

Computational Intelligence Techniques in Bioinformatics

(A special issue for the Artificial Intelligence in Medicine journal)

Research papers are sought on topics that include (but are not limited to):

- Mathematical immunology modeling and discovery
- Computational methods for modeling and simulation of bioinformatics systems like receptors and regulatory network
- Signal processing for genomics problems
- Data mining and pattern recognition methods for functional genomics
- Control theory and systems theory techniques for bioinformatics
- Models for cellular metabolism and inter-cellular signaling
- Modeling and analysis of bioinformatics systems
- Large-scale microarray gene expression data analysis / recognition / classification
- Novel architecture and implementation methods for bioinformatics e.g. large-scale functional genomics
- Novel hardware/software approaches to genome- and proteome-scale modeling
- Nanotechnology in bioinformatics
- Analysis of protein interaction with other cellular constituents
- Comparative and quantitative proteomics
- Management of genomics and proteomics data
- Post-translational modification analysis
- Structural proteomics

Papers should be well written to allow readers not familiar with the field of Bioinformatics to understand its problems and challenges.

We plan to have the special issue ready for publication in six months. Three referees will review each paper. The deadline for submission of the papers is October 30, 2004. Interested parties may contact any of the guest editors with questions or to obtain author instructions.

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