

PMaC Publications

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1. 2010

PEBIL: Efficient Static Binary Instrumentation for Linux

M. Laurenzano, M. Tikir, L. Carrington, A. Snavely
Proceedings of the International Symposium for Performance Analysis of
Systems and Software (ISPASS)
White Plains, NY. March 2010.

2. 2009

A Simulation Toolkit to Investigate the Effects of Grid Characteristics on Workflow Completion Time

M. O. McCracken, A. Snavely
Proceedings of the 4th Workshop on Workflows in Support of Large-Scale
Science
November 2009

PSnAP: Accurate Synthetic Address Streams Through Memory Profiles

C. Olschanowsky, M. Tikir, L. Carrington, A. Snavely
The International Workshop on Languages and Compilers for Parallel Computing
(LCPC'09)
October 2009

PSiNS: An Open Source Event Tracer and Execution Simulator for MPI Applications

M. Tikir, M. Laurenzano, L. Carrington, A. Snavely
Proceedings of Euro-Par
August 2009

3. 2008

DARPA's HPCS Program: History, Models, Tools, Languages

J. Dongarra, R. Graybill, W. Harrod, R. Lucas, E. Lusk, P. Luszczek, J.
McMahon, A. Snavely, J. Vetter, K. Yelick, S. Alam, R. Campbell, L. Carrington,
T. Chen, O. Khalili, J. Meredith, M. Tikir
2008 Advances in Computers, Volume 72

Performance Prediction and Ranking of Supercomputers

T. Chen, O. Khalili, R. L. Campbell, Jr., L. Carrington, M. Tikir, A. Snavely
2008 Advances in Computers, Volume 72

High-Frequency Simulations of Global Seismic Wave Propagation Using SPECFEM3D GLOBE.

L. Carrington, D. Komatitsch, M. Laurenzano, M. Tikir, D. Miche, N. Le Goff, A.
Snavely, J. Tromp

SC08 International Conference for High Performance Computing
November 2008

**Modeling and Predicting Application Performance on Parallel Computers
Using HPC Challenge Benchmarks**

Wayne Pfeiffer and Nicholas J. Wright
22nd IEEE International Parallel and Distributed Processing Symposium
April 2008

4. 2007

**A Genetic Algorithms Approach to Modeling the Performance of
Memory-bound Computations.**

M. Tikir, L. Carrington, E. Strohmaier, A. Snavely
SC07 International Conference for High Performance Computing, Networking,
and Storage, Reno, NV
November 2007

Metrics for Ranking the Performance of Supercomputers.

T. Chen, M. Gunn, B. Simon, L. Carrington, A. Snavely
Cyberinfrastructure Technology Watch Journal: Special Issue on High
Productivity Computer Systems J. Dongarra Editor, Volume 2 Number 4.
February 2007

5. 2006

What's working in HPC?

N. Wolter, M. O. McCracken, A. Snavely, V. Basili, L. Hochstein, T. Nakamura
Cyberinfrastructure Technology Watch Journal: Special Issue on High
Productivity Computer Systems
November 2006

The PMaC Binary Instrumentation Library for PowerPC.

M. Tikir, M. Laurenzano, L. Carrington, A. Snavely
Workshop on Binary Instrumentation and Applications, San Jose, CA
October 2006

**Measuring the Performance and Reliability of Production Computational
Grids.**

O. Khalili, J. He, C. Olschanowsky, A. Snavely, H. Casanova
Proceedings of the 7th IEEE/ACM International Conference on Grid Computing,
Barcelona, Spain
September 2006

Symbiotic Space-Sharing on SDSC's Datastar System.

J. Weinberg and A. Snavely

The 12th Workshop on Job Scheduling strategies for Parallel Processing (JSSPP 2006) , St. Malo, France

June 2006

User-Guided Symbiotic Space-Sharing of Real Workloads.

J. Weinberg and A. Snavely

The 20th {ACM} International Conference on Supercomputing (ICS'06), St. Malo, France

June 2006

6. 2005

How Well Can Simple Metrics Represent the Performance of HPC Applications?

L. Carrington, M. Laurenzano, A. Snavely, R. Campbell, L. Davis

SC 05 , Seattle, WA

November 2005

Quantifying Locality in the Memory Access Patterns of HPC Applications.

J. Weinberg, M. O. McCracken, a. Snavely, E. Strohmaier

SC 05 , Seattle, WA

November 2005

Low Cost Trace-driven Memory Simulation using SimPoint.

M. Laurenzano, B. Simon, A. Snavely, M. Gunn

Workshop on Binary Instrumentation and Applications (held in conjunction with PACT2005), St. Louis, MO

September 2005

Reducing Overheads for Acquiring Dynamic Traces.

