5G
• Quality of Experience: Framework, Evaluation and Challenges
• Smart Grids: Communication, Modeling and Design
• Testbed, experiments, and prototype implementations of systems & services for 5G
• Ultra low-latency and ultra high-reliability
• Validation of Simulation Models with Measurements
• Wireless body area networks and e-health services
• Wireless broadcast, multicast and streaming

Submissions

Prospective authors are invited to submit a full paper of not more than six (6) IEEE style pages including results, figures and references. Papers should be submitted via EDAS (https://edas.info/newPaper.php?c=24497). Papers submitted to the conference, must describe unpublished work that has not been submitted for publication elsewhere. All submitted papers will be reviewed by at least three TPC members. All accepted and presented papers will be included in the conference proceedings and IEEE digital library.

General Chairs

Christos Verikoukis, CTTC, Spain
Mianxiong Dong Muroran Inst. of Technology, Japan

Technical Program Chairs

Luca Foschini, Università di Bologna , Italy
Hyunbum Kim, University of North Carolina at Wilmington, USA
Angelos Antonopoulos, CTTC, Spain

3.2. The First International Workshop on Intelligent Transportation and Connected Vehicles Technologies (ITCVT 2018)

Intelligent Transportation Systems (ITS) plays a significant role in smart cities, with the future being the Autonomous Vehicle (AV). Such transportation systems integrated with today's advanced vehicular and wireless network technologies will play a crucial role in improving the quality and delivery performance of diversified vehicular services. There are many unprecedented challenges that arise from Intelligent Transportation and Connected Vehicles Technologies (ITCVT). These include configuring vehicular cloud services to user requirements, connected vehicle security issues related to connectivity, big data analytics for intelligent transportation, vehicular cloud computing, and service composition, and power management for smart electric vehicles. There is also a need for customized communication technology for the integrated solutions of connected vehicles and smart city sub-systems.

The aim of the First International Workshop on ITCVT is to bring together engineers, researchers, and practitioners interested in the advances and applications in the field of intelligent transportation and vehicle technology. Participants are invited to present and discuss recent developments and challenges in ITCVT systems. This workshop focuses on innovative applications, tools and frameworks in all technology areas related to connected vehicles in the context of smart cities and other application domains. Papers describing original novel work and advanced prototypes, systems and tools are encouraged.

Topics of interest include, but are not limited to:
· Autonomous Vehicles and Automated Driving
· Big Data Analytics for Intelligent Transportation
· Intelligent Infrastructure and Guidance Systems
· Cooperative Driving and Traffic Management
· Connected Services
· Mobility management
· QoE in connected vehicles
· Vehicular Cloud Computing
· Mobility and the Internet of Vehicles
· Vehicular Networks
· Security and Privacy of Connected Vehicle Communication
· Smart Electric Vehicles
· Power Management of Smart Electric Vehicles
· Big Data & Vehicle Analytics
· Analytics for Intelligent Transportation
· Vehicular Ad Hoc Networks (VANET)
· In-Vehicle Networks and Communications
· Networking with Other Road Users
· Green Vehicular Communication Applications and Services
· 5G technologies for connected vehicles
· Communications and networking for automated and semi-automated vehicles
· Congestion and awareness control in vehicular networks
· Simulation and performance evaluation techniques for vehicular networks
· Applications and services to enhance driver experience, performance, and behavior

- Advanced driver assistance systems
- Business Model canvas for Connected Vehicles
- Marketing Innovation for Connected Vehicles
- Incremental Innovation for Connected Vehicles

Technical Program Co-Chairs:
- Moayad Aloqaily, Carleton University
- Ismaeel Al-Ridhawi, American University of the Middle East, Kuwait
- Ala Abu Alkheir, University of Ottawa

4. Ongoing Research projects

4.1. SEMIoTICS: Smart End-to-end Massive IoT Interoperability, Connectivity and Security

By Dr. Prodromos-Vasileios Mekikis (Iquadrat) and Dr. Christos Verikoukis (CTTC)

Participants: Siemens AG (Germany), Foundation for Research and Technology-Hellas (Greece), Centre Tecnologic de Telecomunicacions de Catalunya (Spain), Sphynx Technology Solutions AG (Switzerland), Engineering, Ingegneria Informatica SPA (Italy), STMicroelectronics Srl (Italy), University of Passau (Germany), BlueSoft Sp. (Poland), Iquadrat Informatica S.L. (Spain).

