SPECIAL ISSUE ON
Wireless Communications and Networks for 5G and Beyond

Overview:

Wireless communications technology enables us to seamlessly access many multimedia services, e.g., stored multimedia (e.g., video on-demand), live streaming (e.g., Internet live sport networks, Internet radio stations), and realtime interactive streaming (e.g., online games, video conference, e-education), etc. As such, wireless communications technology has rapidly gained a crucial role and become an important aspect of life. There is a strong, credible body of evidence, suggesting that mobile network operators are facing many formidable tasks but exciting areas of endeavour. Of most concern is the increase in ever-growing wireless/mobile devices and the huge demand in data rates associated with this. It is predicted that the number of mobile-connected devices will exceed 11.5 billion by 2019 (nearly 1.5 mobile devices per capita), which poses a huge traffic demand for ubiquitous communications. On the one hand, it is anticipated that we will witness an up to 10000-fold growth in wireless data traffic by the year 2030.

The future 5G cellular network is expected to achieve as much as 1000 times data rate relative to its current 4G counterpart. On the one hand, as many as 50 billion devices will be connected to the Internet by 2020 request seamless connectivity and mobility. Data rates are projected to increase by a factor of ten every five years, and with the emerging Internet of Things (IoT) predicted to wirelessly connect trillions of devices across the globe, without novel approaches, future mobile networks (5G) will grind to a halt unless more capacity is created. To overcome the aforementioned challenges of wireless communications and networks for 5G and Beyond, this special issue focuses on (but are not restricted to) the following topics.

Topics

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

– QoS/QoE mechanisms for wireless communications and networks	– Integration and co-existence of 5G wireless communication and network technologies
– 5G wireless heterogeneous networks: design and optimization	– Energy efficiency (harvesting and saving) wireless protocols and algorithms for 5G
– Sensing technologies and applications for 5G	
– 5G wireless communications and networks for surveillance and management	– Security and privacy concerns in 5G wireless communications
– 5G Cognitive networks and IoT	– NOMA, full-duplex, massive MIMO
– Experimental results, prototypes, and testbeds of 5G wireless communications and networks	– Green 5G multimedia wireless networks

Important Dates

- **Manuscript submission deadline:** 15th June 2018
- Notification of acceptance: 15th August 2018
- Submission of final revised paper: 1st October 2018
- Publication of special issue (tentative): December 2019

Submission Procedure

This MONET Half Special Issue will publish six selected high-quality extended papers from INISCOM 2018 http://iniscom.org/2018/show/home and from the open call-for-papers. Authors should follow the MONET Journal manuscript format described at the journal site. Manuscripts should be submitted on-line through http://www.editorialmanager.com/mone/.

A copy of the manuscript should also be emailed to the Guest Editors at the following email address(es) trung.q.duong@gmail.com, vonguyenson@gmail.com,

Guest Editors:

Trung Q. Duong, Queen's University Belfast, UK

Nguyen-Son Vo, Duy Tan University, Vietnam

-- Guest Editors Bios ---

Trung Q. Duong received his Ph.D. degree in Telecommunications Systems from Blekinge Institute of Technology (BTH), Sweden in 2012. Since 2013, he has joined Queen's University Belfast, UK as an Assistant Professor. His current research interests include cooperative communications, cognitive radio networks, physical layer security, massive MIMO, cross-layer design, mm-waves communications, and localization for radios and networks. He is an author/co-author of more than 280 technical papers (including 160 ISI journals and 125 conference papers). Dr. Duong is currently serving as an Editor for the following journals: *IEEE Trans on Wireless Communications, IEEE Trans on Communications, IEEE Communications Letters, IET Communications.* He has also served as the Guest Editor of the special issue (SI) for the following journals: Lead Guest Editor of the *IEEE Journal in Selected Areas on Communications* (JSAC) for the SI on "Location Awareness for Radios and Network" in 2015; Lead Guest Editor of the *IET Communications* for the SI on "Secure Physical Layer Communications" in 2013 and on "Green Telecommunications Systems and Computing" in 2016; Guest Editor of the *IEEE Wireless Communications Magazine* for the SI on "Green Media: The Future of Wireless Multimedia Networks" in 2014; Guest Editor of the *IEEE Communications Magazine* for the SI on "Millimeter Wave Communications for 5G" in 2014 and "Energy Harvesting Communications" in 2015; Guest Editor of the *IEEE Access* for the SI on "Security for Wireless Communications and Networking" in 2016 and on "Exploiting the Benefits of Interference in Wireless Networks: Energy Harvesting and Security" in 2017; Guest Editor of the *EURASIP Journal on Wireless Communications and Networking* for the SI on "Cooperative Cognitive Networks" in 2013; Guest Editor of the *EURASIP Journal on Advances Signal Processing* for the SI on "Security Challenges and Issues in Cognitive Radio Networks" in 2014; Editor for *Wiley Transactions on Emerging Telecommunications Technologies* (2013-2016) and *Electronics Letters* (2015-2016). He was awarded the Best Paper Award at the IEEE Vehicular Technology Conference (VTC-Spring) in 2013, IEEE International Conference on Communications (ICC) 2014, and IEEE Global Communications Conference (GLOBECOM) 2016.

Nguyen-Son Vo received his Ph.D. degree in Communication and Information Systems from Huazhong University of Science and Technology, China, in June 2012. Since 2014, he has worked as a lecturer at the Faculty of Electrical & Electronics Engineering of Duy Tan University, Vietnam. He is currently also in charge as the Deputy Director of Institute of Fundamental and Applied Sciences. He is working on self-powered multimedia wireless communications as well as quality of experience provision in wireless networks for smart cities. He is an author of 1 book chapter, 15 journals, 22 conference papers, and PI/Co-I of 10 projects. Many of them were published by high

reputable journals and conferences such as IEEE Trans. on Circuits and Systems for Video Technology, IEEE Systems Journal, IET communications, Journal of Communications, IEEE Global Communications Conference, and IEEE International Conference on Communications. Especially, he has been awarded the Best Paper Award at the IEEE Global Communications Conference (GLOBECOM) 2016. He has served as the Guest Editor of IET Communications, Special Issue on "Recent Advances on 5G Communications", 2018; Guest Editor of ACM/Springer Mobile Networks & Applications (MONET), Special Issue on "Wireless Communications and Networks for Smart Cities", 2017. He was the TPC Co-Chair of the 3rd EAI International Conference on Industrial Networks and Intelligent Systems (INISCOM'17).