

Special Issue on Functional Imaging of the Heart IEEE Transactions on Medical imaging

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Guest Editors

Cardiovascular diseases represent a significant threat to public health. Of importance is to detect cardiovascular disorders in an early stage and to better guide intervention. Cardiac imaging has played an important role in both basic cardiovascular research and clinical cardiology. Of particular interest is the recent development in functional imaging of the heart. Innovative imaging methods have been developed to image the functional status of the heart from magnetic resonance, electrical, mechanical, acoustic, and optical measurements among others. These functional imaging techniques have shown great promises to reveal the underlying mechanisms of cardiovascular diseases and offer potential means of aiding clinical diagnosis and management of cardiac disorders.

This Special Issue will highlight new approaches to the exciting field of cardiac functional imaging, including new functional imaging modalities, new analysis techniques to derive functional information from existing measurement systems, and novel approaches for validation and clinical applications of cardiac functional imaging. Original submissions in areas including, but not limited to, the following topics, are invited:

- Novel functional cardiac imaging modalities
- Electrophysiological cardiac imaging
- Model-based functional imaging
- Magnetic resonance imaging
- Magnetic resonance spectroscopy
- PET imaging of cardiac function
- Novel contrast mechanisms
- Analysis methods for rest-stress studies
- Strain and strain-rate imaging
- Fusion of information on coronary, global and regional function
- Imaging and quantification of cardiac dyssynchrony
- Quantitative assessment of valve function
- Computer-aided diagnosis of cardiac pathologies
- Quantification of changes in longitudinal cardiac imaging studies
- Visualization
- Validation
- Clinical applications involving novel imaging techniques

The IEEE Transactions on Medical Imaging seeks high-quality original research papers for this Special Issue. Authors should submit their manuscripts electronically, by the deadline below, through the IEEE Manuscript Central Office (<http://mc.manuscriptcentral.com/tmi-ieee>) following the TMI Instructions for Authors and indicating in the *Author Comments to the Editor-in-Chief* that the manuscript be considered for the special issue on *Functional Imaging of the Heart*. Authors intending to submit articles are encouraged to discuss their submissions with the Guest Editors to determine suitability for this Special Issue.

Schedule:

Submission of manuscripts	January 1, 2008
Acceptance notification	April 1, 2008
Revised manuscripts due	June 1, 2008
Publication of special issue	October, 2008

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