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Vita

Birthdate: August 17, 1964
Birthplace: Walnut Creek, California
Citizenship: United States

Education

Ph.D.	U.C. Davis/Lawrence Livermore Campus	April, 1994
M.S.	U.C. Davis/Lawrence Livermore Campus	June, 1989
B.S.	California Polytechnic University, San Luis Obispo (Summa Cum Laude)	August, 1986

Professional Experience

July, 2007 - present	Professor	U.C. Santa Barbara
July, 2002 - 2007	Associate Professor	U.C. Santa Barbara
October, 2004 - present	Strategic Advisor	San Diego Supercomputer Center
July, 2001 - October, 2004	Grid Systems Lead	NSF National Partnership for Advanced Computational Infrastructure (initial partner)
July, 2001 - July, 2002	Assistant Professor	U.C. Santa Barbara
October, 2001 - present	Faculty Computer Scientist	Lawrence Berkeley Lab
February, 1999 - June, 2001	Assistant Professor	University of Tennessee
June, 1996 - February, 1999	Research Faculty	U.C. San Diego
April, 1994 - June, 1996	Postdoctoral Researcher	U.C. San Diego
April, 1994 - January, 1997	SDSC Junior Fellow	San Diego Supercomputer Center
September, 1986 - June, 1996	Computer Scientist	Lawrence Livermore Laboratory
September, 1993 - December, 1993	Lecturer	Mills College, Oakland CA.

Awards

- Outstanding Faculty Member of the Year, University of California, Santa Barbara, Computer Engineering Program, June, 2006.
- Academic Senate University Distinguished Teaching Award, University of California, Santa Barbara, May 2005.

- Computer Science Teacher of the Year, University of California, Santa Barbara, Computer Science Department, June, 2003.
- ACM Teacher of the Year award, Computer Science Department, University of Tennessee, Knoxville, TN., May 2000.
- Best Acceleration for “Where do you want to Compute Today?” at the High-performance Computing Challenge, SC98, Orlando FL, November 1998.

Published Work

1. Mutz, A., Wolski, R, Efficient Auction-based Grid Reservations Using Dynamic Programming, (to appear) Proceedings of SC08, November, 2008.
2. Nurmi, D., Brevik, J., Wolski, R., VARQ: Virtual Advance Reservations for Queues, ACM/IEEE International Symposium on High Performance Computing (HPDC), June 2008, Boston, MA
3. Youseff, L., Seymour, K., You, H., Dongarra, J. Wolski, R., The Impact of Paravirtualized Memory Hierarchy on Linear Algebra Computational Kernels and Software, High Performance Distributed Computing (HPDC), Boston, MA, June 2008.
4. Gurun, S., Krintz, C., and Wolski, R. 2008. NWSLite: A general-purpose, nonparametric prediction utility for embedded systems. *Trans. on Embedded Computing Sys.* 7, 3 (Apr. 2008), 1-36.
5. Kee, Y., Kesselman, C., Nurmi, D., Wolski, R., Enabling Personal Clusters on Demand for Batch Resources Using Commodity Software, International Heterogeneity in Computing Workshop (HCW08) in conjunction with IEEE International Parallel and Distributed Processing Symposium (IPDPS08), Apr. 2008
6. Nurmi, D., Wolski, R., and Brevik, J. 2008. Probabilistic advanced reservations for batch-scheduled parallel machines. In *Proceedings of the 13th ACM SIGPLAN Symposium on Principles and Practice of Parallel Programming (Salt Lake City, UT, USA, February 20 - 23, 2008)*. PPOPP '08 POSTER. ACM, New York, NY, 289-290.
7. Kee, Y., Nurmi, D., Singh, G., Mutz, A., Kesselman, K., Wolski, R., VGES: the Next Generation of Virtualized Grid Resource Provisioning, *Proceedings of IEEE International Workshop on End-to-end Virtualization and Grid Management*, 2007.
8. Wen, Y, and Zhang, W. and Wolski, R., and Chohan, N, Simulation-Based Augmented Reality for Sensor Network Development, *Proceedings of ACM Sensys*, November, 2007.
9. Brevik, J., Nurmi, D., Wolski, R., Using Model-based Clustering to Improve Predictions for Queueing Delay on Parallel Machines, *Parallel Processing Letters*, Volume 17, Number 1, March, 2007, pp. 21 – 46.

