



Innovations in Microscope Image Processing

Guest Editor:

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Message from the Guest Editor

Optical microscopy is a powerful tool for investigating biological structures and processes across various scales. Recent advancements in microscopy for biomedical imaging have empowered scientists to integrate multiplex, multimodal, and multiscale imaging techniques, enabling a comprehensive exploration of biological mechanisms. Image processing plays an important role in extracting meaningful information.

This Special Issue aims to present the latest and applications of image processing methods in microscopy. Topics of interest include but are not limited to 1. image enhancement, restoration, denoising, and super-resolution 2. image segmentation, classification, and morphodynamics tracking 3. image registration, fusion, and reconstruction 4. digital stain imaging, virtual histology, and diagnosis 5. real-time or embedded image processing 6. image quality assessment 7. image reconstruction 8. image rendering and interactive visualization.

We invite original research papers that highlight the advantages and challenges of specific methods. We also welcome review articles that provide a comprehensive overview of the state-of-the-art techniques and future directions in this field.





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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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