VITA

Professor John A. Stankovic

MARITAL STATUS: Married, three children

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EDUCATION: 1970: Sc.B. Electrical Engineering, Brown University
                    1976: Sc.M. Computer Science, Brown University
                    1979: Ph.D. Computer Science, Brown University
                    Advisor: Prof. Andries van Dam

AWARDS and HONORS:

- BP America Professor of Computer Science - Univ. of Virginia, from January 1997.

- Fellow of the IEEE (for research contributions in distributed and real-time computing), 1994.

- Fellow of the ACM, 1996.

- Outstanding Scholar Award - School of Engineering, University of Massachusetts, 1983.

- IEEE Award for Outstanding Technical Contributions and Leadership in Real-Time Systems - TC on Real-Time Systems, December 2000, first time award was given.

- IEEE Computer Society Golden Core Member, 50th Anniversary (First) Class, July 1996.

- IEEE Computer Society's Meritorious Service Award, December 2001.

- IEEE Computer Society's Meritorious Service Award, June 1991.

- PhD thesis published as a book as part of a series of the best PhD theses in CompSci.

- Distinguished Lecturer Series, invited speaker, University of Michigan, Naval Postgraduate School, Northeastern, Texas A and M, Honeywell, the Triangle CS Distinguished Lecturer Series (Duke, North Carolina and North Carolina State (1996)), Univ. of SW La., NSF, Purdue, Pittsburgh, Florida Atlantic University, University of Minnesota,

University of Pennsylvania, Northwestern, Notre Dame, William and Mary, Johns Hopkins, Stony Brook, Research Triangle Park (2006), Univ. of Pennsylvania (Electrical and Systems Dept.).

- Keynote Speaker at various conferences and workshops (see list of talks below).

- Distinguished Member - Scientific Advisory Board for the Swedish National Strategic Real-Time Initiative, 1999-2003.

- International member, Scientific Council of the ARTIST2 European Network of Excellence on Embedded Systems Design, October 2003 - present.

- Spring Scheduling Co-Processor Designs Won First and Second Place in MCC VLSI Design Contest, 1993.

- Elected, Computing Research Association Board of Directors, 1996-1999, and re-elected for 1999-2002, re-elected 2002-2004.

- Elected, Treasurer, Computing Research Association Board of Directors, July 1, 2001 - June 30, 2003.

- IEEE Computer Society Distinguished Visitor, 1985–1988.

- Editor-in-Chief, *IEEE Transactions on Parallel and Distributed Systems*, January 1998 - December 2001.

- Co-Editor-in-Chief and Co-Founder, International Journal on Real-Time Systems, 1989 - 2006.

- Associate Editor, ACM Transactions on Embedded Computing Systems, September 2001 - present.

- Associate Editor, ACM Transactions on Wireless Sensor Networks, Jan. 1 2004 - present.

- Associate Editor, Software - Practice and Experience, November 2003 - present.

- Associate Editor, IEEE Transactions on Parallel and Distributed Systems, August 1993 - December 1997.

- Editorial Board, Design Automation for Embedded Systems: An International Journal, Kluwer, since 1994.

- Associate Editor, IEEE Transactions on Computers, July 1986 - December 1990.

- Book Series Editor, Real-Time Systems, Kluwer (23 books published to date).

- Book Series Editor, Distributed Computing, Kluwer.

- Associate Editor, Real-Time and Embedded Systems Area, DS Online, a digital monthly magazine from the IEEE, 1999 - present.

- International Advisory Committee, *Journal of Computer Science and Informatics*, Computer Society of India, May 1990-2003.

- Member Sigma Xi and New York Academy of Sciences.

PROFESSIONAL EXPERIENCE:

- June 1970 - November 1974: software engineer - Western Electric Company. My work included large real-time software system design and implementation, assembly language programming, unit and integration testing, and continual software modification and maintenance for the Surveillance function of the SAFEGUARD Anti-Ballistic Missile system. I was also responsible for live mission support and analysis. The work was performed at Bell Labs, Whippany, N.J., and the Kwajalein Missile Range, Marshall Islands.

- January 1975 - May 1979: Research Assistant, Brown University.

- September - December 1976: Teaching Assistant, Brown University.

- June 16 - August 15, 1980: Visiting Research Scientist, Computer Sciences Corp., Newport, R.I.

- June 1, 1982 - June 20, 1982: Visiting Research Scientist, INRIA, Rocquencourt, France.

- August 1979 - August 1984: Assistant Professor, Department of Electrical and Computer Engineering, University of Massachusetts, Amherst, MA.

- September 1984 - August 1986: Associate Professor, Department of Electrical and Computer Engineering, University of Massachusetts, Amherst, MA.

- August 1, 1985 - July 31, 1986: Sabbatical Year, Visiting Professor, Computer Science Department, Carnegie-Mellon University.

- September 1, 1986 - August 1990: Associate Professor, Department of Computer Science, University of Massachusetts.

- September 1, 1990 - December 1996: Full Professor, Department of Computer Science, University of Massachusetts.

- October 1991 - December 1996: Director, Center for Autonomous Real-Time Systems, University of Massachusetts.

- January 1992 - December 1996: Applied Computing Institute of Massachusetts, Board of Directors and Executive Committee.

- August 1992 - July 1993: Sabbatical Year, Visiting Professor, Scuola Superiore Studi Universita Santa Anna, Pisa, Italy.

- September 1992 - November 1992: Sabbatical Year, Visiting Professor, Consiglio Nazionale delle Ricerche (CNR), Instituto di Elaborazione dell'Informazione (IEI), Computer Architecture Department, Pisa, Italy.

- January 1, 1997 - May 31, 2004: BP America Professor and Chairman, Department of Computer Science, University of Virginia.

- January 1, 1997 - present: BP America Professor, Department of Computer Science, University of Virginia.

BOOKS and EDITED BOOKS:

- J. Stankovic, *Structured Systems and Their Performance Improvement Through Vertical Migration*, **Best PhDs in C.S. Series**, UMI Research Press, Ann Arbor, Michigan, 141 pgs., 1982.

- J. Stankovic, *Reliable Distributed System Software*, Tutorial Text, IEEE Computer Society Press, Silver Spring, Md, 389 pgs., 1985.

- J. Stankovic and K. Ramamritham, *Hard Real–Time Systems*, Tutorial Text, IEEE Computer Society Press, Wash. DC, 618 pgs., 1988; **listed as best seller**.

- J. Stankovic and K. Ramamritham, *Advances in Hard Real-Time Systems*, IEEE Tutorial Text, IEEE Computer Society Press, 780 pgs., 1993.

- J. Stankovic, K. Ramamritham, M. Spuri, and G. Buttazzo, *Deadline Scheduling for Real-Time Systems*, Kluwer Academic Publishers, 273 pgs., 1998.

BOOK CHAPTERS:

- J. Stankovic and Andries van Dam, Research Directions in (Cooperative) Distributed Processing, chapter in *Research Directions in Software Technology*, Peter Wegner, editor, MIT Press, Cambridge, MA, pp. 611-638, 1979.

- J. Stankovic, K. Ramamritham and W. Kohler, A Review of Current Research and Critical Issues in Distributed Systems Software, chapter in *Concurrency Control and Reliability in Distributed Systems*, edited by B. Bharghava, van Nostrand Reinhold, New York, pp. 556-601, 1987.

- T. Weidner and J. Stankovic, Vertical Migration, chapter in *Microprogramming and Firmware Engineering Methods*, edited by Stanley Habib, Van Nostrand Inc., N.Y., N.Y., pp. 191-222, 1988.

- J. Stankovic, Real–Time Computing, chapter in *Encyclopedia of Computer Science and Technology*, Marcel Dekker, Inc., N.Y., N.Y., Vol. 23, Supplement 8, pp. 335-351, 1991.

- J. Stankovic, K. Ramamritham, and D. Towsley, Scheduling in Real-Time Transaction Systems, chapter in *Foundations of Real-Time Computing: Scheduling and Resource Management*, edited by Andre van Tilborg and Gary Koob, Kluwer Academic Publishers, pp. 157-184, 1991.

- K. Ramamritham, and J. Stankovic, Scheduling Strategies Adopted in Spring: An Overview, chapter in *Foundations of Real-Time Computing: Scheduling and Resource Management*, edited by Andre van Tilborg and Gary Koob, Kluwer Academic Publishers, pp. 277-306, 1991.

- J. Stankovic and K. Ramamritham, The Spring Kernel, chapter in *Mission Critical Computer Systems*, editors A. Agrawala, K. Gordon, and P. Hwang, IOS Press, Amsterdam, pp. 86-117, 1992.

- J. Stankovic, Vertical Migration, contribution to Pearls of Wisdom section of, *An Introduction to Microprogramming* edited by V. Milutinovic, Prentice Hall, 1994.

- J. Stankovic, Distributed Computing, invited paper, *Encyclopedia of Telecommunications*, Marcel Dekker, Inc., N.Y., pp. 289–319, 1993; also in *Readings in Distributed Computing Systems*, IEEE Press, editor Tom Casavant.

- J. Stankovic, Real-Time Operating Systems, invited paper, *Encyclopedia of Software Engineering*, John Wiley and Sons, Inc., short article, Vol. 2, pp. 1009-1011, 1994.

- J. Stankovic, Real-Time Operating Systems, invited chapter, *Real-Time Computing*, edited by Halang and Stoyenko, NATO ASI Series, Springer-Verlag, Berlin, pp. 65-82, 1994.

- J. Stankovic and K. Ramamritham, A Reflective Architecture for Real-Time Operating Systems, chapter in *Advances in Real-Time Systems*, Prentice Hall, pp. 23-38, 1995.

- B. Purimetla, R. Sivasankaran, K. Ramamritham, and J. Stankovic, Real-Time Databases: Issues and Applications, chapter in *Advances in Real-Time Systems*, Prentice Hall, pp. 487-507, 1995.

- G. Buttazzo and J. Stankovic, Adding Robustness in Dynamic Preemptive Scheduling, chapter in *Responsive Computer Systems: Steps Toward Fault Tolerant Real-Time Systems*, Kluwer Academic Publishers, pp. 67-88, 1995.

- A. Bondavali, J. Stankovic, and L. Strigini, Adaptable Fault Tolerance for Real-Time Systems, chapter in *Responsive Computer Systems: Steps Toward Integration of Fault Tolerant Real-Time Systems*, Kluwer Academic Publishers, pp. 187-208, 1995.

- J. Stankovic, Real-Time and Embedded Systems, invited, chapter in, *CRC Handbook of Computer Science and Engineering*, CRC Press, pp. 1709-1724, 1997.

