

# Jie Wu

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## 1 Educational Background

- Ph.D. in Computer Engineering, Florida Atlantic University, Boca Raton, FL, 08/89
- M.S. in Computer Science, Shanghai University of Science and Technology (now Shanghai University), Shanghai, P. R. of China, 07/85
- B.S. in Computer Engineering, Shanghai University of Science and Technology, Shanghai, P. R. of China, 07/82

## 2 Employment History

- Program Director, National Science Foundation (NSF) 01/07-present
- Distinguished Professor, Florida Atlantic University 09/06-present
- Professor, Florida Atlantic University 08/98-08/06
- Associate Professor, Florida Atlantic University 08/94-07/98
- Assistant Professor, Florida Atlantic University 08/89-07/94
- Visiting Professor, Georgia Institute of Technology Summer 1991
- Lecturer, Shanghai University of Science and Technology 07/85-01/87

## 3 Scholarly Achievements

### 3.1 Statement of Professional Interests

- Mobile Computing and Wireless Networks
- Routing Protocols

- Computer and Network Security
- Distributed Computing
- Fault-Tolerant Systems
- Parallel Processing
- Interconnection Networks

## 3.2 Publications

### 3.2.1 Refereed Journals (148)

1. D. Guo, J. Wu, H. Chen, Y. Yuan, and X. Luo, "The Dynamic Bloom Filters," accepted to appear in *IEEE Transactions on Knowledge and Data Engineering*.
2. S. Yang, and J. Wu, "Efficient Broadcasting Using Network Coding and Directional Antennas in MANETs," accepted to appear in *IEEE Transactions on Parallel and Distributed Systems*.
3. C. Liu and J. Wu, "Scalable Routing in Cyclic Mobile Networks," accepted to appear in *IEEE Transactions on Parallel and Distributed Systems*.
4. M. Lu, F. Li, and J. Wu, "Efficient Opportunistic Routing in Utility-Based Ad Hoc Networks," accepted to appear in *IEEE Transactions on Reliability*.
5. C. Liu and J. Wu, "Virtual-Force-Based Geometric Routing Protocol in MANETs," accepted to appear in *IEEE Transactions on Parallel and Distributed Systems*, Vol. 20, No. 3, 2009, 433-445.
6. Z. Jiang, J. Wu, and D. Yang, "A New Fault Information Model for Fault-Tolerant Adaptive and Minimal Routing in 3-D Meshes," accepted to appear in *IEEE Transactions on Reliability*, Vol. 57, No. 1, March 2008, 149-162.
7. S. Yang, J. Wu, and F. Dai, "Efficient Directional Network Backbone Construction in Mobile Ad Hoc Networks," *IEEE Transactions on Parallel and Distributed Systems*, Vol. 19, No. 12, Dec. 2008, 1601-1613.
8. M. Lu, J. Yu and J. Wu, "Free-Riding on BitTorrent-like Peer-to-Peer File Sharing Systems: Modeling Analysis and Improvement," *IEEE Transactions on Parallel and Distributed Systems*, Vol. 19, No. 7, July 2008, 954 - 966.
9. J. Wu, S. Yang, and F. Dai, "Iterative Local Solutions for Connected Dominating Set in Ad Hoc Wireless Networks," *IEEE Transactions on Computers*, Vol. 57, No. 5, May 2008, 702 - 715.
10. M. Cardei, S. Yang, and J. Wu, "Algorithms for Fault-Tolerant Topology in Heterogeneous Wireless Sensor Networks," *IEEE Transactions on Parallel and Distributed Systems*, Vol. 19, No. 4, April 2008, 545 - 558.

11. B. Wu, J. Wu, and Y. Dong, "An Efficient Group Key Management Scheme for Mobile Ad Hoc Networks," accepted to appear in *International Journal of Security and Networks (IJSN)*,
12. Q. Yuan, J. Wu, and I. Cardei, "SMRS: A Scalable Multi-Path Routing Scheme," accepted to appear in *International Journal of Parallel, Emergent and Distributed Systems*.
13. V. Ponce, J. Wu, and X. Li, "An Approach to Combating Free-riding in Peer-to-Peer Networks," accepted to appear in *International Journal of Parallel, Emergent and Distributed Systems*.
14. I. Jawhar and J. Wu, "Resource Allocation for Real-Time and Multimedia Communication in TDMA-Based Wireless Networks," accepted to appear in *International Journal of Ad Hoc and Ubiquitous Computing (IJAHUC)*.
15. J. Wu and S. Yang, "Small World Model-based Polylogarithmic Routing using Mobile Nodes," accepted to appear in the *Journal of Computer Science and Technology*.
16. I. H. Jawhar and J. Wu, "A Routing Protocol for Resource Scheduling in Wireless Networks Using Directional Antennas," accepted to appear in *EURASIP Journal on Wireless Communications and Networking*.
17. A. Srinivasan, F. Li, J. Wu, and M. Li, "Secure Clique-based Group Key Assignment in Wireless Sensor Networks," accepted to appear in *International Journal of Security and Networks (IJSN)*.
18. F. Li, A. Srinivasan, and J. Wu, "PVFS: A Probabilistic Voting-based Filtering Scheme in Wireless Sensor Networks," accepted to appear in *International Journal of Security and Networks (IJSN)*.
19. C. Yang, X. Li, and J. Wu, "Dominating-Set-Based Searching in Peer-to-Peer Networks," accepted to appear in *International Journal of High Performance Computing and Networking*.
20. J. Sum, J. Wu, and C. -S. Leung, "On Profit Density-Based Greedy Algorithms for a Resource Allocation Problem in Web Services," accepted to appear in *International Journal of Computer Applications*.
21. M. Ye, C. Li, G. H. Chen, and J. Wu, "EECS: An Energy Efficient Clustering Scheme in Wireless Sensor Networks," accepted to appear in *International Journal of Ad Hoc & Sensor Wireless Networks*.
22. M. Lu, J. Wu, M. Cardei, and M. Li, "Energy-Efficient Connected Coverage of Discrete Targets in Wireless Sensor Networks," accepted to appear in *International Journal of Ad Hoc and Ubiquitous Computing*.
23. S. Yang, F. Dai, M. Cardei, J. Wu, and F. Patterson, "On Connected Multiple Point Coverage in Wireless Sensor Networks," accepted to appear in *International Journal of Wireless Information Networks*.
24. M. Cardei, J. Wu, and M. Lu, "Improving Network Lifetime using Sensors with Adjustable Sensing Ranges," accepted to appear in *International Journal of Sensor Networks*.
25. X. Li, S. Zhong, and J. Wu, "ISRL: Intelligent Search by Reinforcement Learning in Unstructured Peer-to-Peer Networks," *International Journal of Parallel, Emergent, and Distributed Systems (IJPEDS)*, Vol. 23, No. 1, February 2008, 17-44.

26. K. Ho, J. Wu, and J. Sum, "On the Session Lifetime Distribution of Gnutella," *International Journal of Parallel, Emergent and Distributed Systems* (IJPEDS), Vol. 23, No. 1, February 2008, 1-15.
27. J. Wu, S. Yang, and F. Dai, "Logarithmic Store-Carry-Forward Routing in Mobile Ad Hoc Networks," *IEEE Transactions on Parallel and Distributed Systems*, Vol. 18, No. 6, June 2007.
28. S. Yang, M. Li, and J. Wu, "Scan-Based Movement-Assisted Sensor Deployment Methods in Wireless Sensor Networks," *IEEE Transactions on Parallel and Distributed Systems*, Vol. 18, No. 7, July 2007.
29. F. Dai and J. Wu, "On Constructing  $k$ -Connected  $k$ -Dominating Set in Wireless Networks," *Journal of Parallel and Distributed Computing*(JPDC), 2007.
30. W. Lou and J. Wu, "Towards Broadcast Reliability in Mobile Ad Hoc Networks With Double Coverage," *IEEE Transactions on Mobile Computing*, Vol. 6, No. 2, February 2007, 148-163.
31. F. Dai and J. Wu, "Control Frame Shaping in Power Controlled and Directional MAC Protocols," *Ad Hoc & Sensor Wireless Networks: An International Journal*, 2007.
32. B. Roussev and J. Wu, "Automatic Transformation from Use Cases to Class Models and OCL Constraints," *International Journal of Computers and Applications*, 2007.
33. A. Srinivasan, J. Wu, and J. Teitelbaum, "Distributed Reputation-Based Secure Localization in Sensor Networks," a special issue of *Journal of Autonomic and Trusted Computing*, 2007.
34. G. Chen, C. Li, M. Ye, and J. Wu, "An Unequal Cluster-Based Routing Protocol in Wireless Sensor Networks," *Wireless Networks*, 2007.
35. B. Wu, J. Wu, E. Fernandez, M. Ilyas, and S. Magliveras, "Secure and Efficient Key Management in Mobile Ad Hoc Networks," *Journal of Network and Computer Applications*, 30, 2007, 937-954.
36. J. Sum, J. Wu, and K. Ho, "Analysis on a Localized Pruning Method for Connected Dominating Sets," *Journal of Information Science and Engineering* (JISE), 2007.
37. X. Li and J. Wu, "A Hybrid Searching Scheme in Unstructured Peer-to-Peer Networks," *International Journal of Parallel, Emergent and Distributed Systems*, January 2007; Vol. 22, No. 1, 15-38.
38. J. Wu, W. Lou, and F. Dai, "Extended Multipoint Relays to Determine Connected Dominating Sets in MANETs," *IEEE Transactions on Computers*, Vol. 55, No. 3, March 2006, 334-347.
39. F. Dai and J. Wu, "Efficient Broadcasting in Ad Hoc Networks Using Directional Antennas," *IEEE Transactions on Parallel and Distributed Systems*, Vol. 17, No. 4, April 2006, 335-347.
40. M. Cardei, J. Wu, and S. Yang, "Topology Control in Ad Hoc Wireless Networks using Cooperative Communication," *IEEE Transactions on Mobile Computing*, Vol. 5, No. 6, June 2006, 711-724.
41. J. Wu and F. Dai, "Mobility-Sensitive Topology Control in Mobile Ad Hoc Networks," *IEEE Transactions on Parallel and Distributed Systems*, Vol. 17, No. 6, June 2006, 522-535.
42. J. Wu, M. Cardei, F. Dai, and S. Yang, "Extended Dominating Set and Its Applications in Ad Hoc Networks Using Cooperative Communication," *IEEE Transactions on Parallel and Distributed Systems*, Vol. 17, No. 8, August 2006.

