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RESEARCH INTERESTS

Wireless Networks, Ad Hoc Networks, Sensor Networks, QoS support and Cooperative Security in the Internet.

TEACHING EXPERIENCE

Undergraduate Courses:

Computer Networks
Computer System Architecture
Computer Organization
Introduction to Computer Science

Graduate Courses:

Advanced Computer Networks
Wireless and Mobile Networks
Computer System Performance
Computer Architecture

EDUCATION

Ph.D.	The Pennsylvania State University University Park, PA	1993
M.S.	The University of Rhode Island Kingston, RI	1989
B. S.	National Institute of Technology Rourkela, India	1987

PROFESSIONAL EXPERIENCE

2007 --	Chair, Computer Science Department, University of California, Davis, CA
2003 --	Professor, Computer Science Department, University of California, Davis, CA
2006 -	Director, Center for Future Information Technology (CFIT)
June-Aug. 2008	Visiting Professor, Yonsei University, South Korea
June-Aug. 2007	Visiting Professor, Yonsei University, South Korea
2004 -- 2007	Chair, Graduate Group in Computer Science University of California, Davis, CA
Nov-Dec., 2004	Visiting Researcher, National ICT Australia (NICTA), Sydney, Australia
July-Oct., 2004	Visiting Scientist, Institute for Infocomm Research (I2R), Singapore

2001 -- 2003	Associate Professor, Computer Science Department, University of California, Davis, CA
1999 – 2001	Associate Professor, Computer Science & Engineering Department Michigan State University, East Lansing, MI
May-Aug, 1999	Visiting Professor, Server Architecture Laboratory, Intel Corporation, Beaverton, Oregon
1998-1999	Associate Professor, Electrical and Computer Engineering Department Iowa State University, Ames, IA 50011
May-July, 1998	Visiting Scientist, Panasonic Information and Networking Technologies Laboratory, Panasonic Technologies Inc., Princeton, New Jersey
1993-1998	Assistant Professor, Electrical and Computer Engineering Department Iowa State University, Ames, IA 50011
1990-1993	Teaching/Research Assistant The Pennsylvania State University, University Park, PA
1987-1989	Teaching/Research Assistant The University of Rhode Island, Kingston, RI

HONORS AND AWARDS

- Outstanding Engineering Alumni Award, Pennsylvania State University, 2008
- Supervisor, Best Doctoral Dissertation Award from the College of Engineering, 2007 (Student: Chao Gui)
- Outstanding Graduate Research Award, Pennsylvania State University, 1993

CONSULTING ACTIVITIES AND INDUSTRIAL AFFILIATIONS

Dec. 2007 – Mar. 2008	Consultant, Siemens
June 2004 – Oct. 2004:	Consultant, Siemens
Aug. 2003 – Sept. 2003:	Consultant, Intel Corporation
Oct. 2000 – July 2001:	Chief Technology Officer, Polyphasic Corporation, Michigan
June 2000 – July 2000:	Consultant, Intel Corporation
Jan. 2000 – May 2000:	Consultant, Panasonic Information Networking and Technologies Laboratory

GRANTS AND CONTRACTS

[49] P. Mohapatra (Co-PI), \$65,000, Intel Corporation, “SWiM: Scalable Wireless Mesh Networks,” 2008-09 (PI: X. Liu).

- [48] P. Mohapatra (PI), \$200,000, National Science Foundation “Cross-layer Design for Streaming Video in Multihop Wireless Mesh Networks” 2008-11.
- [47] P. Mohapatra (PI), \$20,000, Intel Corporation “Diversity Research Program” 2008-09.
- [46] P. Mohapatra (Co-PI), \$65,000, Intel Corporation, “WiMO: Wireless Management Overlays” 2007-08 (PI: C. N. Chuah).
- [45] P. Mohapatra (Co-PI), \$65,000, Intel Corporation, “Scalable Enterprise Mesh Networks,” 2007-08 (PI: X. Liu).
- [44] P. Mohapatra (PI), \$114,440, UC MICRO, “Security and Manageability of Networks” 2007-08 (Co-PIs: Felix Wu, Kwan-liu Ma, Ben Yoo, Karl Levitt).
- [43] P. Mohapatra (PI), \$93,412, UC MICRO, “Cross-Layer Techniques for Resource Management in Wireless Mesh networks” 2007-08 (Co-PIs: Xin Liu, Chen-nee Chuah).
- [42] P. Mohapatra (PI), \$12000, Intel Corporation, “CFIT Diversity Program” 2007-08.
- [41] P. Mohapatra (PI), \$290,000, National Science Foundation, “Cooperative Security Mechanisms for DNS” 2007-10.
- [40] P. Mohapatra (PI), \$280,000, National Science Foundation, “QuRiNet: A Wide-Area Outdoor Mesh Test-bed” 2007-11 (Co-PIs: X. Liu, V. Boucher).
- [39] P. Mohapatra (PI), \$50,000, Intel Corporation, “Co-operative DNS Security” 2007-08.
- [38] P. Mohapatra (Co-PI), \$60,000, Intel Corporation, “Multicore Equipment Donation” (PI: Zhendong Su), 2007-08.
- [37] P. Mohapatra (PI), \$6,250,000, Department of Defense (Army Research Office), “ARSENAL: A Cross-Layer Architecture for Secure Resilient Tactical Mobile Ad Hoc Networks,” 2006-07 (Co-PIs: K. Levitt, F. Wu, S. Krishnamurthy, M. Faloutsos, L. Swindlehurst, M. Jensen, S. Kasera, T. LaPorta, G. Cao, P. Krishnamurthy, D. Tipper, J. J. Garcia-Luna-Aceves), 2007-2012.
- [36] P. Mohapatra (PI), \$25,000, Hewlett Packard Company, “Video over Wireless Mesh Networks,” 2007-08.
- [35] P. Mohapatra (Co-PI), \$70,000, Intel Corporation, “Management of Wireless Mesh Networks” 2006-07 (PI: C. N. Chuah).
- [34] P. Mohapatra (Co-PI), \$65,000, Intel Corporation, “Scalable Enterprise Mesh Networks,” 2006-07 (PI: X. Liu).
- [33] P. Mohapatra (PI), \$112,000, UC MICRO, “Dependable Security for Large-Scale Networks and Systems,” 2006-07 (Co-PIs: K. Levitt, F. Wu).
- [32] P. Mohapatra (PI), \$150,000, Intel Corporation, “Trusted Autonomics,” 2006-07 (Co-PI: K. Levitt).

