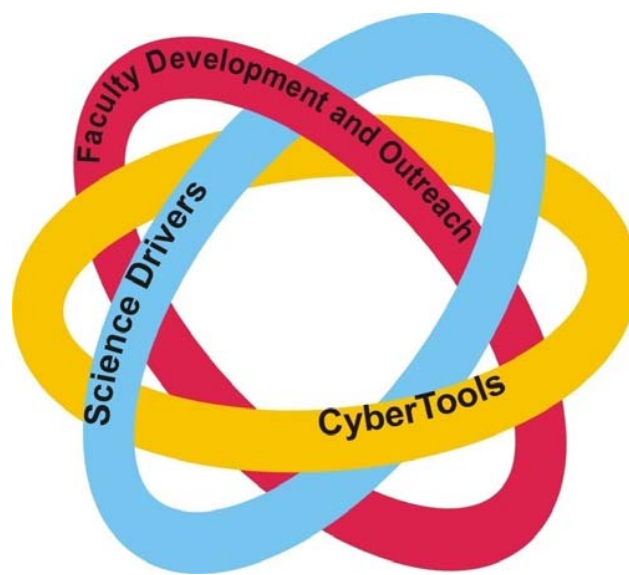# Louisiana Cyberinfrastructure and Science Drivers Symposium

Friday, August 22, 2008

Thomas Jefferson Room, 1-136A, Claiborne Building
1201 N. Third Street, Baton Rouge

Morning Agenda

8:00 – 8:50 a.m.	Coffee & Donuts/Poster setup
8:50 – 9:10 a.m.	Welcoming Remarks & Introductions
9:10 – 9:30 a.m	Overview of Project (Khonsari)

Science Driver (SD) Presentations (including time for Q&A)

9:30 – 10:00 a.m.	Geno/ Small Molecule Sensors (Soper, Carroll, Chen, Emory, Moldovan, Nikitopoulos)
10:00 – 10:30 a.m.	Immunosensors (Cortez, Ali, Bishop, Hamlington, Pillert, Agarwal)
10:30 – 10:50 a.m.	Break/Networking
10:50 – 11:10 a.m.	Biotransport Computations (Acharya, Moldovan)
11:10 – 12:10 p.m.	Poster Presentations
12:10 – 1:00 p.m.	Working Lunch
1:00 – 1:10 p.m.	Announcement of Poster Competition Award(s)

Afternoon Agenda

CyberTools WorkPackage (WP) Presentations and Demonstrations (including time for Q&A)

1:10 – 1:30 p.m.	Overview (Seidel)
1:30 – 2:10 p.m.	Applications and Application Toolkits, WP4 demonstrations (Jha, Kim, Schnetter, Tyagi)
	Demo 1: Fluid Flow using Multipatch Solvers in Cactus *Demo 2: Visualizing the BEM Code* *Demo 3: Distributed Replica-Exchange Using SAGA*
2:10 – 2:40 p.m.	Scheduling and Data Services, WP1 demonstrations (Kosar, Bishop, Bahsi, Wang, Dua, Brener)
	Demo 1: End-to-end Workflow Management *Demo 2: Distributed Data and Retrieval*
2:40 – 3:10 p.m.	Visualization, WP3 demonstrations (Ullmer, Hutanu, Amatya, Ge, Iyengar)
	Demo 1: Remote Visualization
3:10 – 3:50 p.m.	Break
3:50 – 4:15 p.m.	Outreach (Soper, Cortez, Allen, Ullmer)
4:15 – 4:30 p.m.	Evaluation/Assessment (Ramsey, Magee-Brown)
4:30 – 5:00 p.m.	Final Discussion (ERB)

External Review Board Members

Mr. James Hoehn, Executive Director, EPSCoR/IDeA
Foundation, Washington, DC

Dr. Ron Hutchins, Associate Vice-Provost for Research and
Technology and Chief Technology Officer, Georgia Institute
of Technology

Dr. Vince McKoy, Professor of Chemistry at the California
Institute of Technology

Dr. Harold Silverman, Senior Vice Provost, State University
of New York System

Dr. Valerie Taylor, Professor and Department Head,
Computer Science, Texas A&M University.

