

Awards and Honors

- CAREER: Affinity and Scheduling on the Computational Grid, NSF Career Award, FY01-03, Jennifer M. Schopf, PI, \$170,000
- Equipment Donation, Sun E220R server (\$104,000 value), May 2002.
- NASA Graduate Student Researchers Program Fellowship; Langley Research Center
Technical Advisor: David Rudy, Research and Technology Group
\$22,000, 3-year renewable, July 1996 to December 1998.
- Special San Diego Fellowship, University of California Regents
\$12,000 stipend, plus tuition, September 1992 to May 1996.
- University of California Regents Grant, Summer 1994.
- Ford Foundation Scholar, Summer 1989.

Grants

1. CRI: Performance Repository for eScience Applications (PRESA), *submitted to NSF CRI program*, FY05-08, \$2M, PI: Allan Snively, Henri Casanova, Jennifer Schopf, Jack Dongarra, August 2004.
2. ITR: Image-based Biophysical Modeling: Scalable Registration and Inversion Algorithms and Distributed Computing, FY05-09, \$1.2M, PI: Volkan Akcelik, George Biros, Christos Davatzikos, Omar Ghattas, William Gropp, Eldad Haber, David Keyes, Jan Modersitzki, Jennifer Schopf (\$275K to UC/ANL, Schopf PI), awarded August 2004.
3. NMI: Performance Inside: Performance Monitoring and Diagnosis for NMI Software and Applications, FY05-06, \$900,000, Jennifer M. Schopf PI, awarded July 2004.
4. SCI WORKSHOP: Grid Performance Workshop 2004, NSF, FY04-05, Jennifer M. Schopf, PI, \$36,000, awarded April 2004.
5. Monitoring for the Alliance and TeraGrid, NSF National Computational Science Alliance Grant, FY03-04, Jennifer M. Schopf, PI, \$75,000.
6. ITR: Resource Predictors from Application Signatures in High Energy Physics, NSF-ITR, 9/2002-8/2005, John Huth and Jennifer M. Schopf, co-PIs, subcontract \$88,839.
7. Superscheduling for the Alliance, NSF National Computational Science Alliance Grant, FY02-03, Jennifer M. Schopf, PI, \$100,000.
8. Monitoring in the Virtual Data Grid Laboratory, subcontract from NSF iVDGL (international Virtual Data Grid Laboratory) Grant, FY02-06, Jennifer M. Schopf, PI, \$150,000.
9. Superscheduling in the Virtual Machine Room, NSF National Computational Science Alliance Grant, FY01-02, Jennifer M. Schopf, PI, \$50,000.
10. Global Grid Forum Travel Funding, NSF, FY01, Jennifer M. Schopf, PI, \$53,487
11. Global Grid Forum Workshop Funding, DOE, FY01, Jennifer M. Schopf, PI, \$52,140.
12. Meta-Scheduling on the Virtual Machine Room, NSF National Computational Science Alliance Grant, FY00-01, Jennifer M. Schopf, PI, \$30,000.

13. Cluster Scheduling Comparison, Microsoft University Research Grant, FY00, Jennifer M. Schopf, PI, \$3,000.

Professional Society Membership

- Institute of Electrical and Electronics Engineers, Inc (IEEE)
- Association for Computing Machinery (ACM)

Professional Activities

- Organizer and Steering Group member, International Grid Performance Workshop, 2004
- Tutorial Chair, Cluster 2004
- Publicity Chair, HPDC 2004
- Steering Group Member, Global Grid Forum, 2001–present
- Area Director, Scheduling and Resource Management Area, Global Grid Forum, 1999–present
- Site Lead and Co-PI, DOE Science Grid Collaboratory Project, 2003–2004
- Affiliate Partner, NCSA, 1999-2004
- Program Committees, including CCGrid2005, ICPP 2005, USENIX Extreme Linux SIG 2004, Supercomputing 2004, HPDC 2004, CCGrid 2004, Grid Benchmarking Workshop at IPDPS'04 , Cluster 2003, IPDPS 2003, Supercomputing 2002, HPDC 2002, IPDPS 2002, ICPP 2002, HPDC 2001, ICPP 2001, HPC Asia 2001, IPPS/SPDP 2000
- Invited Participant, Conference on High Speed Computing (Salishan), April 2004
- Member, ATLAS physics collaboration, 2001–2004
- Co-lead of the joint PPDG/GriPhyN/iVDGL Monitoring Project, 2001–2003
- Steering Group member, Particle Physics Data Grid Project, 2002–2003
- Tutorials Committees, including Supercomputing 2003, Supercomputing 2001
- Invited Participant, NSF Workshop on US-UK Grid Activities, August 2001
- Invited Participant, Conference on High Speed Computing (Salishan), April 2001
- Research Gems (Posters) Chair, Technical Committee, SC 2000
- eSCape 2000 Advisory Committee, SC 2000
- Invited participant, IPG Workshop on Advance Reservations and Co-Scheduling, Argonne National Laboratory, May 1999

