



Call for Papers for *Communication QoS, Reliability, and Modeling Symposium*

SYMPOSIUM CO-CHAIRS:

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SCOPE AND MOTIVATION:

With ongoing evolution and integration of 5G, Internet of Things (IoT), and vertical applications, we are quickly leaping forward to a ubiquitously connected society, where communications for human and machine intelligence are becoming a key enabler. In modern communication infrastructure, different networks need to co-exist for end-to-end quality of service (QoS) provisioning in a wide range of heterogeneous applications, with a huge number of endpoints represented not only by humans but also more and more by things and machines interconnected to each other and to data centers. 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:

- Metrics and Models for Quality of Experience (QoE) and Quality of Service (QoS)
- Network design, operation, management, and automation for maximizing QoS/QoE
- AI/ML to enhance QoS/QoE
- Integrated control of network and computing resources to enhance QoS/QoE
- QoS provisioning for massive machine-type communications and in IoT networks
- 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
- Cross-layer modeling, design, and optimization
- Performance evaluation techniques including modeling, simulations and testbeds for communication networks
- Quality, scalability and performance in the Internet and in massive IoT networks
- Multimedia streaming, adaptive streaming, MPEG-DASH, HTTP 2.0, and HTTP 3.0
- Quality in multimedia networks including VoLTE, VoNR, IPTV, and gaming
- Quality and performance in beyond 5G/6G wireless and mobile networks
- Network traffic characterization, measurement and monitoring Techniques
- Design and performance evaluation of AI/ML-enabled networks
- Performance evaluation of smart grid communications and demand response techniques
- Protocol design and performance evaluation of new RAN architectures
- Design and integration of multi-domain multi-tenant 5G platforms
- Quality and performance in grid, distributed and cloud computing
- Quality and performance in overlay (including peer-to-peer) networks
- Performance evaluation and modelling of Internet of Vehicles and 5G NR-based V2X networks
- QoS and performance modelling of UAV-assisted Wireless Networks
- Network slicing and resource allocation for radio access and core 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
- IoT Platforms, integration and service provisioning
- Design and scalability of smart city, smart home and crowd sensing applications
- Quality, measurements and performance in cyber-physical systems
- Integration of objects, devices and systems for Industry 4.0 and Society 5.0 applications
- 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
- Formal verification methods for QoS and reliability
- Innovative modeling techniques for large-scale emerging network technologies

IMPORTANT DATES:

Deadline for paper submission: 11 October 2021

Date for notification: 18 January 2022

Deadline for final paper submission: 15 February 2022