Special Issue

Optical Imaging and Signal Processing for Biomedical Applications

Message from the Guest Editor

Optical imaging is a powerful and versatile technology that can be used to visualize biological structures and processes at various scales, which cover molecules, cells, tissues, organs, and in vivo body levels. By exploiting light–tissue interactions, such as absorption, scattering, and reflectance, optical imaging provides non-invasive, high-resolution, and real-time visualization of biological systems. Biomedical signals contain critical diagnostic information buried in noise and artifacts. By extracting meaningful information from noisy physiological data, signal processing provides powerful tools to enhance, analyze, and interpret the complex datasets, enabling breakthroughs in healthcare and research. Recent advances, including high-resolution optical imaging modalities, artificial intelligence, and computational algorithms, continue to expand the role of optical imaging and signal processing in the observation and analysis of biomedical procedures. We believe that this collection of articles will be a valuable resource to those interested in advanced optical imaging and signal processing tools in biomedical research, inspiring further innovation and collaboration.

Guest Editor

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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.

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