Technical Referee

- Supercomputing (SC) 1998, 1999, 2000, 2001, 2002, 2004
- High Performance Distributed Computing (HPDC) 2000, 2001, 2002, 2003, 2004
- CCGrid 2001, 2004
- Advanced Simulation Technologies Conference 2004
- IFIPS Networking and Parallel Computing 2004
- Cluster 2002, 2003
- IEEE Internet Computing Journal 2003
- U.S. Department of Energy 2002, 2003
- National Science Foundation 2000, 2001, 2002, 2003

- Cluster Computing Journal 2002, 2003
- International Parallel Distributed Processing Symposium (IPDPS) 2000, 2001, 2002, 2003
- International Conference on Parallel Processing 2003
- E-Science Core Technology Programme, UK 2002
- ICPP 2001, 2002
- Journal of Parallel and Distributed Computing 2001, 2002
- Scientific Programming 2001
- IEEE Transactions on Parallel and Distributed Systems 1995, 1997, 1999, 2000, 2001
- HPC Asia 2001
- ACM Computing Surveys 1999
- International Conference on Distributed Computing Systems 1998
- International Conference on Algorithms and Architectures for Parallel Processing 1997
- Heterogeneous Computing Workshop 1996
- IEEE Transactions on Software Engineering 1995, 1996
- International Conference on Parallel Architectures and Compilation Techniques 1996
- ACM International Conference on Supercomputing 1995
- International Parallel Processing Symposium 1995

Courses Taught

- Supervised over 75 student quarters of independent study, Northwestern University, Winter '99 – Winter '02
- Tools for Computational Science and Engineering, Northwestern University, Winter '01
- Operating Systems, Northwestern University, Fall '99, Fall '00
- Computing over the Computational Grid, Northwestern University, Spring '00
- Operating Systems 2: Implementations and Architectures, Northwestern University, Spring '99, Winter '00
- Parallel Distributed Computing, Northwestern University, Winter '99
- Operating Systems: Architecture and Implementation, co-lectured with Keith Marzullo, UCSD, Winter '98, Spring '98

Laboratory and University Service

- Summer student supervisor, ANL MCS, 2001-present
- Summer student coordinator, ANL MCS, 2003
- Computational Science and Engineering Program, Steering Committee, NU 1999–2001
- Undergraduate Honors Committee Chair, NU, CS Dept. 1999–2001
- Faculty Recruitment, NU CS Dept., 1999–2001
- Faculty Recruitment Chair, NU CS Dept., 2000
- Graduate Student Recruitment, NU CS Dept., 1999–2001

Current Ph.D. Students

- Lingyun Yang, University of Chicago
- Xuehai Zhang, University of Chicago

Books

1. **Grid Resource Management**, co-editors Jarek Nabrzyski, Jennifer M. Schopf, and Jan Weglarz, Kluwer Publishing, October 2003.

