

# Curriculum Vita

## *Tao Xie*

Address: 4981 Catocin Drive, Apt. 105  
San Diego, CA 92115  
Phone: (619)594-2014(O), (619)3986244(Cell)  
Fax: (619)594-6746

URL: <http://rohan.sdsu.edu/~taoxie>  
e-mail: [xie@cs.sdsu.edu](mailto:xie@cs.sdsu.edu)

### Research Interests

High Performance Computing, Cluster and Grid Computing, Parallel Processing, Storage Systems, Distributed Systems, Real-time/Embedded Systems, Dynamic Resource Management, Information Security, and Performance Evaluation.

### Education

Ph.D. in Computer Science, New Mexico Institute of Mining and Technology, USA, May 2006  
M.E. in Computer Engineering, Hefei University of Technology, China, May 2000  
B.E. in Electrical Engineering, Hefei University of Technology, China, June 1991

### Research Experience

08/2006 – present, San Diego State University, San Diego, USA.

*Tenure-track Assistant Professor*, Department of Computer Science.

- Understanding the Relationship between Energy Conservation Techniques and Disk Array Reliability: Energy conservation schemes based on power management or workload skew for disk arrays inherently and adversely affect the reliability of disks due to either workload concentration or frequent speed transitions. A thorough understanding of the relationship between energy saving techniques and disk reliability is still an open problem, which prevents effective design of new energy saving techniques and application of existing approaches in reliability-critical environments. As one step towards solving this problem, we develop an empirical reliability model, called Predictor of Reliability for Energy Saving Schemes (PRESS), which estimates the reliability of entire disk array. Further, a new energy saving strategy with reliability awareness called Reliability and Energy Aware Distribution (READ) is implemented in the light of the insights provided by PRESS.
- Multi-level Caching-based Reconstruction Optimization for Mobile Storage Systems: Highly reliable, high performance and energy-efficient storage systems are essential for mobile data-intensive applications such as remote surgery and mobile data center. Compared with conventional stationary storage systems, mobile disk-array-based storage systems are more prone to disk failures due to their severe application environments. Further, they have very limited power supply. Therefore, data reconstruction algorithms, which are executed in the presence of disk failure, for mobile storage systems must be reliability-aware, performance-driven and energy-efficient. We are developing a novel reconstruction strategy, called multi-level caching-based reconstruction optimization (MICRO), which can be applied to RAID-structured mobile storage systems to noticeably save energy while providing shorter reconstruction times.
- Static File Assignment Strategy Immune to Workload Characteristic Assumptions: The problem of statically assigning nonpartitioned files in a parallel I/O system has been extensively investigated. A basic workload characteristic assumption of existing solutions to the problem is that there exists a strong inverse correlation between file access frequency and file size. In other words, the most popular files are typically small in size, while the large files are relatively unpopular. Recent studies on the characteristics of web proxy traces suggested, however, the correlation, if any, is so weak that it can be ignored. Hence, the following two questions arise naturally. First, can existing algorithms still perform well when the workload assumption does not hold? Second, if not, can one develop a new file assignment strategy that is immune to the workload assumption? To answer these questions, we first evaluate the performance of three well-known file assignment algorithms with and without the workload assumption, respectively. Next, we develop a novel static file assignment strategy for parallel I/O systems, called static round-robin (SOR), which is immune to

the workload assumption.

- Energy-Conservation for Networked Embedded Systems: Conventional energy-driven task allocation schemes for a cluster of embedded nodes only concentrate on energy-saving when making allocation decisions. Consequently, the length of the schedules could be very long, which is unfavorable or in some situations even not tolerated. I will address the issue of allocating a group of collaborative tasks on a heterogeneous embedded system with an objective of energy-saving and short-latency.
- Data-Intensive Computing in Distributed Environments: Many data-intensive applications are currently utilizing geographically distributed computational platforms. These applications typically require the most compute cycles and generate the largest amount of data. I will investigate this challenging issue by developing an enabling infrastructure to help users easily access and move data across distributed computational resources.

05/2003 – 05/2006, New Mexico Institute of Mining and Technology, Socorro, USA.

*Research Assistant*, Department of Computer Science.

