Special Issue

Intelligent Fiber Bragg Grating (FBG) Sensors for Advanced Measurement and Monitoring

Message from the Guest Editors

This Special Issue aims to bring together cutting-edge research and innovative methodologies that integrate intelligence into FBG sensor technology to achieve improved performance, robustness, and automation.

We welcome original research articles, technical reports, and comprehensive reviews addressing, but not limited to, the following topics:

- Intelligent FBG sensor design and fabrication;
- AI and deep learning-based FBG signal processing and feature extraction;
- Noise reduction and data denoising using AI models;
- Intelligent multiparameter sensing and cross-sensitivity compensation;
- Smart sensing networks and self-learning FBG systems;
- Real-time monitoring and data analytics for FBG-based systems;
- FBG sensors for structural health monitoring and predictive maintenance;
- Biomedical and environmental applications of intelligent FBG sensing;
- Optical sensing integration with IoT and digital twin systems;
- Simulation, modeling, and inverse design for intelligent sensing;
- Smart cities and industrial monitoring;
- Edge and real-time AI systems for FBG-based sensing platforms;
- Applications in structural health monitoring, aerospace, biomedical, environmental, and industrial systems.

Guest Editors

Dr. Yibeltal Chanie Manie

Electrical engineering and Computer Science, National Taipei University of Technology, Taipei 10608, Taiwan

Dr. Minyechil Alehegn Tefera

Electrical engineering and Computer Science, National Taipei University of Technology, Taipei 10608, Taiwan

hv

Photonics

an Open Access Journal by MDPI

Impact Factor 1.9
CiteScore 3.5

mdpi.com/si/259989

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

mdpi.com/journal/photonics

MDPI

Photonics

an Open Access Journal by MDPI

Impact Factor 1.9
CiteScore 3.5

mdpi.com/journal/photonics

MDPI

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 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).