

Jennifer M. Schopf

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Education

University of California, San Diego

Ph.D., Computer Science (December 1998)

Thesis: Performance Prediction and Scheduling for Parallel Applications
on Shared Clusters

Advisor: Dr. Francine Berman

M.S., Computer Science (December 1994)

Vassar College, Poughkeepsie, NY

B.A., with General Honors and Departmental Honors

Major: Mathematics and Computer Science (May 1992)

Summary

I have over ten years of experience working in distributed, scalable systems, both as a researcher and project manager. Most recently, I was the technical lead for the Informatics team in the Encyclopedia of Life project, where I oversaw a development team of 8-10, did requirements gathering, and was responsible for day-to-day operations. Previously, I was a senior member of the Globus distributed software team for over 7 years and the Director for the DOE SciDAC Center for Enabling Distributed Petascale Science (CEDPS). I was also the Director of Outreach for Globus for over 2 years. My research focuses on performance, monitoring, anomaly detection, and user requirements gathering, primarily in distributed system environments. I have co-edited a book, co-authored over 45 refereed papers, and given over 80 invited talks.

Professional Experience

Systems Architect (Technical Lead), 2008, Biodiversity Informatics Group,
Encyclopedia of Life, Marine Biological Laboratory

Scientist, 2004- 2008, Mathematics and Computer Science Division, Argonne National
Laboratory

Visiting Researcher, 2004- 2007, UK National eScience Centre (NeSC) and EPCC,
University of Edinburgh

Computation Institute Fellow, 2002- 2008, University of Chicago and Argonne
National Laboratory

eInfrastructure Policy Advisor, 2005-2006, Joint Information Systems Committee
(JISC) and the UK National eScience Centre (NeSC), University of Edinburgh

Assistant Scientist, 2001-2004, Mathematics and Computer Science Division, Argonne
National Laboratory

Visiting Scholar, 2002- 2008, Computer Science Department, University of Chicago

Adjunct Assistant Professor, 2002-2003, Computer Science Department, Northwestern
University

Assistant Professor, 1999-2002, Computer Science Department, Northwestern University

Guest Faculty, 2000-2001, Mathematics and Computer Science Division, Argonne National Laboratory

Graduate Researcher, 1992-1998, Department of Computer Science and Engineering, University of California at San Diego

Software Developer, 1991-1995, Good Advice Press, Elizaville, NY

Current Professional Activities

- Member, Globus Management Committee, since 2007
- Member, Globus Incubator Management Project, since 2006

Previous Professional Activities

- Advisory member, Component Lead committee, Encyclopedia of Life, 2008
- Project Chair for Globus Toolkit Monitoring and Discovery Service, 2001-2008
- Director, SciDAC Center for Enabling Petascale Science (CEDPS), 2006-2008
- Director of Outreach, Globus Alliance, since 2006-2008
- Founding Chair, Globus Incubator Management Project for new project uptake within Globus, 2006-2007
- Member, Open Science Grid Executive Board, 2006-2008
- Member, OGSA-DAI Project, 2004-2007
- Member, OGSA-DAI Technical Review Board (TRB), 2004-2007
- Member, UK Engineering Task Force, 2004-2007
- Member, JISC eInfrastructure Advisory Board, 2005-2007
- Member, Edinburgh eScience Steering Group, 2005-2007
- Member, JISC Committee to Support Research, 2005-2006
- Member, JISC eFramework Working Group, 2005-2006
- Research Leader, Performance and Information for Smart Decision Making, an eScience Institute Event Theme, 2004-2005
- Steering Group Member, Global Grid Forum, 2001–2004
- Area Director, Scheduling and Resource Management Area, Global Grid Forum, 1999–2004
- Site Lead and Co-PI, DOE Science Grid Collaboratory Project, 2003–2004
- Affiliate Partner, NCSA, 1999-2004
- 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

Awards and Honors

- UK eScience Visitor Program, FY04-05, \$88,000.
- 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. DOE SciDAC: A Center for Enabling Distributed Petascale Science: A DOE SciDAC Center for Enabling Technology, July 1, 2006 – June 30, 2011, \$2.4M/yr, PI: Ian Foster, Senior Personnel: Bill Allcock, Ann Chervenak, Keith Jackson, Kate Keahey, Carl Kesselman, Miron Livny, Donald Petravick, Jennifer Schopf, Brian Tierney, awarded September 2006.
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.