- Security-Aware Real-time Scheduling: In addition to identifying the open issues and challenges involved in developing security-aware real-time scheduling schemes, we proposed a collection of novel real-time scheduling policies, which consider both security and real-time constraints for parallel and distributed systems.
- Digital Watermarking for Image Authentication: In this paper we present a novel image authentication scheme by embedding a fragile content-based cryptographic signature into image compression-domain. Our technique can detect even one compression-domain element's interpolation so that an adversary cannot tamper a watermarked image without being detected.
- Static Analyzer for Vicious Executables (SAVE): To detect obfuscated or polymorphic malware, we present a signature-based malware detection algorithm. The rationale behind our scheme is that all versions of one malware share a common signature. The signature offers us a basis for detecting variants and mutants of the malware in the future.

07/2000 – 08/2001, Microsoft Global Technical Engineering Center, Shanghai, China.

*Enterprise Software Integration Engineer*, Enterprise Business Application/Server Team

- Enterprise Office Automation System: design and implement Office Automation system including email client/server system, Office XP corporation system and software integration for enterprises.

09/1997 – 05/2000, Hefei University of Technology, Hefei, China.

*Research Assistant*, Department of Computer Science and Technology.

- Development & Application of Control Information System CIS: developed a control information system, which can monitor and control industrial field production processes. The on-site operators only need to use Internet browser such as IE to control devices and production processes. All the control information can be automatically updated regularly and available to the management team. The system was applied in Yangzi Petroleum Company, one of the largest petroleum enterprises in China.
- Industrial Information Monitoring System Based on Internet Browser: designed an information monitoring system using browser and ActiveX control. Authorized users can monitor the real-time information by using browser within an enterprise's Intranet. The system was applied in Yangzi Petroleum Company.

07/1991 – 08/1997, Anhui Province Computing Center, Hefei, China.

*Software Engineer*, Department of Software Development.

- Management Information System: developed several MIS software systems for government organizations and enterprises such as Anhui Province Traffic Management Center and Anhui Medicine Company.

## Grant Proposal Funded

05/2007 BUD: A Buffer-Disk Architecture for Energy Conservation in Parallel Disk Systems

- (Co-PI) Funded by the US National Science Foundation under Grant No. CCF-0742187. Among the total awards amount \$299999, \$90244 was awarded to me.

## Grant Proposal Submitted

CPA-ACR: FIT: A Flash Disk Storage Architecture for Data Management in Mobile Computing

- (Single PI) submitted to the US National Science Foundation Computing Processes and Artifacts Program (CPA) in December 2007.  
III-COR-Small: Energy-Efficient Data Management in Next Generation Mobile Storage Systems
- (Single PI) submitted to the US National Science Foundation Information & Intelligent Systems Program (IIS) in December 2007.

### Grant Proposal in Progress

- An Adaptive Power Conservation Framework for Wireless Storage Systems
- (Single PI) will submit to the US National Science Foundation Computer Systems Research Program (CSR) in January 2008.  
Integrating Multi-Core Architecture in Mobile Storage Systems
- (PI) will submit to the US National Science Foundation Faculty Early Career Development (CAREER) Program in July 2008.

### Teaching Experience

08/2006 – Present, San Diego State University, San Diego, USA.

*Instructor*, Department of Computer Science.

- CS 370 Computer Architecture (Fall 2006)
- CS 696 Advanced Distributed Systems (Spring 2007)
- CS 572 Micro Architecture (Fall 2007)
- CS 370 Computer Architecture (Fall 2007)

08/2001 – 05/2003, New Mexico Institute of Mining and Technology, USA.

*Teaching Assistant*, Department of Computer Science.

- CS 589-2 Embedded System Design: taught labs and graded projects, used Intel PX27x Processor DVK
- CS 589-4 Real-Time Systems: graded homework, projects, and final exam.
- CS 331 Computer Architecture: graded homeworks, midterm exam, final exam; taught five classes.
- CS 325 Principles of Operating Systems: graded homeworks and projects, taught labs and three classes.
- CS 221 Computer System Organization: graded homeworks and projects; taught labs.
- CS 222 Unix System Programming: graded homeworks and projects; taught labs.
- CS 373 Introduction to Database Systems: graded homeworks and projects.
- CS 342 Formal Languages and Automata: graded homework.