- [31] P. Mohapatra (PI), \$56,000, UC MICRO, "Resource Management in Wireless Mesh Networks," 2006-07 (Co-PI: C. N. Chuah).
- [30] P. Mohapatra (Co-PI), \$50,000, Intel Corporation, "Computer Engineering Education Laboratories with Wireless Networking Extensions," 2006-07 (with C. N. Chuah).
- [29] P. Mohapatra (PI), \$40,000, Hewlett Packard Corporation, "QoS in Wireless Mesh Networks," 2005-2006.
- [28] P. Mohapatra (PI), \$70,000, Intel Corporation, "Wireless Management Overlays," 2005-2006 (with C. N. Chuah).
- [27] P. Mohapatra (Co-PI), \$150,000, Intel Corporation, "Trusted Autonomics," 2005-2006 (with K. Levitt, H. Chen, Z. Su).
- [26] P. Mohapatra, \$120,000, Hewlett Packard Corporation, "Mobile Ad Hoc Networking Testbed," 2004-2006 (\$110K equipment + \$10,500 cash).
- [25] P. Mohapatra and G. Manimaran, \$360,000, National Science Foundation, "DiffServ-Aware Multicasting," 2003-2006.
- [24] P. Mohapatra, \$200,000, National Science Foundation (subcontract from UCLA), "Scalable Testbed for Next Generation Mobile Wireless Networking Technologies," 2003-2006.
- [23] P. Mohapatra, \$125,000, Hewlett Packard Corporation, "Applied Mobile Technology Solutions," 2003-2004 (\$25K cash + \$100K equipment).
- [22] P. Mohapatra and L. N. Bhuyan, \$441,645, National Science Foundation, "Scalable Software Systems for Large Internet Servers," 2003-2007.
- [21] P. Mohapatra, Hewlett Packard Corporation, "Research on Mobile Ad Hoc Networks," \$82,400, 2002-2004.
- [20] P. Mohapatra, Faculty Research Grant Program, UC Davis, \$7,850, "Constraint-Based Routing in Mobile Ad Hoc Networks," 2002-2003.
- [19] P. Mohapatra and D. Ghosal, Hewlett Packard Corporation, Mobile Technology Solutions Initiative Grant, (~\$200K in wireless equipments), 2002.
- [18] P. Mohapatra, Intel Corporation, \$100,900 (FMV), Equipment Donation, 2002.
- [17] P. Mohapatra, National Science Foundation, \$175,270, "Efficient Marking Techniques for Differentiated services in the Internet," 2001 – 2004.
- [16] P. Mohapatra, \$40,000, Intel Corporation, "E-commerce Traffic Characterization and its Impact on Internet Servers," 2000 – 2002.
- [15] P. Mohapatra, National Science Foundation, \$162,842, "Service Differentiation and Overload Control in Web Servers," July 2000 – June 2003.

- [14] P. Mohapatra, EMC Corporation, \$35,000, "Distributed File Systems," August 2000 – July 2002.
- [13] P. Mohapatra, Panasonic Technologies, \$26,000, "Multicasting Support in Differentiated Services," August 2000 – December 2001.
- [12] P. Mohapatra, EMC Corporation, \$43,500, "Research Issues on Multimedia Storage Systems," August 1998 – July 2000.
- [11] P. Mohapatra, National Science Foundation, \$97,447, "An Integrated Processor Management Scheme for Parallel Computers," September 1996 - August 2000.
- [10] P. Mohapatra, National Science Foundation, \$162,486, "Hardware Multicast Routing Techniques in Scaleable Parallel Computers," June 1996 - May 2000.
- [9] P. Mohapatra (PI), Carver Trust Grant, \$20,000, "Retrieval of Continuous Media Objects from WWW Servers," May 1998 – July 1999.
- [8] P. Mohapatra, EMC Corporation, \$35,000, "Research on Data Access in Real-Time Operating System for Network Attached Storage Devices," June 1997 - July 1998, (In addition, equipment worth \$200,000 was provided by the company).
- [7] P. Mohapatra (PI), S. Sapatnekar, L. F. Chao, S. Tridandapani, \$36,000, National Science Foundation, (+\$36,000 from ISU), "CISE Research Instrumentation: High Performance Computing and Applications Laboratory," January, 1997 - December, 1997.
- [6] P. Mohapatra, Rockwell Collins, Inc., \$8532, "Avionics System Design Database," Sept. 1997 – Dec. 1997.
- [5] P. Mohapatra, National Science Foundation, \$10,000, Research Experience for Undergraduates, August 1996 - July 1998.
- [4] P. Mohapatra, University Research Grant, \$12000, "Design and Analysis of High-Performance High-Reliable Disk Arrays," June 1996 - May 1997.
- [3] P. Mohapatra (Mentor), National Science Foundation, \$1000/year, Research Career for Minority Scholars Program, August 1994 - July 1996.
- [2] P. Mohapatra (PI) and J. Davidson, Carver Trust Grant, \$15,000, "Analysis of an Integrated Measure of Performance and Reliability of Multiprocessor Systems," May 1994 - July 1995.
- [1] P. Mohapatra (Co-PI), Silicon Graphics Inc., \$381,890, Equipment for Instructional Development, 1995.

PATENTS:

- [1] US Patent Number: 6,466,978: *Multimedia File Systems Using File Managers Located on Clients for Managing Network Attached Storage Devices*, (With S. Mukherjee and I. Kamel), October 15, 2002.

TECHNICAL PUBLICATIONS

Books and Book Chapters

- [5] A. Gupta, C. Gui, and P. Mohapatra, *Mobile Target Tracking Using Sensor Networks*, Chapter 7 in *Wireless Ad hoc and Sensor Networks*, John Willey, 2006.
- [4] P. Mohapatra and S. Krishnamurthy (Editors), *Ad hoc Networks: Technologies and Protocols*, Springer Publishers, 2004 (ISBN: 0-387-22689-3).
- [3] P. Mohapatra, J. Li, and C. Gui, *Multicasting in Ad hoc Networks*, Chapter 4 in *Ad hoc Networks: Technologies and Protocols*, Springer Publishers, 2004.
- [2] P. Mohapatra, H. Thantry, and K. Kant, *Bus Traffic Characterization of SPECweb96 Benchmark*, Chapter 4 in *Workload Characterization for Computer System Design*, Kluwer Academic Publishers, 2000.
- [1] C. R. Das and P. Mohapatra, *Dependability Modeling of Parallel and Distributed Computers*, Chapter in *Parallel Computing: Paradigms and Applications*, International Thompson Computer Press, 1996.

Journals Papers

- [47] D. Ghosh, A. Gupta, and P. Mohapatra, "Scheduling in Multihop WiMAX Networks," *Mobile Computing and Communications Review (MC2R)*, Invited Paper, Vol. 12, No. 2, April 2008.
- [46] H. Yu, P. Mohapatra, and X. Liu, "Channel Assignment and Link Scheduling in Multi-channel Multi-radio Wireless Mesh Networks," *ACM Mobile Networks and Applications (MONET)*, vol. 13, pp. 169-185, April 2008.
- [45] M. Huynh and P. Mohapatra, "Metropolitan Ethernet Network: A Move from LAN to MAN," *Computer Networks*, vol. 51, pp. 4867-4894, Dec. 2007.
- [44] Z. Li, L. Yuan, P. Mohapatra, and C. N. Chuah "On the Analysis of Overlay Failure Detection and Recovery," *Computer Networks*, vol. 51, Issue 13, pp. 3828-3843, Sept. 2007.
- [43] A. Gupta and P. Mohapatra, "Ultra Wide Band Medium Access Control Schemes," *Computer Networks*, vol. 51, pp. 2976-2993, August 2007.
- [42] C. Gui and P. Mohapatra, "A Framework for Self-Healing and Optimizing Routing Techniques for Mobile Ad Hoc Networks," *ACM/Springer Wireless Networks (WINET)*, pp. 29-46, Vol. 14, Feb. 2008.