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/>

1. “Conservative Scheduling: Using Predicted Variance to Improve Scheduling Decisions in Dynamic Environments”, Lingyun Yang, Jennifer M. Schopf, and Ian Foster, *to appear Transactions on Parallel and Distributed Computing Journal*, 2007, draft available as Preprint ANL/MCS-P1069-0703, Mathematics and Computer Science Division, Argonne National Laboratory, 2005.
2. “Grid User Requirements – 2004: A Perspective From the Trenches”, Jennifer M. Schopf and Steven J. Newhouse, **Cluster Computing Journal**, Vol. 10, No. 3, September, 2007, pp 311-322.
3. “User Priorities for Data: Results from SUPER”, Jennifer M. Schopf, Steven Newhouse, **International Journal of Digital Curation (IJDC)**, Vol. 2, No. 1, 2007.
4. “Monitoring the Grid with the Globus Toolkit MDS4”, Jennifer M. Schopf, Laura Pearlman, Neill Miller, Carl Kesselman, Ian Foster, Mike D’Arcy, and Ann Chervenak, Invited paper, **Journal of Physics: Conference Series -- Proceedings of SciDAC 2006**, June 2006.
5. “Scalability Analysis of Three Monitoring and Information Systems: MDS2, R-GMA and Hawkeye”, Xuehai Zhang, Jeffrey L. Freschl, and Jennifer M. Schopf, **Journal of Parallel and Distributed Computing**, Vol. 67, Issue 8, August 2007, Pages 883-902. Draft available as Preprint ANL/MCS-P1294-1005, Mathematics and Computer Science Division, Argonne National Laboratory, 2005.
6. “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.
7. “Ten Actions When Grid Scheduling”, Jennifer M. Schopf, Chapter 2 in **Grid Resource Management for Grid Computing**, Kluwer Publishing, October 2003.
8. “PBS Pro”, Bill Nitzberg, Jennifer M. Schopf, and James Patton Jones, Chapter 27 in **Grid Resource Management for Grid Computing**, Kluwer Publishing, October 2003.
9. “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.
10. “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.

11. “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.
12. 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.
13. “Using Stochastic Information to Predict Application Behavior on Contended Resources”, J. M. Schopf and F. Berman, **International Journal of Foundations of Computer Science**, special issue on parallel and distributed computing, Vol. 12, No. 3, June 2001, 341–363,

Refereed Conference Publications

14. “Managing Biodiversity Knowledge in the Encyclopedia of Life”, Jennifer M. Schopf, Sarah Bordenstein, Patrick Leary, Peter Mangiafico, David J. Patterson, Alexey Shipunov, David Shorthouse, *to appear in the Proceedings of the Biodiversity Informatics Workshop at BNCOD 2008*, July 2008.
15. “End-to-End Data Solutions for Distributed Petascale Science”, Jennifer M. Schopf, Ann Chervenak, Ian Foster, Dan Fraser, Dan Gunter, Brian Tierney, Invited Article, **CTWatch Quarterly**, October 2007.
16. “Anomaly Detection and Diagnosis in Grid Environments”, Lingyun Yang, Chuang Liu, Jennifer M. Schopf, Ian Foster, **Proceedings of SuperComputing 2007**, November 2007.
17. “Log Summarization and Anomaly Detection for Troubleshooting Distributed Systems”, Dan Gunter, Brian L. Tierney, Aaron Brown, Martin Swamy, John Bresnahan, Jennifer M. Schopf, **Proceedings of Grid2007**, September 2007.
18. “Study of User Priorities for e-Infrastructure for e Research (SUPER)”, Steven Newhouse, Jennifer M. Schopf, Andrew Richards, and Malcolm Atkinson, **Proceedings of the UK eScience All Hands Meeting**, Sept 2007.
19. “OGSA-DAI 3.0 – The Whats and the Whys”, Mario Antonioletti, Neil P. Chue Hong, Alastair C. Hume, Mike Jackson, Kostas Karasavvas, Amy Krause, Jennifer M. Schopf, Malcolm P. Atkinson, Bartosz Dobrzelecki, Malcolm Illingworth, Nicola McDonnell, Mark Parsons, and Elias Theocharopoulos, **Proceedings of the UK eScience All Hands Meeting**, Sept 2007.
20. “The CEDPS Troubleshooting Architecture and Deployment on the Open Science Grid”, Brian L. Tierney, Dan Gunter, and Jennifer M. Schopf, **Proceedings of SciDAC 2007**, June 2007.
21. “Monitoring the Earth System Grid with MDS4”, Ann Chervenak, Jennifer M. Schopf, Laura Pearlman, Mei-Hui Su, Shishir Bharathi, Luca Cinquini, Mike D’Arcy, Neill Miller, David Bernholdt, **Proceedings of the Second International conference on eScience and Grid Computing (eScience 2006)**, December 2006.
22. “Grid-based Image Registration”, William Gropp, Neill Miller, Jennifer Schopf, Eldad Haber, Stefen Heldmann, David Keyes, and Tianzhi Yang, **Proceedings of WoCo9**, 2006.

