

CALL FOR PAPERS

Special Issue on Bio-Grid

Research in life-sciences increasingly relies on globally distributed information and knowledge repositories. The quality and performance of future computing and storage infrastructure in support of such research depends heavily on the ability to exploit these repositories, to integrate these resources with local information processing environments in a flexible and intuitive way, and to support information extraction and analysis in a timely and on-demand manner.

Modern Grid technology represents an emerging and expanding instrumentation, computing, information and storage platform that allows geographically distributed resources, which are under distinct control, to be linked together in a transparent fashion. The power of the Grids lays not only in the aggregate computing ability, data storage, and network bandwidth that can readily be brought to bear on a particular problem, but also on its ease of use. After a decade's research effort, Grids are moving out of research laboratories into early-adopter production systems, such as the Computational Grid for certain computation-intensive applications, the Data Grid for distributed and optimized storage of large amounts of accessible data, as well as the Knowledge Grid for intelligent use of the Data Grid for knowledge creation and tools to all users.

The Call for Papers focuses on the development, deployment and evaluation of Grid technologies in support of life-science research and practices. Specifically, the call comprises of all aspects of grid-enabled infrastructures, test beds, management and security in support of areas including, but not limited to, the following:

- Computational Genomics
- Computational Proteomics
- Biomedical Information Retrieval
- Biomedical Modeling and Simulation
- Biomedical Image Processing and Simulation
- Distributed Medical Database Management and Integration
- Integration of Biological Information
- Mining and Visualization of Biomedical Data
- Grid-Based Approaches to Systems Biology
- Tele-systems for Diagnostic, Prognostic, and Therapeutic Applications
- Health Data Storage and Retrieval
- Social Health-care
- Pharmaceuticals and Clinical Trials
- Computerized Epidemiology
- Collaborative and Proprietary Health-Grids

In addition to these focus areas, papers reporting on original results of developing, deploying and evaluating Grid techniques in novel topics in bioinformatics, clinical informatics, bioimaging and public health informatics are also solicited.

GUEST EDITORS

Chun-Hsi Huang, PhD
Department of Computer
Science and Engineering
University of Connecticut
Storrs, CT 06269, USA
huang@cse.uconn.edu

Akihiko Konagaya, PhD
Advanced Genome
Information Technology
Research Group
RIKEN Genomic Sciences
Center, Japan
kona@gsc.riken.jp

Vincenzo Lanza, MD
Anesthesia Department
Buccheri La Ferla Hospital
Fatebenefratelli, Palermo,
Italy
lanza@unipa.it

Peter Sloot, PhD
Faculty of Sciences,
Section Computational
Science
University of Amsterdam
Kruislaan 403, 1098 SJ
Amsterdam, The
Netherlands
sloot@science.uva.nl

SUBMISSION OF MANUSCRIPTS

Manuscripts must be prepared according to the format of the IEEE Transactions (see: www.vtt.fi/virtual/proj2/titb) and electronically submitted through the web based Manuscript Central (<http://embs-ieee.manuscriptcentral.com/>). When submitting, authors are requested to indicate that the paper is intended for the Bio-Grid Special Issue.

DEADLINE FOR SUBMISSIONS: Oct. 31, 2006.

For any further questions, please contact the Guest Editors or the Editor-in-Chief:

Dr. Niilo Saranummi, Research Professor
VTT Technical Research Centre of Finland
Pervasive Health Technologies
P. O. Box 1300 FIN-33101 Tampere, FINLAND
Tel: + 358-20-722 3300, Fax: + 358-20-722 3380
niilo.saranummi@vtt.fi