

Call for Papers

2015 IEEE International Conference on Bioinformatics and Biomedicine (BIBM15)

<http://cci.drexel.edu/ieeebibm/bibm2015/>
Nov 9-12 2015, Washington, DC, USA

The IEEE International Conference on Bioinformatics and Biomedicine (BIBM) has established itself as the premier research conference in bioinformatics and biomedicine. IEEE BIBM 2015 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 and biomedicine. *New computational techniques and methods in machine learning; data mining; text analysis; pattern recognition; knowledge representation; databases; data modeling; combinatorics; stochastic modeling; string and graph algorithms; linguistic methods; robotics; constraint satisfaction; data visualization; parallel computation; data integration; modeling and simulation and their application in life science domain* are especially encouraged. Relevant topics include but are not limited to:

1. Genomics and Molecular Structure, Function and Evolution
 - a. Next-Gen Sequencing and Metagenomics
 - b. Evolution, Phylogeny, Comparative Genomics
 - c. SNPs and haplotype analysis, GWAS
 - d. Protein/RNA Structure, Function and Interactions
2. Computational Systems Biology
 - a. Transcriptomics - Microarray Data Analysis
 - b. Gene Regulation, Alternative Splicing, Network/Pathway Analysis
 - c. Proteomics, PTMs, Metabolomics
 - d. Epigenomics, non-coding RNA analysis, DNA methylation analysis
3. Medical Informatics and Translational Bioinformatics
 - a. Biomedical Intelligence, Clinical Data Analysis, and Electronic Health Record
 - b. Biomedical Signal/Image Analysis
 - c. Genome-Phenome Analysis
 - d. Biomarker Discovery
4. 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. High Performance Computing
5. Healthcare Informatics
- a. Healthcare knowledge representation & reasoning
 - b. Health data acquisition, analysis and mining
 - c. Healthcare information systems
 - d. 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 NanoBioscience*, *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 is: 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 2015 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 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**)

Conference Co-Chairs:

Prof. Bin Ma, University of Waterloo, Canada
 Prof. Sanguthevar Rajasekaran, University of Connecticut, USA

Program Co-Chairs:

Prof. Jun (Luke) Huan, University of Kansas, USA
 Prof. Satoru Miyano, University of Tokyo, Japan
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Prof. Illhoi Yoo, University of Missouri at Columbia, USA

Dr. Jiayu Zhou, Samsung, USA

BIBM Steering Committee Chair:

Prof. Xiaohua Tony Hu, Drexel University, USA, xh29@drexel.edu

Area Chairs

1. Genomics and Molecular Structure, Function and Evolution

Xiang Zhang, Case Western University, USA

Mohammad Al Hasan, IUPUI, USA

2. Computational Systems Biology

Xuwen Chen, Wayne State University, USA

Fangxiang Wu, University of Saskatchewan, USA

3. Medical Informatics and Translational Bioinformatics

Hongfang Liu, Mayo Clinics, USA

Huiru Zheng, University of Ulster, UK

4. Cross-Cutting Computational Methods and Bioinformatics Infrastructure

Zoran Obradovic, Temple University, USA

Julie Dickerson, Iowa State, USA

5. Healthcare Informatics

Jimeng Sun, Georgia Tech, USA

Karrem Chandankumar, Wayne State University, USA

Paper Submission:

Please submit a full-length paper (upto **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/2015/bibm15/scripts/submit.php?subarea=B>

Important Dates:

Electronic submission of full papers: July 5, 2015

Notification of paper acceptance: Sept 18, 2015

Camera-ready of accepted papers: Oct 2, 2015

Conference: Nov 9-12, 2015