SEMIoTICS is a European Union project funded under the H2020-IoT-03-2017 work programme and it was recently launched on January 2018. It has a three-year duration and its main scope is to develop a pattern-driven framework, built upon existing IoT platforms, to enable and guarantee secure and dependable actuation and semi-autonomic behaviour in IoT/IIoT applications. Patterns will encode proven dependencies between security, privacy, dependability and interoperability (SPDI) properties of individual smart objects and corresponding properties of orchestrations involving them. The SEMIoTICS framework will support cross-layer intelligent dynamic adaptation, including heterogeneous smart objects, networks and clouds. To address the complexity and scalability needs within horizontal and vertical domains, SEMIoTICS will develop and integrate smart
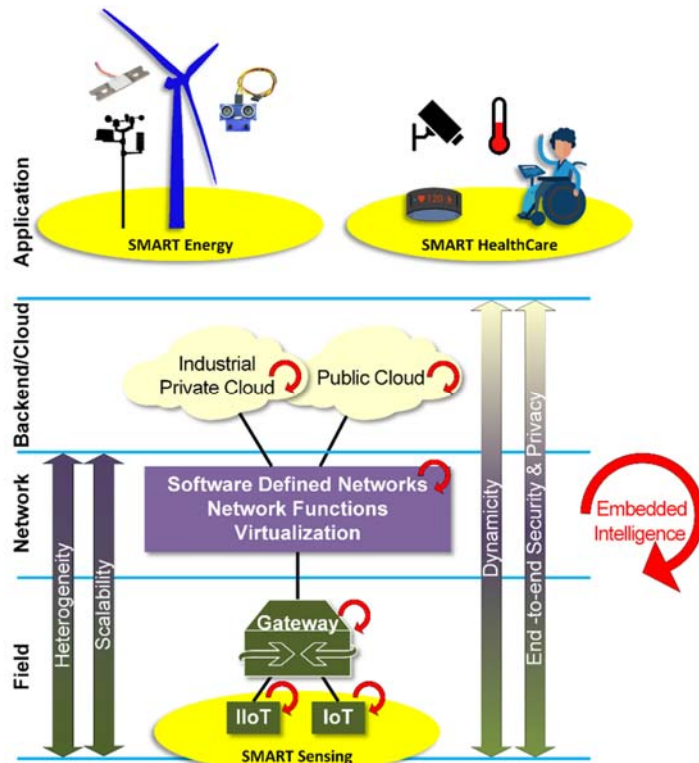
programmable networking and semantic interoperability mechanisms. The above will be validated by industry, using three diverse scenarios and will be offered through an open API. More specifically, the three IoT application scenarios include two verticals in the areas of renewable energy and health care and one horizontal in the area of smart sensing. These

scenarios have been selected since they involve: (a) different and heterogeneous types of smart objects (i.e., sensors, smart devices, actuators) and software components; (b) different vertical and horizontal IoT platforms; and (c) different types of SPDI requirements. Due to these dimensions of variability, our scenarios provide extensive coverage of technical issues, which should be accounted for in developing the SEMIoTICS approach and infrastructure, and to this end provide an effective way for driving the R&D work programme of SEMIoTICS and evaluating and demonstrating its outcomes.

Furthermore, the SEMIoTICS consortium is ideally positioned to ignite and foster a European IoT ecosystem, covering the whole value chain of IoT, local embedded analytics and their programmable connectivity to the cloud IoT platforms with the associated security and privacy provisions. The consortium is striving for a common vision of creating EU's technological capability of innovative IoT landscape both at European and international level.

It includes three top European enterprises:

SIEMENS AG (Germany) is the largest manufacturing and electronics company in Europe

STMICROELECTRONICS (Italy) is Europe's largest semiconductor chip maker based on revenue

ENGINEERING (Italy) is an IT service management company among the top 10 IT groups in Europe

It also includes three highly innovative SMEs working in key IoT areas:

BLUESOFT (Poland) provides a full range of IT services and dedicated software with experience in a wide range of business oriented solutions

SPHYNX (Switzerland) develops products, solutions, services, in cyber intelligence, analytics, incident response, assurance and certification.

