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Communications Technologies 4Good

Call for Papers and Proposals

Green Communication Systems and Networks Symposium

Co-Chairs

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Scope and Motivation

Over the years, Information and Communication Technology (ICT) has dominated several areas, e.g., improving our lives, offering us convenience, and reshaping our daily work circumstances. Despite the passion for 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, burdening 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 significant 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 academic and industry researchers working in 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 logistics, and smart cities. Authors are invited to submit papers presenting novel technical research studies and 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:

- 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, and 6G
- 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 communications via backscatter and metasurfaces
- Green edge computing
- Green Internet of Things
- Green machine learning and artificial intelligence
- Green intelligent transportation systems
- Green management of communication networks
- Green network monitoring
- Green optical communications, switching and networking
- Green optical wireless communications
- Green Quantum Communication
- Green scheduling for communications and computing
- Green software, hardware, devices, and equipment
- Green storage, cloud and fog computing, and data centres
- 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
- Modelling and analysis for green communications and computing
- 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
- Renewable energies for ICT
- Renewable power at the service of data centers, edge, fog and cloud computing and networking
- 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

Biographies of the Co-Chairs

Shahid Mumtaz is a professor at Nottingham Trent University (NTU), UK. He is an IET Fellow, founder, and EiC of IET "Journal of Quantum Communication," Vice-Chair: Europe/Africa Region- IEEE ComSoc: Green Communications & Computing Society. He authorizes four technical books, 12 book chapters, and 300+ technical papers (200+ IEEE Journals/transactions, 100+ conferences, 2 IEEE best paper awards) in mobile communications. Most of his publications are in the field of Wireless Communication.

He is a Scientific Expert and Evaluator for various research funding agencies. In 2012, he was awarded an "Alain Bensoussan fellowship." China awarded him the Young Scientist Fellowship in 2017.

Daniel K. C. So is a Professor of Communication Engineering at the University of Manchester. His research interests include green communications, NOMA, 6G networks, machine and federated learning, RIS, heterogeneous networks, SWIPT, and massive MIMO. He served as a Senior Editor of IEEE Wireless Communication Letters, an Editor of IEEE Transactions on Wireless Communications, and the Green Cellular Networks Special Interest Group chair in the IEEE ComSoc Green Communications and Computing Technical Committee.

How to Submit a Paper

All papers for technical symposia should be submitted via EDAS. Full instructions on how to submit papers and important deadlines are posted at https://icc2025.ieee-icc.org/

The authors of selected papers from this symposium will be invited to submit an extended version of their work for fast-track review and possible publication in the IEEE Open Journal of the Communications Society.