08/2001 – New Mexico Institute of Mining and Technology, USA.

*Teaching Assistant*, Department of Computer Science.

- Attended Teaching Assistantship Workshop.

09/1997 – 01/1998, Hefei University of Technology, China.

*Teaching Assistant*, Department of Computer Science and Technology.

- Taught introductory computer science labs.

### Teaching Interests

My teaching interests include: operating systems, computer architecture, embedded system design, real-time systems, introduction to database system, computer system design, information security, computer networks, and data structure. Additionally, I am confident in designing graduate seminars on topics related to embedded/real-time systems, cluster/grid computing, which will cover cutting-edge issues, including security-aware scheduling for embedded/real-time systems, high-availability cluster solutions, information security, cluster job/resource management, benchmarking tools, and network-based distributed computing.

### Publications

#### • Refereed Journal Papers and Book Chapters

1. **Tao Xie**, “SEA: A Striping-based Energy-aware Strategy for Data Placement in RAID-Structured Storage Systems,” *IEEE Transactions on Computers* (Accepted, regular paper).

2. **Tao Xie** and Xiao Qin, "Security-Aware Resource Allocation for Real-Time Parallel Jobs on Homogeneous and Heterogeneous Clusters," *IEEE Transactions on Parallel and Distributed Systems* (Accepted, regular paper).
3. **Tao Xie** and Xiao Qin, "An Energy-Delay Tunable Task Allocation Strategy for Collaborative Applications in Networked Embedded Systems," *IEEE Transactions on Computers*, Vol. 57, No. 3, pp. 329-343, March 2008.
4. Xiao Qin and **Tao Xie**, "An Availability-Aware Task Scheduling Strategy for Heterogeneous Systems," *IEEE Transactions on Computers*, Vol. 57, No. 2, pp. 188-199, February 2008.
5. **Tao Xie** and Xiao Qin, "Performance Evaluation of a New Scheduling Algorithm for Distributed Systems with Security Heterogeneity," *Journal of Parallel and Distributed Computing*, Vol. 67, No. 10, pp. 1067-1081, October 2007.
6. **Tao Xie** and Xiao Qin, "Improving Security for Periodic Tasks in Embedded Systems through Scheduling," *ACM Transactions on Embedded Computing Systems*, Vol. 6, No. 3, Article 20, July 2007.
7. **Tao Xie** and Xiao Qin, "Scheduling Security-Critical Real-Time Applications on Clusters," *IEEE Transactions on Computers*, Vol.55, No.7, pp. 864-879, July 2006.
8. Mais Nijim, Xiao Qin, and **Tao Xie**, "Modeling and Improving Security of a Local Disk System for Write-Intensive Workloads," *ACM Transactions on Storage*, Vol. 2, No. 4, pp. 400-423, November 2006.
9. **Tao Xie** and Xiao Qin, "Stochastic scheduling for multiclass applications with availability requirements in heterogeneous clusters," *Journal of Cluster Computing, Special Issue DOI: 10.1007/s10586-007-0049-0, Guest Editor: Ira Pramanick, Publisher: Springer, (Accepted)*.
10. **Tao Xie** and Xiao Qin, "Security-Driven Scheduling for Data-Intensive Applications on Grids," *Journal of Cluster Computing, Special Issue: Evaluation and Optimization of High-Performance Computing and Networking Systems, Guest Editors: Geyong Min and Mohamed Ould-Khaoua, Publisher: Springer, ISSN: 1386-7857, Volume 10, Number 2/June, pp. 145-153, 2007*.
11. **Tao Xie** and Xiao Qin, "A Security Middleware Model for Real-time Applications on Grids," *IEICE Transactions on Information and Systems, Special Issue on Parallel/Distributed Computing and Networking*, Vol.E89-D, No.2, pp.631-638, February 2006 (Acceptance rate 28.5%, 40/140).
12. **Tao Xie**, Xiao Qin, Andrew Sung, Man Lin, and Laurence Yang, "Real-Time Scheduling with Quality of Security Constraints," *International Journal of High Performance Computing and Networking (IJHPCN)*, Vol. 4, Nos.3/4, pp.188-197, 2006.
13. **Tao Xie**, Xiao Qin, and Man Lin, "Open Issues and Challenges in Security-aware Real-Time Scheduling for Distributed Systems," *Journal on Information, Special Issue on High Performance Computational Science and Engineering*, Vol. 9, No. 2, pp.309-322, 2006.
14. Mais Nijim, **Tao Xie**, and Xiao Qin, "Performance Analysis of An Admission Controller for CPU- and I/O-Intensive Applications in Self-Managing Computer Systems," *ACM Operating Systems Review*, Vol. 39, No. 4, pp. 37-45, October 2005.
15. **Tao Xie** and Xiao Qin, "Enhancing Security of Real-Time Applications on Grids through Dynamic Scheduling," *Lecture Notes in Computer Science (LNCS 3834)*, ISSN: 0302-9743, ISBN: 3-540-31024-X, Springer, August 2005, pp. 219-237, Editors: Dror Feitelson, Eitan Frachtenberg, Larry Rudolph and Uwe Schwiegelshohn. (*Proceedings of the 11th Workshop on Job Scheduling Strategies for Parallel Processing (JSSPP 2005)*), Cambridge, MA, USA, June 19, 2005, impact rate of JSSPP: top 1.55%, source: CiteSeer).

