

# PMaC Publications

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## 1. 2008

### **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

## 2. 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

## 3. 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

#### 4. 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. MCracken, 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

## 5. 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

## 6. 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