Journal Articles and Book Chapters

All publications available from <http://www.mcs.anl.gov/~jms/Pubs/jmspubs.html>

1. “Predictions and Variance on Shared Resources”, Jennifer M. Schopf and Lingyun Yang, Chapter 12 in **Grid Resource Management for Grid Computing**, Kluwer Publishing, October 2003.
2. “Ten Actions When Grid Scheduling”, Jennifer M. Schopf, Chapter 2 in **Grid Resource Management for Grid Computing**, Kluwer Publishing, October 2003.
3. “PBS Pro”, Bill Nitzberg, Jennifer M. Schopf, and James Patton Jones, Chapter 27 in **Grid Resource Management for Grid Computing**, Kluwer Publishing, October 2003.
4. “Using Regression Techniques to Predict Large Data Transfers”, Sudharshan Vazhkudai and Jennifer M. Schopf, **The International Journal of High Performance Computing Applications (IJHPCA) special issue on Grid Computing: Infrastructure and Applications**, Vol 17, No. 3, August 2003.
5. “Adaptive Computing on the Grid Using AppLeS”, 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, and D. Zagorodnov, **IEEE Transactions on Parallel and Distributed Systems**, Vol. 14, No. 4 (April 2003) 369–382.
6. “Grids: The Top Ten Questions”, J. M. Schopf, B. Nitzberg, **Scientific Programming**, special issue on Grid computing, Vol. 10, No. 2 (August 2002) 103–111.
7. Invited article: “Current Activities in the Scheduling and Resource Management Area of the Global Grid Forum”, Bill Nitzberg and Jennifer M. Schopf, **Lecture Notes in Computer Science #2537**, Selected papers from the 8th International Workshop on Job Scheduling Strategies for Parallel Processing, July 2002.
8. “Using Stochastic Information to Predict Application Behavior on Contended Resources”, J. M. Schopf and F. Berman, **International Journal of Foundations of Computer Science**, Vol. 12, No. 3 (June 2001) 341–363, special issue on parallel and distributed computing.

Refereed Conference Publications

1. “The Inca Test Harness and Reporting Framework”, Shava Smallen, Catherine Olschanowsky, Kate Ericson, Pete Beckman, and Jennifer Schopf, *to appear in SuperComputing '04*, April 2004. Also available as SDSC Technical Report #SDSC-TR-2004-3, <http://www.sdsc.edu/TR/SDSC-TR-2004-3-IncaTest.pdf>.

2. "Resource Predictors in HEP Applications", Sebastian Grinstein, John Huth, and Jennifer M. Schopf, *to appear in the Proceedings of Computing in High Energy Physics (CHEP) 2004*, October 2004.
3. "Performance Analysis of the Globus Toolkit Monitoring and Discovery Service, MDS2", Xuehai Zhang and Jennifer M. Schopf, **Proceedings of the International Workshop on Middleware Performance (MP 2004), part of the 23rd International Performance Computing and Communications Conference (IPCCC)**, April 2004.
4. "Run-Time Prediction of Parallel Applications on Shared Environments", Byoung-dai Lee and Jennifer Schopf, poster-paper, in **Proceedings of Cluster 2003**, December 2003.
5. "Conservative Scheduling: Using Predicted Variance to Improve Scheduling Decisions in Dynamic Environments", Lingyun Yang, Jennifer M. Schopf, and Ian Foster, in **Proceedings of SuperComputing 2003**, November 2003.
6. "A Performance Study of Monitoring and Information Services for Distributed Systems", Xuehai Zhang, Jeffrey Freschl, and Jennifer M. Schopf, in **Proceedings of the 12th IEEE International Symposium on High Performance Distributed Computing (HPDC-12)**, July 2003.
7. "Homeostatic and Tendency-based CPU Load Predictions", Lingyun Yang, Ian Foster, Jennifer M. Schopf, in **Proceedings of the International Parallel Distributed Processing Symposium (IPDPS) 2003**, April 2003.
8. "Using Disk Throughput Data in Predictions of End-to-End Grid Data Transfers", Sudharshan Vazhkudai and Jennifer M. Schopf, in **Proceedings of Grids2002**, November 2002.
9. "Predicting Sporadic Grid Data Transfers", Sudharshan Vazhkudai and Jennifer M. Schopf, in **Proceedings of the 11th IEEE International Symposium on High Performance Distributed Computing (HPDC-11)**, July 2002.
10. "Windows Performance Monitoring and Data Reduction Using WatchTower", Michael W. Knop, Jennifer M. Schopf, and Peter Dinda, in **Proceedings of Workshop on Self-Healing, Adaptive and self-MANaged Systems (SHAMAN)**, June 2002.
11. "Predicting the Performance of Wide Area Data Transfers", S. Vazhkudai, J. M. Schopf, and I. Foster, in **Proceedings of the International Parallel Distributed Processing Symposium (IPDPS) 2002**, April 2002.
12. "Multi-resolution Resource Behavior Queries Using Wavelets", J. Skicewicz, P. Dinda, and J. M. Schopf, in **Proceedings of the 10th IEEE International Symposium on High Performance Distributed Computing (HPDC-10)**, August 2001.
13. "Stochastic Scheduling", J. M. Schopf and F. Berman, in **Proceedings of SuperComputing 1999**, November 1999. Also available as NU, CS Dept. TR #CS-99-03, 1999.
14. "A Practical Methodology for Defining Histograms for Predictions and Scheduling", J. M. Schopf, in **Proceedings of ParCo '99**, August 1999. Abstract version available as NU, CS Dept. TR #CS-99-02, January 1999.
15. "Using Stochastic Intervals to Predict Application Behavior on Contended Resources", J. M. Schopf and F. Berman, in **Proceedings of the Workshop on**

