Call for Papers

2017 IEEE International Conference on Bioinformatics and Biomedicine (BIBM17)

The IEEE International Conference on Bioinformatics and Biomedicine (BIBM) has established itself as the premier research conference in bioinformatics and biomedicine. IEEE BIBM 2017 provides a leading forum for disseminating the latest research in bioinformatics and health informatics. It brings together academic and industrial scientists from computer science, biology, chemistry, medicine, mathematics and statistics.

We solicit high-quality original research papers (including significant work-in-progress) in any aspect of bioinformatics, genomics, and biomedicine. New computational techniques and methods and their application in life science and medical domains are especially encouraged. Relevant topics include but are not limited to:

1. **Bioinformatics and Computational Biology of Molecular Structure, Function and Evolution**
   a. Evolution, Phylogeny, Comparative Genomics
   b. Protein/RNA Structure, Function and Interactions
   c. 3D genome

2. **Computational Systems Biology**
   a. Pathway Analysis
   b. Biological Network Analysis
   c. Interactomics
   d. Gene Expression and Regulation
   e. Post-translational Modifications
   f. Alternative Splicing
   g. Non-coding RNA Analysis

3. **Next Generation Sequencing and High-throughput Methods**
   a. Next-Gen Sequencing
   b. Microarray Data Analysis
   c. SNPs and Haplotype Analysis, GWAS, Personalized Genomics
   d. Transcriptomics
   e. Metabolomics
   f. Proteomics
   g. Epigenomics

4. **Cheminformatics and pharmacogenomics**
   a. Cheminformatics and Computer-Aided Drug Design

b. Molecular Docking
c. Molecular Modeling
d. Pharmacogenomics

5. **Cross-Cutting Computational Methods and Bioinformatics Infrastructure**
   a. Biomedical Text Mining and Ontologies
   b. Biological Data Mining and Visualization
   c. Computational Modeling and Data Integration
   d. AI and Machine Learning Methods in Bioinformatics and Medical Informatics
   e. Big Data Analytics in Biology and Medicine
   f. High Performance Computing

6. **Medical Informatics and Bioinformatics of Disease**
   a. Biomedical Intelligence, Clinical Data Analysis, and Electronic Health Record
   b. Precision Medicine
   c. Biomedical Signal/Image Analysis
   d. Genome-Phenome Analysis
   e. Biomarker Discovery
   f. Pathogen bioinformatics

7. **Healthcare Informatics**
   a. Healthcare Knowledge Representation & Reasoning
   b. Health Data Acquisition, Analysis and Mining
   c. Healthcare Information Systems
   d. Consumer Informatics
   e. Clinical Decision Support and Informatics

INDUSTRIAL Track
The Industrial Track solicits papers describing implementations of Bioinformatics and Biomedicine solutions relevant to industrial settings. The focus of industry track is on papers that address the practical, applied, or pragmatic or new research challenge issues related to the use of bioinformatics and biomedicine technologies in industry. We accept full papers (up to 8 pages), extended abstracts (2-4 pages), as well as short abstracts (1 page, 500 words).

● **Journal special issues:** IEEE BIBM has a tradition to publish selected papers as special issues in highly respected journals. We will publish the special issues publications with 8 journals: ***IEEE Transactions on NanoBiosceince, IEEE/ACM Transactions on Bioinformatics and Computational Biology, International Journal of Data Mining and Bioinformatics***, ***Proteomics, BMC Genomics, BMC Bioinformatics, BMC Complementary and Alternative Medicine, Journal of Network Modeling and Analysis in Health Informatics and Bioinformatics, Methods*** (In the past BIBM conference, the number of special issues are: IEEE BIBM 2016 – 9 special issues, IEEE BIBM 2015 – 9 special issues, BIBM 2014 – 10 special issues, BIBM 2013 –9 special issues, BIBM 2012—8 special issues, BIBM 2011—8 special issue, BIBM 2010—7 special issues, BIBM 2009—4 special issues; BIBM 2008—4 special issues)

- **Student Travel Award:** BIBM 2017 will offer **as many as possible student travel awards** to student authors (including post-doc). We have received a NSF grant for student travel award and expect to offer 25-30 student travel awards. (**BIBM 2016 – 36 student travel award, BIBM 2015 – 30 student travel award**, **BIBM 2014—25 student travel awards**, **BIBM 2013—40 student travel awards**, *BIBM 2012 -30 student travel awards*, *BIBM 2011—28 student travel awards*, *BIBM 2010-22 student travel awards, BIBM 2009—16 student travel awards*)

Paper Submission:

Please submit a full-length paper (up to **8 page IEEE 2-column format**) through the online submission system (you can download the format instruction here (http://www.ieee.org/conferences_events/conferences/publishing/templates.html).

Electronic submissions (in PDF or Postscript format) are required. Selected participants will be asked to submit their revised papers in a format to be specified at the time of acceptance.

Online Submission:

https://wi-lab.com/cyberchair/2017/bibm17/index.php

Important Dates:

Electronic submission of full papers: Aug. 1, 2017
Notification of paper acceptance: Sept 29, 2017
Camera-ready of accepted papers: Oct 13, 2017
Conference: Nov 13-16, 2017