Graduate Student Posters

Louisiana State University

João Abecasis "Enabling Distributed Applications with SAGA"

Raghava Alapati "Application of Molecular Dynamic Simulation for Transport across Cellular Interfaces"

Vinay C. Amatya "Distributed Visualization"

Alborz Amirsadeghi "Simulation and experimental study on demolding for nanoimprint lithography"

Emir Mahmut Bahsi "Workflow enabling Large-scale scientific applications"

Mehmet Balman "Enhancements in Stork Data Placement Scheduler"

Hua Cao, Asim Shrestha, Rathika Natarajan, Gaurav Khanduja, Dipesh Bhattarai "Data Fusion"

Promita Chakraborty "Design and Performance Analysis of a Distributed HPC Molecular Dynamics Code on Distributed Resources"

Pin-Chuan Chen "Toward a Modular High Throughput CFPCR Array from a Single Nanoliter CFPCR"

Junseo Choi "Low Cost Fabrication of Micro- and Nanopores in Fress-Standing Polymer Membranes for Study Lipid Adsorption"

Thomas Dufaud "Hybrid Coupled Continuum-Molecular Dynamics Simulation Tool for the CFDToolkit"

Anvar Gilmanov "A Novel Flow-Structure Interaction Methodology for Biological Systems"

Tim Gilmanov, Anvar Gilmanov "Development and Application of a Material Point Method for Structure Calculations in Biological Systems"

Prasad Kalghatgi "Development of CFD Modules for CFDTOOLKIT"

Namwon Kim "Multi-Phase Flow in Polymer Microfluidic Systems"

Oleg Korobkin "Coupling an Einstein and an Euler code via the Cactus framework"

Archit Kulshrestha, Harsha Bhagawata "Towards Cyber Infrastructure for Dynamic Storm Surge Predictions"

Benoit Laveau "Experimental Study of droplet motion on a ratcheted surface"

Tae Yoon Lee "A polymer modular system for mutation detection"

C. Nancy Lekpeli "Transport of Molecular Clusters through Nano-scale Channels"

Samuel Njoroge "An Automated Genosensor System Using Modular Microfluidics "

Paul Okagbare "Small Molecule Sensor: HTS for Drug Discovery"

Daniel Park "Design and fabrication of small continuous flow PCR devices for a multi-well CFPCR platform"

Celine Ramet "Design Optimization and Realization of an Electrophoretron Cycler"

Sudheer D. Rani "Numerical Simulations of Misalignment Effects in Pressure Driven Flows for Micro-Fluidic Interconnects"

Asim Shrestha, Dimple Juneja "Data Mining"

Katerina Stamou "Real-time Information Services for Scientific Applications"

Ibrahim H Suslu, Mehmet Balman, Ismail Akturk, Xingqi Wang "Distributed Data Management in CyberTools"

Cornelius Toole, Jr. "LIGO Outreach Tangibles: Integration of Tangible Interaction and Visual Computing as Gateways to Science and Cyberinfrastructure"

Eamonn D. Walker "Numerical Simulations of Micro-Scale Segmented Two-Phase Flows for Bio-Analytical Chip Applications"

Esma Yildirim, Dengpan Yin "Predicting Optimal Level of Parallelism in Wide Area Data Transfers"

Byoung Hee You "Assembly tolerance for injection molded modular, polymer microfluidic devices"

Louisiana Tech University

Pradeep Chowriappa "An Algorithmic Tool for Protein Structure Classification based on Conserved Hydrophobic Residues"

Senaka Kanakamedala, Mangilal Agarwal "Evaluation of Microsensor and Micro-Mixer for Biosensor Applications"

Harpreet Singh "Medical Image Classification using Weighted Association Rules based Classifier"

Tulane University

Mehnaaz Ali, Amit Jain "Coupling Antibody Binding to Enzyme Activation in Miniaturized Immunosensor Devices"

Kate Hamlington, Jerina Pillert "Computational Model of a Microfluidic Mixing Chamber for Miniaturized Immunosensor Devices"

