

IEEE
THE 5G WORLD FORUM IS NOW THE

IEEE
Future Networks™
WORLD FORUM • 2022

MONTREAL, CANADA - 12-14 OCTOBER



Call for Papers

FUTURE OPTICAL NETWORKS & COMMUNICATIONS SYMPOSIUM

SYMPOSIUM CO-CHAIRS

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SCOPE AND MOTIVATION

As applications require higher speeds and performance, optical networks and communication systems are transforming, taking on new functionality and being used in new contexts. The network backbone has expanded to include data center interconnect systems that run fully loaded at high capacity point to point between warehouse scale data centers. Within the data center, optical networks reach into the package and onto the chip through co-packaged optics. Enhanced wireless network capabilities are being enabled by optical systems in edge cloud networks that carry radio signals at different stages of radio processing. High speed optical signals are finding applications in access networks, in-building networks, and satellite communications. These trends, together with new technological advances, will shape the future of optical networks and communications.

The Future Optical Networks & Communications Symposium solicits original and unpublished work not currently under review by any other conference or journal. The focus of this symposium is on exploring and discussing the technologies, architectures, and trends that will shape the future of optical networks and communications.

SPECIAL ISSUE IN JOURNAL

Selected papers will be invited to a special issue in the [Journal of Optical Communications and Networking](#).

TOPICS OF INTEREST

To ensure complete coverage of the advances in this field, the Future Optical Networks & Communications Symposium solicits original contributions in, but not limited to, the following topical areas. Successful papers will focus on the function, impact, evolution and implementation of technologies, architectures, and trends within these areas with a connection to the future.

- Optical technologies and architectures enabling 6G networks
- Free space optical access technologies for 6G
- Edge cloud optical networks
- Optical metro and access networks
- In-building optical networks
- Optical satellite networks and ground stations
- Optical communications and networks for Interplanetary Networks
- X-Haul and mobile edge cloud optical networks
- Intra- and inter-data center optical networks and systems
- Chip scale optical networks and co-packaged optics
- Quantum optical networks
- Physical-layer security in optical networks
- Network, energy, and/or cost analyses on the use of new fiber technologies such as hollow core and photonic crystal
- Filterless optical networks
- Analysis or proof of concept experiments on high speed transceiver technologies in future network applications, such as coherent receivers for future access networks or IDC systems
- Optical network control plane and architecture designs for future networks
- Novel disaggregation of optical systems in future wireless x-haul and edge cloud networks
- Application of AI and ML in future optical networks

IMPORTANT DATES

Paper Submission: **21 August 2022 (firm)**

Notification: Rolling basis until 31 August 2022

Camera Ready and Registration: 7 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 FNWF 2022: <https://fnwf.ieee.org/>