23. "Profiling OGSA-DAI Performance for Common Use Patterns", Bartosz Dobrzelecki, Mario Antonioletti, Jennifer M. Schopf, Alistair C. Hume, Malcolm Atkinson, Neil P. Chue Hong, Mike Jackson, Kostas Karasavvas, Amrey Krause, Mark Parsons, Tom Sugden, and Elias Theocharopoulos, **Proceedings of the UK eScience All Hands Meeting**, September 2006.
24. "Abstractions, Accountability and Grid Usability", M Hartswood, R. Procter, J. M. Schopf, R. Slack, J. Ure and A. Voss, **Proceedings of the Second International Conference on e-Social Science**, 28-30 June 2006, Manchester, UK.
25. "Statistical Data Reduction for Efficient Application Performance Monitoring", Lingyun Yang, Jennifer M. Schopf, Catalin L. Dumitrescu, Ian Foster, **Proceedings of the Sixth IEEE International Symposium on Cluster Computing and the Grid (CCGRID'06)**, pp. 327-334, October 2006.
26. "Grid Enabling Your Data Resources with OGSA-DAI", Mario Antonioletti, Malcolm Atkinson, Neil Chue Hong, Bartosz Dobrzelecki, Alastair Hume, Mike Jackson, Kostas Karasavvas, Amy Krause, Jennifer M. Schopf, Tom Sugden, and Elias Theocharopoulos, **Proceedings of Para '06: Workshop on State-of-the-Art in Scientific and Parallel Computing**, June 18-21, 2006
27. "Resource Predictors for Grid Physics Applications", Peter T. Hurst, John Huth, Jennifer M. Schopf, **Proceedings of CHEP 2006**, February 2006.
28. "Real Users – Real Requirements", Jennifer M. Schopf and Steven J. Newhouse, **Proceedings of the UK eScience All Hands Meeting 2005**, Sept. 2005.
29. "OGSA-DAI Status and Benchmarks", Mario Antonioletti, Malcolm Atkinson, Rob Baxter, Andrew Borley, Neil P. Chue Hong, Patrick Dantressangle, Alastair C. Hume, Mike Jackson, Kostas Karasavvas, Amy Krause, Simon Laws, Mark Parsons, Norman W. Paton, Jennifer M. Schopf, Tom Sugden, Kostas Tourlas, Paul Watson, and David Vyvyan, **Proceedings of the UK eScience All Hands Meeting 2005**, Sept. 2005.
30. "A New Architecture for OGSA-DAI", M. Atkinson, M. Antonioletti, R. Baxter, A. Borley, N. Chue Hong, A. Hume, M. Jackson, K. Karasavvas, A. Krause, S. Laws, N. Paton, J. Schopf, T. Sudgen, K. Tourlas, and P. Watson, **Proceedings of the UK eScience All Hands Meeting 2005**, Sept. 2005.
31. "Improving Parallel Data Transfer Times Using Predicted Variances in Shared Networks", Lingyun Yang, Jennifer M. Schopf, and Ian Foster, **Proceedings of CCGrid 2005**, May 2005.
32. "The Inca Test Harness and Reporting Framework", Shava Smallen, Catherine Olschanowsky, Kate Ericson, Pete Beckman, and Jennifer Schopf, **Proceedings of 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>.
33. "Resource Predictors in HEP Applications", Sebastian Grinstein, John Huth, and Jennifer M. Schopf, **Proceedings of Computing in High Energy Physics (CHEP) 2004**, October 2004.
34. "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.
35. "Run-Time Prediction of Parallel Applications on Shared Environments", Byoung-dai Lee and Jennifer Schopf, poster-paper, in **Proceedings of Cluster 2003**, December 2003.
 36. "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.
 37. "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.
 38. "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.
 39. "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.
 40. "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.
 41. "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.
 42. "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.
 43. "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.
 44. "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.
 45. "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.
 46. "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 (ISPAN)**, June 1999.
 47. "Performance Prediction in Production Environments", J. M. Schopf and F. Berman, in **Proceedings of First Merged Symposium IPPS/SPDP 1998 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.
48. “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.
 49. “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.
 50. “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.

Refereed and Invited Poster Presentations

1. “Ray: A System Supporting Multiple Contending Scanning Queries on Large Scientific Data Sets”, Robert Grossman, David Hanley, Jennifer Schopf, Poster paper, **2007 Microsoft eScience Workshop at RENCI**, October 2007.
2. “Troubleshooting with the Open Science Grid”, Brian Tierney, Dan Gunter, and Jennifer M. Schopf, **SciDAC 2007 Conference**, June 2007.
3. “Monitoring the Grid with the Globus Toolkit MDS4”, Jennifer M. Schopf, Laura Pearlman, Neill Miller, Carl Kesselman, Ian Foster, Mike D’Arcy, and Ann Chervenak, **SciDAC 2006 Conference**, June 26, 2006.
4. “Scalability of the MDS2”, Jennifer Schopf and Xuehai Zhang, **GlobusWorld 2004**, January 2004.
5. “Inca Test Harness”, Shava Smallen, Pete Beckman, Michael Feldmann, Tim Kaiser, Catherine Olschanowsky, and Jennifer Schopf, **GlobusWorld 2004**, January 2004.
6. “Inca Test Harness and Reporting Framework”, Shava Smallen, Pete Beckman, Michael Feldmann, Tim Kaiser, Catherine Olschanowsky, and Jennifer Schopf, **SuperComputing 2003**, November 2003.
7. “Extending the Globus Monitoring and Discovery Service for Usability”, Neill Miller and Jennifer M. Schopf, **GlobusWorld**, San Diego, CA, January 2003
8. “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.
9. “Grid Searcher”, S. Melody and J. M. Schopf, **SuperComputing 2000**, Dallas, TX, November 2000.
10. “Performance Prediction Using Intervals”, J. M. Schopf and F. Berman, **SuperComputing 1997**, San Jose, CA, November 1997.

