

CALL FOR PAPERS - IEEE-EMBS 2004  
26TH ANNUAL INTERNATIONAL CONFERENCE  
IEEE ENGINEERING IN MEDICINE AND BIOLOGY SOCIETY

**Theme 6: Bioinformatics and Computational Biology**

San Francisco, USA, September 1-5, 2004

<http://www.ucsfresno.edu/embs2004/>

The annual conference of IEEE Engineering in Medicine and Biology Society (EMBS)2004 provides a general forum for disseminating the latest developments in bioinformatics. The Bioinformatics and Computational Biology Theme of EMBS'04 brings together researchers and students from bioengineering, computer science, mathematics, statistics, molecular biology, and medicine. The scope includes computational problems in the analysis and understanding of biological information.

Relevant topics include: protein structure, protein function, genomics, comparative genomics, proteomics, molecular sequence analysis, evolution and phylogenetics, molecular interactions, molecular structure, structural bioinformatics, gene expression, gene network, microarray analysis, metabolic pathways, regulatory networks, systems systems biology.

Computational techniques of interest include: pattern recognition, machine learning, combinatorics, string and graph algorithms, data mining, text analysis, knowledge representation, databases, stochastic modeling, Bayesian modeling, mathematical programming, visualization, high performance computing, robotics, constraint satisfaction,

**Technical Tracks and Chairs:**

- Algorithm and software system for bioinformatics:  
Chairs: Bhaskar DasGupta (U Illinois at Chicago), Dong Xu (U Missouri)
- Computational genomics and proteomics:  
Chairs: Vladimir Pavlovich (Rutgers), Chiara Sabatti (UCLA), Metin Akay (Dartmouth)
- Regulatory elements, gene networks and simulation of cell:  
Chairs: Hao Li (UCSF), Ajay Jain (UCSF)
- Gene expression and microarray analysis:  
Chairs: Yang Dai (U Illinois at Chicago), T.M. Murali (Virginia Tech), Y.T. Zhang (CU Hong Kong)
- Structural and functional bioinformatics:  
Chairs: Zhiping Weng (Boston U), Jie Liang (U Illinois at Chicago)
- Novel technologies for computational biology and bioinformatics  
Chairs: David Fenstermacher (U Penn), Irena Cosic (RMIT, Australia)

Research papers are solicited in all of the above areas. Attendees are invited to submit papers for presentation at EMBS04. Submitted papers should be a maximum of 4 pages. The IEEE EMB Society also coordinates a paper competition and a design competition for EMB Student Members funded through the generous support of the Whitaker Foundation. See conference website for details.

See [http://www.ucsfresno.edu/embs2004/paper\\_submission\\_info.htm](http://www.ucsfresno.edu/embs2004/paper_submission_info.htm) for submission guidelines.

**Important Dates of Deadline:**

April 9, 2004	June 1, 2004	July 1, 2004	August 2, 2004
Paper submissions	Notification of acceptance	Early registration	Hotel reservation

**Theme Co-chairs:**

Metin Akay (Dartmouth), Jie Liang (U Illinois at Chicago), and Robert Kearney (McGill U).