Next-Generation Networking and Internet

SYMPOSIUM CHAIRS AND CO-CHAIRS

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SCOPE AND MOTIVATION

Recent years are witnessing unprecedented advances in next generation Internet-networking research that has to deal with many innovations triggered by high-performance computing, programmable network equipment, and computing harvesting next generation services. Leveraging three enablers, namely Software-Defined Networking (SDN), Network Function Virtualization (NFV), and Mobile Edge Computing (MEC), communication networks can be made more agile by handling network functions implemented with virtualization technologies. Communication devices can also host very advanced applications, and data centers can be pervasively distributed down to network access points. Many salient issues are affecting next-generation networks, such as network densification, network slicing, mobile cloud computing, mobility management, cross-layer activities, self-organization, security, performance predictability, and energy efficiency operations.

The Next Generation Networking and Internet (NGNI) Symposium at IEEE Globecom 2024 aims at consolidating and disseminating the latest developments and advances in these emerging focus areas. This symposium invites participation from the academy, industry, and government researchers working in the broad area of next-generation networking and Internet, including methodologies, techniques, technologies, theories, services, architectures, and protocols. The NGNI Symposium will provide a forum for researchers to get together, to present a latest snapshot of the cutting-edge research, and to foster technical debate on future directions in this exciting area.

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:

- Addressing and naming with the presence of mobility and portability
- Centralized-RAN, Cloud-RAN, and Fog-RAN architectures
- OpenRAN
- Zero-touch Networks
- Software Defined Perimeter (SDP) and Zero Trust
- Cloud-based networking
- Content-centric networking: caching, naming, distribution, load balancing, resiliency, traffic engineering, and congestion control

- Progress on network slicing standardization (e.g., 3GPP, GSMA, etc.).
- Free Space Optical (FSO) networks and Visible Light Communication (VLC) in next-generation Internet
- Quality of Service (QoS) and Quality of Experience (QoE) in next-generation networks
- Converged networks and applications, including NGN telecom converged management mechanism for RAN and mobile backhaul
- Data center network architectures and performance
- Energy-efficient green communications
- Future Internet and next-generation networking architectures
- Heterogeneous multi-layer and multi-domain wireless-wired internetworking
- High speed and parallel processing architectures for next generation routers and switches
- Internet economics, pricing, accounting, and growth modeling
- Internet of Things (IoT), M2M, D2D, MTC
- Internet survivability and network resilience strategies
- Mobile Cloud Computing (MCC) and Multi-access Edge Computing (MEC) in next-generation Internet
- Mobile security: device, application, and data
- Mobile/wireless content distribution
- Network and service virtualization
- Networking for Cloud and Fog computing
- Network Slicing Software Defined Networking (SDN)
- Network Function Virtualization (NFV)
- Software Defined Radio (SDR) and cognitive radio networks in next-generation Internet
- Blockchain for network and service management
- Next-generation access networking
- Next-generation anomaly, intrusion, and attack detection/prevention
- Data Plane Programmability
- Digital twin-enabled next-generation networks
- Architectures and protocols for VR and AR
- Network intelligence

IMPORTANT DATES

Deadline for paper submission: 1 April 2024 (23:59 EDT)

Date for notification: 1 August 2024

Deadline for final paper submission: 1 September 2024

SUBMISSION INSTRUCTIONS

All papers for technical symposia should be submitted via EDAS through the following link:

https://edas.info/N31420