10. Mutz, A, and Wolski, R., and Brevik, J., Eliciting Honest Value Information in a Batch-Queue Environment, in Proceedings of Grid2007.
11. Gurun, S., Krintz, C., and Wolski, R., NWSLite: A General-purpose, Non-parametric Prediction Utility for Embedded Systems, (to appear) ACM Transactions on Embedded Computing Systems, 2007.
12. Wen, Y., Gurun, S., Chohan, N., Wolski, R., Krintz, C., Accurate and Scalable Simulation of Network of Heterogeneous Sensor Devices, Journal of Signal Processing Systems, August, 2007, Vol. 50, No. 2.
13. Nurmi, D., Brevik, J., and Wolski, R., QBETS: Queue Bounds Estimation from Time Series, (to appear) 13th Workshop on Job Scheduling Strategies for Parallel Processing, June, 2007.
14. Chrabakh, W. and Wolski, R., A Grid Web-based Portal for Solving Satisfiability Problems Using National Cyberinfrastructure, Journal of Concurrency and Computation: Practice and Experience, Volume 19, Number 6, pp. 795-808, April, 2007.
15. Wolski, R., Nurmi, D., and Brevik, J., An Analysis of Availability Distributions in Condor, Workshop on Next-Generation Software (w/IPDPS), March, 2007.
16. Mousa, H., Krintz, C., Youseff, L., and Wolski, R., VIProf: Vertically Integrated Full-System Performance Profiler Workshop on Next-Generation Software (w/IPDPS), March, 2007
17. Wen, Y., Wolski, R., and Moore, G., DiSenS: Scalable Distributed Sensor Network Simulation, Proceedings of ACM Principles and Practices of Parallel Programming (PPoPP) 2007, March, 2007, pp.24-34.
18. Grzegorzcyk, C., Soman, S., Wolski, R., and Krintz, C., Isla Vista Heap Sizing: Using Feedback to Avoid Paging, (to appear) The International Symposium on Code Generation and Optimization (CGO), March, 2007.
19. Youseff, L., Wolski, R., Gorda, B., and Krintz, C., Paravirtualization for HPC Systems, in Proceedings of Workshop on XEN in HPC Cluster and Grid Computing Environments (XHPC), held in conjunction with The International Symposium on Parallel and Distributed Processing and Application (ISPA 2006), December 2006.
20. Youseff, L., Wolski, R., Gorda, B., and Krintz, C., Evaluating the Performance Impact of Xen on MPI and Process Execution For HPC Systems, Proceedings of the First International Workshop on Virtualization Technology in Distributed Computing (VTDC), November, 2006.
21. Nurmi, D., Mandal, A., Brevik, J., Keolbel, C., Wolski, R., and Kennedy, K., Evaluation of a Workflow Scheduler Using Integrated Performance Modelling and Batch Queue Wait Time Prediction, in Proceedings of SC06, November, 2006.

22. Brevik, J., Nurmi, D. and Wolski, R. Predicting Bounds on Queueing Delay in Space-Shared Computing Environments, IISWC, October, 2006, San Jose, CA.
23. Wen, Y., Wolski, R., and Gurun, S., S2DB: A Novel Simulation-Based Debugger for Sensor Network Applications, in Proceedings of EMSOFT, October, 2006.
24. Wen, Ye, Gurun, S., Chohan, N., Wolski, R. and Krintz, C., SimGate: Full-System, Cycle-Close Simulation of the Stargate Sensor Network Intermediate Nodes, International Conference on Embedded Computer Systems: Architectures, Modeling, and Simulation (IC-SAMOS), Samos, Greece, July 2006.
25. Chrabakh, W. and Wolski, R., GridSAT: Design and Implementation of a Computational Grid Application, Journal of Grid Computing, Volume 4, Number 2, June 2006, pp. 177-193.
26. Chrabakh, W. and Wolski, R., GridSAT: A System for Solving Satisfiability Problems on a Computational Grid, Journal of Parallel Computing, Volume 32, Number 9, October, 2006, pp. 660-687.
27. Brevik, J., Nurmi, D., and Wolski, R., Predicting Bounds on Queueing Delay for Batch-scheduled Parallel Machines, Proceedings of ACM Principles and Practices of Parallel Programming (PPoPP) 2006, March, 2006
28. Wolski, R., Obertelli, G., Allen, M., Nurmi, D., and Brevik, J., Predicting Grid Resource Performance On-line, in Handbook of Nature-Inspired and Innovative Computing: Integrating Classical Models with Emerging Technologies, A. Zomaya ed., Springer, 2006, pp. 575-611.
29. Swany, M. and Wolski, R., Network Scheduling for Computational Grid Environments, Journal of Scalable Computing: Practice and Experience, Volume 6, No. 3, pages 85-94, 2005.
30. O'Sullivan, M., Brevik, J., Wolski, R., The Performance of LDPC codes with Large Girth, *Proc. 43rd Allerton Conference on Communication, Control and Computing*, Univ. Illinois, 2005.
31. Nurmi, D., Brevik, J., and Wolski, R., Minimizing the Network Overhead of Checkpointing in Cycle-harvesting Cluster Environments, Proceedings of Cluster 2005, September, 2005.
32. Nurmi, D., Brevik, J., and Wolski, R., Modeling Machine Availability in Enterprise and Wide-area Distributed Computing Environments, Proceedings of EUROPAR 2005, August, 2005.
33. Wolski, R., Nurmi, D., Brevik, J., Casanova, H., Chien, A. Models and Modeling Infrastructures for Global Computational Platforms, Workshop on Next Generation Software, IPDPS, April 2005.