- **Refereed Conference Papers**

16. **Tao Xie** and Yao Sun, "Sacrificing Reliability for Energy Saving: Is It Worthwhile for Disk Arrays?" *The 22nd IEEE International Parallel and Distributed Processing Symposium (IPDPS 2008)*, Miami, Florida, USA, April 14-18, 2008 (accepted, acceptance rate 25.6%, 105/410).
17. Deepthi K.Madathil, Rajani B. Thota, Paulina Paul, and **Tao Xie**, "A Static Data Placement Strategy towards Perfect Load-Balancing for Distributed Storage Clusters," *The 7th International Workshop on Performance Modeling, Evaluation, and Optimization of Ubiquitous Computing and Networked Systems (PMEO UCNS 2008), in conjunction with (IPDPS'08)*, Miami, Florida, April 14-18, 2008 (accepted).
18. **Tao Xie** and Yao Sun, "No More Energy-Performance Trade-Off: A New Data Placement Strategy for RAID-Structured Storage Systems," *The 14th Annual IEEE International Conference on High Performance Computing (HiPC), Lecture Notes in Computer Science (LNCS 3834), pp.35-46, Goa, India, December 18-21, 2007* (acceptance rate 20.55%, 52/253).

19. **Tao Xie**, "SOR: A Static File Assignment Strategy Immune to Workload Characteristic Assumptions in Parallel I/O Systems," *The 36th International Conference on Parallel Processing (ICPP 2007)*, XiAn, China, September 10-14, 2007.
20. **Tao Xie** and Xiao Qin, "A Security-Oriented Task Scheduler for Heterogeneous Distributed Systems," *Lecture Notes in Computer Science (LNCS 4297)*, ISSN 0302-9743, Springer, pp.35-46, *The 13th Annual IEEE International Conference on High Performance Computing (HiPC 2006)*, Bangalore, India, December 18-21, 2006, (acceptance rate 15.5%, 52/335).
21. Mais Nijim, Xiao Qin, and **Tao Xie**, "Adaptive Quality of Security Control in Networked Parallel Disk Systems," *The 15th International Conference on Computer Communications and Networks (ICCCN 2006)*, Arlington, Virginia, USA, October 9 - 11, 2006 (acceptance rate 32%, 71/221).
22. **Tao Xie** and Xiao Qin, "Stochastic Scheduling with Availability Constraints in Heterogeneous Clusters," *The 8th IEEE International Conference on Cluster Computing (Cluster 2006)*, Barcelona, Spain, September 25th-28th, 2006.
23. **Tao Xie**, Xiao Qin, and Mais Nijim, "Solving Energy-Latency Dilemma: Task Allocation for Parallel Applications in Heterogeneous Embedded Systems," *Proc. 35th International Conference on Parallel Processing (ICPP 2006)*, pp.12-19, Columbus, Ohio, August, 2006 (acceptance rate 32%, 64/200).
24. **Tao Xie** and Xiao Qin, "SAHA: A Scheduling Algorithm for Security-Sensitive Jobs on Data Grids," *Proc. the 6th IEEE/ACM International Symposium on Cluster Computing and the Grid (CCGrid'06)*, 2nd Int'l Workshop on Cluster Security, Singapore, May 16-19, 2006.
25. **Tao Xie**, Xiao Qin, and Mais Nijim, "SHARP: A New Real-Time Scheduling Algorithm to Improve Security of Parallel Applications on Heterogeneous Clusters," *The 25th IEEE International Performance Computing and Communications Conference (IPCCC 2006)*, April 10-12, 2006, Phoenix, Arizona, USA
