



## Call for Papers

# *Next-Generation Networking and Internet Symposium*

### Symposium Co-Chairs

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### Scope and Motivation

The recent and unprecedented advances in software and learning technologies are enabling the next generation networks. These technologies seamlessly integrate the computing equipment with networking to provide the data-harvesting next generation services. Thanks to the continuous enhancements in computing processor and interface architectures, communication networks can now handle network functions implemented as virtualized machines or docker containers making use of robust software elements. Communication devices can now host very advanced applications and data centers can be pervasively distributed down to network access points to improve response times and reduce the amount of data that needs to be transmitted over a wide area network. Networks, applications, and clouds control layers can leverage intelligent decision-making solutions to target full automation in the Internet and next-generation service delivery. In addition, quantum networking, with its vast amounts of computing power, is emerging and that opens new and many possibilities. These trends greatly affect the next-generation broadband wireless networks, such as their spectrum efficiency, energy efficiency, and mobility management. The NGNI symposium welcomes original research work in technical areas focusing on the innovations on next-generation networks. In addition, Colorado is a national hub for the Cable, Space, and Satellite Communication Industries, submissions on topics of interest to these industries are especially encouraged.

### Topics of Interest

The Next-Generation Networking and Internet (NGNI) Symposium seeks original contributions in the following topical areas, plus others that are not explicitly listed but are closely related to:

- Centralized-RAN, Cloud-RAN, and Fog-RAN architectures
- Cloud-based and fog-based networking
- Content-centric networking and named data networks
- Data center network architectures and performance
- Deep space and Interplanetary Networks
- Free Space Optical (FSO) networks and Visible Light Communication (VLC)
- Future Internet and next-generation networking architectures
- Energy-efficient green communications
- Heterogeneous multi-layer and multi-domain wireless-wireline internetworking

- Emerging cable and last mile access networks
- Hybrid fiber-coax (HFC) networks
- Internet economics, pricing, accounting, and growth modeling
- Internet of Things (IoT), M2M, D2D, MTC
- Artificial Intelligence in Networking
- Integrated networking, storage and computing
- Mobile Cloud Computing (MCC) and Mobile Edge Computing (MEC)
- Mobile security: device, application, and data
- Networking flying vehicles such as UAVs and drones
- Next-generation access networks
- Next-generation anomaly, intrusion, and attack detection/prevention
- Next-generation flow management: resource sharing, congestion control
- Next-generation Internet applications and services
- Next-generation networking protocols
- Next-generation network management and control
- Overlay and Peer-to-Peer (P2P) networking
- Quality of Service (QoS) and Quality of Experience (QoE) in next-generation networks
- Quantum Internet
- Resource orchestration in next-generation networks
- Routing and switching
- Self-protection and self-organization networking
- Software Defined Networking (SDN) and Network Function Virtualization (NFV)
- Software Defined Radio (SDR) and cognitive radio networks
- Terahertz wireless networks
- Traffic measurement, analysis, modeling, visualization, and engineering
- Vehicular networking (IoV/V2V/V2I/V2X)

## Important Dates

**Paper Submission:** 11 October 2023

**Notification:** 18 January 2024

**Camera Ready and Registration:** 15 February 2024

## How to Submit a Paper

Papers for the symposium must be submitted via EDAS. Full instructions on how to submit papers are provided on the IEEE ICC 2024 website: <https://icc2024.ieee-icc.org/>

## Journal Publication Opportunity

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.