- Advances in Parallel Computing Models, part of the International Symposium on Parallel Architectures, Algorithms, and Networks (ISPA), June 1999.**
16. “Performance Prediction in Production Environments”, J. M. Schopf and F. Berman, in **Proceedings of First Merged Symposium IPPS/SPDP 1998**
 17. **12th International Parallel Processing Symposium & 9th Symposium on Parallel and Distributed Processing (IPPS/SPDP)**, April 1998. Also available as UCSD Technical Report #CS97-558, September 1997.
 18. “Structural Prediction Models for High-Performance Distributed Applications”, J. M. Schopf, in **Proceedings of the Cluster Computing Conference (CCC '97)**, March 1997. Also available as UCSD Technical Report #CS97-528.
 19. “Application-Level Scheduling on Distributed Heterogeneous Networks”, F. Berman, R. M. Wolski, S. Figueira, J. Schopf, and G. Shao, in **Proceedings of SuperComputing 1996**, November 1996.
 20. “Developing Heterogeneous Applications Using Zoom and HeNCE”, R. M. Wolski, C. Anglano, J. Schopf, and F. Berman, in **Proceedings of the Heterogeneous Processing Workshop, International Parallel Processing Symposium (IPPS)**, April 1995.

Technical Reports, Working Documents, and Unrefereed Work

1. “Monitoring Clusters and Grids”, Jennifer M. Schopf and Ben Clifford, column for *ClusterWorld Magazine*, May 2004.
2. “IBL for Replica Selection in Data-Intensive Grid Applications”, Yu Hu and Jennifer M. Schopf, University of Chicago Computer Science Department Technical Report #TR-2004-03. April 2004. Available from <https://www.cs.uchicago.edu/research/publications/techreports/TR-2004-03>
3. “So You Want to Set Up a Grid”, Jennifer M. Schopf and Keith R. Jackson, column for *ClusterWorld Magazine*, February 2004.
4. “The Inca Architecture”, Jennifer M. Schopf, Shava Smallen, and Catherine Olschanowsky, TeraGrid Technical Report, Feb. 2004.
5. “Working Group Formation Documentation”, Jennifer M. Schopf, Peter Clarke, Bill Nitzberg, and Charlie Catlett, GGF Draft Community Practice Document, August 2003.
6. “Run -Time Prediction of Parallel Applications on Shared Environments”, Byoung-dai Lee and Jennifer Schopf, *extended version of poster-paper, Clusters2003* available as #ANL/MCS/P1088-0903, September 2003.
7. “Job Description for GGF Steering Group Members (GFSG)”, Jennifer M. Schopf, Peter Clarke, Bill Nitzberg, and Charlie Catlett, GGF Informational Document, GFD.19, 2003.
8. “Ten Actions When SuperScheduling”, Jennifer M. Schopf, Global Grid Forum Document GFD.04, 2003.
9. “A General Architecture for Scheduling on the Grid”, Jennifer M. Schopf, available as Argonne National Laboratory preprint #ANL/MCS-P1000-1002, 2002.
10. “Globus Toolkit 2.2 MDS Technology Brief”, Jennifer M. Schopf and Lee Liming, Globus Project Tech Report, Brief, January 2003.

