

# Special Issue

## Next-Generation Passive Optical Networks: Progress and Challenges

### Message from the Guest Editors

This Special Issue of the *Photonics* journal covers a large scope of research in NG-PONs, concentrating on optical access networks and the convergence of integrated fiber and wireless access technologies, and solicits contributions in, but not limited to:

- Evolution, design, and performance evaluation of new standards for next-generation PONs;
- Future softwarization and virtualization of optical access networks;
- Dynamic bandwidth allocation (DBA), dynamic and wavelength bandwidth allocation (DWBA) algorithms, and multiple media access control (MAC) mechanisms;
- Optical metro edge and access aggregation convergence;
- Convergence of optical access and mobile broadband systems for new radio access networks;
- Use of AI/ML for improving performance in optical and radio access networks;
- Fiber-wireless integrated radio access network architecture design and system interface;
- PON architectures for low-latency and high-capacity mesh interconnect of edge nodes;
- Free-space optical communication, elastic optical networks, radio over fiber
- Low Latency Optical Network Systems & Techniques for 6G time-sensitive applications

### Guest Editors

Dr. Kamran Ali Memon

Dr. Xing Ouyang

Prof. Dr. Gao Ran

### Deadline for manuscript submissions

closed (31 July 2023)



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*Photonics*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[photonics@mdpi.com](mailto:photonics@mdpi.com)

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## About the Journal

### Message from the Editor-in-Chief

You are invited to contribute a research article or a comprehensive review for consideration and publication in *Photonics* (ISSN 2304-6732). *Photonics* is an online open access journal covering both the fundamental and applications of optics and photonics. *Photonics* strives to provide an avenue to allow authors to disseminate their scientific findings—both theoretical/ simulations and experimental works—in highly accessible peer-reviewed journal publications. The manuscript in *Photonics* will be handled with quick turnaround production processing time. We welcome authors to submit their manuscripts for publications in *Photonics*. Our goal in *Photonics* is to enable fast dissemination of high impact works to the scientific community.

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### Editor-in-Chief

Prof. Dr. Nelson Tansu

School of Electrical and Electronic Engineering (EEE), The University of Adelaide, Adelaide, SA 5005, Australia

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#### Rapid Publication:

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