- [41] X. Liu and P. Mohapatra, "On the Deployment of Data Backhaul Nodes for Wireless Sensor Networks," *IEEE Transactions on Wireless Communications*, pp. 1426-1436, Vol. 6, No. 4, April 2007.
- [40] J. Li and P. Mohapatra, "Analytical Modeling and Mitigation Techniques for the Energy Hole Problems in Sensor Networks," *Pervasive and Mobile Computing Journal*, vol. 3, Issue 3, pp. 233-254, June 2007.
- [39] K. Kredo and P. Mohapatra, "Medium Access Control in Wireless Sensor Networks," *Computer Networks*, Vol. 51, pp. 961-994, March 2007.
- [38] L. Zhi and P. Mohapatra, "On the Investigation of Overlay Service Topologies," *Computer Networks*, Vol. 51, Issue 1, pp. 54-68, Jan. 2007.
- [37] J. Li and P. Mohapatra, "LAKER: Learning from Past Actions to Guide Future Behaviors in Ad Hoc Routing," *Wireless Communications and Mobile Computing (WCMC)*, Vol. 7, pp. 495-511, 2007.
- [36] C. Gui and P. Mohapatra, "Overlay Multicast for MANETs Using Dynamic Virtual Mesh," *ACM/Springer Wireless Networks (WINET)*, pp. 77-91, Vol. 13, January 2007.
- [35] H. Chen and P. Mohapatra, "A Context-Aware HTML/XML Document Transmission Process for Mobile Wireless Clients," *World Wide Web Journal*, pp. 439-461, December 2005.
- [34] C. Gui and P. Mohapatra, "Hierarchical Multicasting Techniques and Scalability in Mobile Ad Hoc Networks" *Ad Hoc Networks Journal*, pp. 586-606, Sept. 2006.
- [33] J. Li and P. Mohapatra, "PANDA: A Novel Mechanism for Flooding Based Route Discovery in Ad Hoc Networks" *ACM/Springer Wireless Networks (WINET)*, vol. 12, No. 6, pp. 771-787, Dec. 2006.
- [32] H. Chen and P. Mohapatra, "Using Service Brokers for Accessing Backend Servers for Web Applications," *Journal of Networks and Computer Applications*, Vol. 28, No. 1, pp. 57-74, Jan. 2005.
- [31] Z. Li and P. Mohapatra, "QoS-Aware Multicasting in DiffServ Domains," *ACM Sigcomm Computer Communications Review*, Vol. 34, No. 5, pp. 47-58, October 2004.
- [30] B. Yang and P. Mohapatra, "Diffserv-Aware Multicasting," *Journal of High-Speed Networks*, vol. 13, No. 1, pp. 37-57, Aug 2004.
- [29] P. Mohapatra, C. Gui, and L. Jian, "Group Communications in Mobile Ad Hoc Networks," *Special Issue on Ad Hoc Networks, IEEE Computer*, pp. 52-60, February 2004.
- [28] Z. Li and P. Mohapatra, "QRON: QoS-Aware Routing in Overlay Networks," *IEEE Journal of Selected Areas in Communications*, Special Issue on Service Overlay Networks, vol. 22, No. 1, pp. 29-40, January 2004.

- [27] B. Yang and P. Mohapatra, "Multicasting in MPLS Domains," *Computer Communications Journal*, Vol. 27, pp. 162-170, February 2004.
- [26] P. Mohapatra, J. Li, and C. Gui, "QoS in Mobile Ad hoc Networks," Special Issue on QoS in Next-Generation Wireless Multimedia Communications Systems in *IEEE Wireless Communications*, pp. 44-53, June 2003.
- [25] H. Chen and P. Mohapatra, "Overload Control in QoS-Aware Web Servers," *Computer Networks*, vol. 42/1, pp. 119-133, 2003.
- [24] X. Chen, H. Chen, and P. Mohapatra, "ACES: An Admission Control Scheme for QoS-Aware Web Servers," *Computer Communications Journal*, pp. 1581-1593, August 2003.
- [23] Z. Li and P. Mohapatra, "QMBF: A QoS-Aware Multicast Routing Protocol," *Computer Communications Journal*, vol. 26/6, pp. 611-621, 2003.
- [22] U. Vallamsetty, K. Kant, and P. Mohapatra, "Characterization of E-Commerce Server Workload," Special Issue of the *Electronic Commerce Research Journal*, pp. 167-192, Vol. 3, January/April 2003.
- [21] X. Chen and P. Mohapatra, "Performance Evaluation of Service Differentiating Internet Servers," *IEEE Transactions of Computers*, pp. 1368-1375, November 2002.
- [20] P. Mohapatra and H. Chen, "WebGraph: A Framework for Managing Dynamic Content in the Web," *IEEE Journal of Selected Areas in Communications*, vol. 20, No. 7, pp. 1414-1425, September 2002.
- [19] F. Wang, P. Mohapatra, S. Mukherjee, and D. Bushmitch, "An Efficient Bandwidth Management Scheme for Real-Time Internet Applications," *Computer Communications Journal*, vol. 25/17, pp. 1596-1605, September 2002.
- [18] F. Wang and P. Mohapatra, "Using Differentiated Services to Support Internet Telephony," *Computer Communications Journal*, pp. 1846-1854, Dec. 2001.
- [17] K. Kant and P. Mohapatra, "Current Research Trends in Internet Servers," *ACM Performance Evaluation Review*, pp. 5-7, September 2001.
- [16] F. Wang, P. Mohapatra, S. Mukherjee, and D. Bushmitch "A Random Early Demotion and Promotion Marker for Assured Services in the Internet," Special Issue on the QoS in the Internet, *IEEE Journal of Selected Areas in Communications*, pp. 2640-2650, Dec. 2000.
- [15] K. Kant and P. Mohapatra, "Scalable Internet Servers: Issues and Challenges," *ACM Performance Evaluation Review*, September 2000.
- [14] V. Varavithya and P. Mohapatra, "Tree-Based Multicasting in Multistage Interconnection Networks," *IEEE Trans. on Parallel and Distributed Systems*, pp. 1159-1178, Nov. 1999.
- [13] X. Jiang and P. Mohapatra, "Efficient Admission Control Schemes for Multimedia Storage Servers," *ACM Multimedia Systems*, Vol. 7, pp. 294-304, 1999.