11. "Windows Performance Modeling and Data Reduction Using WatchTower and Argus", M. W. Knop, P. K. Paritosh, P. A. Dinda, and J. M. Schopf, Technical Report #NWU-CS-01-6, Department of Computer Science, Northwestern University, June 2001.
12. "Super Scheduler Steps/framework", J. M. Schopf, Global Grid Forum SchedWD8.5, July 2001 (first version 8.0 April 2000).
13. "Performance Prediction and Scheduling for Parallel Applications on Multi-User Clusters", J. M. Schopf, Dissertation, UCSD Technical Report #CS98-607, December 1998.
14. "Performance Prediction Using Stochastic Values", J. M. Schopf and F. Berman, poster presentation, University of California, McCormick School of Engineering Research Review, 1998.
15. "Performance Prediction Using Intervals", J. M. Schopf and F. Berman, UCSD Technical Report #CS97-541, May 1997.
16. "Performance Prediction on Clusters Using Stochastic Values", J. M. Schopf and F. Berman, poster presentation, University of California, School of Engineering Research Review, 1997.
17. "Characterizing Heterogeneous Applications", J. M. Schopf and F. Berman, poster presentation University of California, School of Engineering Research Review, 1996.
18. "Heterogeneous Computing with ZOOM", J. M. Schopf and F. Berman, poster presentation, University of California, School of Engineering Research Review, 1995.
19. "Zoom: A Hierarchical Representation for Heterogeneous Applications", C. Anglano, J. Schopf, R. Wolski, and F. Berman, UCSD Technical Report #CS95-451, October, 1995.

Tutorials Given

1. Global Grid Forum Chairs Training, Global Grid Forum 11, Honolulu, HI, June 2004.
2. Globus Tutorial (half day), ATLAS software week, CERN, Geneva, Switzerland, December 2001.
3. Globus Tutorial (half day), European Data Grid Coordination Meeting, Frascati, Italy, October 2001.

Invited Talks at Major Conferences

All talks available from <http://www.mcs.anl.gov/~jms/Talks/>

1. Requirements and Services: The Application Point of View, Service Grids: Current Activity & Middleware Requirements, UK eScience Institute, Edinburgh, UK, 22-23 July, 2004.
2. Grids: Ten Open Issues, The International Symposium on Modern Computing in Celebration of John Vincent Atanasoff's 100th Birthday, Iowa State University, Ames, Iowa, October 31, 2003.

3. Information and Scheduling: What's available and how it changes, Workshop on Open Issues in Grid Scheduling, UK eScience Center, Edinburgh, UK, October 20, 2003.
4. A Global Grid Forum (GGF) Primer, Open Group Plenary Session, Boston, MA, July 22, 2003.
5. Globus and Grids, Open Group Plenary Session, Boston, MA, July 22, 2003.
6. Keynote: Grid Monitoring Futures with Globus, Grid Information Services Workshop, UK eScience Center, Edinburgh, UK, April 25, 2003.
7. Scheduling and The Grid, International Symposium on Grid Computing 2003 and TW Grid Workshop, Taipei, Taiwan, March 2003.
8. The Grid: Ten Open Questions, International Symposium on Grid Computing 2003 and TW Grid Workshop, Taipei, Taiwan, March 2003.
9. Globus Toolkit 2: An Overview, International Symposium on Grid Computing 2003 and TW Grid Workshop, Taipei, Taiwan, March 2003.
10. 10 Actions when SuperScheduling: A Grid Scheduling Architecture, Scheduling Architecture Workshop, GGF-7, Tokyo, Japan, March 2003.
11. Monitoring and Grids, CERN, Geneva, CH, June 2002.
12. High Energy Physics: What do we want from the TeraGrid?, Alliance All Hands Meeting, Urbana-Champaign, IL, May 2002.
13. Information Services and Monitoring, joint talk with James Magowan, The CERN LHC Grid Computing Project, CERN, Geneva, March 2002.
14. The Application's Perspective of Measurement and Performance, Internet2 End to End Measurement Workshop, Tempe, Arizona, February 2002.
15. A GGF Primer, LISHEP workshop, Rio de Janeiro, Brazil, February 2002.
16. Scheduling and Resource Management on the Grid, Asia-Pacific Grid Workshop, Tokyo, Japan, October 2001.

