

# **2008 Workshop on High Performance Computational Finance**

**Austin, Texas, USA  
16 November 2008**



**IEEE Catalog Number: CFP0828F-PRT  
ISBN: 978-1-4244-2911-0**

# TABLE OF CONTENTS

## KEYNOTE ADDRESSES

<b>Locality-based Computing</b> .....	1
<i>D. Cohen</i>	
<b>HPC in Financial Services</b> .....	2
<i>S. Ross</i>	

## INVITED TALKS

<b>Low Latency Requirements for Financial Services Industry</b> .....	3
<i>M. Kohari</i>	
<b>Challenges of Mapping Financial Analytics to Many-core Architecture</b> .....	4
<i>M. Smelyanskiy</i>	
<b>Leveraging Blue Gene for Commercial Applications</b> .....	5
<i>R. Wisniewski</i>	

## PAPERS

<b>Multi-variate Finance Kernels in the Blue Gene Supercomputer</b> .....	6
<i>D. Daly, K-D. Ryu, J. Moreira</i>	
<b>FPGA Acceleration of Mean Variance Framework for Optimal Asset Allocation</b> .....	13
<i>A. Irturk, B. Benson, N. Laptev, R. Kastner</i>	
<b>Financial Monte Carlo Simulation on Architecturally Diverse Systems</b> .....	21
<i>N. Singla, M. Hall, B. Shands, R. Chamberlain</i>	
<b>"Gridifying" Classification--Monte Carlo Algorithm for Pricing High-Dimensional Bermudan-American Options</b> .....	28
<i>V-D. Doan, A. Gaikwad, F. Baude, M. Bossy</i>	
<b>Stream Processing Performance for Blue gene/P Supercomputer</b> .....	36
<i>G. Dozsa, M. Eleftheriou, T. Inglett, A. King, T. Musta, J. Sexton, R. Wisniewski</i>	
<b>Design and Evaluation of Benchmarks for Financial Applications Using Advanced Message Queuing Protocol (AMQP) Over InfiniBand</b> .....	43
<i>H. Subramoni, G. Marsh, S. Narravula, P. Lai, D. Panda</i>	

## **Author Index**