Technical Reports, Working Documents, and Unrefereed Work

1. “Study of User Priorities for e-Infrastructure for e-Research (SUPER)”, Steven Newhouse, Jennifer M Schopf, Andrew Richards and Malcolm Atkinson, UK eScience Technical Report UKeS-2007-01, April 2007.

2. "The Globus Incubator Project", J.M. Schopf, The Globus Consortium Journal, September 2006, available from <http://www.globusconsortium.org/journal/20060905/schopf.html>.
3. "Dynamic Anomaly Detection of a Wide Area File Transfer Service", D. Gunter, M. Rodriguez, B. Tierney, W. Allcock, J. Bresnahan, J. M. Schopf, A. Brown, and M. Swamy, MCS Technical Memorandum #ANL/MCS-TM-ANL/MCS-P1343-0406, April 2006.
4. "Information Services for Smart Decision Making: An eSI Event Theme Prototype Final Evaluation", Jennifer M. Schopf, UK eScience Technical Report #UKeS-2006-UKeS-2006-04, September 06, also available from http://www.nesc.ac.uk/technical_papers/UKeS-2006-UKeS-2006-04.pdf
5. "Report of the e-Frameworks Meets e-Science Workshop", Jennifer M Schopf and Iain Coleman, UK eScience Technical Report #UKeS-2006-03, September 06, also available from http://www.nesc.ac.uk/technical_papers/UKeS-2006-03.pdf
6. "MDS4 Deployment for TeraGrid Resource Selection", Jennifer Schopf, for the MDS4 Team, MCS Technical Memorandum #ANL/MCS-TM-293, March 2006.
7. "Monitoring and Discovery in a Web Services Framework: Functionality and Performance of Globus Toolkit MDS4", Jennifer M. Schopf, Ioan Raicu, Laura Pearlman, Neill Miller, Carl Kesselman, Ian Foster, Mike D'Arcy, available as MCS Technical Memorandum No. ANL/MCS-TM-293.
8. "Report of the UK Globus Week 2005", ed. J.M. Schopf, ANL MCS Technical Memorandum ANL/MCS-TM-291, NeSC report number UKeS-2005-06, also available from http://www.nesc.ac.uk/technical_papers/UKeS-2005-06.pdf, October 2005.
9. "Report of the International Grid Performance Workshop 2005", ed. J.M. Schopf, Argonne National Laboratory MCS Technical Memorandum ANL/MCS-TM-288, UK eScience Technical Report #UKeS-2005-07, also available from http://www.nesc.ac.uk/technical_papers/UKeS-2005-07.pdf.
10. "MDS4 and Project Deployments", Jennifer M. Schopf and the Globus Toolkit MDS Team, Globus Technology Brief, July 2005.
11. "Grid Performance Workshop 2004 Meeting Report", ed. J.M. Schopf, Mathematics and Computer Science Division Technical Memorandum ANL/MCS-TM-285, Argonne National Laboratory, National eScience Centre Technical Report UKeS-2005-05, August 2005, available from http://www.nesc.ac.uk/technical_papers/UKeS-2005-05.pdf.
12. "Statistical Data Reduction for Efficient Application Performance Monitoring", Lingyun Yang, Jennifer M. Schopf, and Ian Foster, ANL/MCS-P1281-0805, April 2005
13. "Monitoring and Discovery in a Web Services Framework: Functionality and Performance of the Globus Toolkit's MDS4", Jennifer M. Schopf, Mike D'Arcy, Neill Miller, Laura Pearlman, Ian Foster, and Carl Kesselman, ANL/MCS-P1248-0405, April 2005.
14. "State of Grid Users: 25 Conversations with UK eScience Groups", Jennifer M. Schopf and Steven J. Newhouse, Argonne National Laboratory Tech Report ANL/MCS-TM-278, Open Middleware Infrastructure Institute Technical Report

- OMII-CO-002, March 2005, UKeS-2004-08 available from http://www.nesc.ac.uk/technical_papers/UKeS-2004-08.pdf
15. "Replica Selection Using Instance-Based Learning", Yu Hu and Jennifer M. Schopf, MCS Technical Memorandum ANL/MCS-TM-282, Mathematics and Computer Science Division, Argonne National Laboratory, January 2005.
 16. "Documentation Required to Request Formation of a Working Group in the GGF", Jennifer M. Schopf, Peter Clarke, Bill Nitzberg, and Charlie Catlett, Global Grid Forum Document GFD.34, October 2004.
 17. "Monitoring Clusters and Grids", Jennifer M. Schopf and Ben Clifford, column for *ClusterWorld Magazine*, May 2004.
 18. "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>
 19. "So You Want to Set Up a Grid", Jennifer M. Schopf and Keith R. Jackson, column for *ClusterWorld Magazine*, February 2004.
 20. "The Inca Architecture", Jennifer M. Schopf, Shava Smallen, and Catherine Olschanowsky, TeraGrid Technical Report, Feb. 2004.
 21. "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.
 22. "Job Description for GGF Steering Group Members (GFSG)", Jennifer M. Schopf, Peter Clarke, Bill Nitzberg, and Charlie Catlett, GGF Informational Document, GFD.19, 2003.
 23. "Ten Actions When SuperScheduling", Jennifer M. Schopf, Global Grid Forum Document GFD.04, 2003.
 24. "A General Architecture for Scheduling on the Grid", Jennifer M. Schopf, available as Argonne National Laboratory preprint #ANL/MCS-P1000-1002, 2002.
 25. "Globus Toolkit 2.2 MDS Technology Brief", Jennifer M. Schopf and Lee Liming, Globus Project Tech Report, Brief, January 2003.
 26. "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.
 27. "Super Scheduler Steps/framework", J. M. Schopf, Global Grid Forum SchedWD8.5, July 2001 (first version 8.0 April 2000).
 28. "Performance Prediction and Scheduling for Parallel Applications on Multi-User Clusters", J. M. Schopf, Dissertation, UCSD Technical Report #CS98-607, December 1998.
 29. "Performance Prediction Using Stochastic Values", J. M. Schopf and F. Berman, poster presentation, University of California, McCormick School of Engineering Research Review, 1998.
 30. "Performance Prediction Using Intervals", J. M. Schopf and F. Berman, UCSD Technical Report #CS97-541, May 1997.

