

Special Issue

Integrative Approaches: The Intersection of Brain–Computer Interfaces and Retinal Health

Message from the Guest Editor

The convergence of bioengineering and ophthalmology has opened new frontiers in relation to the treatment and understanding of ocular diseases, driving innovations that promise to revolutionize patient care. Recent advancements in brain–computer interfaces (BCIs) have opened up new frontiers in medical technology, particularly for individuals dealing with visual impairments or retinal disorders. BCIs are systems that facilitate direct communication between the brain and external devices, which can significantly enhance the quality of life for patients suffering from vision-related conditions. The integration of BCIs with ophthalmological interventions could lead to groundbreaking therapeutic strategies and augmentative systems designed to restore visual function or provide new forms of sensory input. The research in this Special Issue highlights the potential of using BCIs to bypass damaged retinal pathways, create visual prosthetics, and interface neural signals with digital devices. By translating neural activity into actionable commands, BCIs can enable patients to interact with their surroundings in innovative ways, offering a new dimension to assistive technologies.

Guest Editor

Dr. Mouayad Masalkhi

School of Medicine, University College Dublin, Belfield, Ireland

Deadline for manuscript submissions

31 January 2026



Bioengineering

an Open Access Journal
by MDPI

Impact Factor 3.7
CiteScore 5.3
Indexed in PubMed



mdpi.com/si/247968

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

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





Bioengineering

an Open Access Journal
by MDPI

Impact Factor 3.7
CiteScore 5.3
Indexed in PubMed



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



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 *Bioengineering* (ISSN 2306-5354). *Bioengineering* is published in open access format – research articles, reviews and other contents are released on the Internet immediately after acceptance. The scientific community and the general public have unlimited and free access to the content as soon as it is published. *Bioengineering* provides an advanced forum for the science and technology of bioengineering. We would be pleased to welcome you as one of our authors.

Editor-in-Chief

Prof. Dr. Anthony Guiseppi-Elie

Department of Biomedical Engineering, Texas A&M University, College Station, TX 77843, USA

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, CAPIus / SciFinder, Inspec, and other databases.

Journal Rank:

JCR - Q2 (Engineering, Biomedical) Rapid Publication: manuscripts are peer-reviewed and a first decision is provided to authors approximately 19.2 days after submission; acceptance to publication is undertaken in 3.3 days (median values for papers published in this journal in the first half of 2025).

Recognition of Reviewers:

reviewers who provide timely, thorough peer-review reports receive vouchers entitling them to a discount on the APC of their next publication in any MDPI journal, in appreciation of the work done.