

# BOOM 2016

1ST INTERNATIONAL WORKSHOP ON BIOMEDICAL INFORMATICS WITH  
OPTIMIZATION AND MACHINE LEARNING

IN CONJUNCTION WITH  
25TH INTERNATIONAL JOINT CONFERENCE ON ARTIFICIAL INTELLIGENCE  
(IJCAI), JULY 2016, NEW YORK, USA

## Call for Papers

The IJCAI BOOM'16 workshop solicits:

- (1) **full papers (6 page + reference)** that describe original research work that have not been published before, which will be published in a special issue of EURASIP Journal on Bioinformatics and Systems Biology (**JBSB**): <http://www.bsb.eurasipjournals.com/about/update/BIOML>.
- (2) **short abstracts (1 page)** that either highlight significant works that have been published or accepted recently or report unpublished research findings, which will be included in workshop proceedings.

**Format and submission instructions** could be found on the website:

<http://www.ijcai-boom.org/submission.html>

## Topics of interest

### Category I: Machine Learning and Optimization Algorithms

- Applying cutting-edge machine learning (e.g., deep learning) and optimization techniques to real medical and healthcare problems.
- Addressing challenges and roadblocks in biomedical informatics w.r.t the data-driven machine learning, such as imbalanced dataset, weakly-structured/unstructured data, noisy & ambiguous labeling.
- Designing novel numerical optimization algorithms for large-scale, high-dimensional, heterogeneous, and noisy biomedical data.
- Re-visiting traditional machine learning topics such as clustering, classification, regression and dimension reduction, that find application values in emerging biomedical informatics problems.
- Other closely-related disciplines, such as image processing, data mining, cloud computing, control theory, and system engineering.

### Category II: Biomedical Informatics Applications

- Computational Biology, including the advanced interpretation of critical biological findings, using databases and cutting-edge computational infrastructure.
- Clinical Informatics, including the scenarios of using computation and data for health care, spanning medicine, dentistry, nursing, pharmacy, and allied health.
- Public Health Informatics, including the studies of patients and populations to improve the public health system and to elucidate epidemiology.

## Website:

<http://www.ijcai-boom.org>

## Organization Committee

Zhangyang Wang, UIUC

Yang Shen, Assistant Prof., TAMU

Shuai Huang, Assistant Prof., U Washington

Jiayu Zhou, Assistant Prof., MSU

## Invited Speaker

Jiebo Luo, Professor, University of Rochester  
*"The Healing Power of Big Data"*

## Program Committee

See website for the full list.

## Sponsor



## Important Dates

Paper Submission Deadline:	April 18, 2016
Final Decisions Announced:	May 13, 2016
Camera Ready Deadline:	June 15, 2016
Event Date:	Early July, 2016

## Awards

There will be best oral and poster presentation awards, sponsored by Microsoft. We are also planning on student travel awards.

## Contact

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