

**Rod A. Fatoohi, Ph.D.**  
**Computer Engineering Department**  
**College of Engineering**  
**San Jose State University, San Jose, California**  
**Work: (408) 924-4059**  
[rod.fatoohi@sjsu.edu](mailto:rod.fatoohi@sjsu.edu)  
<http://www.sjsu.edu/people/rod.fatoohi>

### Summary

- Over twenty-five-year experience in academia, IT industry, and US government, researching, teaching, and consulting in computer networking, high-performance computers, software development and analysis, performance evaluation, and benchmarking.

### Education

- *Doctor of Philosophy in Electrical Engineering*, Old Dominion University, Norfolk, Virginia, **December 1987**.
- *Master of Science in Computer Engineering*, Syracuse University, Syracuse, New York, **December 1982**.
- *B.Sc. in Electrical Engineering*, **June 1976**.

### Employment

- *Professor and Associate Chair*, Computer Engineering, San Jose State University, San Jose, CA, **1996 – present (Associate Professor 1996 - 2004, tenured in 2002, promoted to Professor in 2004, Associate Chair 2014 - present)**
- *Computer Scientist*, at NASA Ames Research Center, Moffett Field, CA, **1987 – 1996**.

### Consulting and Professional Experience

- *Senior Fellow*, NASA Postdoctoral Program, NASA Ames, Moffett Field, CA, **2006**.
- *Faculty Fellow*, NASA Ames Research Center, Moffett Field, CA, **Summer 2005**.
- *Faculty Scholar*, Lawrence Livermore National Laboratory, Livermore, CA, **Summer 2003**.
- *Faculty Scholar*, Lawrence Livermore National Laboratory, Livermore, CA, **Summer 2002**.
- *Consultant*, IP Infusion, Inc., San Jose, California, **2000 – 2001**.
- *Senior Education Engineer*, Learning Voyage, Cincinnati, Ohio, **2000**.
- *Consultant*, SiteMetrics Corp., San Jose, CA, **1999**.
- *Consultant*, MRJ, Inc. at NASA Ames, Moffett Field, CA, **1995**.

### Grants

- *Principal Investigator*, NASA Ames Research Center, \$175K research grant entitled *Assessment of Distributed Object Middleware*.
- *Principal Investigator*, NASA Ames Research Center, \$190K research grant entitled *Integrated Legacy Applications within a Middleware Environment*.

### Awards and Recognition

- Julian Award for NAS Parallel Benchmark with 12 colleagues, NASA Ames
- The Atlantic, an article "At the Speed Limit" by Thomas Levenson recognizing my work in the area of high speed computing.
- Gigaflop Performance Award, Cray Research Inc.

- Doctoral Fellowship, Old Dominion University

### Teaching Experience

- Developed and taught three undergraduate courses: Computer Engineering I (CmpE 46), Computer Networks I (CmpE 148), Computer Networks II (CmpE 149), San Jose State U.
- Developed and taught four graduate courses: Computer Network Design (CmpE 206), Network Programming and Applications (CmpE 207), Network Architecture and Protocols (CmpE 208), Parallel Processing (CmpE 213), San Jose State University.

### University Service

- **University Senator**, San Jose State University
- **Member**, Provost Search Committee, San Jose State University
- **Member & Chair**, University Sabbatical Leave Committee, San Jose State University
- **Member**, University Retention, Tenure, Promotion Committee, San Jose State University
- **Member & Chair**, University Information Technology Board, San Jose State University
- **Member**, University IT Review Task Force, San Jose State University
- **Member**, University Student Fairness Committee, San Jose State University
- **Member**, University Faculty Hearing Panel, San Jose State University
- **Member**, Faculty-at-large, Chief Information Officer Advisory Committee, San Jose State U.
- **Member & Chair**, College Retention, Tenure, Promotion Committee, College of Engineering
- **Chair**, College Information Technology Committee, College of Engineering
- **Member**, College Graduate Studies & Research Committee, College of Engineering
- **Chair**, Department Post Promotion Increase Faculty Committee, Computer Engineering Dept
- **Member**, Department Retention, Tenure, Promotion Committee, Computer Engineering Dept

### Professional Activities

- **Panel Reviewer**, National Research Council (NRC), Engineering Panel for the Ford Foundation Diversity Pre-doctoral Fellowships.
- **Member**, Honor Society of Phi Kappa Phi
- **Session Chair** for several conferences and workshops
- **Referee** for journals, conferences, NSF proposal, and NASA proposals.
- **Reviewer** for several proposed books.

