Journal of Healthcare Engineering

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Special Issue on

# Translational Optical Imaging and Quantification

# CALL FOR PAPERS

Optical imaging has been a vital tool for studying the biological processes and physiology in life sciences and healthcare since the discovery of optical microscopy. Optical microscopy provides cellular level spatial resolution, but its capability of in vivo tissue imaging has been restricted to superficial examinations. Improving imaging depths as well as temporal resolution and spatial resolution of optical imaging techniques has attracted tremendous research interests. Recent breakthroughs in wavefront shaping, optical coherence tomography, diffuse optical tomography, photoacoustic (optoacoustic) tomography, ultrafast optical imaging, and super-resolution microscopy allow optical imaging at unprecedented depths, with superior temporal and spatial resolutions. Further, advances in signal processing and image reconstruction algorithms allow for optical imaging as a sensing tool for quantification of tissue optical properties such as wavelength-dependent absorption and scattering and physiological parameters such as temperature, blood pressure, blood flow, oxygen saturation, and metabolism.

This special issue is aimed at showcasing the emerging translational optical imaging techniques and the signal processing and image reconstruction algorithms for quantification. We invite submissions of original research articles focusing on instrumentation, signal processing, and image reconstruction algorithms for optical imaging techniques. Research articles that report results on clinical studies are particularly welcome. Review articles that review recent advances on topical areas are encouraged to be submitted to this special issue.

Potential topics include but are not limited to the following:

- Advances in optical microscopy
- Optical endoscopy
- Ultrafast optical imaging
- Wavefront shaping
- Super-resolution optical microscopy
- Optical coherence tomography and quantification
- Diffuse optical tomography and quantification
- Photoacoustic (optoacoustic) imaging and quantification
- Image reconstruction and inverse problems
- Image analysis

Authors can submit their manuscripts through the Manuscript Tracking System at https://mts.hindawi.com/submit/journals/jhe/toiq/.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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