

Call for Papers

1st workshop on

Quantum Communications

QC

In conjunction with ICTON
21th International Conference on Transparent Optical Networks,
Angers, France, **July 9-13, 2019**
<http://www.icton2019.com>

Technically (co-)sponsored by the IEEE

Scope of workshop: Quantum communications (QC) is a rapidly evolving research area. Quantum key distribution (QKD) is one of the most important and successful applications in this research field, with a rapid evolution from theoretical proposals to commercial products. Besides that, there exist other relevant information challenges, such as quantum privacy, where the laws of the quantum physics can offer new functionalities to communication system. At the same time, practical quantum communication systems demand a high scientific endeavor in developing optical quantum technologies for generating, manipulating, transmitting and detecting quantum states over classical or quantum channels, as well in quantum information theory. This workshop gathers international experts to discuss the latest research advances and trends in the field of Quantum communications. Topics of relevance include but are not limited to:

- **Quantum cryptography, QKD and beyond QKD**
 - Quantum key distribution systems
 - Protocols and applications based on QKD primitives
 - Device independent quantum cryptography systems
 - Quantum oblivious transfer: Protocols and applications
 - Quantum bit commitment: Protocols and applications
 - Quantum protocols for:
 - Contract signing;
 - Digital signatures.
- **Optical Quantum technologies**
 - Single and entangled photon sources
 - Single photon detectors
 - Single and multi-mode squeezed states
 - Homodyne and heterodyne receivers
 - Quantum relays and repeaters
 - Random number generators
 - Integrated quantum photonics
 - Quantum networking
- **Quantum information**
 - Quantum data compression
 - Quantum channel capacities
 - Quantum coding
 - Quantum systems with multi-level modulation
 - Quantum decision theory and quantum error correction

QC Technical Program Committee:

Chair: Armando Pinto, University of Aveiro, and Instituto de Telecomunicações, Portugal
Co-Chairs: Virginia D'Auria, Institut de Physique de Nice, University of Nice Sophia Antipolis, France
Vicente Martin, Universidad Politécnica de Madrid, Spain
Nuno Silva, University of Aveiro, and Instituto de Telecomunicações, Portugal
Alberto Porzio, CNR-SPIN, Napoli Italy
Nelson Muga, University of Aveiro, and Instituto de Telecomunicações, Portugal

Paper submission: according to ICTON submission rules at <http://www.icton2019.com> (4 pages in electronic form, MS Word version accompanied by a PDF version), **please write QC in the subject line** when submitting your contribution. All accepted QC papers will be included in ICTON 2019 Proceedings (published on IEEE Xplore).

Important dates: Submission deadline: **March 31, 2019**
Notification of acceptance: **April 30, 2019**

Post-deadline papers with very recent results are requested by **June 1, 2019**