

Special Issue

Optical Satellite Communications for Quantum Networking

Message from the Guest Editors

This Special Issue welcomes articles addressing, among others, the design and development path of a practical quantum satellite infrastructure. Theoretical design studies, numerical, and experimental papers are within the scope of the Special Issue, but review articles will also be considered. We expect to cover a variety of topics, including the following:

- Design and feasibility studies on satellite-to-ground wireless FSO links;
- Channel modeling for satellite QKD systems;
- Quantum communications in a turbulent medium;
- DV- and CV-QKD protocols integration in long-haul satellite links;
- Space-to-ground entanglement distribution systems;
- Next-generation satellite quantum payloads; quantum repeaters in space;
- Novel adaptive optics techniques for robust wireless quantum links;
- Design and architectures of large-scale satellite networks;
- Novel designs of optical ground stations, detection concepts, and portable OGS;
- Technologies and networks for inter-satellite QKD links;
- Synergies and co-design of terrestrial and satellite links;
- Technologies for inter-satellite QKD links;
- Earth monitoring and sensing applications via quantum space technologies.

Guest Editors

Dr. Giannis Giannoulis

Photonics Communications Research Laboratory, School of Electrical and Computer Engineering, National Technical University of Athens, Iroon Polytechniou 9 Str., Zografou, 15780 Athens, Greece

Dr. Nikolaos K. Lyras

Photonics Communications Research Laboratory, School of Electrical and Computer Engineering, National Technical University of Athens, Iroon Polytechniou 9 Str., Zografou, 15780 Athens, Greece

Deadline for manuscript submissions



Photonics

an Open Access Journal
by MDPI

Impact Factor 1.9
CiteScore 3.5



mdpi.com/si/140931

Photonics
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
photonics@mdpi.com

[mdpi.com/journal/
photonics](https://mdpi.com/journal/photonics)





Photonics

an Open Access Journal
by MDPI

Impact Factor 1.9
CiteScore 3.5



[mdpi.com/journal/
photonics](https://mdpi.com/journal/photonics)



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.

Editor-in-Chief

Prof. Dr. Nelson Tansu

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

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), Inspec, Ei Compendex, CAPlus / SciFinder, and other databases.

Journal Rank:

CiteScore - Q2 (Instrumentation)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 15 days after submission; acceptance to publication is undertaken in 1.9 days (median values for papers published in this journal in the second half of 2025).