26. Mais Nijim, Xiao Qin, **Tao Xie**, and Mohammed Alghamdi, "Awards: An Adaptive Write Scheme for Secure Local Disk Systems," *The 25th IEEE International Performance Computing and Communications Conference (IPCCC 2006)*, April 10-12, 2006, Phoenix, Arizona, USA
27. **Tao Xie**, Xiao Qin, and Andrew Sung, "An Approach to Satisfying Security Needs of Periodic Tasks in High Performance Embedded Systems," *The 12th Annual IEEE International Conference on High Performance Computing (HiPC 2005, Poster Session)*, December 18-21, Goa, India.
28. **Tao Xie** and Xiao Qin, "Incorporating Security into Real-Time Scheduling for Parallel Jobs on Clusters," *The 26th IEEE Real-Time Systems Symposium (RTSS 2005, Work-in-Progress Session)*, December 5-8, 2005, Miami, Florida, USA
29. **Tao Xie** and Xiao Qin, "A New Allocation Scheme for Parallel Applications with Deadline and Security Constraints on Clusters," *The 2005 IEEE International Conference on Cluster Computing (Cluster 2005)*, September 27-30, Boston, Massachusetts, USA. (acceptance rate 32.6%, 45/138)
30. Mohammed Alghamdi, **Tao Xie**, and Xiao Qin, "PARM: A Power-Aware Message Scheduling Algorithm for Real-Time Wireless Networks," *1st ACM Workshop on Wireless Multimedia Networking and Performance Modeling (WMuNeP '05)*, October 13th, 2005, Montreal, Quebec, Canada.
31. **Tao Xie** and Xiao Qin, "Towards a Security Service Integration Framework for Distributed Real-Time Systems," *the 18th International Conference on Parallel and Distributed Computing Systems (PDCS 2005, ISCA)*, Las Vegas, NV, USA, September 12-14, 2005.
32. Mais Nijim, **Tao Xie**, and Xiao Qin, "Integrating a Performance Model in Self-Managing Computer Systems under Mixed Workload Conditions," *Proceedings of the IEEE International Conference on Information Reuse and Integration*, Las Vegas, NV, USA, August 15-17, 2005.
33. **Tao Xie**, Xiao Qin, and Andrew Sung, "SAREC: A Security-Aware Scheduling Strategy for Real-Time Applications on Clusters," *Proceedings of the 34th International Conference on Parallel Processing (ICPP-2005)*, PP.5-12, Oslo, Norway, June 14-17, 2005. (acceptance rate 28.6%, 69/241)
34. **Tao Xie**, Xiao Qin, and Andrew Sung, "Integrating Security Requirements into Scheduling for Real-Time Applications in Grid Computing," *Proceedings of the International Conference on Grid Computing and Applications*, PP.24-30, Las Vegas, NV, USA, June 20-23, 2005. (acceptance rate 36%)
35. Xiao Qin, **Tao Xie**, A. Nathan, and vb V. K. Tadepalli, "Benchmarking the CLI for I/O Intensive Computing," *Proceedings of the 19th International Parallel and Distributed Processing Symposium (IPDPS'05)*, the 6th Int'l Workshop on Parallel and Distributed Scientific and Engineering Computing, IEEE/ACM, Denver, CO, USA, April 4-8, 2005 (Acceptance rate 36%).
36. **Tao Xie**, Andrew Sung, and Xiao Qin, "Dynamic Task Scheduling with Security Awareness in Real-Time Systems", *Proceedings of the 19th International Parallel and Distributed Processing Symposium (IPDPS'05)*, the 4th Int'l Workshop on Performance Modeling, Evaluation, and Optimization of Parallel and

*Distributed Systems*, Denver, CO, IEEE/ACM, April 4-8, 2005.

