International Conference on Contemporary Computing

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JAYPEE INSTITUTE OF INFORMATION TECHNOLOGY UNIVERSITY

Call for Papers for a Special Session on Computational Finance

Current chaos in the finance market even after government intervention in USA and other countries has brought down the global economy to a great extent. Some of the root causes of the problems are: the greed and competition have made many money managers to float complex financial instruments (credit default swap, collateralized debt obligation etc) without sound understanding of the actions and reactions of these instruments in the dynamic market environment; sub-prime mortgage boom in USA; and financial institutions failing to constantly analyze the risk involved in their business across the globe. Incorrect reporting system about the financial health of an organization further complicates these problem. In addition, increasing competition in the market drives the research for faster, and more accurate solutions for problems in finance that are complex and computationally intensive. Options are one of the common derivatives in the market. Pricing options is the backbone of major research problems in finance such as value at risk (VaR), portfolio optimization and complex derivatives. This drive has created a highly challenging area of research called computational finance.

This special session seeks research works that address problems ranging from stock price prediction to mobile commerce, from option pricing to portfolio optimization and value at risk. Research employing advanced scientific techniques with contemporary computing infrastructures that simplify the finance problem computationally and make it easier to understand the behavior of the financial instruments are most welcome. The research results should show ways to help speed up the decision making process for investments and hence could pave ways to avoid potential financial losses for individuals and for institutions. Also, applications of this knowledge to other areas such as Grid Resources Management, Energy Market are highly welcome. Topics of interest include but are ***not*** limited to the following:

Algorithms for problems such as stock predictions, option pricing and risk management etc
Numerical Techniques and their implementations on contemporary computer architectures
Nature or Biologically Inspired Algorithms
Molecular simulation in finance
Engineering approaches (e.g. Fast Fourier Transform, Wavelet Transform)
Real time pricing and **Data mining in finance**

Paper Submission: Prospective authors are invited to submit papers of no more than **twelve pages** including results, figures, and references; submission details can be found on the submission website: http://www.jiit.ac.in/jiit/ic3/ic3-2009/ic32009.html.

Location: Jaypee Institute of Information Tech. University, A-10, Sector 62, Noida-201307, U.P., India.

For further information regarding the session, please contact: **Session Chair**: **Dr. Ruppa K. Thulasiram,** Computer Science, University of Manitoba, Winnipeg, Canada and **Dr. Girish K. Jha**, Agricultural Economics, Indian Agricultural Research Institute, New Delhi, India. Email: tulsi@cs.umanitoba.ca or girish08@cs.umanitoba.ca or girish.stat@gmail.com

Conference General Co-Chairs: Dr. Sartaj Sahni, University of Florida, FL, USA and Sanjay Goel, Jaypee Institute of Information Technology University, India