BioMed Research International

Special Issue on

Translational Molecular Imaging Computing: Advances in Theories and Applications

CALL FOR PAPERS

Molecular imaging is capable of revealing cellular and molecular features of biology and disease *in vivo*, meeting the increasing needs in noninvasive understanding of biological processes. Computational technologies are essential for the development of cutting-edge molecular imaging. During the past decades, the advancement of molecular imaging computing has been well recognized and continuously extends the application potential of molecular imaging.

With this in mind we are editing this special issue, providing a forum for researchers to summarize and discuss the latest advances of computational technologies in molecular imaging including theories and applications. We encourage authors to submit original research papers as well as review articles. New developments of both theoretical study and preclinical/clinical applications of molecular imaging are welcome. Computational approaches for multimodality imaging are of great interest.

Potential topics include, but are not limited to:

- Mathematical and computational modeling of molecular imaging
- Reconstruction methods of CT, MRI, PET, SPECT, and optical molecular imaging
- Numerical methods to simulate imaging signal in tissues
- Sparse representation in molecular imaging
- Multimodality fusion imaging
- Big data strategies for molecular imaging processing (i.e., cloud computation)
- Translational molecular imaging computing for personalized medicine
- Advanced applications in preclinical and clinical research (e.g., for oncology and neurology)
- New molecular imaging modalities and techniques

Authors can submit their manuscripts via the Manuscript Tracking System at http://mts.hindawi.com/submit/journals/bmri/computational.biology/micat/.

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Manuscript Due
Friday, 17 June 2016

First Round of Reviews
Friday, 9 September 2016

Publication Date
Friday, 4 November 2016