- [12] P. Mohapatra, "Wormhole Routing Techniques in Multicomputer Systems," *ACM Computing Surveys*, pp. 374-410, September 1998.
- [11] C. Chang, and P. Mohapatra, "An Efficient Method for Computing Submesh Reliability in Two Dimensional Meshes," *IEEE Trans. on Parallel and Distributed Systems*, pp. 1115-1124, November 1998.
- [10] C. Chang and P. Mohapatra, "Performance Improvement of Allocation Schemes for Mesh-Connected Computers," *Journal of Parallel and Distributed Computing*, pp. 40-68, v.52, No. 1, July 1998.
- [9] P. Mohapatra, "Dynamic Real-Time Scheduling on Hypercubes," *Journal of Parallel and Distributed Computing*, pp. 91-100, October 1997.
- [8] J. Upadhyay, V. Varavithya, and P. Mohapatra, "A Traffic-Balanced Adaptive Wormhole Routing Scheme for Two Dimensional Meshes," *IEEE Trans. on Computers*, pp. 190-197, February 1997.
- [7] P. Mohapatra, "Processor Allocation Using Partitioning in Mesh Connected Parallel Computers," *Journal of Parallel and Distributed Computing*, pp. 181-190, vol. 39, No. 2, December 1996.
- [6] P. Mohapatra, C. R. Das, and C. Yu, "Allocation and Mapping Based Reliability Analysis of Multistage Interconnection Networks," *IEEE Transactions on Computers*, pp. 600-607, May 1996.
- [5] P. Mohapatra, and C. R. Das, "A Performance Model for Finite-Buffered Multistage Interconnection Networks," *IEEE Transactions on Parallel and Distributed Systems*, pp. 1825, January 1996.
- [4] P. Mohapatra, and C. R. Das, "On Dependability Evaluation of Mesh Connected Multicomputers," *IEEE Transactions on Computers*, pp. 1073-1084, September 1995.
- [3] P. Mohapatra, C. Yu, and C. R. Das, "A Lazy Scheduling Scheme for Hypercube Computers," *Journal of Parallel and Distributed Computing*, 27, pp. 26-37, May 1995.
- [2] P. Mohapatra, C. R. Das, and T. Y. Feng, "Performance Analysis of Cluster-Based Multiprocessors," *IEEE Transactions on Computers*, pp. 109-114, January 1994.
- [1] C. R. Das, P. Mohapatra, L. Tien, and L. N. Bhuyan, "An Availability Model for MIN-Based Multiprocessors," *IEEE Transactions on Parallel and Distributed Systems*, pp. 11 181129, October 1993.

Conference Papers

- [95] D. Gupta, P. Mohapatra, and C. N. Chuah, "Efficient Monitoring in Wireless Mesh Networks: Overheads and Accuracy Tradeoffs," *IEEE MASS*, 2008.

- [94] H. Liu, X. Liu, C. N. Chuah, and P. Mohapatra, "Heterogeneous Wireless Access in Large Mesh Networks," IEEE MASS, 2008.
- [93] D. Wu, P. Djukic, and P. Mohapatra, "Determining 802.11 Link Quality with Passive Measurements," International Symposium on Wireless Communication Systems, 2008.
- [92] M. Shao, S. Zhu, G. Cao, T. La-Porta, and P. Mohapatra, "A Cross-layer Dropping Attack in Video Streaming over Ad Hoc Networks," IEEE SecureComm, 2008.
- [91] X. Cheng, P. Mohapatra, S. J. Lee, and S. Banerjee, "Performance Evaluation of Video Streaming in Multihop Wireless Mesh Networks," IEEE NOSSDAV, 2008.
- [90] X. Cheng, P. Mohapatra, S. J. Lee, and S. Banerjee, "MARIA: Interference-Aware Admission Control and QoS Routing in Wireless Mesh Networks," IEEE ICC, 2008.
- [89] D. Ghosh, A. Gupta, and P. Mohapatra, "Admission Control and Interference-Aware Scheduling in Multi-hop WiMAX Networks," IEEE MASS, 2007.
- [88] D. Gupta, D. Wu, C. C. Chen, C. N. Chuah, P. Mohapatra, and S. Rungta, "Experimental Study of Measurement-Based Admission Control in Wireless Mesh Networks," IEEE MASS, 2007.
- [87] K. Kredo and P. Mohapatra, "A Hybrid Medium Access Control Protocol for Underwater Wireless Networks," ACM International Workshop on Underwater Wireless Networks (WUWNet), Held in Conjunction with Mobicom 2007.
- [86] H. Yu, P. Mohapatra, and X. Liu, "Dynamic Channel Assignment and Link Scheduling in Multi-Radio Multi-Channel Wireless Mesh Networks," Mobiquitous 2007.
- [85] M. Huynh and P. Mohapatra, "A Scalable Hybrid Approach to Switching in Metro Ethernet Networks," IEEE LCN 2007.
- [84] M. Huynh, P. Mohapatra, and S. Goose, "Cross-Over Spanning Trees: Enhancing Metro Ethernet Resilience and Load Balancing," IEEE BROADNETS, 2007.
- [83] A. Sahoo, K. Kant, and P. Mohapatra, "Improving Packet Delivery Performance of BGP During Large-Scale Failures," IEEE Globecom 2007.
- [82] L. Yuan, C. N. Chuah, and P. Mohapatra, "ProgME: Towards Programmable Network Measurement," Proceedings of ACM SIGCOMM 2007.
- [81] H. Liu, H. Yu, X. Liu, C. N. Chuah, and P. Mohapatra, "Scheduling Multiple Partially Overlapped Channels in Wireless Mesh Networks," ICC 2007.
- [80] D. Wu, D. Gupta, and P. Mohapatra, "Quail Ridge Wireless Mesh Network," IEEE TRIDENTCOM 2007.
- [79] A. Gupta and P. Mohapatra, "Energy Consumption and Conservation in WiFi-Based Phones: A Measurement-Based Study," IEEE SECON 2007.

- [78] L. Yuan, K. Kant, P. Mohapatra, and C. N. Chuah, "A Proxy View of Quality of Domain Name Service," INFOCOM 2007.
- [77] D. Gupta, J. LeBrun, P. Mohapatra, C-N. Chuah, "A WDS-based Layer-2 Routing Scheme for Wireless Mesh Networks," *ACM International Workshop on Wireless Testbeds, Experimental Evaluation and Characterization (WiNTECH)*, in conjunction with *ACM MobiCom*, September 2006
- [76] D. Wu, D. Gupta, S. Liese, P. Mohapatra, "Quail Ridge Natural reserve Wireless Mesh Network", *ACM International Workshop on Wireless Testbeds, Experimental Evaluation and Characterization (WiNTECH)*, in conjunction with *ACM MobiCom*., September 2006.
- [75] A. Sahoo, K. Kant, and P. Mohapatra, "Speculative Route Invalidation to Improve BGP Convergence Delay under Large-Scale Failures," *Int. Conf. on Computer Communications and Networks (ICCCN)*, 2006.
- [74] C. D. Murta, P. R. Torres, and P. Mohapatra, "Characterizing Quality of Time and Topology in a Time Synchronization Network," *Globecom* 2006.
- [73] J. Li, Z. Li, and P. Mohapatra, "APHD: End-to-End Delay Assurance in 802.11e Based MANETs," *MOBIQUITOUS* 2006.
- [72] C. Gui, A. Gupta, and P. Mohapatra, "Securing Sensor Networks Using a Novel Multi-Channel Architecture," *Broadnets*, 2006.
- [71] A. Sahoo, K. Kant, and P. Mohapatra, "Improving BGP Convergence Delay for Large-Scale Failures," *Int. Conference on Dependable Systems and Networks (DSN)*, 2006.
- [70] S. Liese, D. Wu, and P. Mohapatra, "Experimental Characterization of an IEEE 802.11b Wireless Mesh Network," *ACM Int. Wireless Communications and Mobile Computing Conference*, 2006.
- [69] J. S. Pathmasuntharam, A. Das, and P. Mohapatra, "A Flow-Control Framework for Improving Throughput and Energy Efficiency in CSMA/CA Based Wireless Multihop Networks," *IEEE WoWMoM*, 2006.
- [68] Z. Li, L. Yuan, and P. Mohapatra, "An Efficient Overlay Link Performance Monitoring Technique," *IFIP Networking*, 2006.
- [67] L. Yuan, J. Mai, Z. Su, H. Chen, C. N. Chuah, and P. Mohapatra, "FIREMAN: A Toolkit for Firewall Modeling and Analysis," *IEEE Symposium on Security and Privacy*, 2006.
- [66] A. Sahoo, K. Kant, and P. Mohapatra, "Characterization of BGP Recovery Time under Large-Scale Failures," *ICC* 2006.
- [65] M. Huynh and P. Mohapatra, "Etherlay: An Overlay Enhancement for Metro Ethernet Networks," *ICC* 2006.
- [64] L. Yuan, K. Kant, P. Mohapatra, and C. N. Chuah, "DoX: A Peer-to-Peer Antidote for DNS Cache Poisoning Attacks," *ICC* 2006.