34. Krintz, C., and Wolski, R., Using Phase Behavior in Scientific Applications to Guide Linux Operating System Customization, Workshop on Next Generation Software, IPDPS, April 2005.
35. Blanquer, J., Batchelli, A., Schausser, K., and Wolski, R., Quorum: Flexible Quality of Service for Internet Services, USENIX 2nd Symposium on Networked Systems Design and Implementation (NSDI), May 2-4, 2005.
36. Wen, Y., Wolski, R., Krintz, C., Online Prediction of Battery Lifetime for Embedded and Mobile Devices, Special Issue on Embedded Systems: Springer-Verlag Heidelberg Lecture Notes in Computer Science, V3164/2004, Dec 2004, pp. 57–72.
37. Blanquer, J., Batchelli, A., Schausser, K., and Wolski, R., QoS for Internet Services – Done Right, 11th ACM SIGOPS European Workshop, Leuven, Belgium, September 11-22, 2004.
38. Krintz, C., Wen, Ye, and Wolski, R., Application-level Prediction of Battery Dissipation, ACM/IEEE International Symposium on Low Power Electronics and Design (ISLPED), Newport Beach, CA, August 9-11, 2004, pp. 224–229.
39. Gurun, S., Krintz, C., and Wolski, R., NWSLite: A Light-Weight Prediction Utility for Mobile Devices, International Conference on Mobile Systems, Applications, and Services (MobiSys) June 6-9, 2004, pages 2–11.
40. Brevik, J, Nurmi, D., and Wolski, R., Automatic Methods for Predicting Machine Availability in Desktop Grids and Peer-to-peer Systems, Fourth International Workshop on Global and P2P (GP2P) in conjunction with CCGrid04, Chicago, IL, April, 2004 (published electronically).
41. Swany, M. and Wolski, R., Building Performance Topologies for Computational Grids, International Journal of High Performance Computing Applications, Volume 18, Number 2, pages 255–265, 2004.
42. Chrabakh, W. and Wolski, R., GridSAT: A Chaff-based Distributed SAT Solver for the Grid, Proceedings of SC03, Phoenix, AZ, November, 2003 (published electronically).
43. Allen, M. and Wolski, R., The Livny and Plank-Beck Problems: Studies in Data Movement on the Computational Grid, Proceedings of SC03, Phoenix, AZ, November, 2003 (published electronically).
44. Wolski, R., Miller, L., Oberletti, G., and Swany, M., Performance Information Services for Computational Grids, In *Resource Management for Grid Computing*, Nabrzyski, J., Schopf, J., and Weglarz, J., editors, Kluwer Publishers, Fall, 2003.
45. Ye Wen, Rich Wolski, and Chandra Krintz, History-based, Online, Battery Lifetime Prediction for Embedded and Mobile Devices Workshop on Power-Aware Computer Systems (PACS), April 2003 (published electronically).

46. Berman, F., Wolski, R., Casanova, H., Cirne, W, Dail, H., Faerman, M., Figueira, S., Hayes, J., Obertelli, G., Schopf, J., and Shao, G., Smallen, S., Spring, N., Su, A., Zagorodnov, D., Adaptive Computing on the Grid Using AppLeS, *IEEE Transactions on Parallel and Distributed Systems*, Volume 14, Number 4, pp 369–382, April, 2003.
47. Bassi, A., Beck, M., Moore, T., Plank, S., Swany, M., Wolski, R., and Fagg, G., The Internet Backplane Protocol: a study in Resource Sharing, *Future Generation Computer Systems*, Volume 19, Number 4, pp 551–561, 2003.
48. Wolski, R., Experiences with Predicting Resource Performance On-line in Computational Grid Settings, *ACM SIGMETRICS Performance Evaluation Review*, Volume 30, Number 4, pp 41–49, March, 2003.
49. Wolski, R., Brevik, J., Plank, J., and Bryan, T., Grid Resource Allocation and Control Using Computational Economies, In *Grid Computing: Making the Global Infrastructure a Reality*, Berman, F, Fox, G., and Hey, T. editors, Wiley and Sons, pp. 747–772, March 2003.
50. Swany, M. and Wolski, R., Multivariate Resource Performance Forecasting in the Network Weather Service, *Proceedings of SC02*, November, 2002.
51. Swany, M. and Wolski, R., Building Performance Topologies for Computational Grids, *Proceedings of the Los Alamos Computer Science Institute Third Annual Symposium*, October, 2002.
52. Allen, M., Wolski, R. and Plank, J., Adaptive Timeout Discovery Using the Network Weather Service, *Proceedings of the 11th IEEE Symposium on High-Performance Distributed Computing (HPDC-11)*, August, 2002.
53. Swany, M., and Wolski, R., Representing Dynamic Performance Information in Grid Environments with the Network Weather Service, in the *Proceedings of the Second Conference on Cluster and Grid Computing (CCGrid02)*, May, 2002.
54. Kennedy, K., Mazina, M., Mellor-Crummy, J., Cooper, K., Torczon, L., Berman, F., Chien, A., Dail, H., Sievert, O., Anguloa, D., Forster, I., Gannon, D., Johnsson, L., Kesselman, C., Aydt, R., Reed, D., Dongarra, J., Vadhiyar, S., Wolski, R., Toward a Framework for Preparing and Executing Adaptive Grid Programs, *Proceedings of NSF Next Generation Systems Program Workshop (International Parallel and Distributed Processing Symposium 2002)*, April, 2002.
55. Wolski, R., Computational Grids: Current Trends in Performance-oriented Distributed Computing, *SIAM News*, Volume 35, Number 2, page 4, March 2002.
56. Bassi, A., Beck, M., Fagg, G., Moore, T., Plank, J., Swany, M., and Wolski, R., The Internet Backplane Protocol: A Study in Resource Sharing, in the *Proceeding of the Second Conference on Cluster and Grid Computing (CCGrid02)*, May, 2002.