IQUADRAT (Spain) focuses on new generation of research tools for system level evaluation of wireless integrated communication systems

The business partners are complemented by three academic organizations:

FOUNDATION FOR RESEARCH AND TECHNOLOGY– HELLAS (Greece) is one of the largest Research and Development Centre in Greece

CENTRE TECNOLÒGIC DE TELECOMUNICACIONS DE CATALUNYA (Spain) is a research centre focusing in communications and geomatics

UNIVERSITY OF PASSAU (Germany) is a highly visible and highly respected academic and research institution in the heart of Europe.

For more information regarding SEMIoTICS, please refer to the project's website at: https://www.semiotics-project.eu/
Or connect with us on Twitter at: https://twitter.com/semiotics_eu

5. Special Issues Edited by CSIM members

5.1. Smart Infrastructures for Crowd Management (IEEE Communications Magazine)
By Dr. Nizar Zorba (Qatar University)

Recent efforts in the research and industry communities are aimed at realizing the Smart City, a term utilized for a city that exploits its distributed computing and communication infrastructure in order to sense, aggregate, process, discern and act upon various data, with the objective of bettering the management of the city's various sector (e.g., health, education, weather, business, etc.). Traditional efforts have sought the application of Wireless Sensor Network (WSNs) and RFID tags, as well as processing of sparsely distributed feeds (e.g., public and private live CCTV) in order to do the monitoring and processing. An expanded consideration for the Internet of Things (IoT) applications in smart cities has been explored with emphasis on facilitating high-density sensor and actuator deployment. Such an evolution yielded powerful architectures for enabling smart cities. Fundamental issues, however, abound in the high cost of deployment and maintenance, especially when attempting to smarten an existing city infrastructure. Such serious restraints make the aforementioned advanced technologies fully viable and attractive for new cities/districts, but reduces their applicability in the dominant transitional scenarios. Comprehensive and scalable crowd management infrastructures are required to overcome the economic and technical constraints of state-of-the-art conceptualizations and implementations, while maintaining both practical and commercial appeals.

This Feature Topic Issue, motivated by the latest advances in crowd management, will tackle outstanding contributions that deal with state-of-the-art setups, techniques, methodologies, designs and actual deployment of crowd management solutions. Researchers and engineers from academia and industry are invited to submit their recent results and innovations. The list of topics includes, but not restricted to the following topics:
- Data aggregation and analytics for Mobile Crowd Management.
- Data filtering for crowdsourced information.
- Reputation Scores for Crowd Management through crowdsourcing.
- Crowd inference and classification.
- Trust and privacy in crowd management.
- Optimization of crowd management systems
- Incentive mechanisms for crowdsourcing
- Prediction approaches in Mobile Crowd Management.
- Mobile crowd management quality indicators (Quality of Source, measurements uncertainty, etc.).
- Network and computing infrastructures for crowd management.
- Geo-positioning schemes for crowd management.
- Smart City indicators inference and classification.
- Crowd management in emergency and disruptive scenarios.
- Infrastructure inference and classification and behavior characterization.
- Testbeds and real measurements of infrastructures for crowd management in Smart Cities.

SUBMISSION GUIDELINES

Submitted papers should not be under consideration elsewhere for publication and the authors must follow the IEEE Communications Magazine guidelines regarding manuscript content and format for preparation of the manuscripts. For details, please refer to the "Author Guidelines" at the IEEE Communications Magazine Web site at **https://www.comsoc.org/commag/author-guidelines**

Authors must submit their manuscripts via the IEEE Communications Magazine manuscript submission system at **https://mc.manuscriptcentral.com/commag-ieee**

All papers will be reviewed by at least three (3) reviewers for their technical merit, scope, and relevance to the CFP.