- [63] A. Gupta, C. Gui, and P. Mohapatra, "Exploiting Multi-channel Clustering for Power Efficiency in Sensor Networks," COMSWARE 2006.
- [62] A. S. Sudhir, G. Manimaran, and P. Mohapatra, "Heterogeneous QoS Multicast in DiffServ-like Networks," International Conf. on Computer Communications and Networks, 2005.
- [61] F. Hui and P. Mohapatra, "Experimental Characterization of Multi-hop Communications in Vehicular Ad Hoc Network," ACM VANET Workshop, Mobicom 2005.
- [60] X. Liu and P. Mohapatra, "On the Deployment of Wireless Sensor Nodes," ACM SenMetrics, 2005.
- [59] J. Li and P. Mohapatra, "An Analytical Model for the Energy-Hole Problem in Many-to-One Sensor Networks," IEEE Vehicular Technology Conference, Fall 2005.
- [58] S. Narayan, J. Pandya, P. Mohapatra, and D. Ghosal, "Analysis of Windowing and Peering Schemes for Cache Coherency in Mobile Devices," IFIP Networking, 2005.
- [57] Z. Li, P. Mohapatra, and C. N. Chuah, "Virtual Multihoming: On the Feasibility of Combining Overlay Routing with BGP Routing," IFIP Networking, 2005.
- [56] C. Gui and P. Mohapatra, "Virtual Patrol: A new Power Conservation Design for Surveillance Using Sensor Networks," IEEE/ACM Information Processing in Sensor Networks (IPSN), 2005.
- [55] M. Takai, R. Bagrodia, M. Gerla, B. Daneshrad, M. Fitz, M. Srivastava, E. Belding-Royer, S. Krishnamurthy, M. Molle, P. Mohapatra, R. Rao, U. Mitra, C. C. Shen, and J. Evans, "Scalable Testbed for Next-Generation Wireless Networking Technologies," Int. Conf. on Testbed and Research Infrastructures for the Development of Networks and Communities (TRIDENTCOM), 2005.
- [54] L. Yuan, C. Gui, C. N. Chuah, and P. Mohapatra, "Applications and Design of Heterogeneous and/or Broadband Sensor Networks," IEEE Workshop on Broadband Advanced Sensor Networks (Basenets), Broadnets 2004 (Invited paper).
- [53] H. Chen, J. Li, and P. Mohapatra, "RACE: Time Series Compression with RACE Adaptivity and Error Bound for Sensor Networks," IEEE International Conference on Mobile Ad Hoc and Sensor Systems (MASS), 2004.
- [52] C. Gui and P. Mohapatra, "Power Conservation and Quality of Surveillance in Target Tracking Sensor Networks," ACM International Conference on Mobile Computing and Networking (MOBICOM), 2004.
- [51] J. Pandya, P. Mohapatra, and D. Ghosal, "Asymptotic Analysis of Peer-Enhanced Cache Invalidation Scheme," Modeling and Optimization in Mobile Ad Hoc and Wireless Networks (WiOpt'04), 2004.
- [50] C. Gui and P. Mohapatra, "Scalable Multicasting in Mobile Ad Hoc Networks," IEEE INFOCOM, 2004.

- [49] Z. Li and P. Mohapatra, "Impact of Topology on Overlay Routing Service," IEEE INFOCOM, 2004.
- [48] J. Li and P. Mohapatra, "A Novel Mechanism for Flooding Based Route Discovery in Ad Hoc Networks," Wireless Communications Symposium, Globecom 2003.
- [47] C. Gui and P. Mohapatra, "SHORT: A Self Healing and Optimizing Routing Technique for Ad Hoc Networks," ACM International Symposium on Mobile Ad Hoc Networking and Computing (MobiHoc), pp. 279-290, 2003.
- [46] A. H. Esfahanian, B. Yang, P. Mohapatra, and L. Ni, "A Tree Building Technique for Overlay Multicasting in DiffServ Domains," International Conference on Internet Computing, (IC'03), pp. 891-899, 2003.
- [45] Z. Li and P. Mohapatra, "HostCast: A New Overlay Multicasting Protocol," IEEE International Communications Conference (ICC), 2003.
- [44] H. Chen and P. Mohapatra, "CATP: A Context-Aware Transportation Protocol for HTTP," Int. Workshop on New Advances in Web Servers and Proxy Technologies (Held with ICDCS), pp. 922-927, 2003.
- [43] H. Chen and P. Mohapatra, "Using Service Brokers for Accessing Backend Servers for Web Applications," Int. Workshop on New Advances in Web Servers and Proxy Technologies (Held with ICDCS), pp. 928-933, 2003.
- [42] C. Gui and P. Mohapatra, "Efficient Overlay Multicast for Mobile Ad Hoc Networks," Wireless Communications and Networking Conference (WCNC), 2003.
- [41] J. Li and P. Mohapatra, "LAKER: Location Aided Knowledge Extraction Routing for Mobile Ad Hoc Networks," Wireless Communications and Networking Conference (WCNC), 2003.
- [40] Z. Li and P. Mohapatra, "QoS-Aware Multicasting in DiffServ Domains," Global Internet Symposium, Globecom 2002.
- [39] B. Yang and P. Mohapatra, "Multicasting in Differentiated Service Domains," Globecom 2002.
- [38] B. Yang and P. Mohapatra, "Edge Router Multicasting with MPLS Traffic Engineering," IEEE International Conference on Networks, pp. 43-48, Aug. 2002.
- [37] U. Vallamsetty, K. Kant, and P. Mohapatra, "Characterization of E-Commerce Traffic," International Workshop on Advanced Issues of E-Commerce and Web-based Information Systems, pp. 137-144, 2002.
- [36] H. Chen and P. Mohapatra, "Session-Based Overload Control in QoS-Aware Web Servers," pp. 516-524, INFOCOM 2002.

