Call for Papers for
Green Communications Systems and Networks Symposium,
2016 IEEE Global Communications Conference (Globecom 2016)

Scope and Motivation

Over the years, the use of Information Technology (IT) 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 IT infrastructure industry, enterprises and governments face the renewed challenge of tackling sustainability issues and adopting environmentally sound practices. Computers and other IT 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 Communications and Computing Track at IEEE GLOBECOM 2016 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 COMMUNICATIONS SOCIETY

How to Submit a Paper:

The IEEE Globecom 2016 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, 2016. **Unlike recent ICC's and Globecom's, this is a hard deadline that will not be extended.**

Symposium Co-Chairs:

R.R. Venkatesha Prasad TU Delft, the Netherlands (rvprasad@ieee.org)
Taisir Elgorashi, University of Leeds, United Kingdom, (T.E.H.Elgorashi@leeds.ac.uk)

Biographies

R.R. Venkatesha Prasad

R.R. Venkatesha Prasad completed PhD from IISc, Bangalore, India in 2004. During PhD research, a scalable VoIP conferencing platform was designed. Many new ideas including a conjecture were formulated and tested by developing an application suite based on the research findings. The work involved understanding of network protocols, application design and human computer interface. Part of the thesis lead to a startup venture, Esqube Communication Solutions, headed by professors from IISc. He was leading a team of up to ten engineers, developing many real-time applications including bridging anonymous VoIP calls called Click-to-Talk for portlas. While at Esqube, eight patent applications and three PCT applications were filed along with his colleagues. Esqube was selected as top 100 IT innovators in India in 2006 by NASSCOM and top 100 in promising companies in Asia by RedHerring in 2008. He worked for Esqube from 2006 to 2009 on a part-time basis as a senior design consultant. In 2005, he joined TUDelft as a PostDoc to work on the EU FP7 Magnet Project and the Dutch project PNP-2008 on Personal Networks (PNs). His work involved evolving PN network architecture and foreign communication. The work resulted in an ECMA report. He also started working on Cognitive Radio Networks (CRNs) and 60GHz networks for future homes. He is contributing to IEEE standards on CRNs. Now, his work involves the Internet of Things (IoT), Cyber Physical systems (CPS) and energy harvesting networks. He is working on EU funded iCore project on IoTs and NWO funded GoGreen. At TUDelft, he has been supervising PhD and MSc students. The work at TUDelft resulted in 180+ publications. He is also contributing to the academic community by leading many IEEE activities, such as memberships of standards boards (CSDB and CSPDB), leading technical committees, etc., apart from reviewing and organizing conferences and workshops. Specifically, he is the founder of successful workshop series CogNets and E2Nets in IEEE ICC. He is also part of CCSNA workshops and the new GSICT workshop. He is also a member of IEEE TCCN, AHSNTC, TCGCC and TCCC. He is a senior member of IEEE and ACM.

Taisir E. H. El-Gorashi

Taisir E. H. El-Gorashi received the B.S. degree (first-class Hons.) in electrical and electronic engineering from the University of Khartoum, Khartoum, Sudan, in 2004, the M.Sc. degree (with distinction) in photonic and communication systems from the University of Wales, Swansea, U.K., in 2005, and the Ph.D. degree in optical networking from the University of Leeds, Leeds, U.K., in 2010. She is currently a Lecturer of optical networks in the School of Electrical and Electronic Engineering, University of Leeds. Previously, she held a Postdoctoral Research post at the University of Leeds (2010–2014), where she focused on the energy efficiency of optical networks investigating the use of renewable energy in core networks, green IP over WDM networks with data centers, energy efficient physical topology design, energy efficiency of content distribution networks, distributed cloud computing, network virtualization and Big Data. In 2012, she was a BT Research Fellow, where she developed energy efficient hybrid wireless-optical broadband access network and explored the dynamics of TV viewing behaviour and program popularity. The energy efficiency techniques developed during her postdoctoral research contributed 3 out of the 8 carefully chosen core network energy efficiency improvement measures recommended by the GreenTouch consortium for every operator network worldwide. Her work led to several invited talks at GreenTouch, Bell Labs, Optical Network Design and Modelling conference, Optical Fibre Communications, International Conference on Computer Communications and EU Future Internet Assembly, 2013 and collaboration with Alcatel Lucent and Huawei.