

# IEEE JOURNAL OF BIOMEDICAL AND HEALTH INFORMATICS

## J-BHI Special Issue on “Machine Learning in Medical Imaging”

Machine learning plays an essential role in the field of medical imaging and image informatics. With advances in medical imaging, new machine learning methods and applications are demanded. Due to large variation and complexity, it is necessary to learn representations of clinical knowledge from big imaging data for better understanding of health informatics. There are numerous challenges though, including diverse and inhomogeneous inputs, high dimensional features versus inadequate subjects, subtle key pattern hidden by large individual variation, and sometimes an unknown mechanism underlying the disease. Inspired by the challenges and also the chances, more and more people are devoting to the research direction of machine learning in medical imaging nowadays.

The goal of this Special Issue is to publish the latest research advancements in integrating machine learning with medical images and health informatics. This Special Issue is in cooperation with the 8<sup>th</sup> international workshop of Machine Learning in Medical Imaging ([MLMI 2017](#)), and also beyond it. Only original researches will be considered. If the submission is extended from an early conference publication, we request it to consist of at least 70% new material compared to the conference paper.

Topics of this Special Issue include (but are not limited to) machine learning methods (e.g., deep learning, random forest, support vector machine, Bayesian methods, manifold learning, and artificial neural network) with their applications to

- Image analysis of anatomical structures/functions and lesions;
- Computer-aided detection/diagnosis;
- Multi-modality fusion for analysis, diagnosis, and intervention;
- Medical image reconstruction;
- Medical image retrieval;
- Molecular/pathologic/cellular image analysis;
- Dynamic, functional, and physiologic imaging.

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### Key Dates

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