31. "Performance Prediction on Clusters Using Stochastic Values", J. M. Schopf and F. Berman, poster presentation, University of California, School of Engineering Research Review, 1997.
32. "Characterizing Heterogeneous Applications", J. M. Schopf and F. Berman, poster presentation University of California, School of Engineering Research Review, 1996.
33. "Heterogeneous Computing with ZOOM", J. M. Schopf and F. Berman, poster presentation, University of California, School of Engineering Research Review, 1995.
34. "Zoom: A Hierarchical Representation for Heterogeneous Applications", C. Anglano, J. Schopf, R. Wolski, and F. Berman, UCSD Technical Report #CS95-451, October, 1995.

Invited Talks

Talk slides and paper presentations available from <http://www.mcs.anl.gov/~jms/Talks/>

1. "Current Data Collection Approaches in EOL", Global Ant Project Workshop, Harvard University, Cambridge, MA, May 27, 2008.
2. "The Encyclopedia of Life: A Web Page for Every Species", Open Grid Forum 22, Boston, MA, February 27, 2008.
3. "Globus Incubators", Globus Day at OGF21, part of OGF21, Seattle, WA, October 17, 2007.
4. "Globus and Community", Opening Talk, Globus Day at OGF21, part of OGF21, Seattle, WA, October 17, 2007.
5. "CEDPS: Center for Enabling Distributed Petascale Science", SciDAC Centers and Institutes Status Workshop, Las Vegas, NV, October 15, 2007.
6. Keynote: "Grid Trends", 7th International Conference on Parallel Processing and Applied Mathematics (PPAM), Gdansk, Poland, September 10, 2007.
7. "Globus and the Grid Community", CoreGrid Summer School 2007, Budapest, Hungary, September 3, 2007.
8. "Real Data Grids: Three Pragmatic Case Studies", Invited seminar, Woods Hole Oceanographic Institute (WHOI), Woods Hole, MA, August 28, 2007.
9. "SUPER: Study of User Priorities for e-Infrastructure for e-Research", Invited talk, Office of CyberInfrastructure, National Science Foundation, Arlington, VA, July 24, 2007.
10. "Globus and TeraGrid: Current Experience and Near Term Plans", TeraGrid 2007, Madison, Wisconsin, June 5, 2007.
11. "A "Best Practices" Guide for Grid Log Messages", Open Grid Forum 20, Manchester, UK, May 9, 2007.
12. "Globus: Building Globus: Building Communities", Open Grid Forum 20, Manchester, UK, May 8 2007.
13. "SciDAC Center for Enabling Distributed Petascale Science", Oak Ridge National Laboratory, Oak Ridge, TN, February 8, 2007.
14. "CEDPS and CDIGS: Two Globus Projects", Middleware And Grid Infrastructure Coordination (MAGIC), National Science Foundation, Arlington, VA, February 7, 2007.

