Special Issue

Optical Imaging for 3D Surface and Phase Recovery: Techniques and Applications

Message from the Guest Editors

The Special Issue, "Optical Imaging for 3D and Phase Recovery: Techniques and Applications", aims to gather recent advances, novel methodologies, and transformative applications in the field of computational optical imaging. It focuses on recovering 3D structures and quantitative phase maps. The Special Issue seeks to bridge theory and experimental investigation by highlighting emerging trends across biomedical imaging, industrial metrology, and optical sensing, where precise phase retrieval and 3D reconstruction have become pivotal to scientific discovery and engineering innovation. Topics of interest include, but are not limited to, the following: quantitative phase imaging, digital holography, interferometric microscopy, coherent diffraction imaging, optical tomography, lightfield, ptychography, structured illumination and fringe projection profilometry, time-of-flight, stereo, wavefront sensing, and Al-enhanced imaging and phase recovery. The Special Issue welcomes both fundamental studies advancing optical physics and computational reconstruction—and applied research demonstrating practical utility in biomedicine, materials science, or precision manufacturing.

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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 peerreviewed 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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