### Presentations

- Over thirty presentations in professional meetings and international conferences

### Sample of Publications

#### Journal Papers

1. Fatoohi, R. *Assessment of NSF application benchmarks on SGI Altix machines and Cray Opteron cluster*, International Journal of Parallel, Emergent, and Distributed Systems, Vol. 25, Issue 4. (2010). pp.315 – 329.
2. Fatoohi, R., Kardys, K., Koshy, S., Sivaramakrishnan, S., & Vetter, J., *Performance evaluation of high-speed interconnects using dense communication patterns*, Journal of Parallel Computing, Vol. 32, issues 11-12, December 2006, pp. 794-807.
3. Fatoohi, R., Gokhale, N., & Viswesnan, S., *iJob: An Internet-based Job Execution Environment using asynchronous messaging*, Journal of Information and Software Technology, Vol. 47, No. 8, 2005, pp. 565 – 574.
4. Su, X., Fatoohi, R. & Wang, T., *Optimizing Transmission Time of Scalable Coded Images in Peer-to-Peer Networks*, Journal of Multimedia Systems, Vol. 10, No. 5, 2005, pp. 413 - 421.
5. Fatoohi, R. and Jensen, D., *Migration of DCE Applications into CORBA and SOAP Environments*, Software: Practice and Experience, Vol. 33, No. 1, 2003, pp. 1 - 18.

6. Fatoohi, R., Gunwani, V., Wang, Q., and Zheng, C., *Performance Evaluation of Middleware Bridging Technologies*, Journal of Research and Practice in Information Technology, Vol. 33, No. 3, 2001, pp. 161 – 173.
7. Fatoohi, R. and Smith, L., *Development and implementation of a distributed-object job-execution environment*, Journal of Scientific Programming, Vol. 9, No. 1, 2001, pp. 27 - 37.
8. Fatoohi, R., *Performance Evaluation of Communication Software Systems for Distributed Computing*, Distributed Systems Engineering Journal, Vol. 4, No. 3, 1997, pp. 169 – 175.
9. Fatoohi, R., *Adapting a Navier-Stokes Solver for Three Parallel Machines*, The Journal of Supercomputing, Vol. 8, No. 2, 1994, pp. 91 – 115.
10. Bailey, D., Barszcz, E., Barton, J., Browning, D., Carter, R., Dagum, L., Fatoohi, R., Frederickson, P., Lasinski, T., Schreiber, R., Simon, H., Venkatakrisnan, V., *The NAS Parallel Benchmarks*, Int. Journal of Supercomputer Applications, Vol. 5, No. 3, 1991, pp. 63 - 73.
11. Fatoohi, R., *Multitasking on the Cray Y-MP: An Experiment with a 2-D Navier-Stokes Code*, International Journal of High Speed Computing, Vol. 1, No. 3, 1989, pp. 433 – 447.
12. Fatoohi, R., *Multitasking a Navier-Stokes Algorithm on the Cray-2*, The Journal of Supercomputing, Vol. 3, No. 2, 1989, pp. 109 - 124.
13. Fatoohi, R. and Grosch, C., *Implementation of an ADI Method on Parallel Computers*, Journal of Scientific Computing, Vol. 2, No. 2, 1987, pp. 175 - 193.

#### **Refereed Conference Papers**

1. Marjanovic, I. and Fatoohi, R. *Design and Implementation of a Self-Configuring Instrument Control System*, Proc. 9<sup>th</sup> IEEE Int. Symp. on Parallel and Distributed Processing with Applications Workshops, (Busan, May 2011). IEEE Computer Press, pp.165 - 170.
2. Fatoohi, R., *Performance Evaluation of NSF Application Benchmarks on Parallel Systems*, Proc. 7<sup>th</sup> Int. workshop on performance modeling, evaluation, & optimization of ubiquitous computing & networked systems, (Miami, April 2008) IEEE Computer Press.
3. Fatoohi, R., *Performance evaluation of the dual-core based SGI Altix 4700*, Proc. 19<sup>th</sup> Symposium on Computer Architecture and High Performance, (Gramado, October 2007) IEEE Computer Press.
4. Fatoohi, R., Saini, S., Chang, et al., *Performance Analysis of Cray X1 and Cray Opteron Cluster*, Proc. 48<sup>th</sup> Cray User Group Mtg., (Lugano, May 2006).
5. Fatoohi, R., Saini, S., & Ciotti, R., *Interconnect Performance Evaluation of SGI Altix 3700 BX2, Cray X1, Cray Opteron Cluster, and Dell PowerEdge*, Proc. workshop on Performance Modeling, Evaluation, and Optimization of Parallel and Distributed Systems, (Rhodes Island, April 2006), IEEE Computer Press.
6. Fatoohi, R., Kardys, K., Koshy, S., et al., *Performance Evaluation of High-Speed Interconnects using Dense Communication Patterns*, Proc. workshop on Performance Evaluation of Networks for Parallel, Cluster & Grid Computing Systems, (Oslo, June 2005), pp. 554 - 561.
7. Su, X. and Fatoohi, R., *Scalable Coded Image Transmissions Over Peer-to-Peer Networks*, Proc. IEEE Int. Conf. on Multimedia & Expo, (Baltimore, July 2003), pp. 493 – 496.
8. Fatoohi, R. and Gokhale, N., *A Distributed Job Execution Environment using asynchronous messaging and web technologies*, Proc. 5<sup>th</sup> Int. Conf. on Enterprise Information Systems (Angers, April 2003), pp. 246 – 251.
9. Fatoohi, R., Gajria, M., Khader, S. & Singh, R., *Comparative Performance Analysis of IP Routing Software*, Proc. IASTED Int. Conf.: Communications, Internet and Information Technology, (St. Thomas, November 2002), pp. 94 – 99.
10. Fatoohi, R., Nguyen, T., and Nguyen, B. *Virtual Video Server*, TOOLS Eastern Europe 2001 Conference, (Sofia, March 2001), pp. 103 – 118.
11. Fatoohi, R. and Rupinder, S., *Performance of Zebra Routing Software*, Proc. IASTED International Conference: Internet and Multimedia Systems and Applications, (Honolulu, August 2001), ACTA Press, pp. 108 – 113.