37. **Tao Xie**, Andrew Sung, Srinivas Mukkamala, and QingZhong Liu, "Reactive Tamper Detection for Image Authentication," *Proceedings of IEEE Intelligent Systems Design and Applications*, Budapest, Hungary, August 26-28, 2004.
38. A.H. Sung, J. Xu, K. Ramamurthy, P. Chavez, S. Mukkamala, and **T. Xie**, "Static Analyzer for Vicious Executables (SAVE)," *Work-in-Progress Section of IEEE Symposium on Security and Privacy*, Oakland, California, USA, 2004.

- **Other Selected Journal Publications**

39. **Xie Tao**, Xia Xiaobo, and Zhang Weiyong, "Industrial Information Monitoring System Based on Internet Browser," *Journal of Applications of Computer Systems*, pp12 -13, April, 1999. (In Chinese)
40. **Xie Tao** and Zhang Weiyong, "A Control Information System on Intranet," *Journal of Control and Automation*, pp24-30, August 1999. (In Chinese)
41. Wu Jian and **Xie Tao**, "Series Communication System Applied on Chinese Operating System," *Journal of Application Research of Computer*, pp 38-42, May 1994. (In Chinese)

### Papers under Second-Round Review

1. **Tao Xie** and Hui Wang, "MICRO: A Multi-level Caching-based Reconstruction Optimization for Mobile Storage Systems," *IEEE Transactions on Computers* (regular paper, major revision).

### Papers Submitted

1. **Tao Xie**, "Performance Evaluation of A New File Assignment Algorithm for Parallel I/O Systems," submitted in April 2007 to *IEEE Transactions on Knowledge and Data Engineering*.
2. **Tao Xie** and Yao Sun, "Understanding the Relationship between Energy Conservation Techniques and Disk Array Reliability" submitted in December 2007 to *ACM Transactions on Storage*.

### Papers in Progress

1. **Tao Xie** and Yao Sun, "A Dynamic Self-Adaptive Data Placement Algorithm for Large-Scale Storage Systems" to be submitted to *ACM Transactions on Storage*.
2. **Tao Xie** and Deepthi K.Madathil, "FIT: A Flash Disk Storage Architecture of Mobile Data-Intensive Applications," to be submitted to *IEEE Transactions on Mobile Computing*.

### Invited Talks/Conference Talks

- "A Novel Disk Layout Optimization for Networked Storage Systems," *ICCCN 2007 Workshop on Advanced Networking and Communications*, Honolulu, Hawaii, USA, August 15, 2007.
- "Solving Energy-Latency Dilemma: Task Allocation for Parallel Applications in Heterogeneous Embedded Systems," *ICPP 2006*, Columbus, Ohio, USA, August 15, 2006.
- "SHARP: A New Real-Time Scheduling Algorithm to Improve Security of Parallel Applications on Heterogeneous Clusters," *IPCCC 2006*, Phoenix, Arizona, USA, April 10, 2006.
- "A New Allocation Scheme for Parallel Applications with Deadline and Security Constraints on Clusters," *Cluster 2005*, Boston, MA, USA, September 28, 2005.
- "Enhancing Security of Real-Time Applications on Grids through Dynamic Scheduling," *JSSPP'05*, Cambridge, MA, USA, June 19, 2005.
- "Dynamic Task Scheduling with Security Awareness in Real-Time Systems," *IPDPS'05*, Denver, CO, USA, April 8, 2005
- "Benchmarking the CLI for I/O Intensive Computing," *IPDPS'05*, Denver, CO, USA, April 8, 2005.

### Awards

- Langmuir Award 2007 (Nomination), New Mexico Tech, May, 2007
- IEEE Technical Committee on Scalable Computing (TCSC) Student Travel Award, USA, September, 2005.
- ACM Student Travel Award for 19th ACM International Conference on Supercomputing, USA, June 2005
- IEEE Technical Committee on Parallel Processing (TCPP) Student Travel Award, USA, April, 2005.
- 2006 Spring Graduate Travel Award, Graduate Student Association, New Mexico Tech, USA, April, 2006
- 2005 Fall Graduate Travel Award, Graduate Student Association, New Mexico Tech, USA, Sept. 2005.
- 2005 Summer Graduate Travel Award, Graduate Student Association, New Mexico Tech, USA, May 2005.