- M. Xiong, R. Sivasankaran, J. Stankovic, K. Ramamritham, and D. Towsley, Scheduling Access to Temporal Data in Real-Time Databases, chapter in *Real-Time Database Systems*, Kluwer Academic Publishers, pp. 167-191, 1997.

- S. Sen, O. Gonzales, K. Ramamritham, J. Stankovic, C. Shen and M. Takegaki, Multimedia Capabilities in Distributed Real-Time Applications, chapter in *Real-Time Database Systems*, Kluwer Academic Publishers, pp. 105-122, 1997.

- J. Stankovic, S. Son and J. Liebeherr, BeeHive: Global Multimedia Database Support for Dependable, Real-Time Applications, chapter in *Real-Time Databases and Information Systems*, Kluwer Academic Publishers, pp. 409-422, 1997.

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- J. Stankovic, Real-Time Systems, invited article, *Encyclopedia of Computer Science*, International Thomson Computer Press, 4th Edition, August 2000, pp. 1504-1506.

- J. Stankovic, S. Son and Jorgen Hansson, Misconceptions About Real-Time Databases, invited chapter, *Real-Time Database Systems: Architecture and Techniques*, editors T. Kuo and K. Lam, Kluwer Academic Publishers, Boston, 2001, pp. 9-16.

- R. Sivasankaran, K. Ramamritham, and J. Stankovic, System Failure and Recovery in Real-Time Databases, invited chapter, *Real-Time Database Systems: Architecture and Techniques*, editors T. Kuo and K. Lam, Kluwer Academic Publishers, Boston, 2001, pp. 109-124.

- J. Stankovic, VEST: A Toolset for Constructing and Analyzing Component Based Embedded Systems, contributed chapter, Springer-Verlag Lecture Notes in Computer Science, 2211, Springer-Verlag, Berlin, October 2001, pp. 390-402.

- J. Stankovic, Networked Microcontrollers, invited article, *2004 Yearbook of Science and Technology*, McGraw Hill, N.Y., N.Y., 2004, pp. 222-223.

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- T. Abdelzaher, J. Stankovic, S. Son, B. Blum, T. He, A. Wood, and C. Lu, Communication Architecture and Programming Abstractions for Real-Time Embedded Sensor Networks, invited, *Handbook of Sensor Networks*, Chapter 17, CRC Press, Boca Raton, 2005, 9 pages.

- A. Wood and J. Stankovic, A Taxonomy for Denial of Service Attacks in Wireless Sensor Networks, invited, *Handbook of Sensor Networks*, Chapter 32, CRC Press, Boca Raton, 2005, 20 pages.

- R. Stoleru, T. He, J. Stankovic, Range-Free Localization, invited, Springer, to appear.

JOURNAL ARTICLES:

- J. Zhang, T. Yan, J. Stankovic and S. Son, Thunder: Towards Practical, Zero Cost Acoustic Localization for Outdoor Wireless Sensor Networks, *Mobile Computing and Communications Review*, to appear.

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- T. He, S. Krishnamurthy, J. Stankovic, T. Abdelzaher, L. Luo, T. Yan, R. Stoleru, L. Gu, G. Zhou, J. Hui and B. Krogh, VigilNet: An Integrated Sensor Network System for Energy Efficient Surveillance, *ACM Transactions on Sensor Networks*, to appear.

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- L. Luo, T. Abdelzaher, T. He, and J. Stankovic, EnviroSuite: An Environmentally Immersive Programming Framework for Sensor Networks, *ACM Transactions on Embedded Computing Systems*, to appear.

- T. He, C. Huang, B. Blum, J. Stankovic, T. Abdelzaher, Range-Free Localization and Its Impact on Large Scale Sensor Networks, *ACM Transactions on Embedded Computing Systems*, to appear.

- J. Stankovic, I. Lee, A. Mok, R. Rajkumar, Opportunities and Obligations for Physical Computing Systems, *IEEE Computer*, Vol. 38, No. 11, Nov. 2005, pp. 23-31.

- T. He, J. Stankovic, C. Lu and T. Abdelzaher, A Spatiotemporal Communication Protocol for Wireless Sensor Networks, *IEEE Transactions on Parallel and Distributed Systems*, Vol. 16, No. 10, October 2005, pp. 995-1006.

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- J. Stankovic and R. Rajkumar, Real-Time Operating Systems, invited paper, special issue *Real-Time Systems Journal*, Vol. 28, Issues 2/3, Dec. 2004, pp. 237-253.

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- X. Tang, G. Tao, L. Wang, and J. Stankovic, Robust and Adaptive Actuator Failure Compensation Designs for a Rocket Fairing Structural-Acoustic Model, *IEEE Transactions on Aerospace and Electronic Systems*, Vol. 40, No. 4, October 2004, pp. 1359-1366.

- A. Perrig, J. Stankovic, and D. Wagner, Security in Wireless Sensor Networks, invited paper, *CACM*, Vol. 47, No. 6, June 2004, pp. 53-57, **rated Top 5 Most Popular Magazine and Computing Surveys Articles Downloaded in August 2004**, translated into Japanese.

- S. Kim, S. Son, J. Stankovic, and Y. Choi, Data Dissemination over Wireless Sensor Networks, *IEEE Communications Letters*, Vol. 8, No. 9, Sept. 2004, pp. 561-563.

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- T. He, B. Blum, J. Stankovic, and T. Abdelzaher, AIDA: Application Independent Data Aggregation in Wireless Sensor Networks, special issue of *ACM Transactions on Embedded Computing Systems*, Vol. 3, No. 2, pp. 426-457, May 2004.

- L. Shu, J. Stankovic, and S. Son, Achieving Bounded and Predictable Recovery Using Real-Time Logging, *The Computer Journal*, Vol. 47, May 2004, pp. 1-22.

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- T. Abdelzaher, J. Stankovic, C. Lu, R. Zhang, and Y. Lu, Feedback Performance Control in Software Systems, invited paper, *IEEE Control Systems*, Vol. 23, No. 3, June 2003, pp. 74-90.

- K. D. Kang, S. Son and J. Stankovic, Differentiated Real-Time Data Services for E-Commerce Applications, invited paper, *Electronic Commerce Research*, Kluwer, Vol. 3, Nos 1-2, April 2003, pp. 113-142.

- A. Wood and J. Stankovic, Denial of Service in Sensor Networks, *IEEE Computer*, Vol. 35, No. 10, October 2002, pp. 54-62..

- C. Lu, J. Stankovic, G. Tao and S. Son, Feedback Control Real-Time Scheduling: Framework, Modeling and Algorithms, special issue of *Real-Time Systems Journal* on Control-Theoretic Approaches to Real-Time Computing, Vol. 23, No. 1/2 July/September, 2002, pp. 85-126.

- M. Xiong, K. Ramamritham, J. Stankovic, D. Towsley, and R. Sivasankaran, Scheduling Access to Temporal Data in Real-Time Databases, *IEEE Transactions on Knowledge and Data Engineering*, Vol. 14, No. 5, Sept./Oct. 2002, pp.1155-1166.

- M. Xiong, K. Ramamritham, J. Haritsa, and J. Stankovic, Mirror: A State-Conscious Concurrency Control Protocol for Replicated Real-Time Databases, *Information Systems*, Vol. 27, No. 4, April 2002, pp. 277-297.

- L. Freidrich, J. Stankovic, M. Humphrey, M. Marley, and J. Haskins, A Survey of Configurable, Component-Based Operating Systems for Embedded Applications, *IEEE Micro*, May/June, 2001, Vol. 21, No. 3, pp. 54-68, article **licensed to Rational Software Group**.

- M. Di Natale and J. Stankovic, Scheduling Distributed Real-Time Tasks with Minimum Jitter, *IEEE Transactions on Computers*, Vol. 49, No. 4, April 2000, pp. 303-316.

- A. Burns, D. Prasad, A. Bondavalli, F. Di Giandomenico, K. Ramamritham, J. Stankovic, and L. Strigini, The Meaning and Role of Value in Scheduling Flexible Real-Time Systems, *Journal of Systems Architecture*, Vol. 46, pp. 305-325, 2000.

- J. Stankovic and S. Son, An Architecture and Object Model for Distributed Object-Oriented Real-Time Databases, **chosen as one of the outstanding papers from** *IEEE International Symposium on Object-Oriented Real-Time Distributed Computing (ISORC'98)*, Kyoto, Japan, April 1998, *Journal on Computer Systems Science and Engineering*, Special Issue on Object-Oriented Real-Time Distributed Systems, Vol. 14, No. 4, pp. 251-259, July 1999.

- J. Stankovic, S. Son, and J. Hansson, Misconceptions About Real-Time Databases, *IEEE Computer*, Vol. 32, No. 6, June 1999, pp. 29-36.

- J. Stankovic, K. Ramamritham, D. Niehaus, M. Humphrey, and G. Wallace, The Spring System: Integrated Support for Complex Real-Time Systems, special issue of *Real-Time Systems Journal*, Vol. 16, No. 2/3, May 1999.

- M. Humphrey and J. Stankovic, Predictable Threads for Dynamic, Hard Real-Time Environments, *IEEE Transactions on Parallel and Distributed Systems*, Vol. 10, No. 3, March 1999, pp. 281-296.

- W. Burleson, J. Ko, D. Niehaus, K. Ramamritham, J. Stankovic, G. Wallace, and C. Weems, The Spring Scheduling Co-Processor, *IEEE Transactions on VLSI*, Vol. 7, No. 1, March 1999, pp. 38-47.

- J. Stankovic, Real-Time Global Virtual Machines, invited contribution, virtual roundtable discussion, *IEEE Concurrency*, Vol. 5, No. 3, pp. 26-27, Fall 1997.

- J. Stankovic, Q and A Interview on Parallel and Distributed Operating Systems, invited expert, *IEEE Concurrency*, Vol. 5, No. 2, pp. 84-85, April-June 1997.

- J. Stankovic, Strategic Directions in Real-Time and Embedded Systems, *ACM Computing Surveys*, 50th Anniversary Issue, Vol. 28, No. 4, pp. 751-763, December 1996.

- R. Sivasankaran, J. Stankovic, D. Towsley, B. Purimetla, and K. Ramamritham, Priority Assignment in Real-Time Active Databases, **chosen for special issue from best papers at a conference**, *VLDB Journal*, Vol. 5, No. 1, pp. 19-34, January 1996.

- J. Stankovic, Real-Time and Embedded Systems, **invited to Special 50th Anniversary Issue**, *ACM Computing Surveys*, Vol. 28, No. 1, pp. 205-208, March 1996.

