

# Special Issue

## Optical Technologies Supporting 5G/6G Mobile Networks

### Message from the Guest Editors

We invite scientists to submit original papers presenting the results of research on new optical technologies, which may be of key importance in future 5G/6G mobile networks. The potential topics of this Special Issue include, but are not limited to:

- evolution of the optical Xhaul architecture;
- optical O-RAN supporting QoS services;
- smart all-optical paths for O-RAN and 5G/6G core network;
- optical resource management tools dedicated to the mobile and access networks;
- new protocols and techniques for optical slicing;
- elastic optical networking in radio and core domain;
- D-RoF and A-RoF techniques dedicated to effective O-RANs;
- optical networks based on multicore fibers in O-RAN domains;
- effective integration of mobile systems and passive optical networks;
- BBU/CU cloud based on all-optical elastic network;
- RRH/RU as an optical node for radio-fiber services;
- O-RAN DU as optical network cloud service;
- optical eCPRI/NGFI evolution and adaptation to 6G mobile networks controlled by AI;
- ML methods and algorithms for DU service localization and optimization in optical network.

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### Guest Editors

Dr. Zbigniew Zakrzewski

Prof. Dr. Mariusz Głąbowski

Prof. Dr. Piotr Zwierzykowski

Prof. Dr. Vincenzo Eramo

Dr. Francesco Giacinto Lavacca

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### Deadline for manuscript submissions

closed (31 May 2024)



## Photonics

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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

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 14.8 days after submission; acceptance to publication is undertaken in 1.9 days (median values for papers published in this journal in the first half of 2025).