SHAVA SMALLEN

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EDUCATION:

M.S., Computer Science, University of California, San Diego, June 2001
Thesis: *On-line Parallel Tomography*
Advisors: Dr. Francine Berman and Dr. Henri Casanova

B.S., Computer Science, *magna cum laude*, University of California, San Diego, June 1998
Provost's Honor List
Robert C. Byrd Honors Scholarship
INROADS, Northern California intern, June 1996 - August 1997

WORK EXPERIENCE:

Research Associate, Indiana University, Bloomington, IN, July 2001 - present
Currently working on science portal effort in the Extreme! Computing Lab under the supervision of Professor Dennis Gannon. Developing and maintaining portal for ATLAS physicists to submit Athena jobs to the Grid using XCAT Science Portal framework software. This work is in collaboration with the IU Physics department, the US-ATLAS collaboration, and the Grid Physics Network (GriPhyN) project. Leading development of lab's next generation science portal software based on Apache's Jetspeed. Also, contributing to system administration of lab machines.

Graduate Student Researcher, University of California, San Diego, June 1998 - June 2001
Worked in the AppLeS (Application-Level Scheduling) group under the supervision of Professor Francine Berman to develop a dynamic scheduler for an on-line parallel tomography Grid application used by the National Center for Microscopy and Imaging Research. This work was part of a collaborative NPACI Alpha project, *Telescience for Advanced Tomography Applications*.

Applications Programmer, IBM Global Services, Santa Clara, CA, Summer 1997
Assisted in maintenance of an internal billing report, client-server application for Lucent Technologies. Developed project plan and interacted with customer for design and testing of an additional feature to application. Created server-side korn shell scripts, SQL queries, and SQR reports. Designed and implemented client-side user interface in Visual Basic.

Special Technical Associate in Network Systems, Lucent Technologies, Santa Clara, CA, Summer 1996
Assisted in maintenance of internal billing report, client-server application. Modified and created server-side korn shell scripts, Sybase SQL queries, and SQR reports. Designed client-side user interface for enhancements to application in Visual Basic. Also upgraded software on Windows NT systems.

TEACHING EXPERIENCE:

Guest Lecturer, *Web Programming*, University City High School, January-June 2000
Co-taught class with two other guest lecturers. Created assignments, designed curriculum, lectured, and assisted students in lab. Assisted with system administration of Linux machines.

Teaching Assistant, *Introduction to Parallel Computation*, University of California, San Diego, Spring 1999
Lead sections, created and graded programming projects, and helped students in lab. (Conjoined undergraduate and graduate course.)

PUBLICATIONS:

D. Gannon, R. Bramley, G. Fox, S. Smallen, A. Rossi, R. Ananthakrishnan, F. Bertrand, K. Chiu, M. Farrellee, M. Govindaraju, S. Krishnan, L. Ramakrishnan, Y. Simmhan, A. Slominski, Y. Ma, C. Olariu, N. Rey-Cenevaz. "Programming the Grid: Distributed Software Components, P2P and Grid Web Services for Scientific Applications", submitted to the *Journal of Cluster Computing*, 2002.

F. Berman, R. Wolski, H. Casanova, W. Cirne, H. Dail, M. Faerman, S. Figueira, J. Hayes, G. Obertelli, J. Schopf, G. Shao, S. Smallen, N. Spring, A. Su, D. Zagorodnov. "Adaptive Computing on the Grid Using AppLeS", submitted for publication to *IEEE Transactions on Parallel and Distributed Systems*, November 2001.

Shava Smallen, Henri Casanova, and Francine Berman. "Applying Scheduling and Tuning to On-line Parallel Tomography", *Proceedings of Supercomputing 01*, November 2001, Denver, Colorado (Best student paper award). Also to appear in *Journal of Scientific Programming, 2002*.

Shava Smallen, Walfredo Cirne, Jaime Frey, Francine Berman, Rich Wolski, Mei-Hui Su, Carl Kesselman, Steve Young, and Mark Ellisman. "Combining Workstations and Supercomputers to Support Grid Applications: The Parallel Tomography Experience," *Proceedings of the 9th Heterogenous Computing Workshop*, May 2000, Cancun, Mexico.

SELECTED PRESENTATIONS:

"Grappa: Grid Access Portal for Physics Applications", ATLAS Software Week, CERN, Geneva, Switzerland, March 7, 2002 (also given at University of Versailles, Versailles, France, March 11, 2002).

"Telescience for Advanced Tomography Applications", HPC Games, SC99, Porland, OR, November 1999.

"Parallel Tomography", Globus Retreat, Redondo Beach, CA, July 1999.

PROFESSIONAL ACTIVITIES:

Supercomputing 2002 Technical Program Committee member.

AWARDS:

Best Student Paper Award, Supercomputing 01, November 2001.

SKILLS:

Experience with: C/C++, Java, MPI, PVM, Globus, unix shell scripting, Python, SQL

Familiar with: PHP, threads programming, Matlab

Platforms: Linux, Solaris, IRIX, AIX

VOLUNTEER WORK:

Barrio Logan College Institute, San Diego, CA, February 2000 - present
Web page design and maintenance.

Active Students for Kids, San Diego, CA, January 1997 - December 1998
Tutored 4th/5th grade students at Bay Park Elementary School one day a week.

REFERENCES:

Francine Berman
Director, San Diego Supercomputer Center
Director, National Partnership for Advanced Computational Infrastructure
Professor, Department of Computer Science and Engineering
University of California, San Diego
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La Jolla, CA 92093-0114

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Adjunct Assistant Professor, Department of Computer Science and Engineering
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