Special Issue

New Perspectives in Free-Space Optical Communications and Networks

Message from the Guest Editor

Free-space communications at optical frequencies will bring about a paradigm shift in global communications, relieving the bottleneck caused by radio frequency (RF) communications and its limitations. Free-space data capacity will be increased by orders of magnitude, and the high directionality of optical beams affords increased security and negates the need for spectrum regulation. Overcoming the challenges of free-space optical communications has drawn expertise beyond those traditionally found in the telecommunications industry, calling on researchers from fields such as astronomy and adaptive optics, machine learning, and others. This Special Issue aims to showcase these new perspectives in free-space optical communications, and we invite theoretical and experimental papers on topics including, but not limited to, the following:

- adaptive optics and other turbulence mitigation techniques;
- free-space optical communication systems and network architectures;
- novel modulation/multiplexing techniques such as modulating retroreflectors;
- ultra-high data rate demonstrations;
- machine learning/AI-assisted weather forecasting/scheduling for optical ground stations.

Guest Editor

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Deadline for manuscript submissions

closed (15 March 2024)

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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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