57. Swamy, D. M., Wolski, R., Data Logistics in Network Computing: The Logistical Session Layer, Proceedings of IEEE International Symposium on Network Computing Applications, February, 2002.
58. Plank, J., Wolski, R. and Allen, M., The Effect of Timeout Prediction and Selection on Wide Area Collective Operations, Proceedings of IEEE International Symposium on Network Computing Applications, February, 2002.
59. Wolski, R., Brevik, J., Obertelli, G., Spring, N., and Su, A., Writing Programs that Run EveryWare on the Computational Grid, IEEE Transactions on Parallel and Distributed Systems, Vol. 12, Number 10, pp. 1066–1080, October, 2001.
60. Berman, F., Chien, A., Cooper, K., Dongarra, J., Foster, I., Gannon, D., Johnsson, L., Kennedy, K., Kesselman, C., Mellor-Crummey, J., Reed, D., Torczon, L., Wolski, R., The GrADS Project: Software Support for High-Level Grid Application Development, International Journal of High Performance Computing Applications, Volume 15, Number 4, pp. 327–344, Winter 2001.
61. Wolski, R., Plank, S., Bryan, T., and Brevik, J, Analyzing Market-based Resource Allocation Strategies for the Computational Grid, International Journal of High-performance Computing Applications, Volume 15, Number 3, pp. 258–281, Fall 2001.
62. Plank, J., Bassi, A, Beck, M., Moore, T., Swamy, D. M., R. Wolski, Managing Data Storage in the Network, IEEE Internet Computing, Volume 5, Number 5, pp. 50–58, Sept/Oct., 2001.
63. Swamy, D., and Wolski, R., The Logistical Session Layer, IEEE International Symposium on High Performance Distributed Computing, August, 2001.
64. Krintz, C., and Wolski, R., NwsAlarm: A Tool for Accurately Detecting Degradation in Expected Performance of Grid Resources, CCGrid 2001, May, 2001, pp. 404–413.
65. Elwasif, W., Plank, J., and Wolski, R., Data Staging Effects in Wide Area Task Farming Applications, CCGrid 2001, May, 2001.
66. Wolski, R., Plank, J., Brevik, J, and Bryan, T., G-Commerce: Market Formulations Controlling Resource Allocation on the Computational Grid, IPDPS 01, March, 2001.
67. Krintz, C., and Wolski, R., Using JavaNws to Compare C and Java TCP-Socket Performance, The Journal of Concurrency and Computation: Practice and Experience, Volume 13, Number, 8-9, pp. 815–839, 2001.
68. F. Berman, R. Wolski, The AppLeS Project: Harvesting the Grid, Newsletter of the IEEE Technical Committee on Distributed Processing, 2000.
69. Wolski, R., Spring, N. and Hayes, J., Predicting the CPU Availability of Time-shared Unix Systems on the Computational Grid, The Journal of Cluster Computing, December, Vol. 3, No. 4 (2000), pp. 293 – 301.

70. Casanova, H., Obertelli, G., Berman, F., and Wolski, R., The AppLeS Parameter Sweep Template: User-Level Middleware, *Proceedings of SC00*, November, 2000, (best paper finalist).
71. Gaidioz, B., Wolski, R., and Tourancheau, B., Synchronizing Network Probes to avoid Measurement Intrusiveness with the Network Weather Service, The 9th IEEE High-performance Distributed Computing Conference, August, 2000, pp. 147-154.
72. Krintz, C. and Wolski, R., JavaNws: The Network Weather Service for the Desktop, *Proceedings of ACM JavaGrande*, June, 2000, pp. 116-125.
73. Dail, H., Obertelli, G., Berman, F., and Wolski, R., Application-Aware Scheduling of a Magnetohydrodynamics Application in the Legion Metasystem, 2000 Heterogeneous Computing Workshop at IPDPS, May, 2000.
74. Shao, G., Berman, F., and Wolski, R., Master/Slave Computing on the Grid, 2000 Heterogeneous Computing Workshop at IPDPS, May, 2000.
75. Smallen, S., Cirne, W., Frey, J., Berman, F., Wolski, R., Mei-Hui, S., Kesselman, C., Young, S., and Ellisman, M., Combining Workstations and Supercomputers to Support Grid Applications: The Parallel Tomography Experience, 2000 Heterogeneous Computing Workshop at IPDPS, May, 2000.
76. Wolski, R., Brevik, J., Krintz, C., Obertelli, G., Spring, N., and Su, A., Running EveryWare on the Computational Grid, *Proceedings of SC99*, November, 1999.
77. Faerman, M., Su, A., Wolski, R., and Berman, F., Adaptive Performance Prediction for Distributed Data-Intensive Applications, *Proceedings of SC99*, November, 1999.
78. Lee, C., Stepanek, J., Wolski, R., Kesselman, C., and Foster, I., A Network Performance Tool for Grid Environments, *Proceedings of SC99*, November, 1999.
79. J. Plank, M. Beck, W. Elwasif, T. Moore, M. Swany, and R. Wolski, The Internet Backplane Protocol: Storage in the Network, *Proceedings of NetStore 99: Network Storage Symposium*, October, 1999.
80. W. Elwasif, J. Plank, M. Beck, and R. Wolski, IBP-Mail: Controlled Delivery of Large Mail Files, *Proceedings of NetStore 99: Network Storage Symposium*, October, 1999.
81. M. Beck, H. Casanova, J. Dongarra, T. Moore, J. Plank, F. Berman, and R. Wolski, Logistical Quality of Service in NetSolve, *Computer Communications*, Vol. 22, No. 11, July, 1999, pp. 1034 – 1044.
82. Wolski, R., Spring, N. and Hayes, J., The Network Weather Service: a Distributed resource Performance Forecasting Service for Metacomputing, *Journal of Future Generation Computing Systems*, Volume 15, Numbers 5-6, pp. 757-768, October, 1999.

