



Emerging Topics in Single-Photon Detectors

Guest Editor:

Dr. Zheng Li

Research Laboratory of
Electronics, Department of
Electrical Engineering and
Computer Science,
Massachusetts Institute of
Technology, Cambridge, MA
02139, USA

Deadline for manuscript
submissions:

31 May 2024

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.

