IEEE ICC™
IEEE ComSoc — IEEE Communications Society ◆ **IEEE**

IEEE International Conference on Communications
Roma Convention Center
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Sustainable Communications for Renaissance

Call for Papers
Symposium on Selected Areas in Communications: Quantum Communications & Information Technology Track

Track Chair

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Scope and Motivation

Quantum technologies have reached the stage that needs involvement from many disciplines for their widespread deployment. The scope of this QCIT track is to explore the opportunities for application of communications theory and technologies in quantum applications, and, reciprocally, to inform the communications society of recent developments in quantum information technologies. Over the past decades, a wide variety of experimental quantum communications and processing systems has been developed and demonstrated in laboratories, fields, and commercial settings. Results confirm feasibility of real applications in quantum communications and information related fields. This includes applications in areas such as data security, high-precision sensing, and computing. Companies and governments have allocated significant amounts of funding in research and development to quantum technologies. However, additional progress needs to take place to bring quantum technology-based devices and systems to the doorsteps of home users. Moreover, many problems show opportunities to contribute with knowhow, technologies and engineering out of the communications area. It is the aim of this track to connect people from academia and industry, in classical and quantum communities, to discuss about theory, technology and applications of quantum technologies, and exchange ideas to move efficiently forward with the engineering and development of this exciting area.

Topics of Interest

The QCIT track at ICC'23 seeks original contributions in the following topical areas, plus others that are not explicitly listed but are closely related:

- Quantum key distribution
- Quantum cryptography
- Quantum communications

- Quantum information theory
- Entanglement distillation
- Quantum error correction
- Quantum repeaters
- Quantum networks
- Quantum systems architecture
- Quantum synchronization
- Quantum machine learning
- Quantum random number generators
- Quantum algorithms
- Quantum computing
- Quantum sensing & metrology
- Quantum state discrimination
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Important Note

The authors of selected papers from this track 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.

Important Dates

Paper Submission: 11 October 2022
Notification: 18 January 2023
Camera Ready and Registration: 15 February 2023

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 ICC 2023 website: https://icc2023.ieee-icc.org/