- J. Stankovic, M. Spuri, M. Di Natale, and G. Buttazzo, Implications of Classical Scheduling Results For Real-Time Systems, *IEEE Computer*, Vol. 28, No. 6, pp. 16-25, June 1995, **paper was rated 4th best of the year in this Journal.**

- F. Wang, K. Ramamritham, and J. Stankovic, Determining Redundancy Levels for Fault Tolerant Real-Time Systems, **Special Issue** of *IEEE Transactions on Computers* on Fault Tolerant Computing, Vol. 44, No. 2, pp. 292-301, February 1995.

- J. Stankovic, Adjustable Flow Control Filters, Reflective Memories, and Coprocessors as Support for Distributed Real-Time Systems, **chosen for special issue from best papers of a conference**, *International Journal of Mini and Microcomputers*, Vol. 17, No. 1, pp. 11-17, 1995.

- M. Spuri and J. Stankovic, How to Integrate Precedence Constraints and Shared Resources in Real-Time Scheduling, *IEEE Transactions on Computers*, Vol. 43, No. 12, pp. 1407-1412, December 1994.

- K. Ramamritham and J. Stankovic, Scheduling Algorithms and Operating Systems Support for Real-Time Systems, *Proceedings of the IEEE*, Vol. 82, No. 1, pp. 55-67, January 1994.

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- J. Stankovic, Real-Time Computing, *BYTE*, **invited paper**, pp. 155-160, August 1992.

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- W. Zhao, J. Stankovic, and K. Ramamritham, A Window Protocol for Transmission of Time Constrained Messages, *IEEE Transactions on Computers*, Vol. 39, No. 9, pp. 1186-1203, September 1990.

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SOFTWARE LICENSES and Systems

- Mitsubishi Corporation purchased license for real-time scheduling algorithm we developed.

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- VigilNet system transferred to Northrup-Grumman; in addition used by Lockheed Martin, Mitre and SRI.

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- L. Molesky, K. Ramamritham, C. Shen, J. Stankovic, and G. Zlokapa, Implementing a Predictable Real-Time Multiprocessor Kernel - The Spring Kernel, extended abstract, *IEEE Workshop on Real-Time Operating Systems and Software*, May 1990.

- J. Stankovic, The Spring Architecture, *Proc. EuroMicro Workshop on Real-Time*, Denmark, June 1990.

- W. Zhao and J. Stankovic, Performance Analysis of FCFS and Improved FCFS Scheduling Algorithms for Dynamic Real-Time Computer Systems, *Real-Time Systems Symposium*, pp. 156-165, December 1989.

- J. Huang, J. Stankovic, D. Towsley, and K. Ramamritham, Experimental Evaluation of Real-Time Transaction Processing, *Real-Time Systems Symposium*, pp. 144-153, December 1989.

- C. Shen, K. Ramamritham, and J. Stankovic, The Spring Project: Integrated Resource Management in Real-Time Systems, *Proc. Third Workshop on Large Grain Parallelism*, October 1989.

- J. Stankovic and K. Ramamritham, The Spring Kernel: Operating System Support for Critical, Hard Real-Time Systems, *Proc. 1989 Workshop on Operating Systems for Mission Critical Computing*, September 1989.

- D. Niehaus, J. Stankovic, and K. Ramamritham, System Support for Real-Time AI: A Spring Project Perspective, *Workshop on Real-Time AI Proceedings*, IJCAI, August 1989.

- K. Ramamritham, J. Stankovic, and P. Shiah, O(n) Scheduling Algorithms for Real-Time Multiprocessor Systems, *Int. Conf. on Parallel Processing*, August 1989.

- K. Ramamritham and J. Stankovic, Time-Constrained Communication Protocols for Hard Real-Time Systems, extended abstract, *IEEE Workshop on Real-Time Operating Systems*, May 1989.

- J. Stankovic and K. Ramamritham, The Spring Kernel: A New Paradigm for Real-Time Operating Systems, extended abstract, *IEEE Workshop on Real-Time Operating Systems*, May 1989.

- J. Stankovic, K. Ramamritham and D. Niehaus, On Using The Spring Kernel To Support Real-Time AI Applications, *Proc. EuroMicro Workshop on Real-Time Systems*, June 1989.

- R. Mirchandaney, D. Towsley, and J. Stankovic, Adaptive Load Sharing in Heterogeneous Systems, *Proc. 9th Int. Conf. on Distributed Computing Systems*, June 1989.

- S. Biyabani, J. Stankovic, and K. Ramamritham, The Integration of Criticalness and Deadlines in Scheduling Real–Time Tasks, *Real–Time Systems Symposium*, pp. 152-160, December 1988.

- W. Zhao, J. Stankovic, and K. Ramamritham, A Multi-Access Window Protocol for Transmission of Time Constrained Messages, *Proc. 8th Int. Conf. on Distributed Computing Systems*, pp. 384-392, June 1988.

- S. Pulidas, Don Towsley, and J. Stankovic, Embedding Gradient Estimators in Load Balancing Algorithms, *Proc. 8th Int. Conf. on Distributed Computing Systems*, June 1988.

- J. Stankovic and W. Zhao, On Real–Time Transactions, *ACM SIGMOD Record*, Special Issue on Real–Time Database Systems, Vol. 17, No.1, pp. 4-18, March 1988.

- D. Towsley, G. Rommel, and J. Stankovic, The Performance of Processor Sharing For Scheduling Fork–Join Jobs in Multiprocessors, *Proc. Symposium on High Performance Computer Systems*, March 1988.

- J. Stankovic and K. Ramamritham, The Design of the Spring Kernel, *Real Time Systems Symposium*, December 1987.

- K. Ramamritham, J. Stankovic, and W. Zhao, Meta-Level Control in Distributed Real-Time Systems, *Proc. 7th Int. Conf. on Distributed Computing Systems*, September 1987.

- A. Choudhary, W. Kohler, J. Stankovic, and D. Towsley, A Modified Priority Based Probe Algorithm for Distributed Deadlock Detection and Resolution, *Proc. 7th Int. Conf. on Distributed Computing Systems*, September 1987.

- S. Cheng, J. Stankovic, and K. Ramamritham, Dynamic Scheduling of Groups of Tasks with Precedence Constraints in Distributed Hard Real-Time Systems, *Real-Time Systems Symposium*, December 1986.

- J. Stankovic and D. Towsley, Dynamic Reallocation in a Highly Integrated Real-Time Distributed System, *Proc. 6th Int. Conf. on Distributed Computing Systems*, May 1986.

- J. Stankovic, K. Ramamritham, and W. Kohler, A Review of Current Research and Critical Issues in Distributed System Software, *Distributed Processing Newsletter*, IEEE Computer Society, Vol. 7, No. 1, pp. 14-47, March 1985.

- I. Sidhu and J. Stankovic, An Adaptive Bidding Algorithm For Processes, Clusters, and Distributed Groups, *Proc. 4th Int. Conf. on Distributed Computing Systems*, May 1984.

- W. Kohler, J. Stankovic, and K. Wilner, An Experimental Comparison of Locking Policies in a Testbed Database System, *SIGMOD*, May 1983.

- J. Stankovic, A Technique To Identify Implicit Information Associated With Modified Code, *Proc. Conference on System Description Methodologies*, May 1983.

- J. Stankovic, A Heuristic For Cooperation Among Decentralized Controllers, *Proc. INFOCOM 83*, invited paper, April 1983.

- J. Stankovic, Achievable Decentralized Control For Functions of a Distributed Processing Operating System, *COMPSAC*, November 1982.

- J. Stankovic, N. Choudhury, R. Mirchandaney, and I. Sidhu, An Evaluation of the Applicability of Different Mathematical Approaches to the Analysis of Decentralized Control Algorithms, *COMPSAC*, November 1982.

- J. Stankovic, The Analysis of a Decentralized Control Algorithm for Job Scheduling Utilizing Bayesian Decision Theory, *Proc. 1981 Int. Conf. on Parallel Processing*, pp. 333-340, August 1981.

- J. Stankovic, A Comprehensive Framework for Evaluating Decentralized Control, *Proc. Int. Conf. on Parallel Processing*, pp. 181-187, August 1980.

- J. Stankovic, Debugging Commands for a Distributed Processing System, *Proc. COMPCON '80*, Fall, pp. 701-705, September 1980.

- J. Stankovic, The Migration of Primitives, *Proc. of IFIP TC-10 Conference on Firmware, Microprogramming and Restructurable Hardware*, pp. 213-215, April 21 - May 2, 1980.

- J. Stankovic, A. van Dam, and L. DeNoia, Trends in Distributed Data Processing in North America, SEAS, *Proc. Spring Technical Meeting 1977, Distributed Computing*, April 18-22, 1977.

RESEARCH CONTRACTS AND GRANTS (PI unless otherwise noted):

- Adaptable Security for Wireless Sensor Networks, PI, Stankovic, Co-PIs, Son, Sullivan, Lorenz, submitted to NSF, March 2006, 4 years, $1,947,063.

- The Sensor Network Development and Deployment Studio, PI T. Abdelzaher (UIUC), Co-PI, Stankovic, Co-PI He (UMinn), submitted to NSF, March 2006, 3 years, UVA Amount: $456,509.

- Essentia: Architecting Sensor Systems with Asymmetric Function Placement and Reflective Composition, PI Stankovic, Co-PI He (UMinn), submitted to NSF, March 2006, 3 years, UVA Amount: $644,408.

- Obtaining Realistic Communication and Sensing In-situ Models for Wireless Embedded Systems, PI, T. He, Univ. of Minnesotta, Co-PI, J. Stankovic, UVA, submitted to NSF, January 2006, 3 years, UVA Amount: $346,778.

- Autonomous Maneuver and Position Systems, SBIR, with TCNI Corp., Phase I, submitted January 2006, consulting only.

- Multi-frequency Wireless Sensor Networks, PI, Stankovic, Co-PI Son, submitted to NSF, 3 years, January 2006, $727,896.

- Infrastructure Protection for Heterogeneous Surroundings with Wireless Micro-ensor Networks, white paper, PI, Stankovic, Co-PIs, Son He (Minnesotta), Abdelzaher (UIUC), submitted to Dept. of Homeland Defense, August 2005, $2,390,000.

- Robust and Secure Localization, PI, J. Stankovic, submitted to ARO, 3 years, $300,000, August 22, 2005.

- Stream Data Management for Wireless Sensor Networks, PI, S. Son, Co-PI, J. Stankovic, CMU/SEI, 1 year, $48,000, Jan. 2006.

- Environmentally Immersive Programming: A New Programming Paradigm for Deeply Embedded Systems, PI, Tarek Abdelzaher, Co-PI Stankovic, NSF, 4 years, start July 2005, $550,000.

- Reality-Aware Sensor Network Protocols, PI, Stankovic, Co-PI Abdelzaher, NSF, $478,254, 3 years, Sept. 2004.

