

# IEEE GLOBECOM 2023

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## CALL FOR PAPERS

*Intelligent Communications for Shared Prosperity*

# Communication Software and Multimedia Symposium

## Co-Chairs

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## 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 augmented 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
- Software and services in 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
- Volumetric and point cloud 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

## Biographies of the Co-Chairs

**Hassine Moun gla**, is Professor from Université de Paris Cité. He is member of Security and Optimization of Communication Systems (SOCS). He is researcher at Institut Polytechnique de Paris (IPP). He is involved in quite a number of challenging research activities revolving around cutting edge technologies in the areas of Network Softwarization, Network Slicing, Softwarization of Service and Content Delivery Platforms (CDN) and Unmanned Aerial Vehicles (UAV). Hassine Moun gla has authored and co-authored over 120 technical journal and international conference papers. He was/is also involved in the organizing committees and chairing of several conferences and has been on the technical program committee of different ACM and IEEE conferences. He participated and still participates to several national and international research projects. He has been involved in several national and European projects on QoS support in future next generation network, network virtualization, cloud networking and more recently on 5G. Hassine has been acting as Guest Editor for IEEE Journal of Selected Area on Communication (JSAC) Series on Network Softwarization, Elsevier and Special Issue of Future Generation Computer System. He serves as member of IEEE Europe Middle East and Africa Board (EMEAB) which is responsible for stimulating, coordinating and promoting the activities of ComSoc members and Chapters throughout the EMEA Region, till January 2020. He was Awards Committee Chair and Young Researcher Award Program for the IEEE EMEA region. He is a Vice-Chair of the IEEE CommSoft Technical Committee since 2021.

**Zhi Liu** received his Ph.D. degree in Informatics in National Institute of Informatics, Japan. He is currently an associate professor with tenure at The University of Electro-Communications, Japan. His research interest is mainly on video transmission and edge computing. He has published more than 120 IEEE papers and received several best paper awards in IEEE conferences. He currently serves as an Editor for IEEE Open Journal of the Computer Society, IEEE Systems Journal and Springer Wireless Networks. He has been involved actively in conferences and workshops as a program/general co-chair and numerous conference and workshops as a program committee member, including TPC co-chair of IEEE ICC22 DDINS workshop, area chair of ICME, Workshop co-chair of IEEE HPSR22, Track co-chair of IEEE VTC21-fall, TPC co-chair of IEEE ICT-DM21. He is the recipient of IEEE ComSoc MMTC outstanding young researcher award. He is a senior member of IEEE

## How to Submit a Paper

All papers for technical symposia should be submitted via EDAS. Full instructions on how to submit papers and important deadlines are posted at <https://globecom2023.ieee-globecom.org/>