



2nd International Workshop on Data Mining in Bioinformatics (DMB 2007)

With IEEE/WIC/ACM WI-IAT-BIBM 2007 & IEEE GrC 2007

MOTIVATION

Data Mining deals with the use of data analysis techniques and methodologies in the design, development and assessment of data and information systems for biomedical computing. The goal of this workshop is to share research solutions using data mining approaches to problems of today's biomedical systems and to identify new issues and directions for future research in biomedical data mining.

Techniques and Methodologies proposed in this workshop will help addressing two major challenges to incorporate this vast biological knowledge into the data mining cycle: (i) designing efficient the data mining frameworks; and (ii) adapting existing data mining algorithms to understand constantly varying and changing biomedical data. In this workshop we hope to present to the audience, the state-of-the-art frameworks for bringing the background biomedical knowledge into the pattern recognition task for biomedical data.

THEMES

In DMB 2007, complementary to main themes of IEEE BIBM 2007, special focus is aimed at looking on the evolving areas of interest for Application of Data Mining in Bioinformatics, namely Semantic Biomedicine, Biomedical Privacy and Security, Biometrics and Health Informatics. Thus as part of DMB 2007, there are four special tracks on:

1. Biomedical Data Mining: Theory and Applications
2. Semantics in Biomedicine
3. Biomedical Privacy, Security and Biometric Authentication
4. Health Informatics

IMPORTANT DATES

August 10, 2007	Paper Submission Deadline
September 10, 2007	Notification of acceptance
September 17, 2007	Final camera-ready paper due
November 2 - 5, 2007	Workshop Days

TOPICS

Authors are invited to submit original papers to the workshop exploring data mining theories, techniques, and applications for Bioinformatics. Papers are invited (but not limited) to the following topics:

- **Biomedical Data Mining Theory and Applications**
 - Genomics and Proteomics
 - Comparative Genomics
 - Microarray Data Analysis
 - Protein/RNA Structure Prediction
 - Phylogenetics
 - Drug Design
 - Feature selection and pattern discovery in biological data
 - Biomedical Literature Mining
 - System Biology and Pathways
 - Data mining applications in bioinformatics, biomedicine, health care and other biomedical domain areas
- **Semantics in Biomedicine**
 - Conceptual Models for Biological and Medical Data
 - Modeling of Biochemical Pathways
 - Biological Data Visualization
 - Biomedical Ontologies
 - Biomedical Data Engineering using Ontologies
 - Biological Database Management
 - Biomedical Data Warehousing
 - Interoperation of Biomedical Databases
 - Biomedical Query Processing, Query Optimization, and Information Retrieval
- **Biomedical Data Privacy and Security**
 - Trusted Systems for Biomedical Data Frameworks
 - Secure e-science protocols and web services
 - Soft Computing methods in biomedical privacy and security
 - Management of emerging health care technologies
- **Health Informatics**
 - Electronic Health Records
 - Clinical Assessment and Patient Diagnosis
 - Disease Control and Prevention
 - Medical informatics
 - Clinical decision support design, development and implementation
 - e-health and m-health
 - Virtual health technologies

PAPER SUBMISSION

Please submit a full length paper (not exceeding 5000 words) through the online submission system (http://kis-lab.com/cyberchair/bibm07/scripts/ws_submit.php). Please click on the workshop's name to submit a paper. 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. The Best papers selected from the DMB 2007 & IEEE BIBM 07 will be published as special issues in related IEEE Transactions and other journals such as IJDMB, CSSE, and IJBRA etc. Authors will be notified of acceptance after a review process by two independent experts.

For further questions, please contact technical program chair: dmb07@swbio.org

ORGANIZATION

General Chairs:

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- **Tony Hu** (Drexel University, USA)
- **Yi Pan** (Georgia State University, USA)

Special Track Chairs:

- **Biomedical Data Mining** – Tony Hu
- **Semantics in Biomedicine** – Amandeep S. Sidhu
- **Biomedical Privacy, Security and Biometric Authentication** – Farookh Hussain
- **Health Informatics** – Maja Hadzic