

# IEEE Global Communications Conference

4-8 December 2022 – Rio de Janeiro, Brazil

*Accelerating the Digital Transformation through Smart Communications*



## CALL FOR PAPERS AND PROPOSALS

### ***Communication Software & Multimedia Symposium***

#### **Symposium Co-Chairs**

- Miloud Bagaa, IT Center For Science, Finland, [miloud.bagaa@csc.fi](mailto:miloud.bagaa@csc.fi)
- Han Hu, Beijing Institute of Technology, China, [hhu@bit.edu.cn](mailto:hhu@bit.edu.cn)

#### **Scope and Motivation**

With the thunderous rise of virtualization and softwarization in modern networks, and the emergence of a revolutionary landscape of multimedia applications (e.g., virtual and augment realities, tele-presence, tactile, internet), the Communication Software and Multimedia Symposium welcomes manuscripts from both industry and academia on all aspects of the modeling, design, implementation, deployment, and management of communications softwarization, services, and multimedia applications. The symposium will provide a platform to present state-of-the-art research work on challenging issues related to software design, deployment, delivery, and management of services and multimedia applications. It will also provide an opportunity for face-to-face discussions and information sharing among experts from both academia and industry.

The symposium is sponsored by IEEE ComSoc Communication Software (TCCS) and Multimedia Communications (MMTC) technical committees.

#### **Topics of Interest**

The Communication Software & Multimedia Symposium seeks original contributions in the following topical areas, plus others that are not explicitly listed but are closely related:

##### **Network Softwarization & Services**

- Network function virtualization
- Service function chaining
- Resource sharing & isolation
- Software defined networking
- Virtualization technologies/techniques
- Mobile/multi-access edge and fog computing
- MEC-, SDN-, NFV-based network services
- Service, slice, and infrastructure monitoring

- Performance, interoperability, and scalability challenges/issues
- Security and privacy issues in virtualized environments
- Mobile core networks and their slicing
- Slice programmability, modeling, composition algorithms and deployment
- Network/service orchestration and management
- Experimental testbeds, trials and deployment
- Business models & new verticals
- Model and delivery platforms
- Scalable video delivery
- Cooperative networking for streaming media content
- Service overlay networks
- Massive network data analytics
- Machine learning for network service enhancement
- Proactive management of the softwarized network infrastructures
- Distributed systems and applications, including Grid Services
- Convergence of communication and global services
- Communications software in vehicular communications
- Architectures for cooperative communications and ubiquitous computing – Software Defined Radio Access Network (RAN)

### **Quality in Services and Multimedia Applications**

- Quality of Experience (QoE) modelling and metrics
- Adoption of QoE metrics and models for assessment, control and management of multimedia services
- Strategies of End-to-End QoE management
- Quality-oriented routing algorithms
- Video quality assessment and impairment concealment
- Performance studies of digital media ecosystem
- High quality service provisioning for multimedia applications

### **Multimedia Systems and Services**

- Multimedia cloud services
- Multimedia streaming, multicast and broadcast services
- Virtual/augmented/mixed reality
- 360-degree video streaming
- Multimedia security and privacy
- Multimedia edge computing and fog communication
- SDN and NFV support for multimedia
- Multimedia Internet-of-Thing (IoT)
- Mobile multimedia and 5G
- Wearable multimedia
- Machine learning techniques for multimedia content analysis, video delivery and service
- Multimedia big data and social media
- Energy-efficient multimedia streaming
- Web Services and distributed SW technology
- IMS and multimedia services
- Home and entertainment digital media ecosystem
- IPTV service and home networking
- Triple and Quadruple play services
- P2P and P2P-SIP services
- Emerging multimedia communication techniques, e.g., tactile

### **Machine learning techniques for multimedia content analysis**

- Machine learning techniques for video delivery and service

- Machine learning techniques for multimedia communications
- Multimedia Big data and social media
- Multimedia security and privacy
- Multimedia Edge Computing and Fog Communication

### **Service Management**

- Security and privacy in network and service management
- Scalability and reliability issues
- Charging, pricing, business models
- Context awareness and personalization
- Next generation services and emerging threats
- Cross-layer optimization for multimedia service support

## **Important Dates**

Paper Submission: 15 April 2022

Notification: 25 July 2022

Camera Ready and Registration: 1 September 2022

## **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 Globecom 2022 website: <https://globecom2022.ieee-globecom.org/>