

Special Issue
IEEE TBME Letters

**Emerging Technologies in Multi-Parameter Biomedical
Optical Imaging and Image Analysis**
Updated March 2010

The past two decades have witnessed revolutionary advances in biomedical imaging modalities capable of providing physiological and biological information from the cellular scale to the organ level. Recent advances have also been focused on cost-effective, non-invasive, portable, and molecular imaging technologies for imaging at microscopic, mesoscopic and macroscopic levels. These technologies have significant potential to advance biomedical research and clinical practice. They can also provide a better understanding and monitoring of physiological and functional disorders that could lead to mainstream diagnostic technologies of the future.

TBME LETTERS is aimed at expedited review and publication of breakthrough research at the leading edge of rapidly emerging technologies and scientific research work with high impact and novelty. TBME Letters publishes short papers (up to 4 printed pages) that are focused on highly novel and time sensitive scientific and technological advances with high potential impact in biomedical applications and healthcare. Our intent is to highlight promising early-stage advances and new ideas that demonstrate feasibility but for which lengthier validation studies have not yet been performed.

The Special Issue of IEEE Transactions on Biomedical Engineering (TBME) LETTERS on Emerging Technologies in Multiparameter Biomedical Optical Imaging and Image Analysis will be published in July 2010. The aim of this Special Issue is to publish highly innovative, novel and exciting research activities in biophotonic technologies at microscopic, mesoscopic and macroscopic levels for molecular and functional imaging and analysis with potential biomedical and clinical applications. All TBME Special Issues have open general calls for contributed papers.

Authors are encouraged to write LETTERS for publication in the TBME Letters Special Issue in the wide-spectrum of research areas as following but not limited to:

1. Multi-parameter, Multi-dimensional and Optical Microscopy
2. Confocal Microscopy
3. Optical Endoscopy and Spectroscopy
4. Fluorescence Imaging and Tomography
5. Diffuse Reflectance and Transillumination Imaging
6. Optical Coherence Tomography
7. Multiphoton Imaging and Microscopy
8. Photoacoustic Imaging and Tomography
9. Biophotonic Image and Tomography Reconstruction
10. Image Analysis (Segmentation, Registration, Classification, etc.)

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Timetable

Paper submission deadline: April 15, 2010
- Notification of acceptance: May 15, 2010
- Final manuscript due: June 1, 2010
- Publication date: July 1, 2010
- Review turnaround: three weeks