- Wireless Sensor Networks and Embedded Systems, State of Virginia, $325,960, Sept. 2004, Dec. 2005.

- Robust Event Services for Emergency Response in Sensor Networks, PI Stankovic, Co-PI Son, NSF Sensors Program, August 15, 2003, 3 years, $400,000.

- Spatiotemporal Protocols and Analysis for Sensor Nets, PI, C. Lu (Washington University), PI Stankovic, (UVA), Co-PI Abdelzaher, NSF Medium-ITR Program, August 2003, 3 years, $1,000,000.

- ControlWare: Automatic Generation of Adaptable Middleware Controllers, PI Stankovic, Co-PIs Abdelzaher, DARPA, Oct. 2003, 2 years, $437,500.

- A Network Virtual Machine for Real-Time Coordination Services - Part II, PI Stankovic, Co-PIs, Son, Abdelzaher, Tao, Sha (UIUC), Krogh (CMU), DARPA, 4 years, $3,635,095.

- A Paradigm for Scalable Open Real-Time Computing Under Uncertainty, PI, T. Abdelzaher, Co-PI, J. Stankovic, NSF, 3 years, Sept. 1, 2002 - August 30, 2005, $270,000, two years addendum with additional $220,000 to August 2007.

- A QoS Management Scheme for Real-Time Data Services, PI, S. Son, Co-PI, J. Stankovic, NSF, July 1, 2002 - June 30, 2005, $174,000.

- Distributed Real-Time Scheduling and MMLite, PI, J. Stankovic, Co-PI, M. Humphrey, Microsoft Research, December 2001 - December 2002, $25,000.

- The Recruitment and Retention of Faculty and Graduate Students in Computer Science and Engineering, NSF, EIA-0107409, July 1, 2001 - Dec. 31 2002, $99,221.

- Facilitating Predictable and Adaptive Applications in the .NET Compact Framework, PI, M. Humphrey, Co-PI, Stankovic, Microsoft Research, July 2001 - June 2003, $220,000.

- A Network Virtual Machine for Real-Time Coordination Services, PI, Co-PIs, S. Son, T. Abdelzaher, G. Tao, L. Sha, V. Kumar, B. Krogh, BAA 01-06, DARPA Jan. 01, 18 months, $928,262.

- Quality of Surveillance and Control in Network Centric Warfare, PI, Co-PI Abdelzaher, subcontract to University of Illinois, MURI, total ($5,000,000) for UVA $942,552 for 5 years.

- A Control Theoretical Approach to Performance Guarantees in Performance Critical Systems, PI, Co-PIs, Son, Abdelzaher and Tao, NSF, start May 1, 2001, 3 years, $410,000.

- Aspect Suite Automation for Embedded Mission Systems, subcontract with Boeing, DARPA, October 2000, 3 years, $2,000,000 (total), UVA, $670,000.

- Support for Flexible Scheduling in Operating Systems, PI, Microsoft, gift, 1999-2000, $30,000.

- Feedback Control Real-Time Scheduling, PI, Co-PIs, Son and Tao, NSF, 1 year, $99,969.

- Development of Global Multimedia Database and Streaming Framework Support for Real-Time Applications, PI, Co-PI Sang Son, Ministry of Information and Communication, Korea, 2 years, 1999, $130,000.

- Support for Flexible Scheduling in Operating Systems, PI, Microsoft, gift, 1998, $55,000.

- Evaluating Real-Time Database Protocols, PI, Co-PI S. Son, NSF, 3 years, $433,573.

- Fault Tolerance, Events, and Real-Time Object Repositories, PI, Co-PI, S. Son, Unisys Corporation, 1998-1999, $50,000.

- Multimedia in the Factory, Mitsubishi, with K. Ramamritham, $50,000, 1997.

- Distributed Multimedia Over ATM Networks, Mitsubishi, 1996-1997, $30,000.

- Real-Time Distributed Computing Over ATM Networks, Mitsubishi, 1995-1996. $20,000.

- Implementation of Scheduling Rules for an Expert System, Advanced System Technologies, 6 months, 1994 and extended in 1995. $10,000.

- Distributed Real-Time Architectures and Reflective Memories, Mitsubishi, $20,000.

- Fault Tolerance in Real-Time Systems, MITRE, with K. Ramamritham, August 1994, 1 year. $56,667.

- Integrating Active, Real-Time and Temporal Databases for Crisis Management in MDDS, with K. Ramamritham and D. Towsley, Office of Research and Development, Feb. 1995 - Feb. 1997. $452,000. 2 years.

- Real-Time Scheduling, Mitsubishi, with K. Ramamritham, $37,000. September 1993.

- Adaptive Fault Tolerance in Real-Time Systems, Jointly with CNR-Pisa, travel grant, NSF, 3 years, June 1993, $20,000.

- GTE, Real-Time Issues in Heterogeneous Computer Networks, 1992, $25,000.

- The Spring Project: Predictable and Adaptable Complex Computer Systems, Co-PI, K. Ramamritham, ONR, 2 years, April 1991. Amount $299,832.

- Intelligent, Real-Time Complex Computing Systems, 5 Co-PIs, NSF and ARPA, IRI-9208920, 3 years, Sept. 1992 – Feb. 1996. Amount $2,000,000.

- Time Constrained Database Systems, A Renewal, Co-PIs D. Towsley and K. Ramamritham, 3 years, NSF, IRI 9114197, July 1992 - Dec. 1995. Amount $330,000.

- Texas Instruments, Real-Time Symbolic Processing, 1990. Amount $45,000.

- Distributed Deadlock Detection, MIT Draper Labs, October 1989-1990. Amount $45,600.

- Time Constrained Database Systems, Co-PIs D. Towsley and K. Ramamritham, 2 years, NSF, October 1989 - 1991. Amount $250,000.

- Scheduling Support for Real-Time Symbolic Processing, Texas Instruments, 1989. Amount $42,000.

- Distributed Databases, Co-PI, D. Towsley, DEC, July 1988-1989. Amount $60,000.

- Dependable Real–Time Systems, Co-PI K. Ramamritham, ONR, for 3 years, October 1, 1988-1991. Amount $557,677.

- Support for Real–Time Symbolic Processing, Texas Instruments, January 1, 1988 - December 31, 1988. Amount $45,800.

- Building Distributed Time Critical Systems, Co-PI K. Ramamritham, ONR, 3 years, 1986-1989. Amount $600,000.

- Local and Global Control Integration, Co-PI D. Towsley, RADC, Contract No. 93921–39, July 15, 1986 - July 14, 1987. Amount $95,000.

- Distributed Host Architecture Study, NUSC, N00140-85-M-VH75, March 1, 1985 - July 31, 1985. Amount $18,600.

- Design, Evaluation, and Modeling of Distributed Database Systems, NSF, Co-PIs, W. Kohler and D. Towsley, SBD-8418216, 2 years, March 1, 1985 - March 30, 1987. Amount $268,220.

- Scheduling in Real-Time Distributed Systems, Co-PI, K. Ramamritham, ONR, ONR 048-716/3-22-85, May 1, 1985, December 1, 1986. Amount $204,005.

- Non-Traditional Architecture for Distributed Real-Time Systems, General Electric, Sept. 1, 1984 - August 31, 1985. Amount $18,000.

- A Study of Deadlock Detection in Distributed Databases, Naval Underwater Systems Center, N00140-84-M-WM07, CO-PIs W. Kohler and D. Towsley, July 1 - December 31, 1984. Amount $9930.

- Load Balancing, Naval Underwater Systems Center, N00140-84M-VG68, with D. Towsley. March 1, 1984 - August 31, 1984. Amount $9970.

- Concurrency Control and Recovery Algorithms for Distributed Transaction Processing Systems, NSF, ECS-8120931, with W. Kohler and D. Towsley. June 1, 1982 - May 31, 1984. Amount $134,190.

- Decentralized Control of Scheduling in Distributed Processing Systems, U.S. Army CE-COM, DAAB07-82-K-J015, December 15, 1981 - February 15, 1985. Amount $130,830.

- Decentralized Control of Job and Process Scheduling in Distributed Processing Systems, NSF, MCS-8104203, July 1, 1981 - June 30, 1983. Amount $38,799.

- Software Tools For the Support of System Modification, Naval Underwater Systems Center, Newport, RI, N00140-81-M-MY61, August 1, 1981 - January 31, 1982. Amount $6,000.

- Design and Development of a Distributed Computer-Based Instructional System, Digital Equipment Corporation, BD-749339, July 1, 1981 - June 30, 1982. Amount $47,350.

- A Distributed Computer-Based Instructional System - A Definition, Digital Equipment Corporation, BD-749325, June 1, 1980 - June 30, 1981. with C. Hutchinson. Amount $35,176.

- A Computer Graphics Tool for Software Maintenance, University of Massachusetts, Account No. 2-03078, January 1, 1980 - December 31, 1980. Amount $2,500.

EQUIPMENT AND SOFTWARE GRANTS (PI Unless Noted):

- Tornado System, Wind River, January 1998, $20,000.

- NSF, CISE Institutional Infrastructure Program, Infrastructure for Distributed Information Systems and Applications, one of 7 PIs, 5 years. Beginning 1995. Amount $1,342,220.

- NSF, CISE Institutional Infrastructure Program, Real Time Computing: Issues and Applications, one of 7 Co-PIs. 5 years. Amount $2,500,000.

- ONR, SpringNet: A Network of Multiprocessors for Hard Real–Time Systems, Co-PI K. Ramamritham, July 1987. Amount $40,000.

- NSF, Computer Research Equipment, Co-PIs M. Krishna and K. Ramamritham, 1987-1988. Amount $70,000 (matching $40,000).

- Two INTEL 86/310 Systems and an Ethernet for graduate class teaching lab.

- NSF, Computer Research Equipment, June 1985 - May 1986, DCR-8505499. Amount $105,413.

- NSF, Computer Research Equipment, September 1, 1985 - February 28, 1987, DMC-8506255. Amount $92,168.

- NSF, Participating Faculty on UMASS COINS-ECE CER Grant, 5 years, 1984-1989. Amount $5,400,000.

SPECIAL EDITORSHIPS:

- Guest Editor of a Special Issue of *IEEE Transactions on Computers*, on Parallel and Distributed Computing, April 1987.

- Guest Editor of a Special Issue of IEEE Distributed Processing Newsletter, on Distributed Operating Systems, Vol. 6, No. SI-2, June 1984.

- Guest Editor of a Special Issue of IEEE Distributed Processing Quarterly, Vol. 1, No. 2, December, 1981.

- Co-editor (with Andries van Dam) of a special issue of *IEEE Computer* on distributed processing, Vol. 11, No. 1, January 1978.