43. J. Wu and F. Dai, "Virtual Backbone Construction in MANETs using Adjustable Transmission Ranges," *IEEE Transactions on Mobile Computing*, Vol. 5, No. 9, September 2006, 1188-1200.
44. Y. Wang and J. Wu, "Label Routing Protocol: A New Cross-layer Protocol for Multi-Hop Ad Hoc Wireless Networks," *Journal of Pervasive Computing and Communications*. Vol. 1, No. 1, January 2006.
45. Z. Jiang and J. Wu, "A Limited-Global Information Model for Fault-Tolerant Routing in Dual-Cubes," *International Journal of Parallel, Emergent and Distributed Systems*, Vol. 21, No. 1, 2006, 61-77.
46. B. Roussev, J. Wu, and L. Liu, "Distributed Computing Using Java: A Comparison of Two Server Designs," *52, Journal of Systems Architecture*, 2006, 432-440.
47. M. Cardei and J. Wu, "Energy-Efficient Coverage Problems in Wireless Ad-Hoc Sensor Networks," *Computer Communications Journal*, Vol. 29, No. 4, 2006, 413 - 420.
48. J. Wu and Z. Jiang, "On Constructing the Minimum Orthogonal Convex Polygon in 2-D Faulty Meshes," *IEEE Transactions on Reliability*, Vol. 54, No. 3, September 2005, 449-458.
49. J. Wu, F. Gao, Z. Li, and Y. Min, "Optimal and Reliable Communication in Hypercubes using Extended Safety Vectors," *IEEE Transactions on Reliability*, Vol. 54, No. 3, September 2005, 402-411.
50. J. Wu and F. Dai, "Efficient Broadcasting with Guaranteed Coverage in Mobile Ad-Hoc Networks," *IEEE Transactions on Mobile Computing*, Vol. 4, No. 3, May/June 2005, 1-12.
51. I. Jawhar and J. Wu, "Race-Free Resource Allocation for QoS Support in Wireless Networks," *Ad Hoc & Sensor Wireless Networks: An International Journal*, Vol. 1, No. 3, May 2005, 179-206.
52. F. Dai and J. Wu, "A Highly Reliable Multi-Path Routing Scheme for Ad Hoc Wireless Networks," *International Journal of Parallel Algorithms and Applications*, 2005.
53. J. Wu and L. Sheng, "Deadlock-Free Multicasting in Irregular Networks Using Prefix Routing," *The Journal of Supercomputing*, Vol. 31, No. 1, January 2005, 127-133.
54. M. Agarwal, J. H. Cho, L. X. Gao, and J. Wu, "Energy Efficient Broadcast in Wireless Ad Hoc Networks with Hitch-Hiking," *ACM/Kluwer MONET*, a special issue on *Energy Constraints and Lifetime Performance in Wireless Sensor Networks*, Vol. 10, No. 6, December 2005, 897-910.
55. F. Dai, Q. Dai, and J. Wu, "Power Efficient Routing Trees for Ad-Hoc Wireless Networks Using Directional Antenna," *International Journal of Ad-Hoc Networks*, No. 3, 2005, 608-620.
56. I. Jawhar and J. Wu, "QoS Support in TDMA-Based Mobile Ad Hoc Networks," *Journal of Computer Science and Technology*, Vol. 20, No. 6, 2005, 797-810.
57. J. Wu and D. Wang, "Fault-Tolerant and Deadlock-Free Routing in 2-D Meshes Using Rectilinear-Monotone Polygonal Fault Blocks," *International Journal of Parallel, Emergent and Distributed Systems*, Vol. 20, No. 2, June 2005, 99-111.
58. J. Wu and S. Yang, "Energy-Efficient Node Scheduling Models in Sensor Networks with Adjustable Ranges," *International Journal of Foundations of Computer Science*, Vol. 16, No. 1, February 2005, 3-17.

59. Q. Dai and J. Wu, "Computation of Minimal Uniform Transmission Range in Ad-Hoc Wireless Networks," *Cluster Computing*, Vol. 8, 2005, 127-133.
60. F. Dai and J. Wu, "Performance Analysis of Broadcast Protocols in Ad Hoc Networks Based on Self-Pruning," *IEEE Transactions on Parallel and Distributed Systems*, Vol. 15, No. 11, November 2004, 1027-1040.
61. J. Wu and F. Dai, "A Generic Distributed Broadcast Scheme in Ad Hoc Wireless Networks," *IEEE Transactions on Computers*, Vol. 53, No. 10, October 2004, 1343-1354.
62. F. Dai and J. Wu, "An Extended Localized Algorithm for Connected Dominating Set Formation in Ad Hoc Wireless Networks," *IEEE Transactions on Parallel and Distributed Systems*, Vol. 15, No. 10, October 2004, 908-920.
63. J. Wu and F. Dai, "Mobility Control and Its Applications in Mobile Ad Hoc Networks," *IEEE Network*, Vol. 18, No. 4, July/August 2004, 30-35.
64. C. -S. Leung, J. Sum, H. Shen, J. Wu, and G. H. Young, "Analysis and Design of an Agent Searching Algorithm for E-Marketplaces," *Journal of Cluster Computing*, 7, 2004, 85-90.
65. J. Shen, L. Sheng, and J. Wu, "Searching for Sorted Sequences of Kings in Tournaments," *SIAM Journal of Computing*, Vol. 32, No. 5, 2003, 1201-1209.
66. J. Wu, "Optimal Broadcasting in Injured Hypercubes Using Directed Safety Levels," *Journal of Parallel and Distributed Computing*, 63, 2003, 815-826.
67. J. Wu, "A Fault-Tolerant and Deadlock-Free Routing Protocol in 2-D Meshes Based on Odd-Even Turn Model," *IEEE Transactions on Computers*, Vol 52, No. 9, September 2003, 1154-1169.
68. J. Wu, F. Dai, X. Lin, J. Cao, and W. Jia, "An Extended Fault-Tolerant Link-State Routing Protocol in the Internet," *IEEE Transactions on Computers*. Vol. 52, No. 10, October 2003, 1298-1311.
69. Z. Jiang and J. Wu, "Fault-Tolerant Broadcasting in 2-D Wormhole-Routed Meshes," *Journal of Supercomputing*, Vol. 25, No.3, July 2003, 255-275.
70. J. Wu, B. Wu, and I. Stojmenovic, "Power-Aware Broadcasting and Activity Scheduling in Ad Hoc Wireless Networks Using Connected Dominating Sets," *Wireless Communications and Mobile Computing (WCMC)*, a special issue on *Research in Ad Hoc Networking, Smart Sensing, and Pervasive Computing*, Vol. 3, No. 4, June 2003, 425-438.
71. D. Xiang, A. Chen, and J. Wu, "Reliable Broadcasting in Wormhole-Routed Hypercube-Connected Networks using Local Safety Information," *IEEE Transactions on Reliability*, Vol. 52, No. 2, June 2003, 245-256.
72. J. Sum, H. Shen, J. Wu, C. -S. Leung, and G. Young, "Analysis on Extended Ant Routing Algorithms for Network Routing and Management," *The Journal of Supercomputing*, Vol. 24, 2003, 327-340.
73. D. Xiang, A. Chen and J. Wu, "Local-Safety-Information-Based-Fault-Tolerant Broadcasting in Hypercubes," *Journal of Information Science and Engineering*, Vol. 19, No. 3, May 2003.

74. J. Wu and F. Dai, "Broadcasting in Ad Hoc Networks Based on Self-Pruning," *International Journal of Foundations of Computer Science*, Vol. 14, No. 2, April 2003, 201-221.
75. L. Sheng and J. Wu, "Maximum-Shortest-Path (MSP) is not Optimal for a General  $N \times N$  Torus," *IEEE Transactions on Reliability*, Vol. 52, No. 1, March 2003, 22-25.
76. J. Wu, "A Simple Fault-Tolerant Adaptive and Minimal Routing Approach in 3-D Meshes," *Journal of Computer Science and Technology*, Vol. 18, No. 1, 2003, 1-13.
77. J. Wu, "An Extended Dynamic Source Routing Scheme in Ad Hoc Wireless Networks," *Telecommunication Systems*, a special issue on *Wireless Networks and Mobile Computing*, Vol. 22, No. 1-4, 2003, 61-75.
78. D. Xiang, A. Chen, and J. Wu, "Reliable Broadcasting for Hypercube-Connected Networks Using Local Safety Information," *IEEE Transactions on Reliability*, Vol. 52, No. 2, June 2003, 245-256.
79. J. Wu and W. Lou, "Forward Node Set Based Broadcast in Clustered Mobile Ad Hoc Networks," *Wireless Communications and Mobile Computing (WCMC)*, a special issue on *Algorithmic, Geometric, Graph, Combinatorial, and Vector Aspects of Wireless Networks and Mobile Computing*, Vol. 3, No. 2, March 2003, 141-154.
80. J. Wu and F. Dai, "QoS Routing in Hypercube Multicomputers," *Parallel Processing Letters*, Vol. 13, No. 1, March 2003, 43-52.
81. J. Wu and S. Olariu, "On Cost-Optimal Merge of Two Intransitive Sorted Sequences," *International Journal of Foundations of Computer Science*, Vol. 14, No. 1, February 2003, 99-106.
82. J. Wu and L. Sheng, "Deadlock-Free Routing in Regular Networks Using Prefix Routing," *Parallel Processing Letters*, Vol. 13, No. 4, 2003, 705-720.
83. J. Wu and F. Dai, "On Locality of Dominating Set in Ad Hoc Networks with Switch-On/Off Operations," *Journal of Interconnection Networks*, a special issue on *Algorithms for Networks*, Vol. 3, No. 3 & 4, September & December 2002, 129-147.
84. J. Wu, "Extended Dominating-Set-Based Routing in Ad Hoc Wireless Networks with Unidirectional Links," *IEEE Transactions on Parallel and Distributed Systems*, Vol. 13, No. 9, September 2002, 866-881.
85. W. Lou and J. Wu, "On Reducing Broadcast Redundancy in Ad Hoc Wireless Networks," *IEEE Transactions on Mobile Computing*, Vol. 1, No. 2, April-June 2002, 111-122.
86. J. Wu, "A Distributed Formulation of Smallest Faulty Orthogonal Convex Polygons in 2-D Meshes," *Journal of Parallel and Distributed Computing*, Vol. 62, 2002, 1168-1185.
87. J. Wu, "A Fault-Tolerant Adaptive and Minimal Routing Scheme in  $n$ -D Meshes," *The Computer Journal*, Vol. 45, No. 3, 2002, 349-363.
88. L. Sheng, Y. Wang, and J. Wu, "A Formula for the Optimal Shortest-Path Routing in 2-D Mesh-Connected Multicomputers," *Congressus Numerantium*, Vol. 158, 2002, 131-141.