- Student Appreciation Award, Hefei University of Technology, Hefei, China, April 1999.
- Outstanding Student Award, Hefei University of Technology, Hefei, China, 1998 – 1999.
- Third Place Annual Soccer Intramural, Hefei University of Technology, Hefei, China, 1998.
- Annual Best Employee Award, Anhui Province Computing Center, Hefei, China, 1995.
- Qualification Certificate of Programmer, issued by Personnel Ministry of China, 1993.
- Excellent Student Scholarship, Anhui Institute of Technology, Hefei, China, 1990.

### Graduate Student Supervision

- Jack Wang, Master student, thesis title “MICRO: A Multi-level Caching-based Reconstruction Optimization for Mobile Storage Systems,” graduated in July 2007.
- Manjunaatha Harapanahalli, Master student, thesis title “A Two-Level Workload Partitioning Strategy for Energy and Performance Optimized File Assignment in Parallel Multi-Speed Disk Systems,” graduated in August 2007.
- Yao Sun, Master student, thesis title “Understanding the Relationship between Energy Conservation Techniques and Disk Array Reliability,” graduated in December 2007.
- Deepthi K.Madathil, Master student, thesis title “Dynamic File Assignment in Intelligent Disk Arrays,” will graduate in May 2008.
- Uday Patel, Master student, thesis title “Data Reconstruction Mechanisms for Hybrid Disk Arrays”, will graduate in December 2008.
- Abhinav Sharma, Master student, thesis title “Reliability Measurement for Flash Disks”, will graduate in May 2009.

### Professional Activities

- Referee: IEEE Transactions on Computers; IEEE Transactions on Knowledge and Data Engineering; Proceedings of the IEEE, Journal of Parallel and Distributed Computing; Journal of Supercomputing; Journal of Cluster Computing; Journal of Computer Science and Technology, Journal of Systems and Software; The Computer Journal; IPCCC05; IPCCC06; ICPP06, IPDPS05
- Member of IEEE and IEEE Computer Society, Member of USENIX
- Publication Chair: The Third Int’l Conference on Networking, Architecture, and Storage (NAS’2008)
- Program Committee member: ICDCS08, IEEE Cluster07, IEEE IRI07, IEEE AINA07, PMEO07, SNAPI07, PMEO08, IEEE AINA08, IEEE IRI08
- Co-chair: The PDSEC07, in conjunction with the IPDPS 2007, March 26-30, 2007, Long Beach, California.
- Session chair: ICCCN07 (Session WP2), ICPP06 (Session 2A: Algorithms), IPCCC06 (Session 1.2: Multicast and Scheduling and Session 3.1: Ad-hoc Networks).
- Chair of Matuszeski Research Fund Committee, New Mexico Tech, USA, May, 2005

### References

- **Dr. Xiao Qin**, Assistant Professor (My Ph.D. Dissertation Advisor)  
Address: 109 Dunstan Hall, Department of Computer Science and Software Engineering,  
Auburn University, Auburn, AL 36849-5347  
Phone: (334)844-6327 Email: xqin@auburn.edu URL: <http://www.eng.auburn.edu/~xqin/>
- **Dr. Laxmi N. Bhuyan**, Professor  
Dept. of Computer Science and Engineering  
Address: 441, Engineering Building II  
University of California, Riverside, CA 92521.  
Phone: (951)827-2347 Email: bhuyan@cs.ucr.edu URL: <http://www.cs.ucr.edu/~bhuyan>
- **Dr. Hong Jiang**, Professor and Vice Chair  
Address: 268 Avery Hall, Dept. of Computer Science and Engineering,  
University of Nebraska – Lincoln, Lincoln, NE 68588-0115.  
Phone: (402)472-6747 Email: jiang@cse.unl.edu URL: <http://cse.unl.edu/~jiang>
- **Dr. Geyong Min**, Senior Lecturer  
Address: Dept. of Computing, School of Informatics, University of Bradford, Bradford, BD7 1DP, U.K.  
Phone: +44 (0)1274 234021 Email: g.min@brad.ac.uk URL: <http://www.inf.brad.ac.uk/~gmin>