IEEE GLOBECOM 2015

Call for Papers for
Selected Areas in Communications Symposium
Green Communications and Computing Track

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 2015 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:

Transmission, Access and Optical Systems (TAOS)
Green Communications and Computing (TSCGCC)

How to Submit a Paper:

The IEEE Globecom 2015 website provides complete instructions on how to submit papers. You will select the desired symposium when submitting. The paper submission deadline is April 1, 2015.

Symposium Track-Chairs:

Abdallah Shami, Western University, Canada, Abdallah.Shami@uwo.ca
Alagan Anpalagan, Ryerson University, Canada, alagan@ee.ryerson.ca

Biographies

Dr. Alagan Anpalagan received the B.A.Sc. M.A.Sc. and Ph.D. degrees in Electrical Engineering from the University of Toronto, Canada. He is a Professor in Ryerson University, Canada where he directs a research group working on radio resource management and radio access & networking areas within the WINCORE Lab. His current research interests include energy harvesting and green communications technologies, cognitive radio resource management, wireless cross layer design and optimization, cooperative communication, M2M communication, small cell networks,

Dr. Anpalagan serves as Associate Editor for the *IEEE Communications Surveys & Tutorials* (2012-), *Springer Wireless Personal Communications* (2009-14), *IEEE Communications Letters* (2010-13), , and *EURASIP Journal of Wireless Communications and Networking* (2004-2009). He co-authored of three edited books, *Design and Deployment of Small Cell Networks*, Cambridge University Press (2014), *Routing in Opportunistic Networks*, Springer (2013), *Handbook on Green Information and Communication Systems*, Academic Press (2012). Dr. Anpalagan serves as TPC Co-Chair, IEEE Globecom'15: SAC Green Communication and Computing, GameNets'14: Symposium on Advanced Game Theory Framework Applied to Wireless Emerging Communication Networks (2014), IEEE WPMC'12 Wireless Networks, IEEE PIMRC'11 Cognitive Radio and Spectrum Management.

Abdallah Shami received his B.E. degree in Electrical and Computer Engineering from the Lebanese University, Beirut, Lebanon in 1997, and the Ph.D. Degree in Electrical Engineering from the Graduate School and University Center, City University of New York, New York, NY in September 2002. In September 2002, he joined the Department of Electrical Engineering at Lakehead University, Thunder Bay, ON, Canada as an Assistant Professor. Since July 2004, he has been with Western University, Canada where he is currently a Professor in the Department of Electrical and Computer Engineering. His current research interests are in the area of network-based cloud computing and wireless/data networking.

Dr. Shami served/serve as an Associate Editor for *IEEE Communications Tutorials and Survey*, *IEEE Communications Letters, IET Communications Journal and Wiley Journal of Wireless*

Communications and Mobile Computing. Dr. Shami has chaired key symposia for IEEE GLOBECOM, IEEE ICC, IEEE ICNC, and ICCIT. Dr. Shami is a Senior Member of IEEE and elected Chair of the IEEE Communications Society Technical Committee on Communications Software.