89. S. Datta, I. Stojmenovic, and J. Wu, "Internal Node and Shortcut-Based Routing with Guaranteed Delivery in Wireless Networks," *Cluster Computing Journal*, a special issue on *Mobile Ad-hoc Networking*, Vol. 5, No. 2, April 2002, 169-178.
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91. F. He and J. Wu, "An Efficient Parallel Implementation of the Everglades Landscape Fire Model Using Checkpointing," *Parallel Computing*, Vol. 28, 2002, 65-82.
92. J. Wu and X. Chen, "A Fault-Tolerant Path-Based Multicasting in Mesh Networks," *Journal of Computer Science and Technology*, Vol. 16, No. 4, 2001, 393-409.
93. B. Roussev and J. Wu, "Task Scheduling on NOWs using Lottery-Based Workstealing," *Annual Review of Scalable Computing*, Vol. 3, 2001, 63-84.
94. J. Wu and L. Sheng, "An Efficient Sorting Algorithm for a Sequence of Kings in a Tournament," *Information Processing Letters*, Vol. 79, 2001, 297-299.
95. D. Xiang, A. Chen, and J. Wu, "Local-Safety-Information-Based Broadcasting in Hypercube Multicomputers with Node and Link Faults," *Journal of Interconnection Networks*, a special issue on *Clustering Computing and Protocols*, Vol. 2, No. 3, 2001, 365-378.
96. J. Wu and H. Li, "A Dominating Set Based Routing Scheme in Ad Hoc Wireless Networks," *Telecommunication Systems*, a special issue on *Wireless Networks*, Vol. 18, No. 1-3, 2001, 13-36.
97. S. Olariu and J. Wu, "Guest Editors' Introduction: Routing in Computer and Communication Networks," *Journal of Parallel and Distributed Computing*, Vol. 61, No. 9, 2001, 1145-1147.
98. J. Wu and Y. Yang "The Postal Network: A Recursive Network for Parameterized Communication Model," *Journal of Supercomputing*, Vol. 19, 2001, 141-159.
99. J. Wu, "On Finding a Hamiltonian Path in a Tournament Using Semi-Heap," *Parallel Processing Letters*, Vol. 10, No. 4, 2000, 279-294.
100. L. Sheng and J. Wu, "A Note on 'A Tight Lower Bound on the Number of Channels Required for Deadlock-Free Wormhole Routing'," *IEEE Transactions on Computers*, Vol. 49, No. 9, September 2000, 1005.
101. S. Cang and J. Wu, "Time-Step Optimal Broadcasting in 3-D Meshes with Minimum Total Communication Distance," *Journal of Parallel and Distributed Computing*, Vol. 60, 2000, 966-997.
102. E. B. Fernandez, J. Wu, and H. Qian, "A Combined Functional and Object-Oriented Approach to Software Design," *International Journal of Computers and Applications*, Vol. 20, No. 2, 2000, 51-61.
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104. J. Wu and V. Rancov, "An Implementation of Context-Driven Parallel Computations," *International Journal of Computers and Applications*, Vol. 22, No. 1, 2000, 29-37.
105. J. Wu, "Fault-Tolerant Adaptive and Minimal Routing in Mesh-Connected Multicomputers Using Extended Safety Levels," *IEEE Transactions on Parallel and Distributed Systems*, Vol. 11, No. 2, February 2000, 149-159.
106. A. C. Wynn and J. Wu, "The Effect of Compression on Performance in a Demand Paging System," *Journal of Systems and Software*, 30, 2000, 151-170.
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110. J. Wu, E. B. Fernandez, and Y. Luo, "Embedding of Binomial Trees in Hypercubes with Link Faults," *Journal of Parallel and Distributed Computing*, Vol. 54, 1998, 59-74.
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118. J. Wu, "Extended Fibonacci Cubes," *IEEE Transactions on Parallel and Distributed Systems*, Vol. 8, No. 12, December 1997, 1203-1210.
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122. J. Wu, "Dimension-Exchange-Based Global Load Balancing in Faulty Hypercubes," *Concurrency: Practice and Experience*, Vol. 9, No. 1, January 1997, 41-61.
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126. J. Wu "Reliable Communication on Cube-Based Multicomputers," *Journal of Computer Science and Technology*, Vol. 11, No. 3, May 1996, 208-221.
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### 3.2.3 Books and Book Chapters (2 books and 28 book chapters)

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17. S. Yang and J. Wu, *New Technologies of Multicasting in MANETs*, in *Design and Analysis of Wireless Networks*, Y. Pan and Y. Xiao (eds), Nova Science Publishers, 2005.
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19. M. Cardei and J. Wu, *Coverage in Wireless Sensor Networks*, in *Handbook of Sensor Networks*, M. Ilyas (ed.), CRC Press, 2004, 19.1-19.20.
20. I. Stojmenovic and J. Wu, *Broadcasting and Activity-Scheduling in Ad Hoc Networks*, in *Ad Hoc Networking*, S. Basagni, M. Conti, S. Giordano, and I. Stojmenovic (eds.), IEEE Press, June 2004, 205-229.

21. I. Jawhar and J. Wu, *QoS Routing in Ad Hoc Networks*, in *Resource Management in Wireless Networking*, M. Cardei, I. Cardei, and D. -Z. Du (eds.), Springer, 2004, 365-400.
22. X. Chen and J. Wu, *Multicasting Techniques in Mobile Ad Hoc Networks*, in *Handbook of Ad Hoc Wireless Networks*, M. Ilyas and B. Furht (eds.), CRC Press, 2002.
23. J. Wu, *Dominating-Set-Based Routing in Ad Hoc Wireless Networks*, in *Wireless Networks and Mobile Computing*, I. Stojmenovic (ed.), John Wiley & Sons, 2002, 425-450.
24. E. B. Fernandez, J. Wu, and D. R. Hancock, *A Design Method for Real-Time Object-Oriented Systems Using Communicating Real-Time State Machines*, in *Successful Software Reengineering*, S. Valenti (ed.), IRM Press, 2002, 171-185.
25. Y. Pan, C. Qiao, Y. Yang, and J. Wu, *Recent Developments in Optical Multistage Networks*, in *Optical Networks- Recent Advances*, L. Ruan and D. -Z. Du (eds.), Kluwer Academic Publisher, 2001, 151-185.
26. B. Roussev and J. Wu, *Task Scheduling on NOWs using Lottery-Based Workstealing*, in *Annual Review of Scalable Computing*, Y. C. Kwong (ed.), World Scientific, 2001, 63-84.
27. J. Wu and X. Chen, *A Fault-Tolerant and Time-Step Optimal Multicasting in 2-D Meshes*, in *Dependable Network Computing*, Chapter 13, D. R. Avresky (ed.), Kluwer Academic Publishers, 2000, 279-312.
28. J. Wu, *Broadcasting in Hypercubes Using Safety Levels*, in *Fault-Tolerant Parallel and Distributed Systems*, D. Avresky (ed.), IEEE Computer Society Press, 1995, 70-76.
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30. Associate Editor, *Modeling and Simulation*, Technical Communication Services, Vol. 23, 1993.

#### **3.2.4 Magazines (2)**

1. J. Wu and I. Stojmenovic, "Ad Hoc Networks," *Guest Editors' Introduction, IEEE computer*, February 2004, 29-31.
2. J. Wu and F. Dai, "Mobility Control and Its Applications in Mobile Ad Hoc Networks," *IEEE Network*, July-August 2004, 30-35.

#### **3.2.5 Special Issues (6)**

1. J. Wu and M. Cardei, "Theoretical and Algorithmic Aspects of Sensor, Ad Hoc Wireless, and Peer-to-Peer Networks," *Journal of Parallel and Distributed Computing*, Vol. 62, No. 2, 2005.
2. J. Wu and I. Stojmenovic, "Ad Hoc Networks," *IEEE Computer*, February 2004.

3. K. Nakano and J. Wu, "Advances in Parallel and Distributed Computational Models," a special issue in *International Journal of Foundations of Computer Science*, 2004.
4. K. Nakano and J. Wu, "Advances in Parallel and Distributed Computational Models," a special issue in *International Journal of Foundations of Computer Science*, 2003.
5. J. Wu and S. Olariu, "Routing in Computer and Communication Networks," *Journal of Parallel and Distributed Computing*, September 2001.
6. J. Wu and D. P. Agrawal, "Challenges in Designing Fault-Tolerant Routing in Networks," *IEEE Transactions on Parallel and Distributed Systems*, November 1999.

