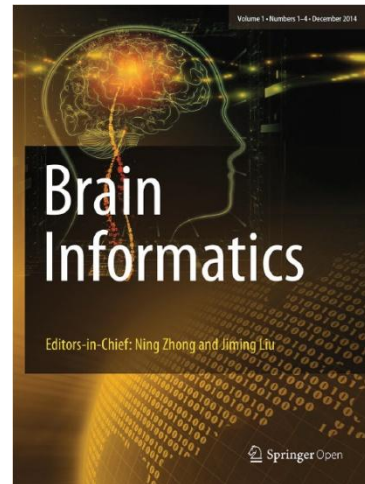


CALL FOR PAPERS

Brain Informatics

Special Issue on
Multimodal Neuroimaging Computing:
the Methods and Applications



Guest Editors

- **Weidong Cai**, The University of Sydney
tom.cai@sydney.edu.au
- **Sonia Pujol**, Harvard Medical School
spujol@bwh.harvard.edu
- **Ron Kikinis**, Harvard Medical School
kikinis@bwh.harvard.edu

Background

Last two decades have witnessed the explosive growth in the development and use of noninvasive neuroimaging technologies, predominately MRI, complemented by PET and EEG/MEG, which have enabled us to visualize the brain function and structure in unprecedented details and transformed the way we study brain under normal and pathological conditions. We are in the era of the brain. The growing interest in novel neurotechnologies is sufficiently demonstrated by the recent funding commitment of many unprecedented large-scale brain research projects, e.g., the recent Obama's Brain Research through Advancing Innovative Neurotechnologies (BRAIN) Initiative in US, and the Human Brain Project (HBP) in EU.

Multimodal neuroimaging has become a major driver of current neuroimaging research due to the awareness of the clinical benefits of the multimodal data, and the higher accessibility of the imaging scanners, especially the hybrid scanners. However, multimodal neuroimaging analysis is much more challenging than single modality analysis, as multimodal neuroimaging requires sophisticated computing, i.e., pre-processing, feature extraction, image fusion, machine learning, visualization and post-processing, to tackle the variations in image spatial-temporal resolution, and the diversity of biophysical-biochemical mechanisms. Therefore, there is an urgent need of the novel computing models and methods to jointly analyze the multimodal data and evaluate their performance in different applications.

Call for Papers

We cordially invite the research papers for this special issue. Potential topics include, but are not limited to:

- Large-scale evaluation of neuroimaging biomarkers
- Patient-centered neuroimaging data analysis
- Image-guided therapy
- Neuroimaging computing workflows, methods and platforms
- Analysis of multi-parametric images, e.g., fMRI-EEG, PET-CT, PET-MRI, and MRI-DTI
- Analysis of functional / structural brain connectome, e.g., fMRI / dMRI
- Causality analysis of brain activities
- Discovering diversity of brain functions in multimodal data
- Applications to neuropsychiatric disorders

Important Dates

- Paper submission deadline: October 31, 2015
- First round notification: November 11, 2015
- Final decision notification: November 22, 2015

Submission Instructions

All manuscripts must be in English. The page limit is 11 pages for each paper (210x279mm in Springer Journal Paper Style). Manuscripts submitted for publication are reviewed by at least three peer reviewers, according to the usual policies of the BRIN Journal.

For submission instructions please visit the journal's online submission system at <http://www.editorialmanager.com/brin>, have a look at the journal product page at <http://www.springer.com/40708> or contact A/Prof. Weidong Cai at tom.cai@sydney.edu.au.