Curriculum Vitae

Wei Jin
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Education

- **Ph.D. in Computer Science,** Duke University, Durham, NC, June 2000
  Dissertation: *Towards Practical I/O Prefetching,* supervised by Jeff Chase and Xiaobai Sun
- **M.S. in Computer Science,** Institute of Software, Chinese Academy of Sciences, Beijing, 1993
- **B.E. in Computer Science & Engineering,** Huazhong University of Science & Technology, Wuhan, China, 1986

Positions and Employment

2003 – present	Assistant Professor Dept. of Computer Information Science, Shaw University, Raleigh, NC
2008 – 2009	Computer Science Program Coordinator Dept. of Computer Information Science, Shaw University, Raleigh, NC
2002 – 2003	Visiting Assistant Professor, Dept. of Computer Science, Duke University
2000 – 2001	Senior Software Engineer & Team Leader, EMC Corporation, RTP, NC
1996 – 2000	Research Assistant, Department of Computer Science, Duke University
1993 – 1996	James B. Duke Fellow, Department of Computer Science, Duke University
1996 Summer	Intern, Data General Corporation, Research Triangle Park, NC
1995 Summer	Instructor, Talent Identification Program, Duke University

Honors and Awards

2008	Excellence in Academic Research, Shaw University
2005	Included in the *Who's Who among America's Teachers*.
2004	Mini-grant Award for 2004-2005 Shaw Faculty Research Development Program.
1993 – 1996	James B. Duke Fellowship, Duke University.
1986 –1990	Scholarship for Outstanding Undergraduate Students, Huazhong University of Science and Technology.

Teaching Experience

Shaw University: Intro. to Programming, Operating Systems, Information System Security, Programming Languages and Compilers, Intro. to Web Programming, Concepts of Computers
Duke University: Computer Science Fundamentals

Research & Technical Experience

- Developed tutors that guide students to write complete programs on several programming structures and investigated the effectiveness of using intelligent tutoring systems to help students learn in the introductory programming classes (2009)
  http://faculty.shawu.edu/wjin/courses/csc201/tutoring/index.html
- Investigated the effectiveness of using intelligent tutoring systems to help students learn in the introductory programming classes (2006-2007)
- 2nd Annual Pittsburgh Science of Learning Center LearnLab Summer School, Carnegie Mellon University (7/31/06-8/4/06)
  - Tutor Track: Design and Development of Intelligent Tutor Systems.
- Investigated the effectiveness of cooperative learning and other methods in the introductory programming classes (2004-2006)

- IT support for Institute of Health, Social and Community Research, Shaw University
- Direct Access File System (DAFS) utilizes memory-to-memory interconnection technologies to enable remote DMA (RDMA), Duke University
- Share based resource provisioning for storage service utility, Duke University
  - Researched approaches used in networking community, and proposed a new scheduling algorithm that can be applied to storage systems
  - Prototyped the scheduling algorithm in an NFS module, which acts as a server for the users and as the client to the storage server.
- Performance Modeling of SAN and NAS storage products (FC4700/IP4700), EMC Corporation
  - Proposed a memory allocation scheme to save copy-on-first-write data to solve a memory budget problem in FC4700.
- Prefetch Integration Framework, Duke University
  - Proposed a trace reduction algorithm FastSlim that can guarantee simulation accuracy for prefetching systems and is also compatible with a wide range of page replacement policies. FastSlim can also be used for efficient prefetching hint management. FastSlim reduces trace size substantially, which effectively speeded up our study.
  - Proposed a dynamic hinting framework for integrated prefetching. The speedup of this scheme against an existing compiler-directed prefetching is up to 270% for a set of scientific applications.
  - Implemented the simulation software to evaluation the above schemes.

