
Sustainable Communications for Renaissance

# Call for Papers

# *Communication QoS, Reliability & Modeling Symposium*

## Symposium Co-Chairs


- **Kazuhiko Kinoshita, Tokushima University, Japan, email: kazuhiko@is.tokushima-u.ac.jp**
- **Claudio Fiandrino, IMDEA Networks Institute, Spain, email: claudio.fiandrino@imdea.org**
- **Antonella Molinaro, University Mediterranea of Reggio Calabria, Italy & CentraleSupélec Univesité Paris Saclay, France, email: antonella.molinaro@unirc.it**


## Scope and Motivation

In recent information society, communication quality and network reliability become even more important. Stable networks are essential infrastructure in the modern life. In current communication infrastructure, different networks need to co-exist for end-to-end quality of service (QoS) provisioning in a wide range of heterogonous applications, with virtualization technologies and AI/ML-assisted management.

The Communication QoS, Reliability and Modeling (CQRM) Symposium aims at providing an international venue for the discussion of research advances in communications service provisioning, quality of service/experience technologies, modeling and formal methods, and analytical and experimental techniques to allow the design of communication networks as a reliable information infrastructure with QoS capability. The scope of this symposium is agnostic to network technologies. Specifically, the goal is to address the key challenges to provide the required level of QoS, resiliency, security, and reliability to coexisting networks that are heterogeneous in nature, in size, and in the type of information transmitted.

## Topics of Interest

Topics of interest for the CQRM Symposium include, but are not limited to:

- AI/ML to enhance QoS/QoE
- Cross-layer modeling, design, and optimization
- Design and evaluation of energy-efficient networks and services
- Design and evaluation of Software Defined Networking (SDN) and Network Function Virtualization (NFV)
- Design and evaluation of microservices-based networking for 5G/6G-enabled edge networks
- Design and evaluation of application/service-oriented networking
- Design and integration of multi-domain multi-tenant 5G platforms
- Design and performance evaluation of AI/ML-enabled networks
- Design and scalability of smart city, smart home and crowd sensing applications

- Formal verification methods for QoS and reliability
- Integrated control of network and computing resources to enhance QoS/QoE
- Integration of objects, devices and systems for Industry 4.0 and Society 5.0 applications
- IoT Platforms, integration and service provisioning
- Innovative modeling techniques for large-scale emerging network technologies
- Metrics and Models for Quality of Experience (QoE) and Quality of Service (QoS)
- Multimedia streaming, adaptive streaming, MPEG-DASH, HTTP 2.0, and HTTP 3.0
- Network design, operation, management, and automation for maximizing QoS/QoE
- Network slicing and resource allocation for radio access and core networks
- Network traffic characterization, measurement and monitoring Techniques
- Performance evaluation of smart grid communications and demand response techniques
- Performance evaluation and modelling of Internet of Vehicles and 5G NR-based V2X network
- Performance evaluation techniques including modeling, simulations and testbeds for communication networks
- Protocol design and performance evaluation of new RAN architectures
- QoS and performance modelling of UAV-assisted Wireless Networks
- QoS provisioning for massive machine-type communications and in IoT networks
- Quality and performance in grid, distributed and cloud computing
- Quality and performance in overlay (including peer-to-peer) networks
- Quality in multimedia networks including VoLTE, VoNR, IPTV, and gaming
- Quality and performance in beyond 5G/6G wireless and mobile networks
- Quality and performance of Multi-access Edge Computing (MEC) and fog computing solutions
- Quality and performance of SDN/NFV handoff management for edge computing in 5G
- Quality and performance of kernel-bypassing approaches for communication support
- Quality, measurements and performance in IoT and big data platforms and applications
- Quality, measurements and performance in cyber-physical systems
- Quality, scalability and performance in the Internet and in massive IoT networks
- Security, reliability, privacy and trust by design and performance evaluation
- Scalability, robustness and resilience
- Standardization aspects of QoS and reliability
- URLLC and dependable communication networks

## Important Note

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.

## 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/