Symposium Attendees

Sumanta Acharya	Louisiana State University
Mangilal Agarwal	Louisiana Tech University
Gabrielle Allen	Louisiana State University
Tom Bishop	Tulane University
Nate Brener	Louisiana State University
Marion Carroll	Xavier University
Pin-Chuan Chen	Louisiana State University
David Claypool	Louisiana State University
Ricardo Cortez	Tulane University
Rachel Cruthirds	Louisiana Board of Regents
Carolina Cruz-Neira	University of Louisiana at Lafayette
Mark DeCoster	Louisiana Tech University
Thomas Dufaud	Louisiana State University
Sumeet Dua	Louisiana Tech University
Hideki Fujioka	Tulane University
Don Gaver	Tulane University
Jinghua Ge	Louisiana State University
Jim Gershey	Louisiana Board of Regents
Anvar Gilmanov	Louisiana State University
Raju Gottumukkala	University of Louisiana at Lafayette
Cindy Greer	Louisiana Board of Regents
Les Guice	Louisiana Tech University
Jim Hoehn	EPSCoR/IdEA Foundation
Ron Hutchins	Georgia Institute of Technology
S.S. Iyengar	Louisiana State University
Amitava Jana	Southern University
Susan Jernigan	Louisiana Board of Regents
Shantenu Jha	Louisiana State University
Ray Jindal	University of Louisiana at Lafayette
Daniel S. Katz	Louisiana State University
Joohyun Kim	Louisiana State University
Sanjay Kodiyalam	Louisiana State University
Tevfik Kosar	Louisiana State University
Michael Khonsari	Louisiana Board of Regents
Benoit Laveau	Louisiana State University
C. Nancy Lekpeli	Louisiana State University
Honggao Liu	Louisiana State University
Frank Löffler	Louisiana State University
Mary Jo McGee-Brown	Qualitative Research & Evaluation for Action, Inc.
Vince McKoy	California Institute of Technology
Marsha J. Miller	University of Louisiana at Lafayette
Dorel Moldovan	Louisiana State University

Michael Murphy	Lousiana State University
Jarek Nabrzyski	Louisiana State University
Daniel Park	Louisiana State University
Karthik Poobalasubramanian	Louisiana Board of Regents
Linda Ramsey	Louisiana Tech University
Bety Rodriguez-Milla	Louisiana State University
Erik Schnetter	Louisiana State University
Ed Seidel	Louisiana State University
Harold Silverman	The State University of New York System
Steve Soper	Louisiana State University
Balamurugan Subramanian	Louisiana State University
Jennifer Tate	Louisiana State University
Valerie Taylor	Texas A&M University
Hilary Thompson	LSU Health Sciences Center
Isaac Traxler	Louisiana State University
Kathy Traxler	Louisiana State University
Mayank Tyagi	Louisiana State University
Brygg Ullmer	Louisiana State University
Sam White	Lousiana State University
Maggie A. Witek	Louisiana State University
Shizhong Yang	Southern University
Denpan Yin	Louisiana State University
Byoung Hee You	Louisiana State University
Zhiyu Zhao	University of New Orleans

Graduate Student Attendees

João Abecasis	Louisiana State University
Ismail Akturk	Louisiana State University
Raghava Alapati	Louisiana State University
Mehnaaz Ali	Tulane University Health Sciences Center
Vinay C. Amatya	Louisiana State University
Alborz Amirsadeghi	Louisiana State University
Emir Mahmut Bahsi	Louisiana State University
Harsha Bhagawaty	Louisiana State University
Junseo Choi	Louisiana State University
Pradeep Chowriappa	Louisiana Tech University
Chris Clayton	Southern University
Swathi Laxmi Dubbaka	Louisiana State University
Tim Gilmanov	Louisiana State University
Kate Hamlington	Tulane University
Andrei Hutanu	Louisiana State University
Amit S. Jain	Tulane University
Lei Jiang	Louisiana State University
Dimple Juneja	Louisiana State University
Prasad Kalghatgi	Louisiana State University
Senaka Kanakamedala	Louisiana Tech University
Namwon Kim	Louisiana State University
Oleg Korobkin	Lousiana State University
Archit Kulshrestha	Louisiana State University
Tae Yoon Lee	Louisiana State University
Vignesh Natesan	University of Louisiana at Lafayette
Samuel Njoroge	Louisiana State University
Paul Okagbare	Louisiana State University
Taehyun Park	Louisiana State University
Jerina Pillert	Tulane University
Emma Pineda	Tulane University
Celine Ramet	Louisiana State University
Sudheer D. Rani	Louisiana State University
Harpreet Singh	Louisiana Tech University
Nikhil Shetty	University of Louisiana at Lafayette
Katerina Stamou	Louisiana State University
Ibrahim H Suslu	Louisiana State University
Cornelius Toole, Jr.	Louisiana State University
Sirish Tummala	Louisiana State University
Eamonn D. Walker	Louisiana State University
Xinqi Wang	Louisiana State University
Esma Yildirim	Louisiana State University
Zhifeng Yun	Louisiana State University