25th IEEE International Parallel & Distributed Processing Symposium
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IPDPS 2011 PhD Forum
Research Projects Selected for Poster Presentation*

An Algorithm-Based Recovery Scheme for Exascale Computing
Hui Liu (Colorado School of Mines, Golden, US)

Lightweight Methods for Automated Design of Self-Stabilization
Aly Farahat and Ali Ebnenasir (Michigan Technological University, US)

Communication Optimization Beyond MPI
Andrew Friedley and Andrew Lumsdaine (Indiana University, Bloomington, US)

Efficient Agreement Protocols in Asynchronous Distributed Systems
Izabela Moise (University Rennes 1, IRISA/INRIA, Rennes, FR)

Efficient Verification Solutions for Message Passing Systems
Subodh Sharma and Ganesh Gopalakrishnan (University of Utah, Salt Lake City, US)

Decentralized Network Bandwidth Prediction and Node Search
Sukhyun Song (University of Maryland, College Park, US)

Large-Scale Parallel Monte Carlo Tree Search on GPU
Kamil Rocki and Reiji Suda (The University of Tokyo, JP)

Memory-aware algorithms and scheduling techniques: from multicore processors to petascale supercomputers
Mathias Jacquelin (ENS Lyon, FR)

Memory Hierarchy Aware Parallel Priority Based Data Structures
Dinesh Agarwal and Sushil Prasad (Georgia State University, Atlanta, US)

Parallel Algorithms for Bayesian Networks Structure Learning with Applications to Systems Biology
Olga Nikolova and Srinivas Aluru (Iowa State University, Ames, US)

Fault tolerant data acquisition through dynamic load balancing
Michał Simon (Silesian University of Technology, Geneva, CH)

A Codesigned Fault Tolerance System for Heterogeneous Many-Core Processors
Keun Soo Yim and Ravishankar Iyer (University of Illinois at Urbana-Champaign, US)

Towards a storage backend optimized for atomic MPI-IO for parallel scientific applications
Viet-Trung Tran (ENS Cachan, IRISA/INRIA, Rennes, FR)

Programming Heterogeneous Systems
David Kunzman and Laxmikant Kale (University of Illinois at Urbana-Champaign, Urbana, US)

Data Parallel Programming Model for Many-Core Architectures
Yongpeng Zhang (North Carolina State University, Dickson, US)

Detection and Correction of Silent Data Corruption for Large-Scale High-Performance Computing
David Fiala (North Carolina State University, Dickson, US)

Improving Job Scheduling on Production Supercomputers
Wei Tang and Zhiling Lan (Illinois Institute of Technology, Chicago, US) and Narayan Desai (Argonne National Laboratory, US)

Towards a Self-Adaptive Data Management System for Cloud Environments
Alexandra Carpen-Amarie (INRIA/IRISA, Rennes, FR)

An Integrated Scratch Management Service for HPC Centers
Henry Monti (Virginia Tech, US)

Policy Based Data Placement in High Performance Scientific Computing
Muhammad Amer (University of Southern California, Los Angeles, US)

Automatic Generation of Executable Communication Specifications from Parallel Applications
Xing Wu and Frank Mueller (North Carolina State University, Dickson, US) and Scott Pakin (Los Alamos National Laboratory, US)

Scout: High-Performance Heterogeneous Computing Made Simple
James Jablin (Brown University, Providence, US) and Pat McCormick (Los Alamos National Laboratory, US) and Maurice Herlihy (Brown University, Providence, US)

Building Dynamic Computing Infrastructures over Distributed Clouds
Pierre Riteau (University Rennes 1, IRISA/INRIA, Rennes, FR)

Next Generation Sequencing: Algorithms and Applications
Xiao Yang (Iowa State University, Ames, US)

Performance Analysis of Long-running Applications
Zoltan Szebenyi (Jülich Supercomputing Centre, DE) and Felix Wolf (German Research School for Simulation Sciences, Aachen, DE) and Brian Wylie (Jülich Supercomputing Centre, DE)

p2MATLAB: Productive Parallel MATLAB for the Exascale
Vipin Sachdeva and David Bader (Georgia Institute of Technology, Atlanta, US)

A Framework for Automated Performance Tuning and Code Verification on GPU Computing Platforms
Allison Gehrke and Daniel Connors and Ilkyeun Ra (University of Colorado Denver, Denver, US)

(*Note: Author listed first is PhD student who will be presenting poster.)