15. "Introduction to Globus: Current Experience and Near Term Plans", Globus Software Session, Open Grid Forum 20, January 29, 2007.
16. "Grid Trends", Information Infrastructures and Architectures Workshop, UK National eScience Centre, Edinburgh, UK, September 27, 2006.
17. "GT4 Status and Experience", UK All Hands Meeting Workshop, Nottingham, UK, September 18, 2006.
18. "dev.globus and the Globus Incubation Process", GlobusWORLD, Washington DC, September 14, 2006.
19. "Globus MDS for Architects", GlobusWORLD, Washington DC, September 11, 2006.
20. "Globus: Where Are We Going Next? A Pragmatic Viewpoint", CoreGrid Summer School 2006, Bonn, Germany, July 2006.
21. "Grid Computing and the Globus Toolkit", DRAGON project seminar, University Maryland, College Park, July 2006.
22. "dev.globus: A Framework for Open Globus Development", Invited Talk, Open Source Software Workshop - A Collaboration Platform for Web Applications, associated with the 15th International World Wide Web Conference (WWW2006), May 23, 2006.
23. "Monitoring and Discovery in a Web Services Framework: Functionality and Performance of Globus Toolkit MDS4", Invited Talk, Trans-European Research and Education Networking Association (TERENA) 2006, Catania, Italy, May 17, 2006.
24. Keynote: "Grid Computing and the Globus Toolkit", La Cuarta Reunion de la Red Tematica en Grid Middleware (Fourth meeting of the Thematic Network in Grid Middleware), Universidad Complutense de Madrid, Spain, April 26, 2006.
25. "MDS4: GT4 Information Services Roadmap", CDIGS Roadmap Meeting, Chicago, IL, March 30, 2006.
26. "Grid Computing and the Globus Toolkit", Opening Talk, DEISA Middleware and Security Technical Meeting, NeSC, UK, March 13, 2006.
27. "MDS4 Deployment for TeraGrid Resource Selection", TeraGrid Architecture Meeting, March 9, 2006.
28. Keynote: "Globus Toolkit 4", LRZ-DGRID Globus Tag, Leibniz Computing Centre of the Bavarian Academy of Sciences and Humanities, Munich, Germany, March 8, 2006
29. "Monitoring and Discovery in a Web Services Framework: Functionality and Performance of Globus Toolkit MDS4", DGRID Seminar, Leibniz Computing Centre of the Bavarian Academy of Sciences and Humanities, Munich, Germany, March 2006
30. Closing Keynote: "Grid Futures - Where Are We Going Next? A Pragmatic Viewpoint", National Centre for e-Social Science: Winter Training School, Manchester, UK, March 2, 2006.
31. "UK eScience – Policy and Futures", GridCoord Policy Workshop: European Research Policy Coordination on Next Generation Grid-Based Systems and Services, Linz, Austria February 27, 2006.
32. "Introduction to Grid Computing and the Globus Toolkit", Middlesex University, Enfield, UK, February 23, 2006.

33. "Distributed Monitoring and Information Services for the Grid", EPCC eScience Masters Program, University of Edinburgh, UK, February 20, 2006.
34. "Introduction to eInfrastructure", NERC GridGIS Working Group, NeSC, Edinburgh February 1, 2006.
35. Keynote: "Grid Computing and the Globus Toolkit", GLOBUS Workshop am LRZ für D-Grid, Leibniz Computing Centre of the Bavarian Academy of Sciences and Humanities, Munich, Germany, January 24, 2006.
36. Keynote: "Globus Toolkit 4: An Overview, Middleware and Clusters for Grid Computing", NW-GRID Seminar, CCLRC, Daresbury Laboratory, December 13, 2005.
37. Keynote: "What do we mean by the Grid and e-research? An overview of some key aspects and technologies in 30 minutes", Workshop on e-Research for University Library staff, CURL/SCONUL Joint Task Force on e-Research in conjunction with the Digital Curation Centre, London, December 12, 2005.
38. "Distributed Monitoring and Information Services for the Grid", Invited Seminar, Cambridge eScience Centre, Cambridge University, December 6, 2005.
39. "Distributed Monitoring and Information Services for the Grid", Invited Seminar, University of Bath, September 30, 2005.
40. "Globus Toolkit 4: Current Status and Futures", Invited Seminar, University of Leeds, September 2005.
41. "Globus Toolkit 4: Current Status and Futures", Invited Seminar, University of Newcastle, June 2005.
42. "Globus Toolkit 4: Current Status and Futures", Invited Seminar, Belfast eScience Centre, May 2005.
43. "Distributed Monitoring and Information Services for the Grid", Master's Seminar, University of Amsterdam, Netherlands, April 2005.
44. "Introduction to Grid Computing", Hauptseminar Munich University, April 2005
45. "Globus Toolkit 4: Current Status and Futures", Juelich University, Germany, April 2005.
46. "Globus Toolkit 4: Futures and Open Issues", NEC, Sankt Augustin, Germany, April 19 2005.
47. "Intro to Grids and the Globus Toolkit", Jornadas de Informatica (Join'05), Universidade do Minho, Portugal, March 9, 2005.
48. "Distributed Monitoring and Information Services for the Grid", MSc in High Performance Computing, Invited Seminar, EPCC Edinburgh, January 28, 2005.
49. "Grids: The Top Ten Questions", RAL Invited Seminar, Rutherford Appleton Lab, UK, January 14, 2005
50. "Distributed Monitoring and Information Services for the Grid", NeSC Public Lecture, Edinburgh, January 10, 2005.
51. Keynote, "Grid Computing and the Globus Toolkit", LRZ Grid Days, LRZ, Munich, December 14, 2004.
52. "Grids and Grid Scheduling", Heart Modeling ITR Kickoff, CMU November 12, 2004.
53. "Globus Toolkit Monitoring and Discovery System: MDS4, Technology Review", Argonne Booth, SuperComputing Nov 8-11, 2004