TUTORIALS:

- Invited Short Course (1 week), Wireless Sensor Networks, Pisa, Italy, October 2004.
- Invited Tutorial Speaker, 16th Brazilian Symposium on Computer Networks, Rio de Janeiro, May 1998.

- Invited Tutorial Speaker, Real-Time Systems Initiative Launching Conference, (8 hours) Lund, Sweden, August 19, 1997.
- Invited Tutorial Speaker (8 hours), 6th Euromicro Workshop on Real-Time Computing, Vesteras, Sweden, June 14, 1994.
- Invited Speaker, Intensive Tutorial, 5 days, Next Generation Real-Time Computing, Scuola Superiore S. Anna, Pisa, Italy, April 26-30, 1993.
- Invited Speaker, Tutorial, NATO Advanced Study Institute on Real-Time Computing, October 1992.
- Invited Speaker, Tutorial, Hard Real-Time Systems, ACM Sigmetrics, Newport, June 1992.
- Invited Speaker, Tutorial, Hard Real-Time Systems, Berlin, February 1991.
- Invited Speaker, Distributed Operating System Tutorial, International Computer Symposium 1986, Taiwan, December 15, 1986.
- Tutorial Week, East, Introduction to Computer Networks and Distributed Operating Systems, Washington, D.C., November 18, 1985; and Tutorial Week Orlando, Fla., April 7, 1986.
- Tutorial on Introduction to Computer Networks and Distributed Operating Systems, IEEE Chapter Tutorial Program, Pittsburg, PA., November 3, 1984.
- *Introduction to Computer Networks and Distributed Operating Systems*, IEEE Computer Society, Chapter Tutorial Workbook, December 1983.
- Tutorial on Reliable Distributed Software presented at the Third Symposium on Reliability in Distributed Software and Databases, October 17, 1983.
- Three day tutorial on Distributed Processing presented at IBM, Kingston, N.Y., with H. Stone, July 20-22, 1981.

MAJOR PROFESSIONAL SERVICE POSITIONS:

- ACM SenSys Steering Committee, Chair, 2005-2006.
- General Chair, IPSN 2006, April 2006, in progress.
- General Chair, Sensys 2004, Baltimore, Md, Nov. 3-5, 2004.
- Co-organizer, Workshop on Grand Challenges in Real-Time and Embedded Computing Systems, Cancun, Dec. 2, 2003.
- Executive Board, IEEE Real-Time Systems Technical Committee, from 1997-present.
- Co-organizer, with S. Sastry and H. Gill, NSF/OSTP Workshop on Information Technology Research for Critical Infrastructure Protection, Sept 19-20, 2002.
- Co-organizer, with K. McKeown and L. Clarke, CRA Workshop on Grand Challenges in Computer Security, Sept. 21, 2002.
- ACM SIG on Embedded Computing, Founding Governing Board, since August 2002.
- Chair, Awards Committee, IEEE Real-Time Systems Technical Committee, 2003-2004.

- General Chair, Workshop on Faculty Recruiting and Retention, supported by NSF and CRA, Washington D.C., Dec. 13-14, 2001, March 6-7, Baltimore, MD, 2002, and Washington D.C., June 27-28, 2002.
- General Co-Chair, IEEE Int. Conf. on Distributed Computing Systems, Providence, R.I., June 2003.
- Program Co-Chair, Snowbird 2000, Snowbird, Utah, July 2000.
- General Chairman, IEEE International Conference on Distributed Computing Systems, Baltimore, Md, May 1997.
- Chairman for IEEE Real-Time Systems Technical Committee, Jan. 1993 - Dec. 1994.
- Vice Chairman for IEEE Real-Time Systems Technical Committee, Jan. 1991 - Jan. 1993.
- Program Co-Chairman, IEEE International Conference on Distributed Computing Systems, June 1990, Paris, France.
- General Chairman, Real–Time Operating Systems Workshop, Washington, D.C., May 1988.
- Member of the Univ. of Vesteras, Sweden, RT-Center advisory board.
- Member of Advisory Council on Programming of Parallel and Distributed Computations, Dept. of Comp. Sci., University of Texas, Austin, Texas, 1987 - 1988, (with C. Seitz, D. Gries and L. Synder).
- General Chairman, IEEE Real Time Systems Symposium, December 1986.
- Program Co-Chairman (and founder), Workshop on Large Grain Parallelism, October 1986.
- Program Chairman, IEEE Real-Time Systems Symposium, San Diego, December 1985.
- Speaker, IEEE Chapter Tutorials Program, 1984-85.
- Vice Chairman for IEEE Distributed Operating Systems Technical Committee on Distributed Processing, January 1981 to December 1984.
- CSnet Liaison for the Department of Electrical and Computer Engineering, Univ. of Mass., January 1982 - August 1983.
- Member of an IEEE Steering Committee on Dist. Processing, September 1976 - January 1978 and 1988-current.
- President of the Brown University Student Chapter of the ACM, 1975-1978.

OTHER PROFESSIONAL SERVICE:

- RT-GENI Workshop, invitation only, Feb 6-7, Washington, DC, 2006.
- Sensor Network Track Chair, IEEE Real-Time Systems Symposium, 2006.
- Program Committee, IEEE SECON, May 2006.
- TinyOS Alliance Working Group, January 2006 - present.
- NSF Panel, Next Generation Internet (Geni), Princeton Univ., Jan. 30 - Feb. 1, 2006.

- Program Committee, FeBID Workshop, April 2006.
- Program Committee, DCOSS, 2006.
- Program Committee, First Int. Workshop on Pervasive and Ubiquitous Health Care, Pisa, Italy, March 2006.
- Program Committee, SUTC 2006, June 2006.
- Program Committee, ICDCS 2006, July 2006.
- Program Committee, Second IEEE Workshop on Dependability and Security in Sensor Networks and Systems (DSSNS), April 2006.
- Program Committee, 2005 Monterey Workshop, May 2005.
- Program Committee, Real-Time Systems Symposium, Sensor Network Track, May 2005.
- NSF CISE area study report, Wireless Sensor Networks, April 2005.
- NSF CISE area study report, Embedded and Hybrid Control, April 2005.
- Invited, NSF Workshop on Control of Computing Systems, May 3-4, 2005.
- NSF Research Awards Panel, March 28-29, 2005.
- External Advisory Board, Department of Computer Science, Washington University, St. Loius, January 2005 - December 2006.
- Steering Committee, SenSys, 2004-2006.
- ACM SIGBED Nominating Committee, Fall 2004.
- EMSOFT'05 Program Committee, September 2005.
- NSF Career Awards Panel, Nov 1-2, 2004.
- External Advisory Board Member, NSF CASA Center, Board meeting Oct. 29, 2004.
- Program Committee, IEEE Int. Conference on Distributed Computing in Sensor Systems, June 2005.
- Program Committee, 4th International Symposium on Information Processing in Sensor Networks (IPSN '05), April 2005.
- IEEE Fellows Awards Committee, 2004.
- Chair, Distinguished Service Committee, CRA, 2004.
- RTSS 2004, Program Committee, Special Track on Wireless Sensor Networks.
- IEEE SECON 2004, Program Committee, October 2004.
- EMSOFT'04 Program Committee, September 2004.
- Steering Committee, EMSOFT'04, September 2004.
- Program Committee, ECRTS 2004, Catania, Italy.
- NSF Workshop on Environmental Cyberinfrastructure Needs for Distributed Sensor Networks, section leader, Scripts Oceanographic Institute, August 2003.
- Program Committee, RTAS, 2004, Toronto, Canada.
- Program Committee, 3rd International Symposium on Information Processing in Sensor Networks (IPSN '04), April 2004.

- RTSS 2003, Program Committe, Special Track on Wireless Sensor Networks.
- Program Committee, First ACM SenSys 2003, Nov. 2003.
- EMSOFT'03 Program Committee, October 2003.
- Program Committee, RTAS, 2003, Washington, D.C.
- Program Committee, Euromicro Real-Time Systems, Porto, Italy, July 2003.
- NSF ITR Large Scale Systems Panel, May 2002.
- Program Committee, RTAS 2002.
- Program Committee, RTSS, 2002.
- EMSOFT'02 Program Committee, October 2002.
- EMSOFT Steering Committee, October 2001 - current.
- Program Committee, Snowbird Conference for Department Chairs, July 2002.
- Program Committee, EuroMicro Real-Time Systems, 2002.
- Program Committee, RTSS, 2001.
- Program Committee, EuroMicro Real-Time Systems, 2001.
- Steering Committee, Ninth Int. Workshop on Parallel and Distributed Real-Time Systems, August 2001.
- Program Committee, ISORC 2001, Magdberg, Germany, March 2001.
- Program Committee, RTSS, 2000.
- Program Committee, RTCSA'00, Korea, 2000.
- Program Committee, ISORC 2000, Newport Beach, Calif., March 2000.
- Program Committee, RTAS 2000, Washington, DC, May 2000.
- Program Committee, EuroMicro 2000, Sweden, June 2000.
- Program Committee, RTCSA'99, Hong Kong, 1999.
- Program Committee, Workshop on QoS Support for Real-Time Internet Applications, Vancouver, June 1, 1999.
- Program Committee, ACM Second International Conference on Metalevel Architectures and Reflection, Saint-Malo, France, July 19-21, 1999.
- Program Committee, Seventh Int. Workshop on Parallel and Distributed Real-Time Systems, April 1999.
- Program Committee, ACM SOSP, May 1999.
- Program Committee, ARTDB-99, Germany, June 1999.
- Program Committee, IEEE Real-Time Applications Symposium, 1999.
- Program Committee, Euromicro '99, York England, June 1999.
- Program Committee, DART'98, Nov. 1998.
- Steering Committee, Seventh Int. Workshop on Parallel and Distributed Real-Time Systems, April 1999.
- Embedded Technology Leadership Awards, sponsored by Mentor Graphics, Committee, 1998.

