

Jack Perdue

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<http://parasol.cse.tamu.edu/people/jack/>

Employment History

- *System Administrator*

Department of Computer Science - Parasol Laboratory - Texas A&M University, Texas - August 1998 to June 2002, June 2006 to May 2010

Initially maintained Parasol's Hewlett-Packard V-class server. Converted our departmentally managed Solaris/Windows environment into a locally managed Linux-based lab. Provided system administration and support for lab's 50+ Linux systems and for professor's home-based PCs and laptops running Linux, Windows and MacOS. Managed three Linux-based clusters used by the group. Packaged a number of different parallel performance libraries and tools for use on RPM-based systems.

- *Graduate Researcher*

Department of Computer Science - Parasol Laboratory - Texas A&M University, Texas - August 1997 to May 2006

Researched parallel performance modeling. Worked on developing empirical and analytical models to predict the runtimes of parallel applications given their inputs and target architecture. Performed initial studies on parallel sorts written in C. Participated in the development of parallel algorithms for Parasol's Standard Template Adaptive Parallel Library (STAPL) while investigating how to apply previous research to STAPL and C++. Developed the first shared library version of the Polaris research compiler. Ported STAPL to the GNU libstdc++ interface and rewrote the STAPL build system to support alternative STL implementations and facilitate running on IBM's BG/L systems

- *Teaching Assistant*

Department of Computer Science - Texas A&M University, Texas - Fall 2000 to Summer 2001

Instructed non-CS students on programming in C using Visual C and GNU gcc. Stressed the importance of writing portable code for a variety of platforms.

- *Owner and Proprietor*

Silicon Slick's Software, Supplies and Support Services (6S Computers) - College Station, Texas - January 1996 to July 1998

Founded the company to provide quality computer service in and around Brazos County. Provided PC support and custom software written in Visual Basic. Tabled the company to pursue academic quests.

- *Manager and Technician*

Computer Access - College Station, Texas - July 1991 to June 1995

Started as Quality Control Technician for new PC systems. Performed hardware testing, software configuration, phone support and customer-site service. Promoted to Production Manager.

Coordinated product purchasing and the manufacture of over 200 new PCs a month. Moved to Retail Inventory Manager. Coordinated requisitioning and processing of over \$300,000 worth of inventory per month. Moved back to Production Manager. Stepped down to Quality Control Technician to concentrate on academic pursuits. Departed the company to devote full time to degree studies.

- ***System Administrator***
Texas A&M University - Department of Biochemistry and Biophysics - College Station, Texas - June 1989 to June 1991
Administered two SGI IRIS 4-D workstations running IRIX (SGI's Unix) used in research by Dr. Scott Linthicum. Configured peripherals, performed system backups and maintained user accounts. Installed, maintained and upgraded Macintosh systems used by researchers under Dr. Linthicum.
- ***Applications Programmer***
Texas A&M University - Department of Geology - College Station, Texas - September 1986 to June 1991
Developed and maintained, on a PC platform, a set of C applications used in grain-size analysis research conducted by Dr. James Mazzullo Installed, maintained and upgraded Macintosh systems used by researchers under Dr. Mazzullo. Converted a small set of FORTRAN programs running on an Amdahl(IBM) 370 to run under MS-DOS.
- ***PC Consultant***
Texas A&M University - Sea Grant College Program - College Station, Texas - January 1986 to January 1988
Developed dBASE applications to help in tracking various surveys performed by Dewayne Hollin at the Sea Grant College Program.
- ***C Programmer***
Tele-Denken Resources - Humble, Texas - Summer 1985
Converted telecommunications software written in C and running under MS-DOS on an Intel 8088 based communications coprocessor to support new communications protocol.
- ***Applications Programmer and Designer***
Trimarand Associates - Kingwood, Texas - Spring 1982 to Summer 1985
Started part-time as a data entry/file clerk while a high-school student. Learned DATABUS (Datapoint Corporation's proprietary business language) and promoted to part time programmer. In 1984, as a full-time employee, designed and developed a Report Writer for Trimarand's multi-user DBMS. Participated in the group design of a multi-language code generator.

Selected Publications

- **An Experimental Evaluation of the HP V-Class and SGI Origin 2000 Multiprocessors using Microbenchmarks and Scientific Applications**, Ravi Iyer, Jack Perdue, Nancy M. Amato, Lawrence Rauchwerger, Laxmi Bhuyan, *International Journal of Parallel Programming*, 33(4):307-350, 2005.
Journal([ps](#), [pdf](#), [abstract](#))
- **A Framework for Adaptive Algorithm Selection in STAPL**, Nathan Thomas, Gabriel Tanase, Olga Tkachyshyn, Jack Perdue, Nancy M. Amato, Lawrence Rauchwerger, In *Proc. ACM SIGPLAN Symp. Prin. Prac. Par. Prog. (PPOPP)*, pp. 277-288, Chicago, Illinois, Jun 2005.
Proceedings([ps](#), [pdf](#), [abstract](#))
- **Predicting Performance on SMPs. A Case Study: The SGI Power Challenge**, Nancy M. Amato, Jack Perdue, Andrea Pietracaprina, Geppino Pucci, Mark Mathis, In *Proc. Int. Par. and Dist. Proc. Symp. (IPDPS)*, pp. 729-737, Cancun, Mexico, May 2000. Also, Technical Report, TR99-020,

Department of Computer Science, Texas A&M University, Oct 1999.
Proceedings([ps](#), [pdf](#), [abstract](#)) Technical Report([ps](#), [pdf](#), [abstract](#))

Education

- **M.S. in Computer Science**, Texas A&M University, December 1998
MS Thesis: *Developing A Cost Model for Communication on a Symmetric Multiprocessor*
Advisor: Nancy Amato
- **B.S. in Computer Science**, Texas A&M University, May 1996

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