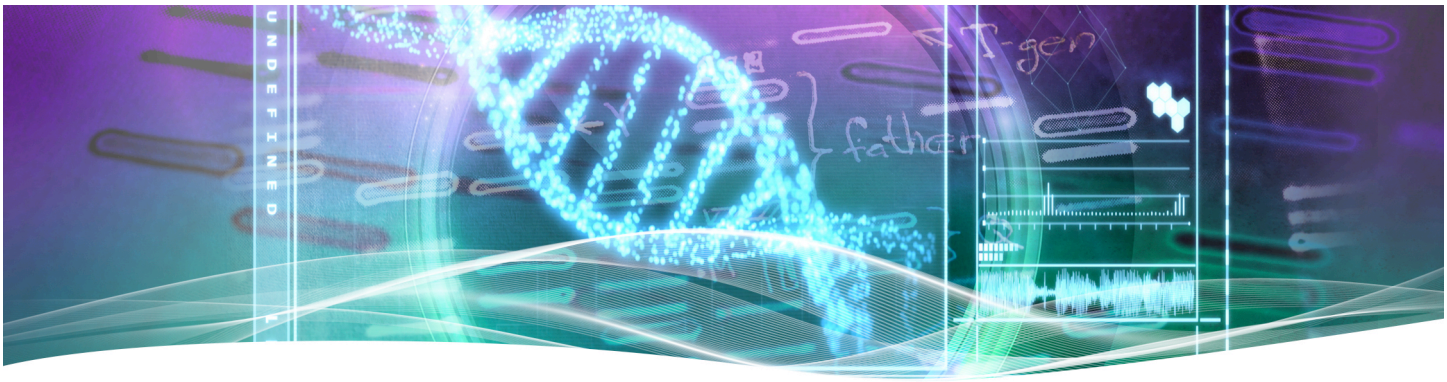
IEEE JOURNAL OF

BIOMEDICAL AND HEALTH INFORMATICS



J-BHI Special Issue on **"Deep Learning for Biomedical and Health Informatics"**

KEY DATES

Deadline For Submission:
4th July, 2016

First Reviews Due:
8th Aug, 2016

Revised Manuscript Due:
19th Sept, 2016

Final Decision:
10th Oct, 2016

Deep learning is a rapidly advancing field in recent years, in terms of both methodological development and practical applications. It allows computational models of multiple processing layers to learn and represent data with multiple levels of abstraction. It is able to implicitly capture intricate structures of large-scale data and ideally suited to some of the hardware architectures that are currently available.

Whilst some of the technical challenges are still being addressed, including generative modelling, large-scale parameter optimisation, and handling heterogeneous multi-modal data with varying temporal dependencies and missing samples, its use for biomedical and health informatics has reached marked success. Examples include the use of deep learning for imaging informatics, with which deep convolutional networks have dramatically improved the analysis performance compared to that of existing techniques. Other applications include drug discovery, protein docking and structure prediction, genomics, and annotating the pathogenicity of genetic variants.

The purpose of this special issue is to report the latest advances in the field of deep learning for biomedical and health informatics, addressing both original algorithmic development and new applications of deep learning. Topics for this special issue include, but are not limited to:

- **Deep learning for sensor informatics and behavioural/activity profiling**
- **Deep learning for imaging informatics and large-scale mining/classification**
- **Deep learning for translational bioinformatics and drug discovery**
- **Deep learning for medical informatics and public health**

We particularly encourage large cohort studies with clearly demonstrated clinical translational values supplemented by online data sets or algorithms that can be shared by the research community.

Submission of manuscripts

Submitted articles must not have been previously published or currently submitted for journal publication elsewhere. As an author, you are responsible for understanding and adhering to our submission guidelines (http://jbhi.embs.org/for-authors/). When submitting, **authors are requested to choose "Deep Learning" in the manuscript type to indicate that the paper is intended for this special issue.** The managing editor for coordinating this special issue is **Dr Benny Lo**.

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