83. Wolski, R., Predicting CPU Availability on the Computational Grid using the Network Weather Service, *Journal of Parallel Processing Letters*, Volume 9, No. 4, pp. 227-241, 1999.
84. Su, A., Berman, F. Wolski, R., and Mills Strout, M., Using AppLeS to Schedule a Distributed Visualization Tool on the Computational Grid, *International Journal of Supercomputer and High-Performance Applications*, Volume 13, No. 3, pp. 253-262, Fall 1999.
85. Wolski, R., Spring, N. and Hayes, J., Predicting the CPU Availability of Time-shared Unix Systems on the Computational Grid, *Proceedings of 8th High-performance Distributed Computing Systems Conference*, August, 1999.
86. Shao, G., Berman, F., and Wolski, R., Using Effective Network Views to Promote Distributed Application Performance, *Proceedings of the 1999 International Conference on Parallel and Distributed Processing Techniques and Applications*, July, 1999.
87. Spring, N. and Wolski, R., Application Level Scheduling of Gene Sequence Comparison on Metacomputers, *Proceedings of the 12th ACM International Conference on Supercomputing*, Melbourne, Australia, July, 1998.
88. Wolski, R. Dynamically Forecasting Network Performance using the Network Weather Service, in *Journal of Cluster Computing*, Volume 1, pp. 119-132, January, 1998.
89. Wolski, R.M., Spring, N., Peterson, C., Implementing a Performance Forecasting System for Metacomputing: The Network Weather Service, *Proceedings of SC97*, November, 1997.
90. Wolski, R.M., Forecasting Network Performance to Support Dynamic Scheduling Using the Network Weather Service, *Proceedings of the Sixth High-performance Distributed Systems Conference*, August, 1997, pp. 316-325.
91. Berman, F., and Wolski, R., The AppLeS Project: A Status Report, *Proceedings of the 8th NEC Research Symposium*, Berlin, Germany, May 1997.
92. Shao, G., Wolski, R., and Berman, F., Modeling the Cost of Redistribution in Scheduling, in *Proceedings of the SIAM conference on Parallel Processing*, March, 1997.
93. Berman F. Wolski, R.M., Figueira, S., Schopf, J., and Shao, G., Application-Level Scheduling on Distributed Heterogeneous Networks, *Proceedings of Supercomputing 1996*, November, 1996.
94. Berman F. and Wolski, R.M., Scheduling from the Perspective of the Application [invited paper], *Proceedings of the 1996 High-Performance Distributed Computing Conference*, August, 1996.

95. W. G. Griswold, R. Wolski, S. B. Baden, S. J. Fink, S. R. Kohn, Programming Language Requirements for the Next Millennium, *ACM Computing Surveys*, Volume 28, No. 4, pp. 194-196, December, 1996.
96. Wolski, R.M., Cann, D, Compiler Controlled Cache Coherence Using a Functional Language, the *The Journal of Scientific Programming*, Volume 5, 1996.
97. Wolski, R.M., Static Scheduling of Hierarchical Program Graphs, *Journal of Parallel Processing Letters*, Volume 5, Number 4, pp. 611-622, December, 1995.
98. Gorda, B. and Wolski, R.M., Time Sharing Massively Parallel Machines, *Proceedings of the International Conference on Parallel Processing*, August, 1995.
99. Wolski, R.M., Anglano, C, Schopf, J., Berman, F., Developing Heterogeneous Applications Using Zoom and HeNCE, the *Proceedings of the Heterogeneous Processing Workshop, International Parallel Processing Symposium*, Santa Barbara, CA, April, 1995.
100. Wolski, R.M., Cann, D, Compiler Controlled Cache Coherence Using a Functional Language, *Proceedings of the Conference on High-performance Functional Computing*, Denver, CO, April, 1995.
101. Wolski, R.M., Feo, J.T., Program Partitioning for NUMA Multiprocessor Computer Systems, *The Journal of Parallel and Distributed Computing*, Volume 19, No. 3, pp. 203-218, November, 1993.
102. Wolski, R.M., Feo, J.T., Overlapping Computations and Communications on NUMA Architectures, *Proceedings of the Third Annual Sisal Users' Conference*, San Diego, CA, October, 1993.
103. Wolski, R.M., Feo, J.T., Program Partitioning for NUMA Architectures, *Proceedings of the Second Annual Sisal Users' Conference*, San Diego, CA, October, 1992.
104. Wolski, R.M., Feo, J.T., and Cann, D. A Prototype Functional Language Implementation for Hierarchical-Memory Architectures, *Proceedings of the 25th Annual Hawaii International Conference on System Sciences*, Kauai, Hawaii, January, 1992.
105. Cann, D., Wolski, R.M., Feo, J.T., Toward Resolving the Parallel Programming Crisis, *Proceedings of the 1992 International Parallel Processing Symposium Parallel Systems Fair*, Beverly Hills, CA, March, 1992.

Technical Reports

1. Brevik, J., Nurmi, D., and Wolski, R., Predicting Bounds on Queuing Delay in Space-shared Computing Environments, University of California, Santa Barbara Computer Science Technical Report Number 2005-09, April, 2005