- [35] Z. Li and P. Mohapatra, "QoS-Aware Multicast Protocol Using Bounded Flooding (QMBF) Technique," IEEE International Communications Conference (ICC), pp. 1259-1263, 2002.
- [34] Y. Chen, L. Ni, M. Yang, and P. Mohapatra, "CoStore: A Serverless Distributed File System Utilizing Idle Disk Space on Workstation Clusters," Int. Performance, Computing, and Communications Conference (IPCCC), pp. 393-398, 2002.
- [33] P. Mohapatra and H. Chen, "A Framework for Managing QoS and Improving Performance of Dynamic Web Content," GLOBECOM 2001, pp. 2460-2464.
- [32] X. Chen, H. Chen, and P. Mohapatra, "An Admission Control Scheme for Predictable Server Response Time for Web Accesses," Proceedings of the 10th International World Wide Web Conference, pp. 545-554, May, 2001.
- [31] F. Wang and P. Mohapatra, "An Efficient Bandwidth Management Scheme for Real-Time Internet Applications," IEEE Int. Symposium on Intelligent Multimedia, Video and Speech Processing, pp. 469-472, May, 2001.
- [30] U. Vallamsetty, P. Mohapatra, R. Iyer, and K. Kant, "Improving Cache Performance for Network-Intensive Workload," pp. 87-94, Int. Conf. on Parallel Processing, 2001.
- [29] K. Kant, R. Iyer, and P. Mohapatra "Architectural Impact of Secure Socket Layer on Internet Servers," Int. Conference on Computer Design, pp. 7-14, 2000.
- [28] F. Wang, P. Mohapatra, S. Mukherjee, "An Application-Based Differentiated Service Model," IEEE International Conference on Networks, pp. 424-430, 2000.
- [27] X. Chen and P. Mohapatra, "Providing Differentiated Service from an Internet Server," Int. Conference on Computer Communications and Networks, pp. 214-217, 1999.
- [26] P. Mohapatra, H. Thantry, and K. Kant, "Bus Traffic Characterization of SPECweb96 Benchmark," IEEE Workshop on Workload Characterization, 1999.
- [25] A. Tyagi, H. C. Ng, and P. Mohapatra, "Dynamic Branch Decoupled Architecture," Int. Conference on Computer Design, pp. 442-450, 1999.
- [24] X. Chen and P. Mohapatra, "TTL Workload Characterization of WWW Servers," IEEE Workshop on Internet Applications, pp. 54-61, 1999.
- [23] X. Jiang and P. Mohapatra, "Efficient Stream Scheduling Algorithms for Multimedia Storage Servers," Int. Conference on Parallel Processing, pp. 321-328, 1998.
- [22] C. Chang and P. Mohapatra, "Processor Allocation Using User Directives in Mesh-Connected Multicomputer Systems," International Conference on High-Performance Computing, pp. 302-309, Dec. 1998.
- [21] C. Chang and P. Mohapatra, "Experimental Evaluation of Communication Latency in Multicomputer Systems," International Conference on Parallel and Distributed Computing and Systems, pp. 163-166, Oct. 1997.

- [20] V. Varavithya and P. Mohapatra, "Tree-Based Multicasting on Wormhole Routed Multistage Interconnection Network," International Conference on Parallel Processing, pp. 203-206, Aug. 1997.
- [19] C. Chang and P. Mohapatra, "An Integrated Processor Management Scheme for Mesh-Connected Multicomputer System," International Conference on Parallel Processing, pp. II 18-21, Aug. 1997
- [18] X. Jiang and P. Mohapatra, "An Aggressive Admission Control Scheme for Multimedia Storage Servers," IEEE International Conf. on Multimedia Computer Systems, 1997.
- [17] P. Mohapatra and V. Varavithya, "A Hardware Multicast Routing Algorithm for Two-Dimensional Meshes," IEEE Symposium on Parallel and Distributed Processing, pp. 198-205, 1996.
- [16] P. Mohapatra, B. Ahn, and J. F. Shi, "On-Line Real-Time Task Scheduling on Partitionable Multiprocessors," IEEE Symposium on Parallel and Distributed Processing, pp. 350-357, 1996.
- [15] S. K. Mishra and P. Mohapatra, "Performance Study of RAID-5 Disk Arrays with Data and Parity Cache," International Conference on Parallel Processing, pp. 222-229, 1996.
- [14] C. Chang and P. Mohapatra, "An Adaptive Job Allocation Method for Directly-Connected Multicomputer Systems," Int. Conf. On Distributed Computing Systems, pp. 224-231, 1996.
- [13] J. Upadhyay, V. Varavithya, and P. Mohapatra, "Routing Algorithms for Torus Networks," International Conference on High Performance Computing, pp. 743-748, 1995.
- [12] V. Varavithya, J. Upadhyay, and P. Mohapatra, "An Efficient Fault-Tolerant Routing Scheme for Two-Dimensional Meshes," Int. Conf. on High Performance Computing, pp. 773-778, 1995.
- [11] J. Upadhyay and P. Mohapatra, "An Efficient Processor Allocation Scheme for Mesh-Connected Parallel Computer," IEEE Symposium on Parallel and Distributed Processing, pp. 196-203, 1995.
- [10] C. Chang and P. Mohapatra, "Computing Submesh Reliability in Two-Dimensional Meshes," Int. Conf. on Parallel and Distributed Computing Systems, pp. 287-292, 1995.
- [9] S. K. Mishra, S. K. Vemulapalli, and P. Mohapatra, "Dual Crosshatch Disk Array: A Highly Reliable Hybrid-RAID Architecture," International Conference on Parallel Processing, pp. 146-149, 1995.
- [8] J. Upadhyay, V. Varavithya, and P. Mohapatra, "Efficient and Balanced Adaptive Routing in Two-Dimensional Meshes," Int. Symp. on High Performance Computer Architecture, pp. 112-121, 1995.
- [7] P. Mohapatra, S. Wong, and C. R. Das, "Analytical Modeling of Combining Multistage Interconnection Networks," International Conference on Modeling Techniques and Tools for Computer Performance Evaluation, pp. 71-76, May 1994.

- [6] P. Mohapatra, S. Wong, and C. R. Das, "Performance Analysis of Combining in Multistage Interconnection Networks," International Conference on Parallel Processing, pp. 13-16, 1994.
- [5] P. Mohapatra, and C. R. Das, "A Queuing Model for Finite-Buffered Multistage Interconnection Networks," International Conference on Parallel Processing, Vol. I, pp. 210-213, August 1993.
- [4] P. Mohapatra, C. Yu, and C. R. Das, "A Lazy Scheduling Scheme for Improving Hypercube Performance," International Conference on Parallel Processing, Vol. I, pp. 110-117, August 1993.
- [3] C. Yu, P. Mohapatra, and C. R. Das, "Processor Allocation Using a Reservation Technique for Hypercube Computers," International Conference on Parallel and Distributed Computing Systems, pp. 147-152, 1993.
- [2] C. R. Das, P. Mohapatra, and C. Yu, "Allocation-Based Subcube-Dependability for MIN-Based Multiprocessors," IEEE Workshop on Fault-Tolerant Parallel and Distributed Systems, pp. 124-131, July 1992.
- [1] P. Mohapatra and C. R. Das, "A Performance Model for Cluster-Based Multiprocessors," International Symposium on Computer Architecture, May 1992, (poster).

