

Sandia National Laboratories
Scalable Computing Systems, Org. 9223
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Education

M.S. in Computer Science

Texas A&M University at College Station, Dec 2001.
M.S. Research Area: Parallel Algorithms and Distributed Computing.
Thesis advisor: Lawrence Rauchwerger

B.S. in Computer Science with Electrical Engineering minor

Texas A&M University at College Station, May 1999.
Department of Computer Science

Research Interests

Testing and validation of distributed systems.
Computational graph theory.
High performance computing applications; algorithms for shared-memory and distributed platforms.
Parallel C++ libraries and performance modeling.

Research Projects

SciDAC Scalable Systems Software (SSS); a collaborative project including eight DOE laboratories to investigate system software components for large systems.
ModifiedDCSC, a parallel strongly connected component detection algorithm implemented for an ASCII radiation transport code in collaboration with Sandia National Laboratories.
Worked on the Standard Template Adaptive Parallel Library (STAPL).
Implemented a hardware counter library for PA-RISC processors (PAHWC) for a Hewlett Packard Exemplar Server running HP-UX 11.X

Work Experience

Member of Technical Staff, Sandia National Laboratories, Albuquerque, NM. (1/2002 – Present)
Manager: Neil Pundit

Graduate Research Assistant, Department of Computer Science, Texas A&M University. (8/1999 – 12/2001)
Research Advisor: Lawrence Rauchwerger

Summer Researcher, Sandia National Laboratories, Albuquerque, NM. (5/2000-8/2000 and 5/1999-8/1999)
Supervisor: Bruce Hendrickson

Technical Co-Op, Fortran 90 Group, Hewlett Packard, Inc., Richardson, TX. (5/1998-8/1998)
Supervisor: Bob Metzger

Summer Internship, Network Design & Support, AudioNET, Dallas, TX. (5/1997-8/1997).
Supervisor: Matt Schmitt

Summer Internship, PC Support Technician, Annuity Board of the SBC, Dallas, TX. (5/1996-8/1996).
Supervisor: Dan Berry

Research Support

Computational Science Research Foundation (Sandia Labs), FY2003-2004, \$240,000. for “Structured Integration Testing of System Software for Parallel Supercomputers”.

Publications

- W. C. McLendon III, B. A. Hendrickson, S. J. Plimpton, and L. Rauchwerger. "Finding Strongly Connected Components in Distributed Graphs," *submitted to Journal of Parallel and Distributed Computing (JPDC)*, 2003.
- S. J. Plimpton, B. A. Hendrickson, S. P. Burns, W. C. McLendon III, and L. Rauchwerger. "Parallel algorithms for Sn transport on unstructured grids," *submitted to Nuclear Science and Engineering*, 2002.
- W. C. McLendon III, "Parallel Detection and Elimination of Strongly Connected Components for Radiation Transport Sweeps," Masters Thesis, Texas A&M University, College Station Texas, December 2001.
- W. C. McLendon III, B. A. Hendrickson, S. J. Plimpton, and L. Rauchwerger, "Finding Strongly Connected Components in Parallel in Particle Transport Sweeps," appearing in *Thirteenth ACM Symposium on Parallel Algorithms and Architectures (SPAA)* , Crete, Greece, July, 2001.
- W. C. McLendon III, B. A. Hendrickson, S. J. Plimpton, and L. Rauchwerger, "Identifying Strongly Connected Components in Parallel," in *Proc. of the 10th SIAM Conference on Parallel Processing for Scientific Computing* Portsmouth, Virginia, March, 2001
- S. J. Plimpton, B. A. Hendrickson, S. P. Burns, and W. C. McLendon III, "Algorithms for Radiation Transport on Unstructured Grids," in *Proceedings of Super Computing 2000 (SC2000)*, Dallas, Texas, November,2000.