- Program Committee, Real-Time Systems Symposium, 1997.
- Search Committee, E-I-C, *IEEE Concurrency*, 1997.
- Chair, Awards Committee, CRA, 1997.
- Program Committee, Second Workshop on Real-Time Education, June 1997.
- Program Committee, Second Int. Workshop on Active, Real-Time and Temporal Database Systems, Como, Italy, 1997.
- Program Committee, Symposium on Distributed Computing Systems, 1997.
- Program Committee, 2nd Int. Workshop on Software Engineering for Parallel and Distributed Systems, Boston, Ma., May 1997.
- Program Committee, ARTDB-97, Sweden, June 1997.
- Chair, Working Group for Real-Time Systems, ACM 50th Anniversary Strategic Directions Workshop, MIT, June 1996.
- Program Committee, Workshop on Real-Time Systems Education, April 1996.
- Program Committee, Third International Workshop on Real-Time Computing Systems and Applications, Seoul, Korea, October 1996.
- Program Committee, 1996 Real-Time Systems Symposium.
- NSF Post Doc panel in Experimental Computer Science, January 1996.
- Program Committee, Eight IEEE Symp. on Parallel and Distributed Processing, Oct. 1996.
- Program Committee, Int. Conf. on Distributed Computer Systems, June 1996.
- Program Committee, Second International Workshop on Real-Time Computing Systems and Applications, Tokyo, Japan, October 1995.
- Program Committee, IEEE Real-Time Technology and Applications Symposium, Boston, May 1996.
- Western Massachusetts Science Fair, Judge, March 14, 1995
- Program Committee, RTSS, Pisa, Italy, December 1995.
- Program Committee, Workshop on Active Real-Time Databases, Sweden, June 1995.
- Program Committee, IEEE Real-Time Technology and Applications Symposium, Chicago, May 1995.
- Program Committee, Int. Conf. on Distributed Computer Systems, June 1995.
- NSF Post Doc Panel in Experimental Computer Science, Jan. 1995.
- Program Committee, First International Workshop on Real-Time Computing Systems and Applications, Seoul, Korea, Dec. 1994.
- Program Committee, IEEE International Computer Performance and Dependability Symposium, Erlagen, Germany, April 1995.
- Program Committee, 8th International Conference on Parallel and Distributed Computing Systems, New Orleans, Sept. 1995.
- External Assessor, Univ. of Malaya, Kuala Lumpur.

- Member, IEEE Technical Segment Committee on Complex Computer Systems Engineering.
- Program Committee, International Conference on Distributed Computing Systems, June 1994.
- Program Committee, 4th IFIP Working Conference on Dependable Computing for Critical Applications, January 1994.
- Program Committee, Real-Time Systems Symposium, December 1993.
- Program Committee, International Workshop on Mechatronical Computer Systems for Perception and Action, June 1993.
- Program Committee, IEEE Workshop on Parallel and Distributed Real-Time Systems, 1993 and 1994.
- Program Committee, International Conference on Responsive Computer Systems, 1993.
- Program Committee, Real-Time Systems Symposium, December 1992.
- Program Committee, Ninth Real-Time OS Workshop, Pittsburgh, May 1992.
- Organizing and Program Committee, Workshop on Artificial Intelligence in Real-Time, April 1991.
- Program Committee, Real-Time Systems Symposium, San Antonio, December 1991.
- Program Committee, ACM Sigmetrics, Newport, June 1992.
- Program Committee, AIDA '90, November 1990.
- NSF Research Initiation Grants Panel, Database, April 1991.
- NSF Research Initiation Grants Electronic Panel, Software Systems, April 1990.
- Program Committee, 3rd Workshop on Large Grain Parallelism, October 1989.
- Program Committee, Real-Time AI Workshop, August 1989.
- NSF Research Initiation Grants Panel, Software Systems, April 3-4, 1989.
- Program Committee, Real-Time OS Workshop, CMU, May 1989.
- Awards Committee, 9th Int. Conf. on Distributed Computing Systems, 1989.
- Program Committee, 9th Int. Conf. on Distributed Computing Systems, 1989.
- Program Committee, AIA Workshop, at CMU/SEI, 1988-1989.
- Member, Steering Committee for Workload Standards for Real-Time Systems, January 1988 - December 1991.
- Program Committee, Real-Time Systems Symposium, Huntsville, Ala., 1988.
- Program Committee, 15th International Symposium on Computer Architecture, 1988.
- Tutorial Chairman, 8th Int. Conf. on Distr. Computer Systems, San Jose, Calif., 1988.
- Program Committee, Real–Time Systems Symposium, San Francisco, Dec. 1987.
- Program Committee, 2nd Workshop on Large Grain Parallelism, Hidden Valley, Pa., October 1987.
- Program Committee, Workshop on Instrumentation for Distributed Computer Systems, January 1987.

- Track Chairman, Distributed Processing, ACM-IEEE Computer Society 1986 Fall Joint Computer Conference, Dallas, November 1986.
- Program Committee, Real-Time Systems Symposium, Austin, Texas, December 1984.
- Program Committee, Vice Chairman for Distributed Operating Systems and Programming Languages, The Fifth International Conference on Distributed Computing Systems, Denver, May 1985.
- Program Committee, The Fourth International Conference on Distributed Computing, San Francisco, April 1984.
- Awards Committee, Computer Data Engineering Conference, Los Angeles, April 24-27, 1984.
- Program Committee, The Third Symposium on Reliability in Distributed Software and Databases, October 18-19, 1983.
- Western Massachusetts Regional State Science Fair Judge, March 27, 1980, and April 14, 1981.
- Assisted with organizing and running the second Brown University Workshop on Distributed Processing, August 1977.
- Assisted with the AFOSR, ARO, ONR sponsored workshop on Research Directions in Software Technology, Providence, RI, October 10-12, 1977.
- Assisted with organizing and running the first Brown University Workshop on Distributed Processing, August 1976.

CONSULTING:

Text Systems Inc, Providence, RI, Sept. - Dec. 1977.
Computer Sciences Corporation, Newport RI, June 16 - Aug. 15, 1980.
Naval Underwater Systems Center, Newport RI, August 1980 - Jan. 1981,
      March 1984 - Sept. 1984, and March 1985 - Sept. 1985.
SYSCON Inc, Washington, D.C., Sept. 1980 - 1982.
INRIA, Rocquencourt, France, January 1984.
China Source, Framingham, Mass, April - May, 1984.
Institute for Defense Analysis, Distributed OS Task Force, Chairman, Aug. 1984 - Jan. 1986.
RADC, SDI Panel on Distributed OS, June 1986.
Moderator, Series of Workshops on Distributed OS Interoperability.
Dynamics Research Corporation, 1986 - 1988.
Texas Instruments, 1988.
Ready Systems, Senior Scientific Advisory Board.
Advanced System Technologies, Senior Technical Advisory Board.
Advanced Decisions Systems, Univ. Technology Study.
European Initiative on Advanced Real-Time Systems, external consultant, 2002-2004.

INVITED LECTURES, PANELS AND CONFERENCE PRESENTATIONS:

- Real-Time GENI Workshop, NSF, Feb. 6-7, 2006, Reston, VA¿
- **Keynote Speaker**, Third International Conference on Networked Sensing Systems, INSS 2006, Chicago, Illinois, June 1 2006.
- **Distinguished Lecture**, Stony Brook, March 10, 2006.
- **Distinguished Lecture**, Research Triangle Park (Duke, North Carolina, North Carolina State), January 23, 2006.
- Panel, Chair, NSF PI meeting, Harvard Univ., Oct. 17, 2005.
- Invited Seminar, Microsoft Research, Redmond, Washington, October 11, 2005.
- **Distinguished Lecture** University of Pennsylvania, Electrical and Systems Engineering, Nov. 22, 2005.
- **Distinguished Lecture**, Johns Hopkins, Nov. 18, 2005.
- Darpa, PI Presentation, Berkeley, August 30, 2005.
- Darpa Demo Presentation, Berkeley, August 29, 2005.
- **Keynote Speaker**, 2005 International Conference on Computer Networks and Mobile Computing (ICCNMC '05), Bejing, China, August 3, 2005.
- Panel, 2005 International Conference on Computer Networks and Mobile Computing, ICCNMC '05, China, August 3, 2005.
- Invited Panel Participant, ARO Workshop on Localization, Univ. of Washington, June 14, 2005.
- Invited Speaker, ARO Workshop on Localization, Univ. of Washington, June 13, 2005.
- Invited Speaker, HCMDSS Workshop, Phil., PA., June 2, 2005.
- Darpa Presentation, (3 hours) Washington, D.C., May 12, 2005.
- Invited, Berkeley Workshop on Sensor Network Architecture, Berkeley, April 15, 2005.
- Panel, ICDCS 25th Anniversary, special invitation for Plenary panel, June 6, 2005.
- Invited, CS-ECE Seminar, University of Washington, Seattle, March 14, 2005.
- Darpa PI presentation, Tampa, Dec 15, 2004.
- Darpa Cleanpoint Summary Presentation, Tampa, Dec. 15, 2004.
- Darpa System Presentation, Avon Park, Dec. 13, 2004.
- Invited, CS Seminar Series, Harvard University, Nov. 18, 2004.
- Invited **Keynote Speaker**, RTSS, 25th Anniversary, Lisbon, December 6, 2004.
- Panel, RTSS, Lisbon, December 6, 2004.
- Invited **Keynote Speaker**, SASN '04, Washinton, DC, October 25, 2004.
- Invited Speaker, IEEE CCW 2004, October 18, 2004.
- Invited Tutorial (5 days), Scoula Santa Anna, Oct. 4-8, 2004, Pisa, Italy.
- Emsoft, Paper presentation, Sept. 28, 2004, Pisa Italy.
- **Distinguished Lecture Series**, William and Mary, September 17, 2004.

- **Keynote Speaker**, Information and Communications Technology Symposium, KICTS'04, Durham, North Carolina, August 13, 2004.
- Speaker, Critical Design Review, Darpa, Tampa, Florida, August 12, 2004.
- Paper presentation, EuroMicro RTS, Sicily, July 2, 2004.
- Paper presentation, EuroMicro RTS, Sicily, June 30, 2004.
- Panel, Center for Strategic and International Studies, Workshop on Wireless Sensor Networks, Washington, D.C., May 19, 2004.
- Intel Corporation, Invited Demo, Wireless Sensor Networks, Rayburn House, Washington D.C., March 17, 2004.
- Darpa design presentation, Tampa Florida, March 3, 2004.
- Invited speaker, NSF Workshop on Networking of Sensor Systems, Los Angeles, Calif., Feb 20, 2004.
- Darpa PI presentation NEST-SOCOM, Santa Fe, Dec. 15, 2003.
- Darpa PI presentation, NEST PI meeting, Santa Fe, Dec. 15, 2003.
- Darpa PI presentation, PCES PI meeting, Nashville, Dec. 12, 2003.
- MURI mid-term review, 2 presentations, Washington, D.C., Nov. 4, 2003.
- Invited presentation, ARTIST Workshop, Philadelphia, PA, Oct 12, 2003.
- Governor's Research Panel, UVa Institutional Presentation on CISE, Washington, D.C., Oct. 7, 2003.
- Darpa Demonstration presentation, Fort MacDill AFB, Tampa, Florida, August 20, 2003.
- Darpa PI presentations, July 14 at Berkeley, and July 16 in San Francisco, 2003.
- SOCOM Presentation, Fort MacDill, Tampa, Florida, July 2, 2003.
- Paper presentation, RTAS, Washington, D.C., May 28,2003.
- ICDCS Panel, invited, Wireless Sensor Networks, May 2003
- Darpa PI presentation and demo, May 18, 2003.
- **Distinguished Lecture Series in Networked Embedded Systems**, Notre Dame, April 17, 2003.
- Darpa PI presentation, Washington DC, March 27, 2003.
- Darpa PI presentation, San Diego, Calif., Jan. 30, 2003.
- Darpa Demo presentation, San Diego, Calif., Jan. 28, 2003.
- MURI presentation, Washington, D.C., Dec. 18, 2002.
- Darpa PI presentations, Dec 3 and Dec 4, Austin Texas, 2002.
- Invited talk, ARTIST workshop, Austin, Texas, Dec 2, 2002.
- Urban Warfare Workshop, invited speaker, Washington D.C., Nov. 6, 2002.
- Invited talk, CRA workshop on Grand Challenges in Computer Security, Sept. 21, 2002.
- Panel, Critical Infrastructures Workshop, Sept. 20, 2002.