### 3.2.6 Non-Refereed Publications (42)

1. L. Sheng, Y. Wang, and J. Wu, "A Formula for the Optimal Shortest-Path Routing in 2-D Mesh-Connected Multicomputers," *Proc. of the 33rd Southeastern International Conference on Combinatorics, Graph Theory, and Computing*, March 2002, (abstract only).
2. W. Lou and J. Wu, "A Multipath Routing Protocol for Unidirectional Networks," *Proc. of 2001 International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA'2001)*, June 2001, 2021-2027.
3. Z. Jiang and J. Wu, "A Fault-Tolerant Broadcasting in 2-D Wormhole-Routed Meshes," *Proc. of 2001 International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA'2001)*, June 2001, 2028-2034.
4. J. Sum, J. Wu, and H. Shen, "Communication Bottleneck in Agent-Mediated eMarketplace," *Proc. of 2001 International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA'2001)*, June 2001, 2015-2020.
5. C. Wu and J. Wu, "An Application of PVM in Parallel Computing," *Proc. of Workshop on Data Intensive Parallel and Distributed Computation* (in conjunction with PDPTA'2001), 1604-1609.
6. J. Wu and L. Sheng, "An Efficient Sorting Algorithm for a Sequence of Kings in a Tournament," Technical Report, DIMACS, 2000-2012.
7. W. Lou, J. Wu, and L. Sheng, "On the Existence of a Sorting Sequence of Kings in A Tournament," *Proc. of the 31st Southeastern International Conference on Combinatorics, Graph Theory, and Computing*, March 2000, (abstract only).
8. J. Wu, "Dominating and Absorbent Set in Directed Graphs and Its Applications in Wireless Networks," *Proc. of the 31st Southeastern International Conference on Combinatorics, Graph Theory, and Computing*, 2000.
9. J. Wu, "On Finding a Hamilton Path in a Tournament Using Semi-Heap," *Proc. of the 30th Southeastern International Conference on Combinatorics, Graph Theory, and Computing*, March 1999, (abstract only).



10. J. Wu and H. Li, "On Calculating Connected Dominating Set for Efficient Routing in Ad Hoc Wireless Networks," *Proc. of the 30th Southeastern International Conference on Combinatorics, Graph Theory, and Computing*, March 1999, (abstract only).
11. X. Chen and J. Wu, "Fault-Tolerant Multicasting in 3-D Meshes," *Proc. of the 30th Southeastern International Conference on Combinatorics, Graph Theory, and Computing*, March 1999, (abstract only).
12. L. Sheng and J. Wu, "On Minimum Number of Channels Required for Deadlock-Free Wormhole Routing," *Proc. of the 30th Southeastern International Conference on Combinatorics, Graph Theory, and Computing*, 1999.
13. J. Wu, "On Constructing Faulty Orthogonal Convex Polygons in 2-D meshes," *Proc. of the 29th Southeastern International Conference on Combinatorics, Graph Theory, and Computing*, March 1998, (abstract only).
14. C. Yang and J. Wu, "Enhanced WK-Recursive Networks," *Proc. of the 29th Southeastern International Conference on Combinatorics, Graph Theory, and Computing*, March 1998, (abstract only).
15. X. Chen and J. Wu, "Minimal Routing in 3-D Meshes Using Extended Safety Levels," *Proc. of the 29th Southeastern International Conference on Combinatorics, Graph Theory, and Computing*, March 1998, (abstract only).
16. J. Wu, "Optimal Routing in 2-Dimensional Meshes with Faulty Blocks," *Proc. of the 27th Southeastern International Conference on Combinatorics, Graph Theory and Computing*, March 1997, (abstract only).
17. R. Yehia and J. Wu, "Extensions To Integrated-Snooper Fault Tolerant Distributed Share Memory," *Proc. of ISCA International Conference on Computer Applications in Industry and Engineering*, December 1996, 23-27.
18. V. Rancov and J. Wu, "Implementing Context-Driven Parallel Computations," *Proc. of ISCA International Conference on Computer Applications in Industry and Engineering*, December 1996, 5-8.
19. J. Wu, J. Pan, K. Gopu, F. Sklar, and Y. Wu, "Domain Partition Scheme for the Everglades Landscape Model (ELM)," *Proc. of the 4th Software Engineering Research Forum*, November 1995, 53-59.
20. J. Wu, "Optimal Broadcasting in Hypercubes with Link Faults Using Limited Global Information," *Proc. of the 4th ORSA Telecommunication Conference*, April 1995.
21. J. Wu, "A Trail-Based Deadlock-Free Routing Scheme in Wormhole-Routed Networks," *Proc. of IEEE Southcon'95*, March 1995, 285-288.
22. C. Yang and J. Wu, "A General Deadlock-Free Routing Algorithm for Wormhole-Routed Torus Networks," *Proc. of the 26th Southeastern International Conference on Combinatorics, Graph Theory and Computing*, March 1995, (abstract only).
23. J. Wu, "Broadcasting in Injured Hypercubes Using Limited Global Information," *Proc. of IEEE Southeastcon'94*, April 1994, 343-347.

24. H. More and J. Wu, "Throughput Improvement Through Dynamic Load Balancing," *Proc. of IEEE Southeastcon '94*, April 1994, 339-342.
25. K. Huang and J. Wu, "Consistent Recoverable Tree Embedding in Balanced Hypercubes," *Proc. of the 25th Southeastern International Conference on Combinatorics, Graph Theory and Computing*, March 1994, (abstract only).
26. H. Pendyala and J. Wu, "Computing Prefix Sums in Extended Fibonacci Cubes," *Proc. of the 25th Southeastern International Conference on Combinatorics, Graph Theory and Computing*, March 1994, (abstract only).
27. Y. Luo and J. Wu, "Gray-Code-Based Optimal Cube-Connected Cube Networks," *Proc. of the 24th Southeastern International Conference on Combinatorics, Graph Theory and Computing*, February 1993 (abstract only).
28. K. Huang and J. Wu, "Hypercube Embedding in Balanced Hypercubes," *Proc. of the 24th Southeastern International Conference on Combinatorics, Graph Theory and Computing*, February 1993, (abstract only).
29. J. Wu and H. More, "Load Balancing and Fault Tolerance in Hypercube Systems," *Proc. of the 24th Southeastern International Conference on Combinatorics, Graph Theory and Computing*, February 1993, (abstract only).
30. H. Zhuang, J. Wu, and R. Sudhakar, "A Parallel Algorithm for Stereo Motion Estimation," *Proc. of the 5th Annual Conference on Recent Advances in Robotics*, June 1992, 816-818.
31. J. Wu and X. -H. Sun, "Optimal Cube-Connected Cubes," *Proc. of the 3rd Annual Pittsburgh Conference on Modeling and Simulation*, Vol. 23, No. 3, May 1992, 1463-1470.
32. L. Brown, J. Wu, and E. B. Fernandez, "Fault-Tolerant Task Scheduling for Hypercube Multiprocessors," *Proc. of the 23rd Annual Pittsburgh Conference on Modeling and Simulation*, Vol. 23, No. 3, May 1992, 1449-1456.
33. K. Huang and J. Wu, "Optimal Fault-Tolerant Ring Networks," *Proc. of the 23rd Southeastern International Conference on Combinatorics, Graph Theory and Computing*, February 1992, (abstract only).
34. Z. Li and J. Wu, "A Novel Method of Function Decomposition," *Proc. of the 23rd Southeastern International Conference on Combinatorics, Graph Theory and Computing*, February 1992, (abstract only).
35. J. Wu, "Software Fault Tolerance Using Hierarchical N-Version Programming," *Proc. of IEEE Southeastcon '91*, 1991, 241-247.
36. J. Wu and E. B. Fernandez, "Petri Net Modeling Techniques," *Proc. of the 21st Pittsburgh Conference on Modeling and Simulation*, May 1990, 1311-1317.
37. J. Wu and E. B. Fernandez, "A Scheduling Approach for Communicating Tasks," *Proc. of the 22nd Southeastern Symposium on System Theory*, March 1990, 91-97.

38. J. Wu, "On the Decomposition of A Boolean Function into Two Unate Functions," *Proc. of the 21st Southeastern International Conference on Combinatorics, Graph Theory and Computing*, February 1990, (abstract only).
39. J. Wu and E. B. Fernandez, "Scheduling of Real-Time Tasks," *Proc. of the 20th Southeastern International Conference on Combinatorics, Graph Theory and Computing*, February 1989, (abstract only).
40. J. Wu and V. Chandra, "A Situation Adaptive Algorithm for Test Minimization for Applications in Safety of Robot Systems," *Proc. of Conference on Recent Advances in Robotics*, May 1988, 36.
41. J. Wu, "A Method of Achieving Several Goals Simultaneously," *Proc. of the 1st Artificial Intelligence Research Symposium*, May 1988, 35-39.
42. J. Wu and E. B. Fernandez, "A Weighted Tree Model for Algorithms with Boolean Vector Operations," *Proc. of the 20th Southeastern Symposium on System Theory*, March 1988, 150-154.

### 3.3 Keynote Speeches (13)

- Keynote Speaker: A Utility-based Routing Scheme in Ad Hoc Networks. *2008 International Conference on Wireless Algorithms, Systems and Applications (WASA)*, Oct. 2008.
- Keynote Speaker: Mobility in Ad Hoc Wireless Networks: Friend or Foe. *The 8th IEEE International Symposium on Network Computing and Applications (NCA)*, July 2008.
- Keynote Speaker: Mobility in Ad Hoc Wireless Networks: Friend or Foe. *2008 International Conference on Networking, Architecture, and Storage (NAS)*, July 2008.
- Keynote Speaker: A Utility-based Routing Scheme in MANETs. *The 4th IEEE International Conference on Mobile Ad-Hoc and Sensor Systems (MASS)*, Oct. 2007.
- Keynote Speaker: Mobility in Wireless Networks: Blessing or Curse. *The 4th Annual International Conference on Mobile and Ubiquitous Systems: Computing, Networking and Services (MOBIQUITOUS 2007)*, Aug. 2007.
- Keynote Speaker: Controlled Store-Carry-Forward Routing in Mobile Ad Hoc Networks. *The First International Workshop on Specialized Ad Hoc Networks and Systems (SAHNS 2007)*, in conjunction with IEEE ICDCS'07, June 2007.
- Keynote Speaker: The 2nd International Conference on Mobile Ad-Hoc and Sensor Networks (MSN), 2006.
- Keynote Speaker: The 6th International Workshop on Parallel and Distributed Scientific and Engineering Computing (PDSEC), 2005.
- Keynote Speaker: The 3rd International Workshop on Mobile Distributed Computing (MDC), 2005.
- Keynote Speaker: Wireless Ad-Hoc/Sensor Networks and Network Security Track, IEEE ITCC, 2005.