12. Fatoohi, R. and Smith, L., *Integrating Legacy Applications within a Java/CORBA Environment*, Proc. 3<sup>rd</sup> Int. Conf. on Enterprise Information Systems, Vol. 1, (Setubal, July 2001), ICEIS Press, pp. 157 – 162.
13. Smith, L. and Fatoohi, R., *An Object-Oriented Job Execution Environment*, Proc. SC2000: High Performance Networking and Computing, (Dallas, Nov 2000), IEEE Computer Press.
14. Maheshwari, R. and Fatoohi, R., *Design and Implementation of CORBA-Based Subscription Server*, Proc. 37<sup>th</sup> Int. Conference on Technology of Object-Oriented Languages and Systems (TOOLS-37), (Sydney, November 2000), IEEE Computer Society Press, pp. 2 – 13.
15. Fatoohi, R., Gunwani, V., Wang, Q., & Zheng, C., *Performance Evaluation of Middleware Bridging Technologies*, Proc. 2000 IEEE Int. Symp on Performance Analysis of Systems & Software (ISPASS-2000), (Austin, April 2000), pp. 34 - 39.
16. Smith, L., Fatoohi, R. and Harkey, D., *NASA Flow Solvers Support Environments*, Proc. Computational Aerosciences Workshop, NASA Ames Research Center, February 2000.
17. Fatoohi, R., *CORBA Framework for Distributed Virtual Manufacturing*, Proc. 1998 World Automation Congress (Anchorage, May 1998), Vol. 7, TSI Press Series, pp. 597 – 602.
18. Fatoohi, R., *Performance Evaluation of Communication Software Systems for Distributed Computing*, Proc. 30<sup>th</sup> Annual Hawaii Int. Conf. on System Sciences, Vol. I, (Maui, 1997), IEEE Computer Society Press, pp. 100 - 109.
19. Fatoohi, R., *Performance Evaluation of Communication Networks for Distributed Computing*, Proc. 4<sup>th</sup> Int. Conf. on Computer Communications and Networks, (Las Vegas, September 1995), IEEE Computer Society Press, pp. 456 - 459.
20. Fatoohi, R. A. and Weeratunga, S., *Performance Evaluation of Three Distributed Computing Environments for Scientific Applications*, Proc. Supercomputing '94, (Washington, November 1994), IEEE Computer Society Press, pp. 400 - 409.
21. Castagnera, K., Cheng, D., Fatoohi, R., et al., *NAS Experiences with a Prototype Cluster of Workstations*, Proc. Supercomputing '94, (Washington, November 1994), IEEE Computer Society Press, pp. 410 - 419.
22. Fatoohi, R., *Performance Analysis of Four SIMD Machines*, in Proc. 7th ACM International Conference on Supercomputing, (Tokyo, July 1993), ACM Press, pp. 117 - 126.
23. Fatoohi, R. and Yoon, S., *Multitasking the INS3D-LU code on the Cray Y-MP*, Proc. AIAA 10th Computational Fluid Dynamics Conference, (Honolulu, June 1991), pp. 619 - 626.
24. Fatoohi, R., *Performance Comparison of Several SIMD Machines*, in Proceedings of the Fifth SIAM Conference on Parallel Processing for Scientific Computing, (Houston, March 1991), SIAM Publication, pp. 419 - 424.
25. Fatoohi, R., *Vector Performance Analysis of The NEC SX-2*, Proc. 1990 ACM International Conference on Supercomputing, (Amsterdam, June 1990), ACM Press, pp. 389 - 400.
26. Bailey, D., Barszcz, E., Fatoohi, R., Simon, H. and Weeratunga, S., *Performance Results on the Intel Touchstone Gamma Prototype*, Proc. Fifth Distributed Memory Computing Conference, (Charleston, April 1990), IEEE Computer Society Press, pp. 1236 - 1245.
27. Chan, T. F. and Fatoohi, R. A., *Multitasking Domain Decomposition Fast Poisson Solvers on the Cray Y-MP*, Proc. Fourth SIAM Conference on Parallel Processing for Scientific Computing, (Chicago, December 1989), SIAM Publication, pp. 237 - 244.

### **Technical Reports**

- Fifteen refereed NASA technical reports – some of them appeared as refereed papers

### **References**

- Available upon request.

### **Personal**

- US Citizen
- Enjoy traveling, reading, and playing tennis and chess.