Call for Papers for

Green Communications Systems and Networks Symposium,

2017 IEEE Global Communications Conference

(GLOBECOM 2017)

Scope and Motivation

Over the years, the use of Information and Communication Technology (ICT) has come to dominate several areas, improving our lives, offering us convenience and reshaping our daily work circumstances in the process. Despite the passion about advances in the ICT infrastructure industry, enterprises and governments face the renewed challenge of tackling sustainability issues and adopting environmentally sound practices. Computers and other ICT infrastructure consume significant amounts of electricity, placing a heavy burden on electric grids and contributing to greenhouse gas emissions. Moreover, the large number of devices with high transmission capacity connected to the Internet is playing a major role in increasing the energy consumption by communications networks. A recent global study by GreenTouch consortium has revealed that energy consumed by communications networks can be reduced by 90 percent in few years if energy efficient communications protocols are deployed.

The Green Symposium in IEEE GLOBECOM 2017 aims to consolidate and disseminate the latest developments and advances in the green communications emerging research area. This track invites participation from both academic and industry researchers working in the areas of green-enabled communications and computing networks, as well communication and computing technologies enabling other green solutions such as smart grids, green cloud computing data centers, green buildings and green logistics. Authors are invited to submit papers presenting novel technical research studies as well as broader position papers.

Topics of Interest Include (but are not limited to):

- Energy-efficient protocols and networking
- Green communication in 5G systems
- Green transmission technologies and network protocols
- Cross-layer design and optimization for green communications and networking
- Energy-efficient routers and switches
- Green wireless cellular networks
- Green cloud computing communications protocols

- Novel network concepts and architectures lowering the overall footprint of ICT
- Self-organizing green wireless networks
- Non-energy based green issues and approaches
- Green traffic shaping and policy implementation
- Green optical communications, switching and networking
- Use of cognitive principles to reduce energy and/or resource consumption in wireline and/or wireless networks
- Power-efficient cooling and air-conditioning systems for communications and computing
- Physical layer approaches for green communications and computing
- Low cost, energy-efficient antenna and RF designs
- Green management of communication networks
- Context-based green management & green awareness
- Economy and pricing for green communication and services
- Green network monitoring
- Green sustainable storage and cloud computing
- Measurement and profiling of energy consumption
- Green scheduling for communications and computing
- Power consumption trends and reduction in communications
- Modeling and analysis for green communications and computing
- Security in green communication networks
- Standardization, policy and regulation for green communications and computing
- Mitigation of electromagnetic pollution
- Experimental test-beds and results for green communications and computing
- Communication technologies for transport and logistics efficiency, e.g., applications to road traffic optimization and supply chain management
- Communication technologies for industrial processes
- Communication technologies for green buildings
- Communication technologies for energy harvesting
- Architectures and models for smart grid communications
- Communications networks for the smart grid
- Quality of service in smart grids
- Information security in the smart grid
- Sensor and actuator networks for smart grid
- Advanced metering infrastructure and smart meter technologies
- Field trials and deployment experiences

Sponsoring Technical Committees:

Technical Committee on Green Communications and Computing (TCGCC)
IEEE Transmission, Access and Optical Systems (TAOS) Technical Committee

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How to Submit a Paper:

The IEEE Globecom 2017 website provides full instructions on how to submit papers. You will select the desired symposium when submitting. The firm paper submission deadline is April 1, 2017. **Unlike recent ICC's and Globecom's, this is a hard deadline that will not be extended.**

Symposium Co-Chairs:

Yan Zhang, University of Oslo, Norway. (yanzhang@ieee.org)
Jaafar Elmirghani, University of Leeds, United Kingdom. (J.M.H.Elmirghani@leeds.ac.uk)

Short biography

Yan Zhang is Full Professor at the Department of Informatics, University of Oslo, Norway. He received a PhD degree in School of Electrical & Electronics Engineering, Nanyang Technological University, Singapore. He is an Associate Technical Editor of IEEE Communications Magazine, an Editor of IEEE Transactions on Green Communications and Networking, an Editor of IEEE Communications Surveys & Tutorials, and an Associate Editor of IEEE Access. He serves as chair positions in a number of conferences, including IEEE GLOBECOM 2017, IEEE PIMRC 2016, IEEE CloudCom 2016, IEEE ICCC 2016, IEEE CCNC 2016, WCSP 2016, IEEE SmartGridComm 2015, and IEEE CloudCom 2015. He serves as TPC member for numerous international conference including IEEE INFOCOM, IEEE ICC, IEEE GLOBECOM, and IEEE WCNC. His current research interests include: next-generation wireless networks leading to 5G, green and secure cyber-physical systems (e.g., smart grid, healthcare, and transport). He is IEEE VTS (Vehicular Technology Society) Distinguished Lecturer. He is also a senior member of IEEE, IEEE ComSoc, IEEE CS, IEEE PES, and IEEE VT society. He is a Fellow of IET.

Professor Jaafar Elmirghani is FIET, FIoP, and Director of the Institute of Integrated Information Systems, Leeds. He joined Leeds in 2007 and prior to that founded, developed and directed the Institute of Advanced Telecommunications (ERDF £5.2m), and the Technium Digital (ERDF £4.3m) at Swansea University. He has provided outstanding leadership in a number of large research projects, secured over £22 million in grants over the past 8 years and is currently PI of the £6m EPSRC INTERNET Programme Grant (2010-2016) with Cambridge. He led between 2010 and 2015 the Wired Core and Access Networks (WCAN) working group of GreenTouch, one of two

technical committees in GreenTouch representing about half of the 50+ GreenTouch industrial and academic member organisations. He was awarded in international competition the IEEE Comsoc 2005 Hal Sobol award, the IEEE Comsoc outstanding service award in 2009 for "contributions to signal processing and communication electronics", and in 2015 for "leadership and contributions to the area of green communications", the 2015 GreenTouch 1000x award for "pioneering research contributions to the field of energy efficiency in telecommunications" he shared the 2016 Edison Award in the collective disruption category with a team of 6 from GreenTouch for their joint work on the GreenMeter and was awarded the 2016 Premium Award for best paper in IET Optoelectronics for work on Green Optical OFDM networks. He has published over 450 technical papers, and has research interests in communication networks and systems.