- Keynote Speaker: The 6th International Workshop on Advances in Parallel and Distributed Computational Models, 2004.
- Keynote Speaker: International Conference on Parallel and Distributed Computing, Applications and Technologies (PDCAT), 2004.
- Keynote Speaker: International Symposium on Parallel Processing and Applications, 2003.

### 3.4 Panels (3)

1. Panelist: Mobile Computing and Systems: Where is the Tofu?, *ACM MobiCom/MobiHoc*, 2007.
2. Panel Organizer: Network Systems in Challenging Environments: Hype or Reality, *IEEE INFOCOM*, 2008.
3. Panelist: Pervasive and Mobile Computing: Continued Challenges and Issues, *IEEE ICCCN*, 2008.

### 3.5 Presentations (Invited Seminars) (100)

1. "Research Directions in Mobile Ad Hoc Networks," Shanghai Jiaotong University, Shanghai, China August 2006.
2. "Research Directions in Mobile Ad Hoc Networks," Nanjing University, Nanjing, China, July 2006.
3. "Mobility in Mobile Ad Hoc Networks: Friend or Foe," Zhejiang University, Zhejiang, China, July 2006.
4. "Research Directions in Mobile Ad Hoc Networks," National University of Defense Technology, Changda, China, July 2006.
5. "Research Directions in Mobile Ad Hoc Networks," Inner Mongolia University, Inner Mongolia, Huhhot, China, June 2006.
6. "Mobility in Mobile Ad Hoc Networks: Friend or Foe," Toyko Denki University, Toyko, Japan, June 2006.
7. "Mobility in Mobile Ad Hoc Networks: Friend or Foe," Wayne State University, April 2006.
8. "Mobility in Mobile Ad Hoc Networks: Friend or Foe," University of Alabama, March 2006.
9. "Self-Stabilization in Mobile Ad Hoc Networks," Georgia Institute of Technology, November 2005.
10. "Mobility in Mobile Ad Hoc Networks: Friend or Foe," Ohio State University (**Distinguished Lecture**), October 2005.
11. "Localized Algorithms and Their Applications in Ad Hoc Wireless Networks," Montclair State University, September 2005.

12. "How to Write a Successful Proposal: A Personal Reflection," Montclair State University, September 2005.
13. "Research Directions in Mobile Ad Hoc Networks," National Central University, Taiwan, July 2005.
14. "Scan-Based Load Distribution in Sensor Networks," National Central University, Taiwan, July 2005.
15. "Dominating-Set-Based Routing in Ad Hoc Networks," National Central University, Taiwan, July 2005.
16. "Dominating-Set-Based Routing in Ad Hoc Networks," Hong Kong Baptist University, Hong Kong, July 2005.
17. "Mobility in Mobile Ad Hoc Networks: Friend or Foe," City University of Kong Kong, Hong Kong, July 2005.
18. "Scan-Based Load Distribution in Sensor Networks," Hong Kong Polytechnic University, Hong Kong, July 2005.
19. "Dominating-Set-Based Routing in Ad Hoc Networks," University of Burnos Aires, Burnos Aires, Argentina, June 2005.
20. "Localized Algorithms and Their Applications in Ad Hoc Wireless Networks," College of Computing, Wuhan University, Wuhan, China, May 2005.
21. "Ad Hoc Networks," College of Computing, Huazhong University of Science and Technology, Wuhan, China, May 2005.
22. "Localized Algorithms and Their Applications in Ad Hoc Wireless Networks," College of Computing, Shanghai University, Shanghai, China, May 2005.
23. "Dominating-Set-Based Routing in Ad Hoc Wireless Networks," Department of Computer Science, American University of Beirut, Beirut, Lebanon, January 2005.
24. "Dominating-Set-Based Routing in Ad Hoc Wireless Networks," Zhongshang University, Guangzhou, China, December 2004.
25. "Local-Information-Based Routing and Broadcasting in Ad Hoc Networks," Department of Computer Engineering, George Washington University, November 2004.
26. "Efficient and Localized Broadcasting in MANETs," NSF PI Meeting, Manchester, NH, November 2004.
27. "Localized Algorithms and Their Applications in Sensor Networks," Department of Computer Science, Shanghai Jiaotong University, Shanghai, China, July 2004.
28. "Localized Algorithms and Their Applications in Ad Hoc (and Sensor) Networks," International Conference on High Performance Computational Applications, Shanghai, China, July 2004.
29. "Localized Algorithms and Their Applications in Sensor Networks," Tyco, Boca Raton, FL, May 2004.

30. "Secured Routing Protocols in Ad Hoc Wireless Networks," Dept. of Computer Science, West Chester University, April 2004.
31. "Dominating-Set-Based Searching in Peer-to-Peer Networks," University of Azizu, Azizu, Japan, March 2004.
32. "Dominating-Set-Based Routing in Ad Hoc Wireless Networks," Dept. of Computer Science, Nanjing University, Nanjing, China, March 2004.
33. "Localized Algorithms and Their Applications in Ad Hoc Wireless Networks," Dept. of Computer Science, Hong Kong University of Science and Technology, Hong Kong, March 2004.
34. "Distributed System Design: An Overview," National University of Defense Technology, Changsa, China, December 2003.
35. "Dominating-Set-Based Routing in Ad Hoc Wireless Networks," College of Engineering, Central Chinese University, Changsa, China, December 2003.
36. "Dominating-Set-Based Routing in Ad Hoc Wireless Networks," Dept. of Computer Science, Michigan State University, November 2003.
37. "Dominating-Set-Based Routing in Ad Hoc Wireless Networks," Dept. of Electrical and Computer Engineering, Old Dominion University, October 2003.
38. "Localized Algorithms and Their Applications in Ad Hoc Wireless Networks", Chinese NSF Workshop on Advance in Computer Science, Fujian, China, December 2003.
39. "Dominating-Set-Based Routing in Ad Hoc Wireless Networks," Dept. of Computer Science, University of Tsukuba, Tsukuba, Japan, July 2003.
40. "Dominating-Set-Based Routing in Ad Hoc Wireless Networks," Dept. of Electrical and Computer Engineering, McGill University, Montreal, Canada, June 2003.
41. "Dominating-Set-Based Routing in Ad Hoc Wireless Networks," Dept. of Computer Engineering, University of Massachusetts at Amherst, November 2002.
42. "Dominating-Set-Based Routing in Ad Hoc Wireless Networks," Dept. of Computer Science, University of Nebraska at Lincoln, October 2002.
43. "Dominating-Set-Based Routing in Ad Hoc Wireless Networks," Dept. of Computer Science, Northeastern University, Qinghuangdao, China, August 2002.
44. "Distributed System Design," Dept. of Computer Science, Nanjing University, Nanjing, China, July 2002.
45. "Dominating-Set-Based Routing in Ad Hoc Wireless Networks," Dept. of Computer Science, University of Connecticut, December 2001.
46. "Distributed System Design: An Overview," College of Information Science, Shanghai Jiaotong University, Shanghai, China, December 2001.

47. "Fault-Tolerant Routing in Hypercubes," Dept. of Mathematics, Polytechnic University of Milan, Milan, Italy, November 2001.
48. "Dominating-Set-Based Routing in Ad Hoc Wireless Networks," Dept. of Computer Science, Polytechnic University of Milan, Milan, Italy, November, 2001.
49. "Dominating-Set-Based Routing in Ad Hoc Wireless Networks," Dept. of Computer Science, Zhejiang University, Hangzhou, China, June 2001.
50. "Distributed System Design: An Overview," Dept. of Computer Science, Tamkang University, Taiwan, May 2001.
51. "Dominating-Set-Based Routing in Ad Hoc Wireless Networks," Dept. of Computer Science, National Jiaotong University, Taiwan, May 2001.
52. "Dominating-Set-Based Routing in Ad Hoc Wireless Networks," Academy of Science, Taiwan, May 2001.
53. "On Sorting An Intransitive Total Ordered Set Using Semi-Heap," Dept. of Computer Science, Kent State University, January 2001.
54. "Parallel Processing: Past, Present, and Future," Dept. of Computing, The Hong Kong Polytechnic University, Hong Kong, December 2000.
55. "On Sorting An Intransitive Total Ordered Set Using Semi-Heap," Dept. of Computing, The Hong Kong Polytechnic University, Hong Kong, December 2000.
56. "Routing Protocols for Ad Hoc Wireless Networks," Dept. of Computer Science, University of Minnesota (sponsored by **Cray Inc.**), October 2000.
57. "Routing Protocols for Ad Hoc Wireless Networks," Dept. of Electrical & Computer Engineering and Computer Science, University of Cincinnati (**IEEE Distinguished Lecture**), October 2000.
58. "Routing Protocols for Ad Hoc Wireless Networks," IEEE Ottawa Chapter (**IEEE Distinguished Lecture**), August 2000.
59. "Routing Protocols for Ad Hoc Wireless Networks," Dept. of Computer Science, City University of Hong Kong, Hong Kong, June 2000.
60. "Routing Protocols for Ad Hoc Wireless Networks," Dept. of Computer Science, Shanghai Jiaotong University, Shanghai, China, May 2000.
61. "Routing Protocols for Ad Hoc Wireless Networks," Dept. of Computer Science and Technology, Tsinghua University, Beijing, China, May 2000.
62. "Routing Protocols for Ad Hoc Wireless Networks," Dept. of Computer Science, Shanghai University, Shanghai, China, May 2000.
63. "Routing Protocols for Ad Hoc Wireless Networks," IEEE Central Texas Chapter (**IEEE Distinguished Lecture**), January 2000.

