Special Issue

Emerging Topics in Single-Photon Detectors

Message from the Guest Editor

In recent times, there has been a noticeable surge in research interest surrounding photodetectors designed to achieve single-photon sensitivity. Two prominent examples of such detectors include single-photon avalanche diodes (SPADs) and superconducting nanowire single-photon detectors (SNSPDs). We extend a warm invitation for submissions to this Special Issue, entitled "Emerging Topics in Single-Photon Detectors". Both research papers and comprehensive review articles are welcome, addressing the following areas:

- Fundamental research delving into the physics and signal processing techniques that account for the quantum nature of single-photon detection;
- Modeling and fabrication techniques for single-photon detectors;
- Exploring advanced sensing modalities made possible by single-photon detectors;
- Advancements in the development of multimodal, multispectral, and/or multiscale sensing systems leveraging single-photon detectors;
- Innovative data processing methodologies, including the application of advanced algorithms;
- Validation studies showcasing the effectiveness of single-photon detection methods in the context of biomedical and clinical research.

Guest Editor

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Deadline for manuscript submissions

closed (15 December 2024)

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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.

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