



# IEEE Global Communications Conference

7-11 December 2021 • Madrid, Spain

*Connecting Cultures around the Globe*

## SAC Symposium: Quantum Communications & Computing

### SYMPOSIUM CHAIRS AND CO-CHAIRS

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### SCOPE AND MOTIVATION

The scope of this symposium is to explore the opportunities for application of communications theory and technologies to quantum technology and its applications. Over the last decade, a wide variety of experimental quantum communications and processing devices has been invented and used for fundamental demonstrations in laboratories. Results confirm feasibility of real applications in quantum communications and information related fields. Recently one can observe upcoming applications in areas like a quantum communications, quantum sensors and random number generators which are partially even commercially available. Companies and governments started to spend significant amounts of funding in research and development of quantum technologies. However, the step from quantum technology based devices to real systems running a communications or information processing task has not completed yet. Moreover, many problems show opportunities to contribute with knowhow, technologies and engineering out of the communications area.

It is the aim of this symposium to connect people from academia and industry to discuss about theory, technology and applications and exchange ideas to move efficiently forward in the engineering and development of this exiting area.

### TOPICS OF INTEREST

The following topics are crucial to the development of future quantum technology based systems:

- RF technology and control
- Coding theory
- Communications and information theory
- Photonic communications technology
- Interconnection and complexity theory
- Quantum error correction
- RF based programming and algorithms
- Modeling and simulation
- Quantum systems architecture
- Optimized algorithms and applications
- Experimental results and demonstrations
- Quantum information theory
- Entanglement distillation
- Network coding
- Quantum-algorithms and applications
- Quantum sensing
- Quantum networking

### IMPORTANT DATES

Deadline for paper submission: 15 April 2021

Date for notification: 25 July 2021

Deadline for final paper submission: 1 September 2021

### **SUBMISSION INSTRUCTIONS**

All papers for technical symposia should be submitted via EDAS through the following link

<https://edas.info/newPaper.php?c=27494&track=102696>