64. "Routing Protocols for Ad Hoc Wireless Networks," Dept. of Mathematics and Computer Science, Southwest Texas State University, January 2000.
65. "Routing Protocols for Ad Hoc Wireless Networks," Motorola at Plantation, Florida, November 1999.
66. "On Sorting An Intransitive Total Ordered Set Using Semi-Heap," Dept. of Computer Science, Nanjing University, Nanjing, China, June 1999.
67. "Fault-Tolerant Communication in Direct Networks," Dept. of Computer Science, University of Toledo, May 1999.
68. "Fault-Tolerant Communication in Direct Networks," IEEE Philadelphia Chapter (**IEEE Distinguished Lecture**), January 1999.
69. "Parallel Processing: Past, Present, and Future," Dept. of Computer Science, Univ. of New South Wales, Sydney, Australia, December 1998.
70. "Fault-Tolerant Communication in Point-to-Point Networks," Dept. of Computer Science, Old Dominion University, November 1998.
71. "Fault-Tolerant Adaptive and Minimal Routing in Mesh-Connected Multicomputers," Dept. of Computer Science, National Central University, Taiwan, May 1998.
72. "Reliable Communication in Cube-Based Multicomputers," Dept. of Computer Science, National Taiwan University, Taiwan, May 1998.
73. "Distributed System Design: An Overview," Dept. of Computer Science, National Tsinghua University, Taiwan, May 1998.
74. "Parallel Processing: Past, Present, and Future," Dept. of Engineering Science, National Cheng-Kung University, Taiwan, May 1998.
75. "Reliable Communication in Cube-Based Multicomputers," Dept. of Computer Science, Tokyo Denki University, Tokyo, Japan, April 1998.
76. "Reliable Communication in Cube-Based Multicomputers," Dept. of Computer Science, The University of Vermont, September 1997.
77. "Minimal Routing in 2-D Meshes Using Extended Safety Levels," Dept. of Computer Science, Nanjing University, Nanjing, China, July 1997.
78. "Reliable Communication in Cube-Based Multicomputers Using Safety Vectors," Dept. of Computer Science, Nanjing University, Nanjing, China, July 1997.
79. "Reliable Communication in Cube-Based Multicomputers," Dept. of Computer Science, Xi'an Jiaotong University, Xi'an, China, July 1997.
80. "Parallel Processing: Past, Present, and Future," Institute of Computing Science, Chinese Academic of Science, Beijing, China, June 1997.



81. "Reliable Communication in Cube-Based Multicomputers," Dept. of Computer Science and Technology, Tsinghua University, Beijing, China, June 1997.
82. "Parallel Processing: Past, Present, and Future," Dept. of Computer Science, Nanjing University, Nanjing, China, June 1996.
83. "Distributed System Design," American University of Bulgaria, Blagoevgrad, Bulgaria, April 1996.
84. "Unicasting in Faulty Hypercube Using Safety Levels," Dept. of Computer Science, University of Newcastle Upon Tyne, Newcastle, England, March 1996.
85. "Parallel Processing: Past, Present, and Future," Motorola at Boynton Beach, FL, September 1995.
86. "Reliable Communication Using Safety Levels," Dept. of Computer Science, Nanjing University, Nanjing, China, July 1995.
87. "Parallel Processing: Past, Present, and Future," The 4th International Conference for Young Computer Scientists, Beijing, China, July 1995.
88. "Parallel Processing: Past, Present, and Future," Dept. of Computer Science, Shanghai Railway University, Shanghai, China, July 1995.
89. "Unicasting in Faulty Hypercubes Using Safety Levels," Dept. of Computer Science, Louisiana State University, February 1995.
90. "Reliable Broadcasting in Injured Hypercubes," Institute of Computing Science, Polish Academy of Sciences, Warsaw, Poland, June 1994.
91. "Reliable Broadcasting in Injured Hypercubes," Institute of Computing Technology, Chinese Academy of Sciences, Beijing, China, July 1993.
92. "Reliable Broadcasting in Injured Hypercubes," Dept. of Computer Science, Shanghai University of Science and Technology, Shanghai, China, July 1993.
93. "Optimal Binomial-Tree Based Broadcasting in Injured Hypercubes," Dept. of Computer and Information Science, Polytechnic University of Madrid, Madrid, Spain, January 1993.
94. "Broadcasting in Faulty Hypercubes," Dept. of Computer Science, University of Hong Kong, Hong Kong, July 1992.
95. "The Design of Fault-Tolerant Concurrent Software Using Petri Nets," College of Computing, Georgia Institute of Technology, May 1991.
96. "The Design of Fault-Tolerant Concurrent Software Using Petri Nets," Dept. of Computer Science, Old Dominion University, April 1991.
97. "Cube-Connected-Cube Networks," Dept. of Computer Science, University of Rhode Island, October 1990.
98. "Hypercube Multicomputers," IEEE Computer Society, Palm Beach Chapter, September 1990.

99. "The Design of Fault-Tolerant Concurrent Software Using Petri Nets," Dept. of Computer Science, Utah State University, February 1990.
100. "The Design of Fault-Tolerant Concurrent Software Using Petri Nets," Dept. of Computer Science, Xavier University, New Orleans, August 1989.

## 4 Research

### 4.1 Sponsored Research

- Energy-Efficient Design in Wireless Networks Using Cooperative Communication (PI) (CCF 0830289, renewal of CCR 039741) 09/08 - 09/11  
Supported by National Science Foundation (NSF), Arlington, VI. (\$277,370)
- *Mobility-Assisted Routing in Mobile Networks.* (PI) 09/06-09/09  
Supported by National Science Foundation (NSF), Arlington, VA (\$284,943)
- *IEEE MASS 2006 Travel Grant.* (PI) 09/06-09/07  
National Science Foundation (NSF), Arlington, VA (\$15,000)
- *Acquisition of a NUMA-Based Supercluster for High Performance Computing.* (PI) 9/05 - 9/08  
Supported by National Science Foundation (NSF), Arlington, VA (CNS 0521410) (\$447,191)
- *IEEE MASS 2006 Travel Grants.* (PI) 07/06-08/07  
Supported by a grant from Army Research Office (ARO), NC. (\$8,000)
- *Service Grant.* (PI) 06/06-09/06  
Supported by SIVA Corp., Boca Raton, FL (\$4,445)
- *Design of High-Performance Publish/Subscribe Systems for Mobile Computing Environments.*  
(Co-PI with Prof. J. Cao) 2006-2007  
Supported by Hong Kong RGC grant, Hong Kong (805,200 HK Yuan = \$102,000)
- *Outstanding Overseas Young Researcher Award.* (PI) 08/06 - present  
Supported by National Nature Science Foundation of China (NSFC), China (400,000 Yuan = \$50,000)
- *Research Experiences for Undergraduates (REU) 1.* (PI) 05/06-05/07  
Supported by National Science Foundation (NSF), Arlington, VA (\$11,875)
- *Research Experiences for Undergraduates (REU) 2.* (PI) 05/06-05/07  
Supported by National Science Foundation (NSF), Arlington, VA (\$15,000)
- *Research Experiences for Undergraduates (REU) 3.* (PI) 05/06-05/07  
Supported by National Science Foundation (NSF), Arlington, VA (\$15,000)
- *Efficient and Localized Broadcasting in Ad Hoc Wireless Networks.* (PI) 09/04 - 09/07  
Supported by National Science Foundation, Arlington, VA (CNS 0422762) (\$225,000)

- *Wireless and Sensor Network Laboratory.* (Co-PI) 08/04 - 08/07  
Supported by National Science Foundation, Arlington, VA (CNS 0434533) (\$57,263)
- *Secure Telecommunication Networks.* (Co-PI) 09/04 - 09/06  
Supported by Defense Information Systems Agency (DISA) (\$300,000 out of \$3,000,000)
- *Parallel Programming.* (PI) 05/05-08/05  
Supported EDSS, Inc., Port St. Lucie, FL (\$6,000)
- *Energy Efficient Communication in Sensor Networks.* (PI) 09/03 - 09/06  
Supported by National Science Foundation (NSF), Arlington, VA (CCR 039741) (\$375,000)
- *International Workshop on Theoretical and Algorithmic Aspects of Sensor, Ad Hoc Wireless, and Peer-to-Peer Networks.* (PI) 10/03 - 10/04  
Supported by National Science Foundation (NSF), Arlington, VA (CCR 0335238) (\$22,200)
- *Research Experiences for Undergraduates* (REU) 4. (PI) 05/03 - 05/04  
Supported by National Science Foundation (NSF), Arlington, VA (\$11,650)
- *Self-Organization Cluster-Tree Design in ns-2 Platform.* (PI) 08/03 - 07/04  
Supported by a grant Florida Communication Research Lab., Motorola, Inc. Plantation, FL (\$60,000)
- *Research Experiences for Undergraduates* (REU) 5. (PI) 05/02 - 05/03  
Supported by National Science Foundation (NSF), Arlington, VA (\$5,500)
- *A Low Cost Parallel and Distributed Systems Laboratory.* (PI) 09/01 - 09/04  
Supported by National Science Foundation (NSF), Arlington, VA (EIA 0130806) (\$79,039)
- *A Dominating-Set-Based Routing Scheme in Ad Hoc Wireless Networks.* (PI) 06/00 - 06/03  
Supported by National Science Foundation (NSF), Arlington, VA (ANI 0073736) (\$181,957)
- *A Theory of Fault-Tolerant Adaptive and Minimal Routing in Mesh-Connected Multicomputers.* (PI) 04/99 - 04/03  
Supported by National Science Foundation (NSF), Arlington, VA (CCR 9900646) (\$134,109)
- *Implementation of Radio Service Software.* (PI) 01/97 - present  
Supported by a grant from Motorola, Inc. Plantation, FL (\$1,898,255)
- *Research Experiences for Undergraduates* (REU) 6. (PI) 04/02- 05/03  
Supported by National Science Foundation (NSF), Arlington, VA (\$5,825)
- *Software Path Coverage.* (PI) 01/03 - 12/03  
Supported by a grant from Motorola, Inc. Plantation, FL (\$55,487)
- *Cell Phone Software Testing.*(PI) 01/02 - 12/02  
Supported by a grant from Motorola, Inc. Coconut Creek, FL (\$12,505)
- *Web Design Using Java.* (PI) 08/01-12/01  
Supported by a grant from SIVA Corp., Boca Raton, FL (\$15,890)

