BOOM 2018

3RD INTERNATIONAL WORKSHOP ON BIOMEDICAL INFORMATICS WITH OPTIMIZATION AND MACHINE LEARNING

IN CONJUNCTION WITH
27TH INTERNATIONAL JOINT CONFERENCE ON ARTIFICIAL INTELLIGENCE
(IJCAI), JULY 2018, STOCKHOLM, SWEDEN
AS PART OF THE FEDERATED AI MEETING (FAIM)

Important Dates

Abstract Submission Deadline: May 20, 2018
Final Decisions Announced: June 1, 2018
Camera Ready Deadline: June 15, 2018
Event Date: mid July, 2018

Website: http://www.ijcai-boom.org

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.
- mHealth Applications, including the use of mobile apps and wearable sensors for health management and wellness promotion.
- Cyber-Informatics Applications, including the use of social media data mining and natural language processing for clinical insight discovery and medical decision making.

Call for Papers

The FAIM BOOM'18 workshop solicits:

(1) **full papers** that describe original research work that have not been published before, which will be published in a partner journal (under negotiation).

See last year's special issue of EURASIP Journal on Advances in Signal Processing (**JASP**): https://www.springeropen.com/collections/bioml2017

(2) **short abstracts (1-2 pages including references)** that either highlight significant works that have been published or accepted recently or report unpublished research findings, which will be included in workshop online proceedings (unarchived).

There is also an opportunity to be invited as a co-author of an Elsevier book chapter. Details will be updated soon.

Format and submission instructions
http://www.ijcai-boom.org/submission.html

Organization Committee

Yang Shen, Texas A&M University
Zhangyang Wang, Texas A&M University
Shuai Huang, University of Washington
Jiayu Zhou, Michigan State University
Qing Ling, Sun Yat-Sen University, China

Contact: ijcai1boom@gmail.com

Invited Speaker (TBA)

Program Committee (See Website).

Awards

Best paper awards (long and short)