

Call for Papers

IEEE Photonics Technology Letters

Special issue on Optical Wireless Communications in Challenging Environments

Guest Editors

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Scope and Topics

IEEE Photonics Technology Letters (PTL) will publish a Special Issue dedicated to presenting expanded versions of the invited talks from the Rank Symposium on Optical Wireless Communications in Challenging Environments, held from September 9-12, 2024, in the Lake District, UK. This symposium brought together delegates from both UK-based and international institutions to share their latest contributions to the area of optical wireless communications. Advances in solid-state light sources and photodetectors have propelled optical wireless technology to the forefront of future communications solutions. Its unique advantages—including a broad unregulated spectrum, inherent physical layer security, high transmission speeds, and resilience to electromagnetic interference—position optical wireless as an ideal candidate for meeting connectivity demands in challenging environments. Applications range from free-space communications to mining operations, healthcare, and non-terrestrial communication. Research efforts focus on enhancing the capabilities of optical wireless links to meet the key performance indicators (KPIs) for future communication networks. These KPIs extend beyond traditional metrics like data rates and latency to include crucial aspects such as security, inherent intelligence, self-adaptation, pervasive coverage, and energy efficiency.

The topics of this Special Issue include but not limited to the following:

Free Space Optics, Visible Light Communication/LiFi, Underwater Optical Wireless Communications, High speed devices, Non-terrestrial free space communication, Quantum communication in free space, Intelligent Reconfigurable Environments, Optical Integrated Communication and Sensing

Submission Guidelines

Submissions will be reviewed in accordance with the normal procedures of the Journal and papers must be formatted according to the Information for Authors found at:

<https://ieeephotonics.org/publications/photronics-technology-letters/>

- Manuscript submissions should be made online at <https://ieeephotonics.org/journal/ptl-ieee>
- Select the paper type “**Special Issue on Optical Wireless Communications in Challenging Environments.**”

Important Dates

Open for Submissions: 15 October 2024

Submission Deadline: 15 January 2025

Tentative Publication: April 2025

EARLY ACCESS: DOI-citable articles will be published online after acceptance upon submission of final files and rights selection – sometimes well in advance of issue publication.

For further information, contact the PTL Editorial Office:

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