- *Network Administration. (PI)* 04/01-12/01  
Supported by a grant from Malema Corp., Boca Raton, FL (\$19,028)
- *Testing of Application Software. (PI)* 10/22/99-04/21/00  
Supported by a grant from Motorola, Inc., Boynton, FL (\$9,287)
- *Implementation of Application Software. (PI)* 08/12/99-12/31/99  
Supported by a grant from Alpine Engineered, Boca Raton, FL (\$11,582)
- *Functional Parallelization of the Everglades Landscape Fire Model. (PI)* 04/97-03/99  
Supported by a grant from South Florida Water Management District, West Palm Beach, FL (\$34,219)
- *Domain-Specific Software Engineering on Pager Development. (PI)* 01/97-01/98  
Supported by a grant from Motorola, Inc., Boynton Beach, FL (\$40,025)
- *Load Balancing of the Everglades Landscape Model. (PI)* 10/94-04/97  
Supported by a grant from South Florida Water Management District, West Palm Beach, FL (\$62,556)
- *Computer System Evaluation. (PI)* 01/90-05/95  
Supported by a grant from IBM, Boca Raton, FL (\$1,030,000)
- *A Privilege-Based Security Model for Distributed Systems. (PI)* 07/91-07/92  
Supported by a grant from Florida Atlantic University Foundation, Inc. (\$500)
- *Fault-Tolerant Concurrent Software. (Co-PI)* 01/90-12/90  
Supported by a grant from Florida High Tech. and Industry Council (\$52,744)

## 5 Professional Service

### 5.1 Membership Professional Societies

- Institute of Electrical and Electronics Engineering (IEEE): Computer Society (Fellow).
- Association for Computing Machinery (ACM) (Senior Member since 2006)
- Society for Computers and Their Applications (ISCA)
- Upsilon Pi Epsilon: Computing Science Honor Society

### 5.2 Editorial Board (14)

- IEEE Transaction on Mobile Computing, 11/2008 - present
- ACTA Press/ IASTED International Journal of Computers and Applications (Co-Editor-in-Chief, 09/2003-01/2007)
- International Journal of Security and Networks (IJSN) (01/2008 - present)

- Journal of Interconnection Networks (01/2007 - present)
- Ad Hoc & Sensor Wireless Networks: An International Journal (AHSWN) (10/2004-present)
- International Journal of Parallel, Emergent, and Distributed Systems (IJPEDS) (10/2004-present)
- Journal of Pervasive Computing and Communications (JPCC) (09/2004-present)
- International Journal of Security and Networks (IJSN) (1/2008-present)
- Journal of Interconnection Networks (1/2007-present)
- International Journal of High Performance Computing and Networking (IJHPCN) (09/2003-present)
- IEEE Transactions on Parallel and Distributed Systems (Associate Editor, 2001-2005)
- ISCA International Journal of Computers and Their Applications (Associate Editor in Networks and Protocols, 9/1999-12/2002).
- Journal of Computer Science and Technology (A Publication of the Chinese Computer Federation, 09/2002-present).
- International Advisory Board, High Education Publishing Inc., China.

### **5.3 Conference Organization (major role)**

1. Program Co-Chair: The 30th IEEE Conference on Computer Communications (INFOCOM'11), 2011.
2. Panel Co-Chair: The 29th IEEE Conference on Computer Communications (INFOCOM'10), 2010.
3. General Co-Chair: International Conference on Distributed Computing in Sensor Systems (DCOSS), 2009.
4. Panel Co-Chair: ACM Annual International Conference on Mobile Computing and Networking (MobiCom), 2009.
5. Area TPC Chair: The 28th IEEE Conference on Computer Communications (INFOCOM'09), 2009.
6. General Chair: The 22nd IEEE International Parallel & Distributed Processing Symposium (IPDPS), 2008.
7. Executive Vice Program Chair: The 28th IEEE International Conference on Distributed Computing Systems (ICDCS), 2008.
8. Panel Co-Chairs: The 5th Annual IEEE Communications Society Conference on Sensor, Mesh and Ad hoc Communications and Networks (SECON), 2008.
9. General Co-Chair: International Conference on Wireless Algorithms, Systems and Applications (WASA), 2007.

10. General Co-Chair: The 5th International Symposium on Parallel and Distributed Processing and Applications (ISPA'07), 2007.
11. General Vice Chair: The 21st IEEE International International Parallel & Distributed Processing Symposium (IPDPS), 2007.
12. Program Co-Chair: Symposium on Advances in Internet, ChinaCom, 2007.
13. General Chair: The 3rd IEEE International Conference on Mobile Ad-Hoc and Sensor Systems (MASS), 2006.
14. Program Co-Chair: International Workshop on Networking, Architecture, and Storage, 2006.
15. General Vice Chair: The 2nd IEEE International Conference on Distributed Computing Sensor Systems (DCOSS), 2006.
16. General Chair: International Workshop on Wireless and Sensor Networks Security (WSNS'05) (in conjunction with MASS), 2005.
17. Program Co-Chair: The 1st International Workshop on Security and Mobility in Peer-to-Peer Systems (MPPS) (in conjunction with ICDCS), 2005.
18. Program Co-Chair: The 1st International Workshop on Ad-Hoc, Sensor and P2P Networks (AHSP) (in conjunction with ISADS), 2005.
19. Program Co-Chair: International Conference on Mobile Ad-Hoc and Sensor Networks (MSN), 2005.
20. Program Vice Chair: International Conference on Computer Networks and Mobile Computing (ICCNMC), 2005.
21. Program Chair: The 1st IEEE International Conference on Mobile Ad-Hoc and Sensor Systems (MASS), 2004.
22. General Co-Chair: The 2nd International Workshop on Mobile Distributed Computing (MDS), 2004.
23. Workshops Chair: The IEEE International Conference on Distributed Computing Systems (ICDCS), 2003.
24. General Co-Chair: The 7th International Conference on Computer Science and Informatics (ICS), 2003.
25. Program Co-Chair: The 4th and 5th Workshops on Advances in Parallel and Distributed Computational Models (in conjunction with IPDPS), 2002 and 2003.
26. Program Vice Chair: The 21st IEEE International Conference on Distributed Computing Systems (ICDCS), 2001.
27. Program Co-Chair: Workshop on Wireless Networks and Mobile Computing 2001 (in conjunction with ICPP 2001), 2001.
28. Program Vice Chair: The 29th International Conference on Parallel Processing (ICPP), 2000.

29. Program Co-Chair: The 12th ISCA International Conference on Parallel and Distributed Computing Systems (PDCS), 1999.
30. Local Arrangements Chair: The 5th IEEE International Symposium on High Performance Computer Architecture (HPCA), 1999.
31. Advisory Committee: The 18th and 21st International Conference on Advanced Information Networking and Applications (AINA), 2004 and 2007.
32. Advisory Committee: The 13th and 14th ISCA International Conference on Parallel and Distributed Computing Systems (PDCS), 2000 and 2001.
33. Advisory Committee: The 20th, 21st, and 22nd IASTED International Conference on Parallel and Distributed Computing Systems, 1999, 2000, and 2001.
34. Steering Committee Chair: The IEEE International Workshop on Wireless Security and Privacy (WiSP).
35. Steering Committee Chair: The IEEE International Workshop on Wireless and Sensor Networks Security (WSNS).
36. Steering Committee: The IEEE International Parallel & Distributed Processing Symposium (IPDPS)
37. Steering Committee: The 6th Workshop on Advances in Parallel and Distributed Computational Models (in conjunction with IPDPS).
38. Steering Committee: Workshop on Advances in Parallel and Distributed Computational Models (APDCM).
39. Steering Committee: International Symposium on Parallel and Distributed Processing and Application (ISPA).
40. Steering Committee: The IEEE International Conference on Mobile Ad-Hoc and Sensor Systems (MASS).
41. Steering Committee: The IEEE Symposium on Reliable Distributed Systems (SRDS).
42. Steering Committee: The IEEE International Parallel & Distributed Processing Symposium (IPDPS).

#### **5.4 Conference Organization (program committee/session chair)**

1. The 15th and 16th IEEE Int'l Conference on Network Protocols (ICNP), 2007 and 2008 (Program Committee).
2. The 27th IEEE Symposium on Reliable Distributed Systems (SRDS-27), 2008 (Program Committee).
3. The 5th and 6th Annual IEEE Communications Society Conference on Sensor, Mesh and Ad Hoc Communications and Networks (SECON), 2008 and 2009 (Program Committee).
4. The 3rd International Workshop on Delay/Disruption-Tolerant Mobile Networks (IEEE DTMN), 2008 (Program Committee).

