



Annual Workshop on
Interdisciplinary Computational Science 2007

SCHEDULE

Thursday, March 22, 2007

This Event is
sponsored by:



- 8:00 AM Registration/Continental Breakfast
- 8:30 AM Welcome – Sun Microsystems
- 8:45 AM Dr. Roland Glowinski; University of Houston
Least-squares Methods for the Numerical Solution of fully Nonlinear Elliptic Equations
- 9:30 AM Dr. Ernst Leiss; University of Houston
Some Comments on the Phenomenon of Superlinear Speedup
- 9:55 AM Hatem Ltaief; University of Houston
Fault Tolerant Algorithm for Distributed Computing
- 10:20 AM **BREAK**
- 10:35 AM Dr. Thierry Colin; Université of Bordeaux1
Computational Modeling of Avascular Tumor Growth
- 11:20 AM Dr. Marc Garbey; University of Houston
Image Base CFD: Application to Hemodynamic
- 11:45 PM Dr. Monte Pettitt; University of Houston
Integral Equation Formulations for Biomolecules and Interfaces
- 12:10 PM Conrad Geiger; Sun Microsystems
Research Partnership through Sun's Centers of Excellence
- 12:35 PM **LUNCH**
- 1:45 PM Dr. John Boisseau; University of Texas at Austin
Accelerating Computational Biomedical Research with Advanced Computing
- 2:30 PM Dr. Ioannis Kakadiaris; University of Houston
Cardiovascular Informatics: How to Stop a Heart Attack Before it Happens
- 2:55 PM Dr. David Anderson; University of California-Berkeley
The Future of Volunteer Computing
- 3:40 PM **BREAK**
- 3:55 PM Dr. Ioannis Pavlidis; University of Houston
Looking Through the Human Face
- 4:20 PM Dr. Charles Taylor; Stanford University
Image-based Modeling of Blood Flow in Arteries: Applications to Disease Research and Surgical Planning
- 5:05 PM Christopher Linsenmann; University of Houston
Adaptive Path-Following Primal-Dual Interior Point Methods in Shape Optimization for Stationary Flow Problems
- 5:30 PM Dr. Jun Zhang; University of Kentucky
Diffusion Simulation for Understanding Human Brain Connectivity
- 5:55 PM **END SESSION**
- 6:10 PM **DINNER/Shamrock Room (261AM)**





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- 8:00AM Registration/Continental Breakfast
- 8:30 AM Dr. C.H. Lai; University of Greenwich
On Transformation Methods and Concurrency in Time Domain Computation
- 9:05 AM Dr. Michael Resch; University of Stuttgart
Developing a Virtual Water Power Plant
- 9:50 AM Dr. Shishir Shah; University of Houston
Automated Cell Segmentation using Shape-Classification Model for Cancer Cytology
- 10:15 AM Christoph Picard; University of Houston
Solution Verification in CFD and Heat Transfer
- 10:40 AM **BREAK**
- 10:55 AM Dr. Mary Wheeler; University of Texas at Austin
Computational Environments for Coupling Multiphase Flow, Transport, and Mechanics in Porous Media
- 11:40 AM Dr. David Zimmerman; University of Houston
Navigating Expensive and Complex Design Spaces Using Genetic Algorithms and Neural Networks
- 12:05 AM Dr. Edgar Gabriel; University of Houston
Runtime Optimization of Collective Communication Operations in Scientific Applications
- 12:30 PM **LUNCH**
- 1:40 PM Dr. Edward Jones, Visual Numerics, Inc.
Solving Business Analytic Problems in Java and C using Neural Networks
- 2:05 PM Dr. Michel Bercovier; The Hebrew University of Jerusalem
Modelling and Numerical Simulation of Drug Release: Getting into Real Life
- 2:50 PM Dr. Christof Karmonik; The Methodist Hospital, Houston
Magnetic Resonance Imaging Research – Selected Examples
- 3:15 PM Dr. Catherine Putonti; University of Houston
A New Algorithm for the Discovery of Flexible Patterns
- 3:40 PM **BREAK**
- 3:55 PM Dr. David Keyes; Columbia University
Five Easy Pieces
- 4:40 PM Dr. Pauline Markenscoff; University of Houston
Modeling of Controlled-Release Drug Delivery Systems
- 5:05 PM Dr. Kevin Bassler; University of Houston
Optimization of Transport on Complex Networks
- 5:30 PM Closing Remarks – Dr. C.H. Lai and Dr. Marc Garbey