Publications

- Wei Jin. "Preprogramming Pre-programming Analysis Tutors Help Students Learn Basic Programming Concepts." *In Proceedings of ACM SIGCSE Technical Symposium on*

Computer Science Education (2008), March 12-15, Portland, Oregon, USA.
* ACM: Association for Computing Machinery
* SIGCSE: Special Interest Group in Computer Science Education

- Wei Jin, Jeff Chase, and Jasleen Kaur. "Interposed Proportional Sharing for a Storage Service Utility." In *Proceedings of the 2004 ACM Sigmetrics Conference on Measurement and Modeling of Computer System (SIGMETRICS'2004),* Columbia University, New York, June 14-16, 2004.
- Ron Doyle, Jeff Chase, Omer Asad, Wei Jin, and Amin Vahdat. "Model-based Resource Provisioning in a Web Service Utility". In *Proceedings of the Fourth Symposium on Internet Technologies and Systems (USITS'2003)*.
- Wei Jin, Xiaobai Sun, and Jeff Chase. "Fastslim: Prefetch-safe trace reduction for I/O cache simulations". In *ACM Transactions on Modeling and Computer Simulation, Vol. 11, No. 2, April 2001.*
- Wei Jin, Rakesh Barve, and Kishor Trivedi. "A Simple Characterization of Provably Efficient Prefetching Algorithms". In *Proceedings of International Performance and Dependability Symposium (IPDS'2002).*
- Wei Jin, "Two-tier Chunking for Longbow SnapView". *EMC technical report, September 2001.*
- Wei Jin, "K10 Longbow, SnapView, and MirrorView Performance Model and Their Validation". *EMC technical report, September, 2001.*
- Wei Jin and Erol Gelenbe. "Call admission control in ATM networks using the Random Neural Networks". *Duke University, Department of Computer Science, Research Report DUKE- CS-1996-16.*

Professional Activities

Paper Reviews: IEEE Transaction of Computers, HPCA-9 (International Symposium on High Performance Computer Architecture), FAST'03 (USENIX conference on File and Storage Technologies), and HotOS'03, International Journal of Modeling and Simulation, Performance Evaluation (2005).

Grant Review Panel: Reviewer and Panel Member for National Science Foundation (NSF) Course, Curriculum, and Laboratory Improvement (CCLI) program (July 2009).

Grants and Funding

- NSF CCLI Grant (1/1/2009-8/31/2011) $149,708
  - *"A Cognitive-Apprenticeship Learning Curriculum Augmented by Cognitive Tutors (CAL-CT) for Fundamental Programming Concepts"*
  - Role: Principle Investigator
  - This project will utilize two proven effective instruction methodologies to improve student problem solving skills with fundamental programming concepts. It will produce **online cognitive tutors** that will guide students in their learning process.

- eHealth Access Project (2005-2006) UNCFSP/NLM $20,000

  - *"Shaw University Training Networks for National Library of Medicine Online Resources"*
  - Role: Principle Investigator

- Mini-grant (2004-2005) Shaw Faculty Research Development Program
  - *"Lecture-Driven Collaborative Learning for Introductory Programming Courses"*

Synergistic Activities and Services

- Computer Science Program Coordinator (2008-2009)
- Quality Enhancement Plan (QEP) Advisory Committee, Shaw University (2009 – present)
- Strategic Planning Committee, Shaw University (2009 – present)
- Shaw University Faculty Senate (2008 – present)
- General Education Committee, Shaw University (2008 – 2009)
- Institutional Review Board (IRB) member (2009 - present)
- External Advisory Committee, NSF HBCU-UP project --- Optimum --- at Fayetteville State University (http://www.uncfsu.edu/optimum/committee.htm) (2007 – present)
- Faculty Development Advisory Committee for Shaw University (2003 – 2007)
- Through hard work over a period of one and one half year, we trained 400 students at Shaw and 150 people in communities at the Walnut Terrace Public Housing Community Center and Garner Road YMCA on how to access National Library of Medicine (NLM) online databases (2005 – 2006).
- Volunteering twice a week for voter registration during the 2004 presidential election season
- Project leader for storage appliance performance modeling team in EMC Corporation (2000 – 2001).

Other Activities

- Chinese Dance, Sunny Dance Performance Group (http://www.sunnync.org) (2008 – present)
- Chinese Teacher at Raleigh Academy of Chinese Languages (a weekend school)