

## Special Issue

# Artificial Intelligence and Mechanistic Modeling: New Tools to Assist in the Management of Ocular and Systemic Disease

### Message from the Guest Editors

This Special Issue of *Photonics* aims at presenting the status of AI and mechanistic modeling in the eye and discusses the utility of these techniques in improving disease diagnosis, treatment, and management. The success of these virtual modeling applications in other fields will also be evaluated as a way to offer insight into how these techniques may alter the course of ocular disease paradigms. Specifically, papers are solicited that demonstrate the use of AI and mechanistic modeling on individual diagnosis, treatment, and management of ocular diseases. Importantly, the health status of the eye is often an indicator of systemic problems, including heart disease, stroke, diabetes, Alzheimer's Disease, and Parkinson's disease. Studies that manage Big Data and identify trends between ocular and systemic disease are especially encouraged. Researchers are invited to submit their contributions to this Special Issue.

### Guest Editors

Prof. Dr. Alon Harris

Prof. Dr. Julia Arciero

Prof. Dr. Giovanna Guidoboni

### Deadline for manuscript submissions

closed (31 July 2022)



## Photonics

an Open Access Journal  
by MDPI

Impact Factor 1.9  
CiteScore 3.5



[mdpi.com/si/77923](https://mdpi.com/si/77923)

*Photonics*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[photonics@mdpi.com](mailto: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 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).