2. Nurmi, D., Wolski, R., and Brevik, J., Model-Based Checkpoint Scheduling for Volatile Resource Environments, University of California, Santa Barbara Computer Science Technical Report Number 2004-25, November, 2004
3. Brevik, J., Nurmi, D., and Wolski, R. Quantifying Machine Availability in Networked and Desktop Grid Systems, University of California, Santa Barbara Computer Science Technical Report Number 2003-37, November, 2003
4. Nurmi, D., Brevik, J., and Wolski, R. Modeling Machine Availability in Enterprise and Wide-area Distributed Computing Environments, University of California, Santa Barbara Computer Science Technical Report Number 2003-28, October, 2003
5. Chrabakh, W. and Wolski, R., GrADSAT: A Parallel SAT Solver for the Grid, University of California, Santa Barbara Computer Science Technical Report Number 2003-05, February, 2003.
6. Swamy, M., and Wolski, R., Improving Throughput with Cascaded TCP Connections: the Logistical Session Layer, University of California, Santa Barbara Computer Science Technical Report Number 2002-24, October, 2002.
7. Wen, Y., Krintz, C. and Wolski, R., Predicting Program Power Consumption, University of California, Santa Barbara Computer Science Technical Report Number 2002-20, July, 2002.
8. Wolski, R., Krintz, C., and Wen, Y., Application-level Prediction of Program Power Dissipation, University of California, Santa Barbara Computer Science Technical Report Number 2002-10, February, 2002.
9. Wolski, R., Plank, J., Brevik, J, and Bryan, T., G-Commerce: Analyzing Market-based Resource Allocation Strategies for the Computational Grid, University of Tennessee Technical Report Number CS-00-453, December, 2000.
10. Wolski, R., Plank, J., Brevik, J, and Bryan, T., G-Commerce: Market Formulations Controlling Resource Allocation on the Computational Grid, University of Tennessee Technical Report Number CS-00-450, October, 2000.
11. Wolski, R., Plank, and J., Brevik, G-Commerce – Building Computational Marketplaces for the Computational Grid, University of Tennessee Technical Report Number CS-00-439, October, 2000.
12. Wolski, R., Brevik, J., Krintz, C., Obertelli, G., Spring, N., and Su, A., Writing Programs that Run EveryWare on the Computational Grid, University of Tennessee Technical Report UT-CS-99-420, April, 1999.
13. Wolski, R. Dynamically Forecasting Network Performance using the Network Weather Service, UCSD Technical Report TR-CS96-494, October, 1996.

14. Anglano, C, Schopf, J., Wolski, R., Berman, F., Zoom: A Hierarchical Representation for Heterogeneous Applications, U.C. San Diego Tech. Report No. CS95-451, October, 1995.
15. Wolski, R., Cann, D. Cache-line Based Loop Partitioning to Eliminate False Sharing, U.C. San Diego Tech. Report No. CS95-452, October, 1995.
16. Wolski, R.M., Program Partitioning and Scheduling for NUMA Computer Architectures, Ph.D. Thesis, U.C. Davis, Lawrence Livermore National Laboratory Publication No. UCRL-LR-117760, March, 1994.
17. Wolski, R.M., Feo, J.T., *Implementing Functional Languages to Exploit Locality*, Technical Report UCRL-JC-109744, Lawrence Livermore National Laboratory, Livermore, CA, June, 1991.
18. Cann, D., Wolski, R.M., Feo, J.T., *Parallel Functional Computation: Current Results and Observations*, Technical Report UCRL-JC- 107022, Lawrence Livermore National Laboratory, Livermore, CA, March, 1991.

Invited Professional Talks

Invited Speaker, TeraGrid Conference, June 2006
 Invited Speaker, Condor Week, April 2006
 Invited Speaker, Trends in High Performance Distributed Computing, March 2006
 Invited Speaker, Google Research Seminar, Google Inc., June 2006
 Invited Speaker, SC05, Rice University Exhibit, November 2005
 Session Co-organizer, NSF Workshop on Cyberinfrastructure and Social, Behavior, and Economic Sciences, March, 2005
 Invited participant, NSF Workshop on Cyberinfrastructure and Operations Reserach, September, 2004
 Invited speaker, SIAM Meeting on Computational Science, December, 2003
 Invited panelist, "Open Issues in Grid Computing," GlobusWorld, January, 2003
 Keynote speaker at PACT 2002, Charlottesville, VA, October, 2002
 APART-01 Workshop on On-line Performance Analysis, SC01, November, 2001
 SC00 Tutorial Presentation on the Network Weather Service, November, 2000.
 Grid Forum 5 invited presentation, October, 2000.
 Keynote speaker at ASCI'00, Lommel, Belgium, June, 2000.
 Beta Grids invited speaker, March, 2000.
 SIAM mini-symposium and Network-Aware Servers, May, 1999.
 Blackberry Farm Conference on Grid Computing, October, 1998.
 Invited panelist SC98 Next Generation Computing Systems, November, 1998.
 Invited speaker DARPA Performance Engineering Meeting, November, 1997.
 Invited panelist at the *ACM International Conference on Supercomputing*, panel on New

Directions in Metacomputing, Philadelphia, PA, May, 1996.

Invited participant at the *Second Pasadena Inter-Agency Workshop on System Software and Tools for High-Performance Computing Environments*, Pasadena, CA, January 1995.

Co-organizer of *Mapping Programs to Massively Parallel Computer Systems*, Supercomputing '92, Minneapolis, MN, November 1992.

