
CALL FOR PAPERS

Workshop on Computing and Communications from Biological Systems:

Theory and Applications

to be held in conjunction with BIONETICS 2007

(<http://www.bionetics.org/>)

Budapest, Hungary 10-12 December 2007

in cooperation with

IPJS SIGMPS (<http://www.ipsj.or.jp/sig/mps/>) and

IPJS SIGBIO (<http://www.ipsj.or.jp/katsudou/sig/sighp/bio/index.html>)

The Workshop on Computing and Communications from Biological Systems: Theory and Applications solicits papers addressing fundamental information theory of biological computing and communications (e.g., neural information processing, cell-cell communications, signal transduction, intracellular material transport). Such theory may be used to understand, quantify, and maximize information processing capabilities of biological systems. The workshop also solicits papers presenting novel applications that become feasible by exploiting biological systems.

The specific topic areas of interest include, but are not limited to, the following:

- Modeling and simulations of computing and communications in biological systems
- Biologically inspired computing theory (e.g., membrane computing and P-systems)
- Biologically inspired signal processing and biomedical engineering
- Information theory for biological systems
- Coding theory of biological communications
- Novel information processing paradigms using biological materials, cellular components and living cells
- Tissue-based computing, cellular computing, chemical computing and field computing
- Molecular computing, molecular communication and molecular electronics
- Bio-nanotechnology and material sciences for unconventional information processing
- Nanoscale computing and communications for nanomedicine and other novel applications
- Noise handling of biological systems and its applications

- Probabilistic computing and communications of biological systems and its applications

The workshop is being planned as a half-day workshop and is open to BIONETICS 2007 attendees.

Submission guidelines

Interested authors are encouraged to submit full papers of up to 6 pages or short papers of 3 pages. Papers must be in accordance with ACM conference proceedings format. Papers must be electrically submitted through COCUS (<http://cocus.create-net.it/>). More detailed information about paper submission is available on the submission guideline page of BIONETICS 2007 (<http://www.bionetics.org/submission.shtml>). All submitted papers will be reviewed by workshop TPC members.

The workshop proceedings will be published by ACM and IEEE, and all accepted papers will appear in ACM and IEEE digital libraries.

Important dates

- Paper submission deadline: 9/16 (Sun)
- Notification of acceptance: 9/30 (Sun)
- Camera-ready manuscripts due: 10/16 (Tue)

Workshop chairs

- Jian-Qin Liu (liu@nict.go.jp)
NICT (National Institute of Information and Communications Technology), Japan
- Tadashi Nakano (tnakano@ics.uci.edu)
University of California, Irvine, USA

Advisory chairs

- Gheorghe Paun, Romanian Academy, Romania
- Kazuo Joe, Nara Women's University, Japan

TPC members

- Wei Cheng, High Education Press, China
- Junping Du, Beijing University of Posts and Telecommunication, China
- Andrew W. Eckford, York University, Canada

- Csanad Imreh, Szeged University, Hungary
- Satoshi Kobayashi, University of Electro-Communications, Japan
- Takahiro Nitta, Gifu University, Japan
- Marion Oswald, Technical University of Austria, Austria
- Yasubumi Sakakibara, Keio University, Japan
- Jianwei Shuai, Xiamen University, China
- Martin Stetter, Siemens AG, Germany
- Chen Sun, ATR (Advanced Telecommunications Research Institute International),
Japan
- Yasuhiro Suzuki, Nagoya University, Japan