TUTORIALS

- [19] Wireless Mesh Networks, AICCSA, Doha, Qatar, March 2008.
- [18] Wireless Mesh Networks, University of Pisa, Italy, March 2007.
- [17] Wireless Mesh Networks, Institute of Advanced Studies, IMT Lucca, Italy, March 2007.
- [16] Wireless Mesh Networks, GLOBECOM, December 2006.
- [15] Wireless Mesh Networks, ICC, June 2006.
- [14] Wireless Mesh Networks, ACM MobiHoc, May 2006.
- [13] Wireless Mesh Networks, IEEE Computer Society, Tutorial Now, Mar. 2006.
- [12] Wireless Mesh Networks, COMSWARE, Delhi, India, Jan. 2006.
- [11] Wireless Mesh Networks, International Conference on Broadband Networks (Broadnets 2005), Boston, Oct. 2005.
- [10] Mobile Ad Hoc and Sensor Networks, Australian Telecommunications Networks and Applications Conference (ATNAC), Sydney, Dec. 2004.
- [9] Mobile Ad Hoc and Sensor Networks, IEEE International Conference on Communications Systems (ICCS), Singapore, Sept. 2004.

- [8] Mobile Ad Hoc Networks, IFIP Networking 2004, Athens, Greece, May 2004.
- [7] Ad Hoc and Sensor Networks, IEEE High Performance Computing, Hyderabad, India, Dec. 2003.
- [6] Ad Hoc and Sensor Networks, IEEE International Conference on Networks, Sydney, Australia, September 2003.
- [5] Infrastructure-less Wireless Networks, King Mongkut Institute of Technology, North Bangkok, Thailand, Aug. 2003.
- [4] Mobile Ad Hoc and Sensor Networks, IEEE Conference on High Speed Networks and Multimedia Communications, Estoril, Portugal, July 2003.
- [3] QoS in the Internet and Internet Servers, IEEE High Performance Computing, Hyderabad, India, Dec. 2001.
- [2] QoS in the Internet and Internet Servers, IEEE International Symposium on Intelligent Multimedia, Video and Speech Processing, Hong Kong, May 2001.
- [1] Service Differentiation in Internet and Internet Servers, IEEE International Conference on Networks, Singapore, September 2000.

INVITED TALKS/PANELS

- [67] “QuRiNet Test-bed and Related Research on Resource Management in Wireless Mesh Networks,” Department of Computer Science, Yonsei University, South Korea, Aug 2008.
- [66] “QuRiNet Test-bed and Related Research on Resource Management in Wireless Mesh Networks,” Department of Computer Science, Seoul National University, July 2008.
- [65] “QuRiNet Test-bed and Related Research on Resource Management in Wireless Mesh Networks,” Department of Computer Science, University of Memphis, April 2008.
- [64] “QuRiNet Wireless Mesh Networks,” SPIE Photonic West, Jan. 2008.
- [63] “Experimental Study of Resource Management in Wireless Mesh Networks,” WINLAB, Rutgers University, Aug. 2007.
- [62] “QuRiNet Test-bed and Related Research on Resource Management in Wireless Mesh Networks,” Samsung Institute of Advanced Technology, South Korea, Aug. 2007.
- [61] “QuRiNet Test-bed and Related Research on Resource and Quality Management in Wireless Mesh Networks,” Ajoju University, South Korea, Aug. 2007.
- [60] “QuRiNet Test-bed and Related Research on Sensor Networks,” ETRI, Daejeon, South Korea, Aug. 2007.

- [59] "QuRiNet Test-bed and Related Research on Resource and Quality Management in Wireless Mesh Networks," POSTECH University, South Korea, July 2007.
- [58] "QuRiNet Test-bed and Resource Management WiFi/WiMAX Mesh Networks," Yonsei University, South Korea, July 2007.
- [57] "QuRiNet Test-bed and Related Research on Resource Management in Wireless Mesh Networks," Korea University, South Korea, July 2007.
- [56] "QuRiNet Test-bed and Related Research on Resource Management in Wireless Mesh Networks," Korea Telecom, South Korea, July 2007.
- [55] "QuRiNet Test-bed and Related Research on Resource Management in Wireless Mesh Networks," Seoul National University, South Korea, July 2007.
- [54] "Wireless Mesh Network: An Application Perspective," California State University, Sonoma, April 2007.
- [53] "Quail Ridge Wireless Mesh Network," University of Padova, Italy, December 2006.
- [52] "Quail Ridge Wireless Mesh Network," California State University, Sonoma, September 2006.
- [51] "Quail Ridge Wireless Mesh Network," National ICT Australia, Sydney, August 2006.
- [50] "Wireless LAN, Ad Hoc, and Mesh Networks," Winter School, Center for Mobile Computing, Jadavpur University, India, Jan. 2006.
- [49] "Advances in Wireless Mesh Networks," Panelist, International Conference on Ad Hoc and Sensor Networks (SECON 2005), Sept. 2005.
- [48] "Target Tracking and Surveillance using Sensor Networks," IEEE/NATEA Annual Conference, Santa Clara, May 2005.
- [47] "Target Tracking and Surveillance using Sensor Networks," Department of Computer Science and Engineering, The Pennsylvania State University, March 2005.
- [46] "Target Tracking and Surveillance using Sensor Networks," Department of Electrical Engineering, University of Pennsylvania, March 2005.
- [45] "Sensor Networks: A Sense of the Future," School of Computer Engineering, Nanyang Technological University, Singapore, March 2005.
- [44] "Wireless Sensor Networks: A Sense of the Future," Plenary Address, Australian Telecommunications and Networking Conference (ATNAC), Sydney, Dec. 2004.
- [43] "Target Tracking and Surveillance using Sensor Networks," University of Sydney, Sydney, Dec. 2004.

- [42] "Target Tracking and Surveillance using Sensor Networks," University of Technology, Sydney, Dec. 2004.
- [41] "Target Tracking and Surveillance using Sensor Networks," University of New South Wales, Sydney, Dec. 2004.
- [40] "A Sense of the Future of Sensor Networks," EHS Symposium, Global Entropolis, Singapore, October 2004.
- [39] "Target Tracking and Surveillance using Sensor Networks," School of Computer Engineering, Nanyang Technological University, Singapore, September 2004.
- [38] "Target Tracking and Surveillance using Sensor Networks," Institute for Infocomm Research (I2R), Singapore, August 2004.
- [37] "Target Tracking and Surveillance using Sensor Networks," School of Computing, National University of Singapore, July 2004.
- [36] "Target Tracking Sensor Networks," Nokia Research Center, April 2004.
- [35] "Quality and Performance Tradeoff in Target Tracking Sensor Networks," MOBWISER Workshop, National University of Singapore, March 2004.
- [34] "Target Tracking and Surveillance in Sensor Networks," NSF Workshop on Theoretical and Algorithmic aspects of Sensor, Ad hoc Wireless and Peer-to-Peer Networks, February, 2004.
- [33] "Mobile Ad Hoc Networks," Silicon Institute of Technology, Bhubaneswar, India, December, 2003.
- [32] "Performance Enhancement of Routing in Mobile Ad Hoc Networks," Department of Computer Science, University of Hyderabad, December 2003.
- [31] "Energy, Quality, and Trust in Mobile Ad Hoc Networks," Keynote Address, Trusted Internet Workshop, Hyderabad, India, December 2003.
- [30] "Overlay Service Networks: Routing and Topology Considerations," Hewlett Packard Laboratories, Palo Alto, CA, November 2003.
- [29] "On Improving Performance of Routing in Mobile Ad hoc Networks," Department of Computer Science and Engineering, Arizona State University, October 2003.
- [28] "Performance Improvement of Routing in Mobile Ad hoc Networks," Kesarsat University, Bangkok, Thailand, July 2003.
- [27] "Mobile Ad Hoc Networks for Internet Applications: Real or Hype," Panel Moderator, IEEE Workshop on Internet Applications, San Jose, June 2003.
- [26] "Enhancing Routing Performance of Mobile Ad Hoc Networks," Department of Computer Science, Indiana University-Purdue University of Indianapolis, February 2003.