Invited Seminar Talks

University of Wisconsin Colloquium, January, 2006

Texas Advanced Computing Center, Colloquium, February, 2005

STIET Seminar, University of Michigan, February, 2005

San Diego Supercomputer Center, Colloquium, January, 2005

Colloquium Speaker, ENS I, Lyon, France, December, 2003

Colloquium Speaker, Vrije Universiteit, Amsterdam, NL, September 2003

Colloquium Speaker, University of Texas, Austin, April, 2003

Northridge University Colloquium, April 2003

College of William and Mary Colloquium, December 2002

IBM Hawthorne Research Seminar, December, 1999

Colby College Research Colloquium, September, 1999

Northwestern University Computer Science Research Colloquium, October, 1999

UCSD Computer Science Research Seminar, December, 1999

UCSD Computer Science Research Seminar, February, 1998

Harvey Mudd University Engineering Research Series, May 1997

USC Information Sciences Institute Seminar, March, 1997

Argonne National Laboratory Research Colloquium, May, 1996

Computer Science Research Colloquium, UCSB, March, 1995

Computer Science Research Seminar, Dipartimento di Informatica, Università di Torino, September, 1994

Parallel Computing Seminar, USC, April, 1994

Mills College ICS Colloquium, February and October, 1993

Computer Science Seminar, Harvey Mudd College, April, 1993

Parallel Computing Seminar, USC, April, 1993

Parallel Computing Seminar, UCSD, August, 1992

Apple Computer Research Colloquium, February, 1992

Grants

SENSIMIDE: Integrated Software Development and Multi-Mode Simulation for Large-Scale Sensor Networks (CNS-0627183), Rich Wolski, PI, FY06 - FY09, (\$500,000).

Predicting Batch Queue Delay on SDSC Datastar (SDSC Strategic Partnership), Rich Wolski, PI, FY-05 - FY07 (\$400,000).

Predicting Batch Queue Waiting Time on ETF Resources, (CCF-0526005), Rich Wolski, PI, FY-05 - FY07 (\$200,000).

Automatic Linux Customization and Optimization for High-performance Scientific Applications, Software Tools for High-end Computing Program, (ST-HEC-0444412), Chandra Krintz, PI, Rich Wolski, Co-PI, FY-04 - FY07 (\$550,000).

VGrADS: Virtual Grid Application Development Software, NSF Information Technology Research (ITR) Program, (CCF-0331645), Ken Kennedy, PI, Rich Wolski (and others), Co-PI, FY04 - FY09, (\$8,000,000)

Models to Support Performance Engineering of Global Computations, NSF Next Generation Software program (NGS-0305390), Rich Wolski, PI, FY04 - FY07. (\$500,000)

Orchestrated Modeling, Analysis, and Composition Strategies for Resource Management in Embedded Systems, Vision of Ubiquitous Computing, NSF Information Technology Research (ITR) Program (EHS-0209195), FY02 - FY05, Michael Franz, PI, Richard Wolski (and others), Co-PI. (\$640,000)

Developing a Resource Aware Adaptive Compilation System for High Performance Distributed Computing Next Generation Software Systems Program, (NGS-0204019), FY02 - FY05, Richard Wolski, PI. (\$30,000)

Developing Performance Monitoring and Analysis Middleware Based on the Network Weather Service, NSF Middleware Infrastructure Research program (ANR 0123911), FY01 - FY04, Richard Wolski, PI. (\$450,000)

Optimizing Performance and Enhancing Functionality of Distributed Applications using Logistical Networking, DOE SciDAC FY01 - FY04, Micah Beck, PI, Richard Wolski (and others) Co-PI. (\$1,600,000)

Effective Grid Programming with EveryWare and G-commerce, NSF CAREER award (0093166), FY01 - FY06, Richard Wolski, PI. (\$500,000)

University of Tennessee Center for Information Technology Research (CITR), Co-founder, FY-01 - FY06. (\$7,000,000)

National Partnership for Advanced Computational Infrastructure, Metasystems Partner, FY-96 - present (renewable \$510,000 current funding level)

NASA Information Power Grid infrastructure partner, FY-98 - FY-02 (renewable \$110,000/year)

A Research Testbed for Services Based on Logistical Networking, NSF Advanced Network Infrastructure program (ANI-9980203), FY00 - FY03, Micah Beck, PI, Richard Wolski (and

others) Co-PI. (\$1,000,000)

Virtual Instruments: Scalable Software Instruments for the Grid, NSF Information Technology Research (ITR) Program (ACI-0086092), FY00 - FY02, Francine Berman, PI, Richard Wolski (and others), Co-PI. (\$680,000)

Deploying the NWS on the Information Power Grid, NASA IPG program, FY00 - FY01, Richard Wolski, PI. (\$150,000)

Deploying the NWS on the Information Power Grid, NASA IPG program, FY99 - FY00, Richard Wolski, PI. (\$150,000)

Grid Application Development Software, NSF Next Generation Software program (EIA-9975020), FY99 - FY02, Ken Kennedy, PI, Richard Wolski (and others), Co-PI. (\$7,200,000)

Optimizing distributed Application Performance using Logistical Networking, DOE Next Generation Internet program, FY99 - FY00, Jack Dongarra, PI, Richard Wolski, James Plank, Micah Beck, Co-PIs. (\$890,000)

Logistical QoS through Application-driven Scheduling of Remote Storage, NSF Next Generation Software program (EIA-9975015), FY99 - FY02, J. Plank, PI, Richard Wolski (and others), Co-PI. (\$1,300,000)

Application-Level Scheduling with AppLeS, NSF New Technologies program (ACI-9701333), FY97 - FY00, Francine Berman, PI, Richard Wolski, Co-PI. (\$650,000)

Performance Prediction Engineering for Metacomputing, DARPA ITO BAA 97-12, FY97 - FY00, Francine Berman, PI, Richard Wolski, Co-PI. (\$300,000)

Mapping Parallel Programs to NUMA Architectures Institutional Research and Development Program, Lawrence Livermore National Laboratory, FY91 - FY92, (with J.T. Feo and D.C. Cann). (\$150,000)

Courses Taught

Computer Engineering Capstone (UCSB), 2002 – 2006

Advanced Topics in Data Analysis (UCSB), 2006

Advanced Topics in Operating Systems (UCSB), 2002 – 2005

Operating Systems (UCSB), 2002 – 2004

Computational Grid Computing (UCSB), 2002 – 2004

Unix Internals (University of Tennessee), Fall 2000

Systems Programming (University of Tennessee), Spring 2000

Distributed Operating Systems (University of Tennessee), Summer 1999

Grid Computing (University of Tennessee), Fall 1999

High-performance Computer Architectures (Mills College), Fall 1993
C and Unix Programming (Mills College), Fall 1993
High-performance Distributed Computing (with C. Krintz at U.C Santa Barbara), Fall 2001.

