Editorial

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Biographical notes: Ibrahim Kamel received his PhD in Computer Science from University of Maryland, College Park, USA, MSc and BSc from University of Alexandria, Egypt. He was a Lead Scientist at Panasonic Research, Princeton, NJ. He has 23 patents and more than 130 papers. He has chaired several international conferences and is serving in the editorial boards for several international journals. His research interest includes databases, information security, social network, big data, and multimedia retrieval. He is currently a Full Professor and the Chairman of the Electrical and Computer Engineering department, University of Sharjah. He is also an Adjunct Professor at Concordia University, Canada.

Scott Fowler received his PhD from Wayne State University, USA in 2006. During 2006 to 2010, he was a Research Fellow at Aston University, UK and Sony Ericsson R&D lab, UK. Since 2010, he has been an Associate Professor at Linköping University, Sweden. He has served on several IEEE conferences/workshops as TPC to Chair. His research has been funded and supported by EU PF7, ELLIIT, Ericsson and Ascom. In 2012, he was awarded a visiting professorship from the France Scientific Council to the University of Paris-Est Creteil (UPEC), France and in 2011 a host for a Fulbright Specialist.

Xavi Masip-Bruin received his PhD in Telecommunications Engineering, Technical University of Catalonia, UPC, Spain. He is an Associate Professor of Computer Science at UPC and Director of the Advanced Network Architectures Lab (CRAAX). Since 1996, he has a long trajectory of participation on different national and European research projects, as well as in contracts with institutions and industries. He has co-authored around a hundred of papers in

international conferences and journals and has chaired or co-chaired several international conferences. His current R&D interests are in internet of things (IoT), smart cities, overlay control and management for multi-layer networks, cloud computing, and data centres.

Samer Mohammed is an Assistant Professor in Computer Science at the Laboratory of Image, Signal and Intelligent System (LISSI) – University of Paris-EstCréteil (UPEC). He received in 2006 his PhD in Computer Science from the Laboratory of Computer Science, Robotic and Microelectronic of Montpellier (LIRMM), France. His research domain concerns mainly the modelling, identification and control of robotic systems but also artificial intelligence. Applications of his research include chiefly the functional assisting of dependent people. He has been involved in the organising committees of some national and international workshops in robotics, automatic and network domains.

Abdelhamid Mellouk is a Full Professor. He graduated in Computer Network Engineering from the Computer Science High Eng. School, University Oran-EsSenia, Algeria, and the University of Paris Sud XI Orsay and received his PhD in Informatics from the same university, and a Doctorate of Sciences (Habilitation) diploma from UPEC. He is the Founder of the Network Control Research activity with extensive international academic and industrial collaborations. He has published/coordinated five books and several refereed international publications in journals, conferences, and books, in addition to numerous keynotes and plenary talks in flagship venues. He held also several offices including leadership positions in IEEE ComSoc TCs.

Smart communications has affected various aspects of networking technologies which include communication protocols, buffer design, collaboration paradigm, power model, etc. The technological improvements have had an impact on various types of networks such as peer-to-peer, sensor networks, mobile ad hoc networks (MANETs), and vehicular ad hoc networks (VANETs). A wide range of application areas such as healthcare, medical, underwater, vehicular, robotic, etc. have benefited from these technological developments.

This special issue features three distinct papers selected from many accepted papers from the 3rd IEEE International Workshop on SmArtCOmmunications in NEtwork Technologies (SaCoNeT-III) held in June 2012 in Ottawa, Canada.

Initially, the guest editors selected 12 papers for consideration for this special issue. After an extensive review process, three papers were finally selected for inclusion in this special section due to space limitations. The guest editors would like to thank all of the authors and reviewers for their great efforts and contributions.

In the context of ubiquitous and autonomous networks, the paper 'Scalability and routing performance of future autonomous networks' studies the scalability of routing protocols under different network size scenarios, in the existence of mobility. The paper presents a thorough evaluation of the DASH, OLSR, and COLSR protocols.

While such routing conception may reduce the typical routing overhead found in a network, the impact of node mobility among different hierarchical levels could influence the overall performance of the routing protocol. A theoretical analysis of the average number of forwards per TC message is introduced as a measure for scalability.

The paper 'Metrics and QoE assessment in P2PTV applications' addresses multimedia streaming in peer-to-peer network platform. The authors propose a multilayer performance metrics for quality assessment of peer-to-peer television streaming. The proposed metric aims to improve the quality of service (QoS) and the quality of experience (QoE) of multimedia traffic for P2PTV streaming applications.

In the context of a heterogeneous network environment where diverse of mobile users are collaborating, the paper 'Towards a semantic-driven and scalable publish/subscribe framework' proposes communication model for sharing multimedia content. The proposed framework uses on publish/subscribe (Pub/Sub) systems. It also ensures a real-time content delivery from one PN cluster to another distant cluster. Ontology is used to provide the semantic description of the multimedia objects. This allows publishers and subscribers to use common semantic space.