



Conference on Data Mining, Systems Analysis and Optimization in Neuroscience

February 15-17, 2006

University of Florida

Gainesville, FL

Sponsored by DIMACS, National Science Foundation, UF Engineering, UF Genetics Institute

Current experimental neuroscience methods have resulted in massive amounts of data, but traditional data-processing and quantitative methods are not sophisticated enough to exploit this new flood of information. The purpose of this conference is to explore new methods in experimental and quantitative neuroscience. There is an increasing number of modern research efforts in data mining, systems analysis and optimization research to advance methods needed to process the large spatial and temporal data arising in experimental and quantitative neuroscience. This conference is designed to bring together scientists, engineers, neurobiologists and clinicians, with scientific interest and expertise in the human brain, in an attempt to share knowledge, ideas, and scientific methodology. This conference will result in lively discussions of the cross-disciplinary research and open up a new question: How do we go from the gigabytes of experimental data that we now have to concise conclusions about the function of the brain? The answer to this question will revolutionize neuroscience research and give us a greater understanding of brain function.

A major area of interest lies in the study of how neuronal circuitries of the brain support its cognitive and functioning capacities at a descriptive level of the molecular mechanisms of synaptic plasticity. Advances in the fields of signal processing, statistics, data mining and optimization have made it possible to discover and investigate complex patterns in the vast amount of information being generated by neuroimaging and neurophysiological signals.

ORGANIZERS:

W. Art Chaovalitwongse, Rutgers Univ.
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ADVISORY COMMITTEE:

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Hoang Pham, Rutgers Univ.
Onur Seref, Univ. of Florida
Oleg A Prokopyev, Univ. of Florida

PARTICIPANTS:

Researchers and practitioners working in related areas are invited to submit abstracts for possible conference presentations. Those who submit abstracts will be notified regarding whether a presentation based on the abstract can be scheduled for the conference. Accepted abstracts will be printed in the conference program and speakers will have approximately thirty minutes to present their material. The conference facilities will have projectors for presenting material from a laptop computer, as well as overhead projectors.

IMPORTANT DATES:

Session Proposals: December 15, 2005

Submission Deadlines: December 31, 2005

To submit an abstract or propose a session, please email the session title or presentation title and abstract to W. Art Chaovalitwongse (wchaoval@rci.rutgers.edu). Full papers presented at the conference will be considered for publication in special issues of international journals.

CONTACT INFORMATION:

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