Special Issue

Advancements in Computational Imaging Techniques for Quantitative Phase Imaging

Message from the Guest Editor

Quantitative phase imaging (QPI) has emerged as a powerful label-free imaging modality with widespread applications in diverse scientific and medical domains. This Special Issue explores the synergy between computational imaging techniques and QPI, showcasing the latest advancements, challenges, and opportunities in this rapidly evolving field. In this Special Issue, we will highlight how computational methods can amplify the capabilities of QPI, offering improved data quality, faster imaging speeds, and enhanced interpretability. The articles in this collection delve into a spectrum of computational strategies that complement QPI. From sophisticated algorithms for phase retrieval and unwrapping to innovative machine learning approaches for artifact correction and image reconstruction, these contributions push the boundaries of computational imaging. The integration of computational techniques with QPI has enabled real-time imaging, three-dimensional tomographic reconstructions, and the fusion of multimodal data, enabling comprehensive analyses in fields such as cell biology, neuroscience, and materials science.

Guest Editor

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Message from the Editor-in-Chief

The imaging term, specific with journal, is to be considered in its broadest sense. Image processing, image understanding and computer vision are all terms related to imaging acquisition, its processing and the extraction of relevant information from the scene to obtain the underlying knowledge. All tasks related to the above items are oriented toward specific applications in a broad range of areas and topics. The *Journal of Imaging* is conceived as an efficient vehicle in the scientific community for the communication and transmission of the progress and research results in the topics covered.

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