- [25] "On Improving the Performance of Routing in Mobile Ad Hoc Networks," Institute for Communications Research, Singapore, August 2002.
- [24] "Routing in Mobile Ad Hoc Networks," School of Computer Engineering, Nanyang Technological University, Singapore, August 2002.
- [23] "On Improving the Performance of Routing in Mobile Ad Hoc Networks," Department of Electrical and Computer Engineering, National University of Singapore, August 2002.
- [22] "Efficient Packet Marking Techniques in Differentiated Services Internet," Department of Electrical and Computer Engineering, Oregon State University, March 2001.
- [21] "QoS Support in Internet and Web Servers," Department of Electrical and Computer Engineering and Computer Science, Univ. of Cincinnati, October 2000.
- [20] "WebGraph: A Framework for Managing Dynamic Web Requests," Polyphasic, Inc., September 2000.
- [19] "Service Differentiation in Web Servers," Keynote Address, ICPP Workshop on Distributed Multimedia Systems, Toronto, August, 2000.
- [18] "Service Differentiation in Internet and Internet Servers," Indian Institute of Technology, Delhi, India, Dec. 1999.
- [17] "Service Differentiation in Internet and Internet Servers," International Conference of Information Technology, Bhubaneswar, India, Dec. 1999.
- [16] "Bus Traffic Characterization of SPECweb96 Benchmark," Server Architecture Laboratory, Intel Corporation, Beaverton, Oregon, July 1999.
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- [13] "Admission Control and Stream Scheduling in Multimedia Systems," Department of Computer Science and Engineering, Pennsylvania State University, January, 1999.
- [12] "A Framework for Scalable Multimedia File System," Department of Electrical and Computer Engineering, University of Minnesota, December, 1998.
- [11] "Scalable Multimedia File Systems," Department of Electrical Engineering, University of Rhode Island, October 1998.
- [10] "Multimedia File Systems," Panasonic Information Networking Technology Laboratory, Panasonic Technologies Inc., July 1998.
- [9] "Application-Aware Service Differentiation in Internet," Panasonic Information Networking Technology Laboratory, Panasonic Technologies Inc., July 1998.

- [8] "Scheduling Issues in Multimedia Storage Servers," Department of Electrical and Computer Engineering, University of Wisconsin, Madison, May 1998.
- [7] "Efficient Processor Management Schemes for Parallel Computers," Department of Electrical and Computer Engineering, University of Massachusetts at Amherst, March 1997.
- [6] "Multicasting in Multicomputers," Center for Advanced Computer Studies, University of Southwestern Louisiana, LA, October 1996.
- [5] "Activities of the Advanced Computer Architecture Research Group," Hewlett Packard Research Laboratories, Palo Alto, CA, August 1996.
- [4] "An Integrated Study of Allocation, Scheduling, and Routing Schemes in Parallel Computers," Department of Computer Science, Hong Kong University of Science and Technology, May 1996.
- [3] "An Integrated Processor Management Scheme for Parallel Computers," Department of Electrical Engineering and Computer Science, University of Minnesota, April 1996.
- [2] "An Integrated Approach to Processor Allocation, Job Scheduling, and Message Routing in Parallel Computers," Department of Computer Science, Iowa State University, November 1995.
- [1] "An Integrated Approach to Processor Management in Parallel Computers," Department of Computer Science, Texas A&M University, TX, October 1995.

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Doctoral Dissertations:

- [8] Jian Li, *Quality of Service Provisioning in Multihop Ad Hoc Networks*, 2006.
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- [6] Zhi Li, *Resiliency and QoS Support in Multicasting and Overlay Networks*, 2005.
- [5] Huamin Chen, *Web Server Performance Improvement and QoS Provisioning*, 2003.
- [4] Baijian Yang, *Supporting Multicast in Scalable QoS Frameworks*, 2002.
- [3] Xiangping Chen, *A Framework for Service Differentiating Internet Servers*, 2000.
- [2] Vara Varavithya, *Interprocessor Communication in Multicomputer Systems*, 1998.
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Masters Degree Theses:

- [21] Stephanie Liese, *Experimental Characterization and Implementation of a Self-Organizing Multi-Radio Wireless Mesh Network*, May 2006.
- [20] Eric Thomas, *Location-Based Authentication Using Wireless LANs*, 2005.
- [19] Shilpi Gautam, *QoS in Wireless Mesh Using Channel Scheduling Schemes*, 2005.
- [18] Fay Hui, *Experimental Characterization of Multi-hop Communications in Vehicular Ad Hoc Network*, 2005.
- [17] Mohit Gupta, *A Novel Addressing Mechanism for Vehicular Networks*, 2004.
- [16] Amit Sahoo, *TCP Modification to Support Differentiated Services Over Internet*, 2002.
- [15] Udaykiran Vallamsetty, *E-Commerce Traffic Characterization*, 2001.
- [14] Fugui Wang, *End-to-End QoS Support in Differentiated Services Internet*, 2000.
- [13] Wei Chen, *Design and Implementation of a Continuous Network File System*, 1999.
- [12] Zhiqi Liu, *System Architecture for Multimedia File Server*, 1999.
- [11] Daphna Nathanson, *Scheduling Real-Time Periodic Tasks in Multiprocessor Systems*, 1998.
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- [10] Hon-Chi Ng, *Dynamic Branch Decoupled Architecture*, 1998.
- [9] Forest Jensen, *Reduced Program Counter Power Consumption with Gray Encoding*, 1998.
- [8] Oyvind Haehre, *Branch Decoupled Architecture*, 1998.
- [7] Xiaoye Jiang, *Efficient Admission Control and Stream Scheduling Algorithms for Multimedia Storage Servers*, 1997.
- [6] Kee-Tai Kim, *Video-On-Demand Server Based on Hierarchical Storage Organization*, 1996.
- [5] Sunil K. Mishra, *Dual Crosshatch Disk Array*, 1996
- [4] Sudheer Vemulapalli, *Dynamic Disk Scheduling for Multimedia Storage Systems*, 1995.
- [3] Jatin Upadhyay, *Efficient and Fault Tolerant Routing in Two Dimensional Mesh and Torus Networks*, 1995.
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- [2] Joel Wichgers, *Applying Fault-Tolerant Design Techniques to Critical, Computer-Based Aircraft Flight Control Systems*, 1995.

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IEEE Workshop on Advances in Sensor Networks, 2006.
IEEE Sensor and Ad hoc Communications and Networking Conference (SECON), 2004
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