Other Invited Talks

1. Requirements and Services: The Application Point of View, Service Grids: Current Activity & Middleware Requirements, Open Middleware Infrastructure Institute, Southampton, UK, July 29 2004.
2. Grid Computing and the Globus Toolkit, Woods Hole Oceanographic Institute, Woods Hole, MA, July 29, 2003.
3. Grid Monitoring with Globus, Lawrence Berkeley National Laboratory, April 9, 2003.
4. Grid Prediction and Scheduling with Variance, Poznan Supercomputing and Networking Center, February 2003.
5. Performance Problem Analysis and the Globus Toolkit, Workshop on Troubleshooting and Fault Tolerance in Grid Environments, Chicago, IL, Dec. 11, 2002.
6. Monitoring, Prediction and Scheduling on the Grid, University Chicago/Argonne National Lab Computation Institute, July 2002.
7. Getting a Job in Academia, Women in Science Confab (WiSC 2002), Brown University, April 2002.

8. Scheduling on Clusters, Scheduling on the Grid, MCS Seminar, Argonne National Laboratory, July 2001.
9. Grids: The Top Ten Problems, London Regional E-Science Center, Imperial College, London, June 2001.
10. Grids: The Top Ten Problems, PDP/IT Seminar Series, CERN, Geneva, Switzerland, June 2001.
11. Finding an Academic Position, Computer Science Department, University of Chicago, October 2000.
12. Prediction and Scheduling on Cluster of Workstations, Center for Parallel and Distributed Computing, Electrical and Computer Engineering Department, Northwestern University, February 1999.
13. Scheduling on Clusters of Workstations, Special Lecture Series in Computer Science, Computer Science Department, University of San Francisco, December 1998.
14. Prediction and Scheduling for Metacomputing Environments, NEOS Colloquium, ECE Department, Northwestern University, November 1998.
15. Explicit Models in Application-Level Scheduling for Heterogeneous Computing, Computer Science Research Colloquium, Old Dominion University, September 1996.

Invited Panel Presentations

1. “Global Grid Forum Chairs Updates”, Moderator Jennifer M. Schopf, Panelists Jennifer M. Schopf, William Nitzberg, Dane Skow, Cees DeLaat, Steve Crumb, **Global Grid Forum 11**, Honolulu, HI, June 2004.
2. “Grid Information Services: A Roadmap”, Panelists Jennifer M. Schopf, Matthew Dovey, Rob Allan, Omar Rana, and John Colgrave, **Grid Information Services Workshop**, UK eScience Center, April 2003.
3. “Core Technology: Future Directions”, Panelists Jennifer Schopf, Vicky White, and Les Robertson, **International Symposium on Grid Computing 2003 and TW Grid Workshop**, Taipei, Taiwan, March 2003.
4. “Path to Success”, Panelists Jennifer M. Schopf, Karen Willcox, and Joanne Yeh, **Women in Science Confab (WiSC 2002)**, Brown University, April 2002.
5. “Computational Grids: A Solution Looking for a Problem?”, Jennifer M. Schopf, Moderator and Organizer; Panelists: Ian Foster, Geoffrey Fox, Cherri Pancake, and Marc Snir. **SuperComputing 2000**, November 2000.
6. “How to Successfully Find an Academic Position”, Panelists Jennifer M. Schopf and Toni Pitassi, **CRAW Careers Workshop**, Federated Computing Research Conference (FCRC), April 1999.

Refereed Poster Presentations

1. “Scalability of the MDS2”, Jennifer Schopf and Xuehai Zhang, **GlobusWorld 2004**, January 2004.
2. “Inca Test Harness”, Shava Smallen, Pete Beckman, Michael Feldmann, Tim Kaiser, Catherine Olschanowsky, and Jennifer Schopf, **GlobusWorld 2004**, January 2004.

3. "Inca Test Harness and Reporting Framework", Shava Smallen, Pete Beckman, Michael Feldmann, Tim Kaiser, Catherine Olschanowsky, and Jennifer Schopf, **SuperComputing 2003**, November 2003.
4. "Extending the Globus Monitoring and Discovery Service for Usability", Neill Miller and Jennifer M. Schopf, **GlobusWorld**, San Diego, CA, January 2003
5. "Windows Performance Modeling and Data Reduction using WatchTower and Argus", M. W. Knop, P. K. Paritosh, P. A. Dinda, and J. M. Schopf, **SuperComputing 2001**, Denver, CO, November 2001.
6. "Grid Searcher", S. Melody and J. M. Schopf, **SuperComputing 2000**, Dallas, TX, November 2000.
7. "Performance Prediction Using Intervals", J. M. Schopf and F. Berman, **SuperComputing 1997**, San Jose, CA, November 1997.