- Darpa presentation, Washington, D.C., August 2, 2002.
- Recruiting and Retention Panel, Chair and Presenter, Snowbird, July 16th, 2002.
- DARPA PI Presentations (3), Bar Harbor, Maine, July 9, July 10, and July 11, 2002.
- Invited participant, Grand Challenges in Computer Science Systems, Airlie, Virginia, June 23-26, 2002.
- **CS/ECE Distinguished Lecture Series**, Northwestern, May 16, 2002.
- DARPA PI presentation, Washington, D.C., April 3, 2002.
- DARPA PI presentation, Napa Valley, California, Feb 6, 2002.
- Semi-Annual Report Presentation, MURI, Washington, D.C., Dec. 11, 2001.
- Paper presentation, Real-Time Systems Symposium, London, Dec. 4, 2001.
- Paper presentation, Real-Time Embedded Systems Workshop, London, Dec. 3, 2001.
- Darpa PI meeting, presentation, Mesa, AZ, October 25, 2001.
- Invited Speaker, Paper Presentation, EMSOFT 2001, Lake Tahoe, October 8, 2001.
- Presentation, Darpa PI meeting, Huntington Beach, Calif., Sept. 12, 2001.
- Invited speaker, seminar, Xerox Parc, August 15, 2001.
- Presentation, Darpa PI meeting, Napa, Calif., June 5th, 2001.
- Presentation, Darpa PI meeting, Washington, D.C., May 24, 2001.
- MURI Kickoff meeting presentation, Washington, D.C., May 18, 2001.
- **Keynote Speaker**: IEEE 21st International Conference on Distributed Computing Systems, Phoenix, April 18, 2001.
- Research Presentation, DARPA PI meeting, Feb 2001.
- **CS Distinguished Lecture Series**, University of Pennsylvania, October 26 2000.
- Invited Speaker, Panel, RTAS'2000, June 2000.
- **CS Distinguished Lecture Series**, University of Minnesota, May 8, 2000.
- Panel, invited speaker, Workshop on Parallel and Distributed Real-Time Systems, Cancun, May 1, 2000.
- **Keynote Speaker**, Workshop on Parallel and Distributed Real-Time Systems, Cancun, May 1, 2000.
- Invited talk, Cambridge University, England, March 13, 2000.
- Panel, Malardalen University Industry Conference, Vesteras, Sweden, March 15, 2000.
- Invited talk, Malardalen University, Vesteras, Sweden, March 15, 2000.
- **Keynote Speaker**, Second ARTES Conference, Goteborg, Sweden, March 16, 2000.
- **CS Seimans Distinguished Lecture Series**, Florida Atlantic University, Feb. 17, 2000.
- Invited, panel speaker, *RTSS*, December 1999.
- **Invited Speaker**, Reflection '99, St. Malo, France, July 1999.
- Paper Presentation, EuroMicro Conference on Real-Time Systems, York, England, June 1999.

- **CS Distinguished Lecturer Series**, University of Pittsburgh, March 26, 1999.
- Invited Speaker, University of Maryland, Feb. 12, 1999.
- **Keynote Invited Speaker**, Enea Conference on Real-Time Systems, Stockholm, Sweden, Nov. 19, 1998.
- **CS Distinguished Lecturer Series**, Purdue, Nov. 9, 1998.
- **Distinguished Lecture Series**, NSF, June 18, 1998.
- Paper Presentation, RTAS Conference, Denver, June 1998.
- Invited Speaker, Brazilian Symposium on Computer Networks, Rio de Janeiro, Brazil, May 1998.
- Invited speaker, FAA Symposium, April 21, 1998.
- **CS Distinguished Lecturer Series**, Univ. of Southwestern Louisianna, January 1998.
- **Invited Speaker**, Second International Workshop on Active, Real-Time, and Temporal Database Systems, Lake Como, Italy, September 1997.
- Chair, Panel, Practical Experience, Second International Workshop on Active, Real-Time, and Temporal Database Systems, Lake Como, Italy, September 1997.
- Panel Participant, Predicatability for RT Databases, Second International Workshop on Active, Real-Time, and Temporal Database Systems, Lake Como, Italy, September 1997.
- **Invited Distinguished International Speaker**, Sweden Real-Time Systems Initiative Launching, August 20, 1997, Lund, Sweden.
- Paper presentation, Next Generation Internet Workshop, Washington, DC, May 1997.
- Paper Presentation, Advanced Information Processing and Analysis Symposium, Washington DC, March 1997.
- **Keynote Speaker**, Second International Workshop on Mechatronical Computer Systems for Perception and Action, Feb. 1997, Pisa, Italy.
- Paper Presentation, Second International Workshop on Mechatronical Computer Systems for Perception and Action, Feb. 1997, Pisa, Italy.
- National Science Foundation Infrastructure Awards Workshop, presentation, July 13, 1996.
- Panel, RTAS 96, Boston, MA, June 1996.
- Paper Presentation, RTAS 96, Boston, MA, June 1996.
- Series of Presentations, SPAWAR, Washington DC, March 28, 1996.
- Invited Speaker, Univ. of Virginia, March 22, 1996.
- Panel, First International Workshop on Real-Time Databases, Newport Beach, Calif., March 8, 1996.
- **Triangle CS Distinguished Lecturer Series**, (Duke, North Carolina and North Carolina State), Feb. 4, 1996.
- Invited Speaker, Dartmouth College, Nov. 15, 1995.

- Invited Speaker, Brown University, Nov. 9, 1995.
- Invited Speaker, International Workshop on Real-Time Computing Systems and Applications, Tokoyo, Japan, October 25, 1995.
- Panel, International Workshop on Real-Time Computing Systems and Applications, Tokoyo, Japan, October 27, 1995.
- Special invited visitor and speaker (2 seminars), Electrotechnical Labs, Tsokuba City, Japan, October 30 and 31, 1995.
- Seminar, Mitsubishi, Kobe, Japan, Oct. 28, 1995.
- ARPA PI meeting, presentation, Atlanta, GA, Sept. 7, 1995.
- Fault Tolerant OSs, Workshop Presentation, Pisa, Italy, June 19, 1995.
- Seminar, CIM Lab, Lugano, Switzerland, June 16, 1995.
- Panel Chair and Participant, Real-Time Technology and Applications Symposium, May 15, 1995.
- HOTOS V, paper presentation and panel, May 7, 1995.
- Invited Speaker, NIST ATP Workshop, Raleigh-Durham, N.C., Feb. 6, 1995.
- Real-Time Systems Symposium, paper presentation, Puerto Rico, Dec. 8, 1994.
- **Shell Distinguished Lecture Series**, Texas A and M Univ., Nov. 14, 1994.
- ARPA PIs meeting, presentation, Oct. 6, 1994.
- **Keynote Speaker**, 6th Euromicro Workshop on Real-Time Computing, Vaesteraas, Sweden, June 15, 1994.
- Paper presentation and Panel at Real-Time Operating System and Software Workshop, Seattle, May 1994.
- Workshop on Parallel and Distributed Real-Time Systems, paper presentation, April 28, 1994.
- Seminar, CS Dept., Boston Univ., Jan. 19, 1994.
- Responsive Computer Systems Workshop, Paper presentation, Sept. 30, 1993.
- Invited Outside Speaker, Predictable Distributed Computing Systems Conference, Toulouse, France, Sept. 23, 1993.
- Invited Speaker, International Workshop on Mechatronical Computer Systems for Perception and Action, Sweden, June 3, 1993.
- CS Seminar, Technical Univ. of Vienna, May 5, 1993.
- Seminar, CS Dept., Univ. of Genoa, March 4, 1993.
- Seminar, CS Dept., Univ. of Pisa, Feb. 19, 1993.
- Invited Speaker, PDCS Workshop, Italy, Jan. 7, 1993.
- CS Seminar, Univ. of Torino, Nov. 18, 1992.
- CS Seminar, Univ. of Milan, Nov. 17, 1992.
- NATO workshop, invited speaker, 2 hour lecture, St Martin, October 6, 1992.
- NATO workshop, panel on Real-Time Operating Systems, October 7, 1992.

- NATO workshop, panel on Real-Time Databases, October 9, 1992.
- Instituto Di Elaborazione Della Informazione, Seminar, Pisa, Italy, Sept. 30, 1992.
- Seminar, Scuola Superiore Santa Anna, Pisa, Italy, September 16, 1992.
- **Keynote Speaker**, Honeywell Technology Workshop, June 18, 1992.
- Honeywell Technology Workshop, panel, June 17, 1992.
- GTE Labs, Seminar, May 1992.
- Real-Time OS Workshop, invited talk, May 1992
- Real-Time OS Workshop, team leader, May 1992
- CS Seminar, CMU–ITC, May 1992
- CS Seminar, Univ. of Virginia, April 1992.
- Workshop on Architectural Aspects of Real-Time Systems, Dec. 3, 1991.
- ONR Annual Workshop, Washington, D.C., Nov. 1, 1991.
- Int. Workshop on Responsive Systems, Golfe-Juan, Oct. 4, 1991.
- Sym. on Reliable and Distributed Systems, Pisa, Oct. 1, 1991.
- VLDB, paper presentation, Sept. 3, 1991.
- Invited Speaker, Modcomp Professional Seminar Series, Boston, June 7, 1991.
- 11th DCS Conf., Panel, May 23, 1991.
- Real-Time OS Workshop, Panel, May 17, 1991.
- **Keynote Speaker**, Process Control Systems 91, Feb. 1991.
- ONR Kickoff Meeting, panel, Wash., D.C., Nov. 8, 1990.
- ONR Annual Review, research summary presentation, Wash., D.C., Oct. 25, 1990.
- COINS Technology Roundtable, presentation, Boston, Oct. 23, 1990.
- EuroMicro Workshop paper presentation, Denmark, June 7, 1990.
- Seminar, Univ of Groningen, The Netherlands, June 4, 1990.
- Panel, Real-Time OS Workshop, Charlottesville, Va., May 10, 1990.
- Invited Speaker, ARTEWG meeting, 4 hour presentation of Spring Project research results, May 1, 1990.
- Seminar, Universite Pierre and Marie Curie, Paris, France, Jan. 11, 1990.
- **Keynote Speaker**, Real-Time ADA and Embedded Systems Conference, Nov. 15, 1989.
- ONR Workshop, Annual Review, Oct. 25, 1989.
- Workshop on Operating Systems for Mission Critical Computing, paper presentation and panel participant, Sept. 19-21, 1989.
- Ready Systems, Seminar, Sunnyvale, Calif., July 21, 1989.
- **Distinguished Lecture Series**, Naval Postgraduate School, July 20,1989.
- EuroMicro Workshop on Real-Time, paper presentation, Como, Italy, June 14, 1989, and invited panel participant on June 16, 1989.
- Charles Stark Draper Labs, Seminar, May 31, 1989.

