



CBMS 2007

The 20th IEEE International Symposium on
Computer-Based Medical Systems

SPECIAL TRACK

Grids for Biomedicine and Bioinformatics

CALL FOR PAPERS

Biomedicine and Bioinformatics are quickly evolving into a research field that encompasses the use of all kinds of biomedical information, from genetic and proteomic data to image data associated with particular patients in clinical settings. Biomedical Informatics comprises the fields of Bioinformatics (e.g., genomics and proteomics) and Medical Informatics (e.g., medical image analysis), and deals with issues related to the access to information technology in medicine, the analysis of genomics data, security, interoperability and integration of data-intensive biomedical applications.

What is missing today is:

- the full integration of these methods and technologies to enhance all phases of health care, including diagnosis, prognosis, etc.;
- the dissemination of such methods in the clinical practice, whenever they are developed, deployed and maintained.

The grid paradigm offers CPU and data handling capabilities and allows users and laboratories to share their facilities (computing and data storage resources, instruments, knowledge, etc.) through high bandwidth networks between dynamically formed Virtual Organizations.

Grid middleware currently offers basic services for Grid management, and application development and deployment. To face the complexity of novel, cooperative, distributed Health and Bioinformatics applications, new specialized Grid services have to be developed: in such a way Grids can be deployed to address the needs of the biomedical community.

Grid middleware, used as the integrative middleware, has matured from its prototypical state to an expanding network of Grid services. With that, it has started to be enthusiastically embraced by the Biomedical Informatics community for its use in complex interactive computational environments that provide integrated facilities to scientists for ubiquitous computation, efficient data access, and high quality visualization, generally known as Problem Solving Environments (PSEs).

The main goal of the track is to discuss well-known and emerging bio data-intensive systems in the context of Grids and to analyse technologies and methodologies useful to develop such systems in these environments.

TOPICS OF INTEREST include, but are not limited to:

- Grid Infrastructures for Biomedical Data Analysis and Management
- Problem Solving Environments for Biomedical and Bioinformatics Applications
- GRID based application in life science
- Workflow application for complex analysis processes
- High Throughput for in-silico virtual screening
- Grid Computing Infrastructures, Middleware and Tools for Healthcare
- Grid Computing Biomedical Services
- Collaboration Technologies
- Databases and the Grid in the Biomedical Field
- Extracting Knowledge from Biomedical Data Grids
- Data Grids for Bioinformatics
- Grid Architectures for Interactive Biomedical Applications
- Grid Architectures and Solutions for Data-Intensive Biomedical Applications

- Grid-based Biomedical Informatics Interoperability
- Security in Biomedical Data Grids
- Semantic Grids for Multimedia Biomedical Data
- Ubiquitous Access to Grid-enabled Applications in Biomedicine
- High-performance Computing for Data-Centric Biomedical Applications
- Grid-based Visualization of Biomedical Data
- Integration of Grid-enabled Applications into Clinical Practice

IMPORTANT DATES

February 15, 2007

Submission of (6-page, maximum) paper

March 15, 2007

Notification of acceptance

April 15, 2007

Final camera-ready paper due

April 15, 2007

Pre-registration deadline

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