



BioMed Research International

Special Issue on

Machine Learning in Multimodal Medical Imaging

CALL FOR PAPERS

Although the last few decades have witnessed the explosive growth in the development and use of noninvasive medical imaging technologies, such as CT, MRI, PET, and SPECT, it was not until recently that multiple imaging modalities began to be incorporated into one single instrument and treated integrally. Multimodal medical imaging provides us with separate yet complementary structure and function information of a patient study in a single imaging session and hence has transformed the way we study living bodies.

Machine learning techniques have been increasingly applied to medical images for developing computer-aided diagnosis and prognosis models. However, machine learning using multimodal medical images is much more challenging than that using single modality images, as multimodal images require sophisticated computing, i.e., reconstruction, restoration, registration, segmentation, and feature extraction, to tackle the variations in image spatial-temporal resolution, as well as the diversity of biophysical-biochemical mechanisms.

We invite investigators to contribute original research articles as well as review articles that will address the machine learning challenges in multimodal medical imaging.

Potential topics include but are not limited to the following:

- ▶ Multimodal medical image reconstruction, restoration, compression, registration, fusion, segmentation, modeling, visualization, and analysis
- ▶ Data mining for multimodal medical images
- ▶ Machine learning models for multimodal medical images
- ▶ Classification, prediction, regression, indexing, and retrieving models for multimodal medical images
- ▶ Deepening learning models for multimodal medical images
- ▶ Computer-aided detection/diagnosis using multimodal medical imaging
- ▶ Patient-centered multimodal medical image interpretation
- ▶ Large-scale evaluation of machine learning techniques applied to multimodal medical images

Authors can submit their manuscripts through the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/bmri/molecular.imaging/mmmi/>.

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