54. "Grid Monitoring and Information Services: Globus Toolkit MDS4 & TeraGrid Inca", LCG Operations Workshop, CERN November 2-4 2004.
55. "Requirements and Services: The Application Point of View, Service Grids: Current Activity & Middleware Requirements", Open Middleware Infrastructure Institute, Southampton, UK, July 29 2004.
56. "Requirements and Services: The Application Point of View", Service Grids: Current Activity & Middleware Requirements, UK eScience Institute, Edinburgh, UK, 22-23 July, 2004.
57. "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.
58. "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.
59. "Grid Computing and the Globus Toolkit", Woods Hole Oceanographic Institute, Woods Hole, MA, July 29, 2003.
60. "A Global Grid Forum (GGF) Primer", Open Group Plenary Session, Boston, MA, July 22, 2003.
61. "Globus and Grids", Open Group Plenary Session, Boston, MA, July 22, 2003.
62. Keynote: "Grid Monitoring Futures with Globus", Grid Information Services Workshop, UK eScience Center, Edinburgh, UK, April 25, 2003.
63. "Grid Monitoring with Globus", Lawrence Berkeley National Laboratory, April 9, 2003.
64. "Scheduling and the Grid", International Symposium on Grid Computing 2003 and TW Grid Workshop, Taipei, Taiwan, March 2003.
65. "The Grid: Ten Open Questions", International Symposium on Grid Computing 2003 and TW Grid Workshop, Taipei, Taiwan, March 2003.
66. "Globus Toolkit 2: An Overview", International Symposium on Grid Computing 2003 and TW Grid Workshop, Taipei, Taiwan, March 2003.
67. "10 Actions when SuperScheduling: A Grid Scheduling Architecture", Scheduling Architecture Workshop, GGF-7, Tokyo, Japan, March 2003.
68. "Grid Prediction and Scheduling with Variance", Poznan Supercomputing and Networking Center, February 2003.
69. "Performance Problem Analysis and the Globus Toolkit", Workshop on Troubleshooting and Fault Tolerance in Grid Environments, Chicago, IL, Dec. 11, 2002.
70. "Monitoring, Prediction and Scheduling on the Grid", University Chicago/Argonne National Lab Computation Institute, July 2002.
71. "Monitoring and Grids", CERN, Geneva, CH, June 2002.
72. "High Energy Physics: What do we want from the TeraGrid?", Alliance All Hands Meeting, Urbana-Champaign, IL, May 2002.
73. "Getting a Job in Academia", Women in Science Confab (WiSC 2002), Brown University, April 2002.
74. "Information Services and Monitoring", joint talk with James Magowan, The CERN LHC Grid Computing Project, CERN, Geneva, March 2002.

75. "The Application's Perspective of Measurement and Performance", Internet2 End to End Measurement Workshop, Tempe, Arizona, February 2002.
76. "A GGF Primer", LISHEP workshop, Rio de Janeiro, Brazil, February 2002.
77. "Scheduling and Resource Management on the Grid", Asia Pacific Grid Workshop, Tokyo, Japan, October 2001.
78. "Scheduling on Clusters, Scheduling on the Grid", MCS Seminar, Argonne National Laboratory, July 2001.
79. "Grids: The Top Ten Problems", London Regional E-Science Center, Imperial College, London, June 2001.
80. "Grids: The Top Ten Problems", PDP/IT Seminar Series, CERN, Geneva, Switzerland, June 2001.
81. "Finding an Academic Position", Computer Science Department, University of Chicago, October 2000.
82. "Prediction and Scheduling on Cluster of Workstations", Center for Parallel and Distributed Computing, Electrical and Computer Engineering Department, Northwestern University, February 1999.
83. "Scheduling on Clusters of Workstations", Special Lecture Series in Computer Science, Computer Science Department, University of San Francisco, December 1998.
84. "Prediction and Scheduling for Metacomputing Environments", NEOS Colloquium, ECE Department, Northwestern University, November 1998.
85. "Explicit Models in Application-Level Scheduling for Heterogeneous Computing", Computer Science Research Colloquium, Old Dominion University, September 1996.

Invited Panel and Birds of Feather Presentations

1. "Globus and Community", Moderator Jennifer Schopf, Panelists Amy Krause, Rachana Ananthakrishnan, Rachana Ananthakrishnan, Eduardo Huedo, Joan Slottow, Prakashan Korambath, Globus Day, OGF21, Seattle, WA, October 17, 2007.
2. "Visions of Future Grids", Panelists Jennifer M. Schopf, Daniel Mallmann, Keith Jeffery, CoreGrid Summer School 2006, Bonn, Germany, July 2006.
3. "Strengths and Weaknesses of Grid Middleware", Panelists Jennifer M. Schopf, Stephen Pickles, Steven Newhouse, John Brooke, Rob Allan, and Joanna Schmidt, Middleware and Clusters for Grid Computing NW-GRID Seminar, CCLRC, Daresbury Laboratory, December 13, 2005.
4. "Grid Applications and Performance", BOF Presentation, Supercomputing 2005, Seattle, WA, November 2005.
5. "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.
6. "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.

7. “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.
8. “Path to Success”, Panelists Jennifer M. Schopf, Karen Willcox, and Joanne Yeh, Women in Science Confab (WiSC 2002), Brown University, April 2002.
9. “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.
10. “How to Successfully Find an Academic Position”, Panelists Jennifer M. Schopf and Toni Pitassi, CRAW Careers Workshop, Federated Computing Research Conference (FCRC), April 1999.