- **Distinguished Lecture Series**, Northeastern, May 16, 1989.
- Real-Time OS Workshop, paper presentation and on 2 panels, May 1989.
- Purdue University, CS Dept. Seminar, Feb 8, 1989.
- **Distinguished Lecture Series**, Univ. of Michigan, Feb 6, 1989.
- ONR Real-Time Initiative, Speaker, Wash, DC, Nov. 29, 1988.
- Real-Time AI Workshop, Speaker, Univ of Michigan, Nov. 16, 1988.
- Texas Instruments, Speaker, Seminar program, Dallas, August 29, 1988.
- 8th DCS Conference, 2 paper presentations, San Jose, Calif., June 16, 1988.
- 8th DCS Conference, panel, San Jose, Calif., June 14, 1988.
- Panel on Real-Time Computing, RTOS Workshop, Washington, DC, May 12, 1988.
- Univ. of Maryland, CS Seminar, March 11, 1988.
- Real–Time Systems Symposium, paper presentation, Dec. 2, 1987.
- Univ. of Connecticut, CS Seminar, Nov. 13, 1987.
- Large Grain Parallelism Workshop, 2 presentations, Oct. 12, 1987.
- Panel on Critical Issues in Distributed Operating Systems, DCS Conf., Berlin, Sept. 25, 1987.
- Real–Time OS Workshop, paper presentation, July 2, 1987.
- Carnegie-Mellon University, Workshop on Real-Time Systems, invited, Presentation, March 31, 1987.
- Workshop on Instrumentation in Distributed Systems, Presentation, Sanibel Island, Jan. 30, 1987.
- International Computer Symposium, invited speaker, Taiwan, Dec. 16, 1986.
- Brown University, CS and Engineering Seminar, Nov. 11, 1986.
- Large Grain Parallelism Workshop, Presentation, Oct. 29, 1986.
- RADC Technology Exchange, Presentation, Oct. 22, 1986.
- NASA Workshop on Load Balancing, invited, Presentation, Oct. 20, 1986.
- ONR Seminar, September 19, 1986.
- Sixth DCS Conference, Paper Presentation, May 21, 1986.
- University of Michigan, EECS Seminar, April 14, 1986.
- IEEE Dallas Chapter, IEEE Distinguished Visitor Seminar, March 19, 1986.
- University of Michigan, EECS Seminar, Feb. 20, 1986.
- Ohio State University, IEEE Distinguished Visitor Seminar, Feb. 13, 1986.
- Dartmouth College, Thayer School of Engin. Seminar, Jan. 6, 1986.
- Real-Time System Symposium, Workshop Discussion Leader, San Diego, Ca., Dec. 5, 1985.
- University of Iowa, CS Seminar, December 12, 1985.
- Carnegie-Mellon, CS Seminar, Sept. 11, 1985.

- Invited Theme Day Speaker, ACM National Conference, New Orleans, La., March 14, 1985.
- Real-Time Operating Systems Workshop, Paper Presentation, Wakefield, Mass., November 8, 1984.
- Carnegie-Mellon University, CS Seminar, November 2, 1984.
- Apollo Computer, CS seminar, Chelmsford, Ma., June 28, 1984.
- US Army CECOM, 2 paper presentations, Fort Monmouth, NJ, June 12, 1984.
- Fourth International Conference on Distributed Computing Systems, paper presentation, San Francisco, May 17, 1984.
- University of California, Berkeley, CS Seminar, May 16, 1984.
- INRIA, France, Invited Lecture, January 18, 1984.
- Panel Member, Critical Issues in Real-Time Operating Systems, Real Time Systems Symposium, Washington, D.C., Dec 7, 1983.
- IEEE First Workshop on Real-Time Operating Systems, Paper Presentation, Niagara Falls, NY, August 12, 1983.
- **Keynote Speaker**, Working Conference on Distributed AI, Holyoke, Massachusetts, June 8, 1983.
- Working Conference on System Description Methodologies, Paper Presentation, by special invitation, Kecskemet, Hungary, May 27,1983.
- Presented results of a working group on Specifications to Code Mapping, Kecskemet, Hungary, May 27, 1983.
- INFOCOM83, Paper Presentation, San Diego, Calif., April 19, 1983.
- COMPSAC82, Two Papers Presented, Chicago, November 10, 1982.
- U.S. Army, CECOM, Fort Monmouth, NJ, presentation of semi-annual report of a research contract, July 28, 1982.
- INRIA, Rocquencourt, France, CS Seminar, June 16, 1982.
- U.S. Army, CECOM, Fort Monmouth, NJ, a series of presentations, March 25, 1982.
- Boston University, CS Seminar, February 5, 1982.
- 1981 International Conference on Parallel Processing Conference, Paper Presentation, Shanty Creek, MI, August 28, 1981.
- Army Research Office Workshop Presentation, by special invitation, Wrightsville Beach, North Carolina, May 21-23, 1981.
- COMPCON '80, Fall, Paper Presentation, Washington, D.C., September 25, 1980.
- Naval Research Lab, CS Seminar, Washington, D.C., September 24, 1980.
- 1980 International Conference on Parallel Processing Conference, Paper Presentation, Boyne Highlands, Michigan, August 29,1980.
- IFIP Conference of Firmware, Microprogramming and Restructurable Hardware, Panel Chairman, Panel Topic, Migration of Primitives, Linz, Austria, April 30, 1980.
- IEEE Student Chapter Lecture, University of Massachusetts, February 2, 1980.

- Naval Underwater Systems Center, Research Lab, CS Seminar, Newport, Rhode Island, December 6, 1979.
- ACM '79, Annual Conference, Panel Participant, Panel Topic, Industrial Darwinism: Evolution of Microprogramming, Detroit, Michigan, October 29, 1979.
- ACM '79, Annual Conference, Paper Presentation, Detroit, Michigan, October 29, 1979.
- University of Massachusetts, Computer and Information Sciences Seminar, September 30, 1979.
- University of Massachusetts, Computer Engineering Seminar, March 30, 1979.
- University of Illinois at Urbana-Champaign, CS Seminar, March 16, 1979.
- Cornell University, CS Seminar, March 14, 1979.
- Prime Computer Inc., Research Division Seminar, Framingham, Massachusetts, March 6, 1979.
- University of Connecticut, CS Seminar, February 22, 1979.
- Digital Equipment Corporation, Research Division Seminar, Maynard, MA, February 13, 1979.
- Worcester Polytechnic Institute, CS Seminar, February 8, 1979.
- Raytheon, CS Seminar, Portsmouth, RI, November 17, 1977.

STUDENTS Ph.D. Thesis - Chairman

- W. Zhao - A Heuristic Approach to Scheduling Hard Real-Time Tasks with Resource Requirements, (co-advisor with K. Ramamritham), Feb. 1986. (Texas A and M)
- Sheng-Chang Cheng - Dynamic Scheduling in Hard Real-Time Systems, May 1987. (IBM)
- Ravi Mirchandaney - Load Sharing in Distributed Systems, August 1987. (Yale)
- Gary Rommel - Scheduling Parallel Programs in Distributed Systems, August 1988. (Connecticut College)
- Ann Goodman - Optimistic Processing For Distributed Database Systems in a Partitioned Network, January 1990. (Univ. of Nevada)
- Jim Huang - Real-Time Transaction Processing: Design, Implementation and Performance Evaluation, May 1991. (Cisco)
- K. Arvind - Protocols for Distributed Real-Time Systems, (co-advisor with K. Ramamritham), May 1991.
- S. Shih - Deadlock and Related Problems in Distributed Real-Time Systems, August 1992.
- Goran Zlokapa - Real-Time Systems: Well-Timed Scheduling and Scheduling with Precedence Constraints, February 1993.
- Fuxing Wang - Fault Tolerance in Real-Time Systems - August 1993. (started his own company)
- Doug Niehaus - Program Representation and Execution in Real-Time Multiprocessor Systems, January 1994. (Kansas)
- Marty Humphrey - Real-Time Threads and Scheduling Support, August 1996. (Virginia)
- Ming Xiong, Real-Time Databases, (informal advisor) May 2000. (Bell Labs)
- John Regehr, Using Hierarchical Scheduling to Support Soft Real-Time Applications in General Purpose Operating Systems, May 2001. (Utah)
- Chenyang Lu, Feedback Control Real-Time Scheduling, May 2001 (wins Outstanding Research Graduate Student 2000 in CS department at UVA). (Washington University)
- Shri Hariharasubrahmanian, Dynamic Composability Building Flexible Complex Real-Time Systems, January 2003. (started his own company)
- Tian He, (wins Outstanding Research Graduate Student 2003 in CS department at UVA), HERMES: A Composable Wireless Sensor Network Architecture for Dynamic, Energy and Spatiotemporal Awareness, January 2004. (University of Minnesotta).
- Ronghua Zhang (co-advisor with Tarek Abdelzaher), QoS Support for Legacy Applications, August 2005. (VMware)
- Ting Yan - in progress (Eaton Corporation)

- Anthony Wood - in progress
- Gang Zhou - in progress
- Pascal Vicaire - in progress
- Radu Stoleru - in progress
- Quihua Cao - in progress
- Zhimin He - in progress
- Lin Gu - in progress
- Yafeng Wu - in progress
- Vijay Srinivasan - in progress
- Lei Fang - in progress
- Thao Doan - in progress
- Shan Lin - in progress