

IEEE Global Communications Conference

4-8 December 2022 – Rio de Janeiro, Brazil

Accelerating the Digital Transformation through Smart Communications



CALL FOR PAPERS AND PROPOSALS

Green Communication Systems and Networks Symposium

Symposium Co-Chairs

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Scope and Motivation

Over the years, the use of Information and Communication Technology (ICT) has come to dominate several areas, e.g., 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 challenges of tackling sustainability issues and adopting environmentally sound practices. Computers and other ICT infrastructure consume significant amounts of electricity, consequently 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 communication networks.

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

Topics of Interest

The Green Communication Systems and Networks Symposium seeks original contributions in the following topical areas, plus others that are not explicitly listed but are closely related:

- Advanced metering infrastructure and smart meter technologies
- Architectures, models, security, and approaches for smart grids and smart grid networks relevant to energy efficiency

- Big data to meet green challenges
- Carbon-neutral communication and computing systems
- Context-based green approaches & green awareness
- Cross-layer design and optimization for green communications and computing
- Economics and pricing for green systems and services
- Energy efficiency and scalability of communication networks and infrastructures
- Energy efficiency in 5G and beyond
- Energy harvesting, storage, recycling, wireless power transfer
- Energy-aware communications and networking
- Experimental testbeds and results for green communications and computing
- Field trials and deployment experiences and green industrial processes
- Green intelligent transportation systems
- Green management of communication networks
- Green network monitoring
- Green optical communications, switching and networking
- Green scheduling for communications and computing
- Green software, hardware, devices, and equipment
- Green storage, cloud and fog computing, and data centers
- Green traffic shaping and policy implementation
- Green transmission technologies and network protocols
- Green wireless cellular networks
- Green wireline communications and networking
- ICT for green buildings
- Low cost, energy-efficient antenna and RF designs
- Machine learning and AI for energy efficiency and green operation in communication systems and networks
- Measurement and profiling of green issues
- Mitigation of electromagnetic pollution
- Modelling and analysis for green communications and computing
- Non-energy based green topics, issues and approaches
- Novel network concepts and architectures lowering the overall footprint of ICT
- Physical layer approaches for green communications and computing
- Power consumption trends and reduction in communications and computing
- Power-efficient cooling and air-conditioning systems for communications and computing
- Reconfigurable Intelligent Surfaces and Green Communications
- Renewable energies for ICT
- Security in green communications and computing
- Standardization, policy and regulation for green communications and computing
- Transport and logistics efficiency, e.g., applications to road traffic optimization and supply chain management
- Use of cognitive principles to achieve green objectives
- Zero-emission base stations, communication devices, and networks

Important Dates

Paper Submission: April 15, 2022

Notification: July 25, 2022

Camera Ready and Registration: September 1, 2022

How to Submit a Paper

All papers for technical symposia should be submitted via EDAS. Full instructions on how to submit papers are provided on the IEEE Globecom 2022 website: <https://globecom2022.ieee-globecom.org/>