Tutorials

1. Training the Trainers: The 3-hour Technical Globus Tutorial, Distributed Systems Laboratory, Argonne National Laboratory, January 25, 2007.
2. Introduction to Globus (Full day), SuperComputing 2007, Reno, NV, November 2007.
3. Globus and Community (Half day), Internet2 Fall members Meeting, San Diego, CA, October 11, 2007.
4. Introduction to Globus (Full day), GridKA Summer School, Karlsruhe, Germany, September 12, 2007.
5. Globus: Fundamental Tools for Building Your Grid (Half day), 7th International Conference on Parallel Processing and Applied Mathematics (PPAM), Gdansk, Poland, Sept 9, 2007.
6. CEDPS and Grids (Half day), SciDAC Annual Meeting 2007, Boston, Massachusetts, June 2007.
7. Grid Computing and the Globus Toolkit (Half day followed by hands on exercises), TeraGrid2007, Madison, Wisconsin, June 4, 2007.
8. Grid Computing and the Globus Toolkit (Half day followed by hands on exercises), Great Plains Network Annual Meeting, Kansas City, Missouri, June 2, 2007.
9. Globus Tutorial (Half day), CoreGrid Summer School 2006, Bonn, Germany, July 2006.
10. Global Grid Forum Chairs Training, Global Grid Forum 11, Honolulu, HI, June 2004.
11. Globus Tutorial (Half day), ATLAS software week, CERN, Geneva, Switzerland, December 2001.
12. Globus Tutorial (Half day), European Data Grid Coordination Meeting, Frascati, Italy, October 2001.

Professional Society Membership

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

Selected Conference Activities

- Organizer, Globus Day at OGF21, OGF21 Community Program, Seattle WA, October 17, 2007
- Co-General Chair CLADE 2007
- Co-Program Committee Chair, CLADE 2006
- Organizer, User Requirements and Web based Access for eResearch Workshop, eScience Institute, University of Edinburgh, May 19, 2006
- Organizer, eScience meets eFrameworks Workshop, eScience Institute, University of Edinburgh, April 28, 2006
- Organizer, Grid Applications and Performance Birds of Feather session, SuperComputing 2005
- Organizer and Steering Group member, International Grid Performance Workshop, 2004, 2005
- Technical Paper Vice-chair for SuperComputing 2005
- Publicity Chair, HPDC 2004
- Invited Participant, Conference on High Speed Computing (Salishan), 2004, 2001
- Invited Participant, NSF Workshop on US-UK Grid Activities, August 2001
- Research Gems (Posters) Chair, Technical Committee, SC 2000
- Invited participant, IPG Workshop on Advance Reservations and Co-Scheduling, Argonne National Laboratory, May 1999
- Program Committees, including Workshop on Data-Aware Distributed Computing 1998, HPDC 2008, ICSOC07, SC 2007, Cluster2007, ISGC 2007, HPDC 2007, AINA 2007, SC 2006, UK AHM 2006, Cluster 2006, WoCo9 (2006), HPDC 2006, SC 2005 (Grid Area Vice-Chair), Grid 2005 Workshop, UK Globus Week (Organizer), 1ST International Workshop on Peformability, 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
- Tutorials Committees, including Cluster 2004 (chair), Supercomputing 2003, Supercomputing 2001

Technical Referee (Journals, Funding agencies)

- National Science Foundation 2000, 2001, 2002, 2003, 2006, 2007, 2008
- Concurrency and Computation: Practice and Experience 2008
- IEEE Transactions on Computers 2008
- Journal of Scheduling 2008
- IEEE Internet Computing Journal 2003
- U.S. Department of Energy 2002, 2003
- Cluster Computing Journal 2002, 2003
- E-Science Core Technology Programme, UK 2002
- Journal of Parallel and Distributed Computing 2001, 2002, 2006
- Scientific Programming 2001

- IEEE Transactions on Parallel and Distributed Systems 1995, 1997, 1999, 2000, 2001
- ACM Computing Surveys 1999
- IEEE Transactions on Software Engineering 1995, 1996

Courses Taught

- Tools for Computational Science and Engineering, Northwestern University graduate and undergraduate course, Winter '01
- Operating Systems, Northwestern University undergraduate course, Fall '99, Fall '00
- Computing over the Computational Grid, Northwestern University graduate and undergraduate course, Spring '00
- Operating Systems 2: Implementations and Architectures, Northwestern University graduate and undergraduate course, Spring '99, Winter '00
- Parallel Distributed Computing, Northwestern University graduate and undergraduate course, Winter '99
- Operating Systems: Architecture and Implementation, co-lectured with Keith Marzullo, UCSD undergraduate course, Winter '98, Spring '98

Laboratory and University Service

- Summer student supervisor, ANL MCS, 2001-2004
- 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

Past Advising and Mentoring

- Lingyun Yang, University of Chicago, PhD 2007, University of Chicago
- Yu Hu, M.S. 2004, University of Chicago
- Xuehai Zhang, M.S. 2002, University of Chicago
- Michael Knop, M.S. 2002, Northwestern University
- Sudharshan Vazhkudai, “Lab Grad” 2000-2002, Argonne National Laboratory
- Supervised over 75 student quarters of undergraduate and MS student independent study, Northwestern University, Winter '99 –Winter '02