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Communications Enabling Shared Understanding

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Call for Papers

Communication QoS, Reliability, and Modelling Symposium

Symposium chairs

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Scope and Topics of Interest

In modern communication networks, different technologies need to cooperate with each other for end-to-end quality of service (QoS) provisioning, support a wide range of multi-media applications with a huge number of customers represented not only by humans, but more and more by things and robots interconnected to each other and to data centers. The Communication QoS, Reliability and Modelling (CQRM) Symposium provides an international venue for the discussion of research advances in communications service provisioning, quality of service/experience technologies, 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, security and reliability to coexisting networks that are heterogeneous in nature, in size, and in the type of information transmitted. Topics of interest for the CQRM Symposium include, but are not limited to, the following:

Networks and Communication Systems Design

- Cooperative Networking and Unified Management of Connectivity
- Cross-layer Design, Modelling and Optimization
- Design and Evaluation of Application / Service Oriented Networking
- Design and Evaluation of Content Distribution Networks (CDNs)
- Design and Evaluation of Energy-Efficient Networks and Services
- Design and Evaluation of Smart Cities
- Design and Evaluation of Software-Defined Networking (SDN) Architectures and Networks

- Design of Network Architectures/Technologies for Ubiquitous 5G Multitenant Networks
- Design of Networks and Network Services
- Tradeoff Between Performance and Energy-Efficiency in Network Design

QoS and Network Efficiency

- Metrics and Models for Quality of Experience (QoE)
- Multimedia Streaming, Adaptive Streaming, MPEG-DASH
- Performance Evaluation Techniques
- Quality and Efficiency for Web browsing, HTTP 2.0
- Quality and Performance in Autonomic Systems
- Quality and Performance of Network and Services
- Quality in Multimedia Networks including Voice over IP and IPTV
- Quality, Reliability and Performance in Optical and Multi-layer Networks
- Quality, Scalability and Performance in the Internet
- TCP/IP Variants and Performance

Networks and Communication Systems Modelling and Performance Evaluation

- Modelling and Performance of 5G and Beyond Wireless Radio Networks
- Modelling and Performance of Socially-Aware Wireless and Mobile Networks
- Performance and Efficiency of Energy Harvesting
- Performance Evaluation of Mobile Devices in Wireless Communications
- Performance Evaluation of SDN-based Networks
- Performance of Mobile Cloud Networks
- Quality and Performance in Wireless and Mobile Networks
- Wireless and Mobile Networks Performance

Network Measurement and Monitoring Techniques

- Integrated Multitenant 5G and Beyond Platforms
- Machine-Learning and Artificial Intelligence for Traffic/QoE Management
- Measurement and Evaluation Techniques of Energy-Efficient Communication Systems
- Network Measurement and Monitoring Techniques
- Network Measurement for Smart Cities and Internet of Things
- Network Simulation Techniques
- Network Traffic Characterization and Measurement
- Performance Evaluation and Design of Cognitive Network Architectures
- Performance Evaluation and Integration in Smart Grids Communications and Demand Response Techniques

Design of Cloud, Grid and Distributed Computing Networks

- Performance Evaluation and Design of Cloud Networks
- Performance Evaluation and Design of Vehicular Cloud Networks
- Quality and Performance in Grid, Distributed and Cloud Computing
- Quality and Performance in Mobile Edge and Fog Computing Systems
- Quality and Performance in Overlay (including Peer-to-Peer) Networks
- Quality and Resource Allocation for Network Services, VPN, Web
- Resource Allocation for Networks and Their Services
- Software-Defined Networking (SDN) and Network Functions Virtualization (NFV)

Integration Aspects in IoT and Big Data Systems

- Design and Scalability of Smart Cities and Crowd Sensing Applications
- Integration of Objects, Devices and Systems in an IoT Environment
- IoT Platforms, Integration and Services
- Quality, Measurements and Performance in Cyber Physical Systems
- Quality, Measurements and Performance in the Internet of Things (IoT) and Big Data Applications
- Scalability and Performance of Edge Computing and Distributed Computing Systems

Security, Reliability and Trust in Network Design

- Dependable Communication Networks
- Integration of Behavioral (or Soft) Biometrics into IoT Environments
- Scalability, Robustness and Resilience
- Security, Reliability, Privacy and Trust by Design and Performance Evaluation
- Standardization Aspects of QoS and Reliability

Submission Guidelines

The IEEE ICC 2020 website (icc2020.ieee-icc.org) provides full instructions on manuscript format and how to submit a manuscript. You will select the desired symposium/track when submitting your manuscript.