

2009 International Conference on Intelligent Computing (ICIC'09)

(<http://www.ic-ic.org/2008/index.htm>)

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Paper Submission Deadline: April 10, 2009

Session Title: **Special Session on Computational Analysis and Data Mining in Biological Systems**

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The past decade has witnessed an exponential growth of vast amount of biological data including genomic sequences, gene annotations, expression and regulation, protein-protein interactions and biological pathways. We have also seen a wide-spread proliferation of biology-oriented databases, algorithm and computational tool developments, and computational analysis and data mining. This trend will continue, and very likely accelerate, thanks to the revolutionary high throughput technologies of genomics, transcriptomes, and proteomics. This session will address the current research topics on these data using an intelligent computing, integrative, or large scale data analysis approach. Topics of interest include, but are not limited to:

- Sequence analysis in biological systems
- Algorithms on sequence alignment and assembly
- Motif and regulatory elements finding
- Gene prediction, identification and gene pattern discovery
- Gene expression analysis
- Genetic variation including single nucleotide polymorphisms and copy number variation
- Comparative genomics and genome evolution
- Theory and applications in phylogeny and population genetics
- RNA, DNA and amino acid structure and pattern analysis
- Ontology-driven biomedical systems
- Gene network and pathway analysis
- Biological data mining
- Biological data integration
- Algorithms, computational tools and databases for the topics above

Prospective authors are invited to submit full-length papers by the submission deadline (April 10, 2009). The authors are encouraged, but not required, to discuss with session chair before preparation of their papers. The submission of a paper implies that the paper is original and has not been submitted to elsewhere for review or copyright protected and **will be presented by one of the author(s) in ICIC 2009 if accepted**. All papers should be submitted electronically via Online Electronic Submission System at <http://www.ic-ic.org/icg/index.asp>. The initial submissions are acceptable in the formats of PDF, Word, or Postscript. The accepted papers will be published by the Springer Verlag, including Lecture Notes in Computer Sciences (LNCS)/Lecture Notes in Artificial Intelligence (LNAI)/Lecture Notes in Bioinformatics (LNBI)/ Communications in Computer and Information Science (CCIS). A small number of selected high-quality papers will be extended for possible inclusion in several main-stream international journals.