



an Open Access Journal by MDPI

Optical Light Propagation and Communication Through Turbulent Medium

Guest Editors:

Dr. Mert Bayraktar

Interdisciplinary Centre for Security, Reliability and Trust (SnT), University of Luxembourg, 29 Avenue J.F Kennedy, L-1855 Luxembourg, Luxembourg

Dr. Kholoud Elmabruk

Engineering Faculty, Electric Electronic Engineering Department, Sivas University of Science and Technology, Gültepe Mahallesi Mecnun Otyakmaz Caddesi No 1 Merkez, Sivas 58000, Türkiye

Deadline for manuscript submissions: 1 February 2025

mdpi.com/si/204633

Message from the Guest Editors

Optical communication through turbulent media presents significant challenges and opportunities for researchers in optics and photonics. This Special Issue explores the latest advancements, research findings, and innovative solutions in this field. We welcome submissions presenting numerical and experimental results from turbulent media such as atmosphere, water, marine waters, jet engine exhaust, and tissue; adaptive optics techniques for mitigating turbulence effects in optical communication, free-space and underwater optical communication systems in turbulent environments, and the associated challenges; novel approaches for improving the performance of optical communication through turbulence; and the applications of optical communication in 6G backhaul, satellite, defense, aerospace, and underwater exploration. The constantly growing body of research on optical light propagation and communication through turbulent media demonstrates the many opportunities for increasing its technological applications.

We invite you to submit recent results on optical light propagation and communication through turbulent media to this Special Issue.