Professional Activities

Program Review Panelist, DOE ASC Alliance Center, University of Utah, 2004 and 2005.

Steering Committee member, IEEE Symposium on High-performance Distributed Computing (HPDC), 2004 – present.

Technical Program co-Chair, IEEE Symposium on High-performance Distributed Computing (HPDC15), 2006.

General Chair, IEEE Symposium on High-performance Distributed Computing (HPDC13), 2004.

Partner in the *National Partnership for Advanced Computational Infrastructure (NPACI)*, 1997 - 2004. Principle architect of the Network Weather Service (<http://nws.npaci.edu>) which is being used to monitor and forecast network conditions across the NSF vBNS sites and the general Internet.

Program Committee Member, SC06, November 2005.

Program Committee Member, SC05, November 2005.

Program Committee Member, HPDC 14, June 2005.

Program Committee Member, Conference on Mobile Systems, Applications, and Services (Mobisys), June, 2005.

Program committee member for Cluster Computing and Grid Computing *CCGrid04*, April 2004.

Program committee member for *SC03*, November 2003.

Program Committee member for ACM Symposium on Principles and Practice of Parallel Programming (PPoPP), June, 2003.

Program committee member for Cluster Computing and Grid Computing *CCGrid03*, April 2003.

Program committee member for *SC02*, November 2002.

Co-editor Special Issue of the Journal of Parallel and Distributed Computing on Grid Computing, September, 2002.

Program committee member for *10th IEEE High-performance and Distributed Computing (HPDC11)*, August 2002.

Program committee member for *SC01*, November 2001.

Program committee member for *10th IEEE High-performance and Distributed Computing (HPDC10)*, August 2001.

Program committee member for *SC00*, November 2000.

Program committee member for *9th IEEE High-performance and Distributed Computing (HPDC9)*, August 2000.

Program committee member for *SC99*, November 1999.

Program committee member for *IEEE International Parallel Processing Symposium*, November 1999.

Program committee member for *8th IEEE High-performance and Distributed Computing (HPDC8)*, August 1999.

Program committee member for *1999 IEEE Workshop on Internet Applications*, March 1999.

Program committee member for *ACM International Conference on Supercomputing*, July 1998.

Program committee member for the *1996 Heterogeneous Computing Workshop*, April 1996.

Advising and Mentoring

- Wahid Chrabakh, Ph.D. granted 2006, Thesis entitled “GridSAT: A Distributed Large Scale Satisfiability Solver for the Computational Grid”
- Josep Blanquer, Ph.D. granted 2005, Thesis entitled “Flexible and Non-Invasive QoS for Scalable Internet Services,” (co-advised with Klaus Schauer, currently at Citrix On-line)
- Todd Bryan, M.S. granted 2001, Thesis entitled “Market-based Resource Allocation on the Computational Grid,” (now Software Engineer with Citrix On-line)
- Saranyan Rajagopalan, M.S. granted 2004, Thesis entitled “Using Box-Jenkins Forecasting Method to predict GRID Resource Performance, Online,” (now Senior Software Engineer with Alfred Mann Foundation)

- William Strathearn, M.S. granted 2004 (co-advised with Tao Yang), Thesis entitled “On-Demand Server Allocation for Network Services,” (now a Software Engineer with Citrix On-line)
- D. Martin Swamy, Ph.D. granted 2003, Thesis entitled “Logistical Scheduling for Data Movement for Computational Grids,” (now Assistant Professor, University of Delaware)
- Rajiv, Thonadoor, M.S. granted 2004, non-thesis option, (now Software Engineer with Ask Jeeves/Teoma)
- Vladimir Veytser, M.S. granted 2003, Thesis entitled “The Network Weather Service for .NET,” (now Staff Scientist with the San Diego Supercomputer Center)
- Ye Wen, P.D. granted 2007, Thesis entitled “Toward a debugging and development system for sensor networks based on scalable high fidelity simulation,” (now at Google)

Current Ph.D. Students : Matthew Allen, Chris Grzegorzcyk, Andrew Mutz, Daniel Nurmi, Lamia Youseff

Postdoctoral Advisees : John Brevik (currently at Cal State Long Beach), Selim Gurun (currently at Citrix On-Line), Martin Quinson (currently on the faculty of Informatique et Mathematiques Appliquees), Sunil Soman, Dmitrii Zagorodnov

Technical Referee:

IEEE Transactions on Computer Systems
 IEEE Transactions on Parallel and Distributed Systems
 Journal of Parallel and Distributed Computing
 Supercomputing
 International Conference High-performance Distributed Computing
 International Conference on Parallel and Distributed Systems
 International Conference on Supercomputing
 International Conference on Parallel Processing
 International Conference on Computer Architecture
 International Parallel Processing Symposium
 Frontiers of Massively Parallel Computing
 International Conference on Distributed Computing