

## Call for Papers

### International Workshop on “Quantum Computing and Communications” - jointly with IEEE ANTS

**16 December 2020 (from 15:00 IST)**

**Scope:** Quantum theory has led to one of the most significant scientific breakthroughs of the 20th century. The interaction of light and matter have contributed towards development of superconductors used in MRI machines, flash memory of mobile phones and LED's. In future, a new generation of quantum technologies will drive the development of disruptive devices, services and systems which will primarily impact imaging and computing of intractable problems, as well as enhance network security.

Quantum computers use quantum bits (qubits) which can enhance parallel processing more effectively than a conventional digital computer. This offers a new and powerful method to solve problems or tackle large-scale challenges that conventional computers struggle with. Quantum Key Distribution (QKD) is a promising technology that can enable secure key exchange in core and metro optical networks. QKD has been presented in the literature as a future-proof solution to guarantee secured key distribution since it relies on the fundamental principles of quantum mechanics, i.e., quantum no-cloning theorem and Heisenberg's uncertainty principle. These principles ensure that any third party trying to gain knowledge of the secret keys will be easily detected.

The **International Workshop on Quantum Computing and Communications** is a half-day workshop that will take place during IEEE ANTS 2020 in Delhi, on December 15, 2020. The work-shop aims to bring researchers/experts around the world together to explore and discuss the state-of-the-art research in the areas mentioned below. Topics of interest include, but not limited to:

- Quantum Sources and Detectors.
- Quantum Key Distribution over Telecom Infrastructure.
- Quantum Random Number Generators (QRNG).
- Quantum Computing: Devices and Algorithms.
- Quantum Clocks.
- Prototyping, test-beds and field trials.
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**Note: Please submit an abstract for your talk to Prof. Vimal Bhatia ([vbhatia@iiti.ac.in](mailto:vbhatia@iiti.ac.in)) or Prof. Anand Srivastava ([anand@iiitd.ac.in](mailto:anand@iiitd.ac.in))**

#### Workshop Organizers:

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