X. Gao, M. Laurenzano, B. Simon, a. Snavely

International Symposium on Workload Characterization (ISWC05), Austin, TX

September 2005

ALITER: An Asynchronous Lightweight Instrumentation Tool for Event Recording.

X. Gao, B. Simon, A. Snavely

Workshop on Binary Instrumentation and Applications (held in conjunction with PACT2005),

St. Louis, MO

September 2005

Performance Modeling: Understanding the Present and Predicting the Future.

D. H. Bailey, A. Snavely

EuroPar 2005, Lisbon

September 2005

Performance Sensitivity Studies for Strategic Applications.

L. Carrington, X. Gao, N. Wolter, A. Snavely, and R. Campbell
UGC 2005, Nashville, TN

June 2005

EMPS: An Environment for Memory Performance Studies.

J.K.Hollingsworth, A.Snavely, S.Sbaraglia, K.Ekanadhm
NSF Next Generation Software Program Workshop (held in conjunction with
IPDPS) Denver, CO

April 2005

7. 2004

Making HPC System Acquisition Decisions is an HPC Application.

L.P.Davis, C.J.Henry, R.L.Cambell, W.Ward, A.Snavely, L.Carrington
Masterworks at Supercomputing 2004 Pittsburgh, PA
September 2004

**Applying an Automated Framework to Produce Accurate Blind
Performance Predictions of Full-Scale HPC Applications.**

L.Carrington, N.Wolter, A.Snavely, C.Lee
UGC 2004 Williamsburg, VA
June 2004

Are User Runtime Estimates Inherently Inaccurate?

C.Lee, Y.Schartzman, J.Hardy, A.Snavely
10th Workshop on Job Scheduling Strategies for Parallel Processing New York,
NY
May 2004

Towards High-Order Performance Objectives for HPC System Scheduling.

C.Lee, A.Snavely, B.Leary, L.Carrington, H.Casanova, R.Bohn, R.Carson,
J.Hardy, Y.Schwartzman
Technical Report
March 2004

8. 2003 and earlier

Performance Modeling of HPC applications.

A.Snavely, X.Gao, C.Lee, L.Carrington, N.Wolter, J.Labarta, J.Gimenez, P.Jones
Parallel Computing 2003 Dresden, Germany
September 2003

PERC ScicomP8 Tutorial.

Parallel Computing 2003 Dresden, Germany

July 2003

Performance Technologies for Peta-Scale Systems.

A White Paper Prepared by the Performance Evaluation Research Center and Collaborators

May 2003

Benchmarks for Grid computing: A Review of Ongoing Efforts and Future Directions.

A.Snavely, G.Chun, H.Casanova, R.F.Van der Wijngaart, M.A.Frumkin
SIGMETRICS Performance Evaluation Review (PER), Vol. 30, No. 4, March 2003.

March 2003

Performance Modeling for Dynamic Algorithm Selection.

M.McCracken, A.Snavely, A.Malony
Workshop on Performance Modeling - ICCS Melbourne, Australia

June 2003

A Performance Prediction Framework for Scientific Applications.

L.Carrington, A.Snavely, X.Gao, N.Wolter
Workshop on Performance Modeling - ICCS Melbourne, Australia

June 2003

Exploiting Stability to Reduce Time-Space Cost for Memory Tracing.

X.Gao, A.Snavely
Workshop on Performance Modeling - ICCS Melbourne, Australia

June 2003

PERC Tutorials.

Supercomputing 2002 Baltimore, MD

November 2002

A Framework for Application Performance Modeling and Prediction.

A.Snavely, L.Carrington, N.Wolter, J.Labarta, R.Badia, A.Purkayastha
Supercomputing 2002 Baltimore, MD

November 2002

Data Intensive Grid Benchmarks.

C.Baru, H.Casanova, A.Snavely
STI Proposal and GGF Working Document

October 2002

A Framework for Application Performance Prediction to Enable Scalability Understanding.

L.Carrington, N.Wolter, A.Snavely
Scaling to New Heights Workshop Pittsburgh, PA

May 2002

Modeling Application Performance by Convolving Machine Signatures with Application Profiles.

A.Snavely, N.Wolter, L.Carrington

IEEE 4th Annual Workshop on Workload Characterization Austin, TX

December 2001

Performance Predictions of NAS Parallel Benchmarks on HPC Platforms using MAPS and MetaSim.

Supercomputing 2001 Denver, CO

November 2001

Towards More Meaningful Machine Comparisons.

A. Snavely

DoD HPC Users Conference Biloxi, MS

June 2001