IMPORTANT DATES
- Manuscript Submission Deadline: August 1, 2018
- Notification of Acceptance/Rejection due date: December 1, 2018
- Final version due date: January 15, 2019
- Publication: March 2019

GUEST EDITORS
Prof. Hossam Hassanein, Queen's University, Canada
Dr. Nizar Zorba, Qatar University, Qatar
Dr. Shuai Han, Harbin Institute of Technology, China
Dr. Salil Kanhere, University of New South Wales, Australia
Eng. Mutaz Shukair, Qualcomm, USA

5.2. Improving Resilience across the Cloud-to-Things Continuum: The Convergence of Cloud, Fog, and Edge Computing (Journal: Journal of Computer Networks and Communications)
By Dr. Glauco E. Gonçalves (Universidade Federal Rural de Pernambuco, Recife, Brazil)

The emergence of Internet of Things (IoT) applications is transforming how society operates and interacts with each other. IoT applications rely on connected things that interact and cooperate with neighboring devices (things) to reach common objectives. However, small form size and heterogeneity typically results in limited storage and processing capacity at the thing-level resulting in reliability, performance, and security issues. Some of these issues can be mitigated by integrating edge, fog, and cloud computing in so-called IoT to cloud (I2C) systems. I2C systems offer scalability and high availability to IoT applications, working as a computational extension and improving the resilience of those I2C systems as a whole.

Despite the advantages of I2C systems, they introduce complexity in the management and interconnectivity of resources and applications. While improving computing capacity and scalability, I2C systems also introduce new points of failure beyond the discreet IoT devices,

for example, failures in edge and fog nodes and in cloud infrastructure components. In this special issue, we aim to collect high-quality works on technologies, methodologies, models, and mechanisms that contribute to the more resilient and higher performing I2C systems. We encourage submissions relating relevant original research as well as review articles describing the current state-of-the-art.

Potential topics include but are not limited to the following:
* Design of resilient I2C computing systems
* Secure and fault-tolerant I2C computing systems
* Modeling and simulation of resilient I2C computing systems
* Analyzing and measurement of I2C computing systems
* Fault and recovery models for I2C computing systems
* Availability and performance of I2C computing systems
* Risk-based design of resilient I2C computing systems
* Control in resilient I2C computing systems
* Design tools to develop resilient I2C computing
* Disaster recovery solutions for I2C computing systems
* Computational intelligence applied on I2C computing systems
* Energy efficient solutions for I2C computing systems
* Case studies on resilient I2C computing systems
* Privacy preservation within I2C computing systems

Authors can submit their manuscripts through the Manuscript Tracking System at https://mts.hindawi.com/submit/journals/jcnc/irctc/.

Submission Deadline: 31 August 2018
Publication Date: January 2019
Papers are published upon acceptance, regardless of the Special Issue publication date.

Guest Editors
Patricia T. Endo, Dublin City University, Dublin, Ireland and Universidade de Pernambuco, Caruaru, Brazil
Glauco E. Gonçalves, Universidade Federal Rural de Pernambuco, Recife, Brazil
Theo Lynn, Dublin City University, Dublin, Ireland

5.3. Recent Advance on Vehicle to Everything (V2X): Emerging Applications and Technologies (Journal: IET Intelligent Transport Systems)
By Dr. Di Zhang (Zhengzhou University, China)

The main focus of this special issue is on attracting emerging V2X technologies from application to physical layers, including ultra-reliable and low latency communications (URLLC), heterogeneous network architecture, network model and estimation, complex and information diffusion and propagation and their enabling applications.
With the emerging technologies of automatics driving and the fifth generation (5G) wireless communications, the vehicle to everything (V2X) technologies are attracting a growing attention from both academia and industries. Recently, other than the dedicated short range

communication (DSRC) frequency (5.9GHz) to connect more devices and provide an even faster transmission speed for the connected vehicles, 3GPP release 14 initiated an alternative approach known as cellular-V2X (C-V2X). The 5G automotive association (5GAA) was established in 2016, aiming to provide comprehensive C-V2X solutions with a joint force from both academia and industries. As of March 2017, the C-V2X standards have been accomplished, and they are expected to be widely adopted across the world.

Topics of interest include but are not limited to:
- Intelligent V2X Applications: including Smart and autonomous valet parking; Car sharing, Traffic light control
- V2X Radio Technologies: including New Radio technologies for massive connected vehicles; URLLC technologies for automatic piloting and traffic safety ; Channel estimation and measurement technologies; Front-hauling and back-hauling technologies
- V2X Network Architecture and System Design: Software defined and ICN based vehicle network architectures; Cloud/edge computing architecture; Optimal vehicle routing (e.g., MANETs, DTNs)

Submission Deadline 16th October 2018
Publication Date September 2019

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