5. The 9th IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM), 2008 (Program Committee).
6. The 8th International Conference on Algorithms and Architectures for Parallel Processing (ICA3PP), June 2008 (Program Committee).
7. The 4th IEEE International Workshop on Sensor Networks and Systems for Pervasive Computing (PerSeNS), 2008.
8. The 2nd ACM Workshop on Sensor Actor Networks (SANET 2008), in conjunction with ACM MobiCom, 2008 (Program Committee).
9. The 1st ACM International Workshop on Integrated Heterogeneous Sensor Networks (HeterSenet), in conjunction with ACM MobiHoc, 2008 (Program Committee).
10. The ACM International Symposium on Mobile Ad-Hoc Networking and Computing (MobiHoc), 2007 (Program Committee).
11. International Conference on Parallel Processing (ICPP), 2007 (Program Committee).
12. The 4th IEEE International Conference on Mobile Ad-Hoc and Sensor Systems (MASS), 2007 (Program Committee).
13. The 5th Annual IEEE International Conference on Pervasive Computing and Communications (PerCom), 2007 (Program Committee).
14. The 3rd IEEE International Workshop on Sensor Networks and Systems for Pervasive Computing (PerSeNS), 2007 (Program Committee).
15. The ACM International Symposium on Mobile Ad-Hoc Networking and Computing (MobiHoc), 2006 (Program Committee).
16. International Conference on Parallel Processing (ICPP), 2006 (Program Committee).
17. The 2006 IEEE International Symposium on Modeling, Analysis, and Simulation of Computers and Telecommunication Systems (MASCOTS), 2006 (Program Committee).
18. The 1st ACM International Workshop on Performance Monitoring and Measurement of Heterogeneous Wireless and Wired Networks (PM2HW2H'2006), 2006 (Program Committee).
19. International Workshop on Networking, Architecture, and Storage, 2006 (Session Chair).
20. The 2nd International Conference on Mobile Ad-hoc Sensor Systems (MASS), 2005 (Session Chair).
21. The IEEE International Conference on Distributed Computing in Sensor Systems (DCOSS), 2005 (Program Committee).
22. The IEEE International Parallel and Distributed Processing Symposium (IPDPS), 2005 (Program Committee).



23. The 24th Annual Joint Conference of the IEEE Computer and Communications (INFOCOM), 2005 (Program Committee).
24. The 61st IEEE Vehicular Technology Conference (VTC), 2005 (Program Committee).
25. The 12th Annual International Conference on High Performance Computing (HiPC), 2005 (Program Committee).
26. International Conference on Parallel Processing (ICPP), 2005 (Session Chair).
27. The IEEE 2005 International Conference on Distributed Systems Conference (ICDCS), 2005 (Session Chair).
28. The 1st International Workshop on Sensor Networks and Systems for Pervasive Computing (PerSeNS), 2005 (Program Committee).
29. The 1st IEEE Symposium on World of Wireless, Mobile and Multimedia Networks (WoWMoM), 2005 (Program Committee).
30. The 19th IEEE International Conference on Advanced Information Networking and Applications (AINA), 2005 (Program Committee).
31. International Workshop on Mobile Distributed Computing (MDC), 2005 (Program Committee).
32. The 1st International Workshop on System and Networking for Smart Objects (SaNSO), 2005 (Program Committee).
33. International Workshop of Ubiquitous Smart Worlds (USW), 2005 (Program Committee).
34. The 11th International Conference on Parallel and Distributed Systems (ICPADS), 2005 (Program Committee).
35. The 4th International Workshop Performance Modeling, Evaluation, and Optimization of Parallel and Distributed Systems, 2005 (Program Committee).
36. The 5th IEEE Workshop on Algorithms for Wireless, Mobile, Ad Hoc and Sensor Networks, 2005 (Program Committee).
37. The 2nd International Workshop on Wireless Ad Hoc Networking (WWAN), 2005 (Program Committee).
38. The IEEE International Workshop on Strategies for Energy Efficiency in Ad Hoc and Sensor Networks (IWSEEASN), 2005 (Program Committee).
39. International Workshop on Information Fusion and Dissemination in Wireless Sensor Networks, 2005 (Program Committee).
40. The Aizu Workshop on Peer-to-Peer Workshops, March 2004 (Guest Speaker).
41. The HKUST Workshop on Network Research, 2004 (Guest Speaker).

42. International Conference on Parallel and Distributed Processing and Applications (ISPA), 2004 (Session Chair).
43. International Conference on High Performance Computing and Applications (HPCA), 2004 (Session Chair).
44. The 1st International Conference on Embedded Software and Systems (ICESS), 2004 (Program Committee).
45. The 2004 International Conference on Embedded and Ubiquitous Computing (EUC), 2004 (Program Committee).
46. Euro-Par, 2004 (Program Committee).
47. The 23rd Annual Joint Conference of the IEEE Computer and Communications (INFOCOM), 2004 (Program Committee).
48. The IEEE Global Telecommunications Conference (GLOBECOM), 2004 (Program Committee).
49. International Conference on Parallel Processing (ICPP), 2004 (Program Committee).
50. The 24th International Conference on Distributed Computing Systems (ICDCS), 2004 (Program Committee).
51. International Conference on Parallel and Distributed Computing and Networks (PDCN), 2004 (Program Committee).
52. The 17th International Conference on Parallel and Distributed Computing Systems (PDCS), 2004 (Program Committee).
53. International Workshop on Wireless Ad hoc Networking (WWAN), 2004 (Program Committee).
54. The 2nd International Workshop on Mobile Distributed Computing (MDC), 2004 (Program Committee).
55. The 4th International Workshop on Algorithms for Wireless, Mobile, Ad Hoc and Sensor Networks (WMAN), 2004 (Program Committee).
56. International Workshop on Performance Modeling, Evaluation, and Optimization of Parallel and Distributed Systems (PME)(PDS), 2004 (Program Committee).
57. The Chinese NSF Workshop on Advance in Computer Science, 2003 (Guest Speaker).
58. The 2nd International Workshop on Grid and Cooperative Computing (GCC 2003), 2003 (Session Chair).
59. The 23rd IEEE International Conference on Distributed Computing Systems (ICDCS), 2003 (Session Chair).
60. The 10th Annual International Symposium on High Performance Computing (HPCA), 2003 (Program Committee).

61. The 2003 High Performance and Large Scale Computing Conference, 2003 (Program Committee).
62. The 2003 International Workshop on Mobile Distributed Computing, 2003 (Program Committee).
63. The 3rd International Workshop on Internet Computing and E-Commerce, 2003 (Program Committee).
64. Workshop on Advances in Parallel and Distributed Computational Models, 2003 (Session Chair).
65. Workshop on Massive Parallel Processing, 2003 (Session Chair).
66. International Conference on Parallel Processing (ICPP), 2002 (Session Chair).
67. International Conference on Parallel Processing (ICPP), 2002 (Program Committee).
68. The 3rd International Conference on Communications and Computing, 2002 (Program Committee).
69. The 2002 International Conference on Parallel and Distributed Systems (ICPADS), 2002 (Program Committee).
70. The IASTED International Conference on Networks, Parallel and Distributed Processing and Applications, 2002 (Program Committee).
71. The 4th International Conference on Formal Engineering Methods, 2002 (Program Committee).
72. International Conference on Parallel Processing (ICPP), 2001 (Program Committee).
73. International Conference on Parallel Processing (ICPP), 2001 (Session Chair).
74. Workshop on Wireless Networks and Mobile Computing, 2001 (Session Chair).
75. The 14th ISCA International Conference on Parallel and Distributed Computing Systems (PDCS), 2001 (Session Chair).
76. The 14th ISCA International Conference on Parallel and Distributed Computing Systems (PDCS), 2001 (Program Committee).
77. The 2nd International Conference on Parallel and Distributed Computing, Applications and Technologies (PDCAT), 2001 (Program Committee).
78. The 2001 International Conference on Parallel and Distributed Systems (ICPADS), 2001 (Program Committee).
79. The 1st International Workshop on Parallel and Distributed Computing Issues in Wireless Networks and Mobile Computing (in conjunction with IPDPS 2001), 2001 (Program Committee).
80. The 3rd Workshop on High Performance Scientific and Engineering Computing with Application (HPSECA-01) (in conjunction with ICPP), 2001 (Program Committee).
81. Workshop on Advances in Parallel and Distributed Computational Models (in conjunction with IPDPS), 2001 (Program Committee).

82. The 20th International Conference on Distributed Computing Systems (ICDCS), 2000 (Program Committee).
83. The 13th ISCA International Conference on Parallel and Distributed Computing Systems (PDCS), 2000 (Program Committee).
84. The 4th International Conference on Algorithms and Architectures for Parallel Processing, 2000 (Program Committee).
85. The 4th International Conference on Algorithms and Architectures for Parallel Processing, 2000 (Session Chairman).
86. The 1st International Conference on Parallel and Distributed Computing, Applications and Technologies (PDCAT), 2000 (Program Committee).
87. The 2000 International Conference on Parallel and Distributed Systems (ICPADS), 2000 (Program Committee).
88. The 31st Southeastern Conference on Combinatorics, Graph Theory and Computing, 2000 (Session Chairman).
89. The 4th International Conference on Algorithms and Architectures for Parallel Processing, 2000 (Session Chair).
90. International Conference on Parallel Processing (ICPP), 2000 (Session Chair).
91. The 5th International Symposium on High Performance Computer Architecture (HPCA), 1999 (Local Arrangements Chairman).
92. The 12th ISCA International Conference on Parallel and Distributed Computing Systems (PDCS), 1999 (Program Chairman).
93. International Conference on Parallel Processing (ICPP), 1999 (Program Member).
94. International Conference on Computer Applications in Industry and Engineering, 1999 (Program Member).
95. The 14th ISCA International Conference on Computers and Their Applications, 1999 (Program Member).
96. The 30 Southeastern Conference on Combinatorics, Graph Theory and Computing, 1999 (Session Chairman).
97. The 5th International Conference for Young Computer Scientists, 1999 (Program Member).
98. The 18th International Conference on Distributed Computing Systems (ICDCS), 1998 (Program Committee).
99. The 29th Southeastern Conference on Combinatorics, Graph Theory and Computing, 1998 (Session Chairman).

100. The 1998 International Conference on Parallel and Distributed Computing and Networks, 1998 (Session Chairman).
101. The 13th International Conference on Computers and Their Applications, 1998 (Program Committee).
102. The Annual IEEE Workshop on Fault-Tolerant Parallel and Distributed Systems, 1998 (Program Committee).
103. The 10th ISCA International Conference on Parallel and Distributed Computing Systems, 1997 (Session Chairman).
104. The 28th Southeastern Conference on Combinatorics, Graph Theory and Computing, 1997 (Session Chairman).
105. The 9th ISCA International Conference on Computer Application in Industry and Engineering, 1996 (Program Committee).
106. The 9th ISCA International Conference on Computer Application in Industry and Engineering, 1996 (Session Chairman).
107. The 8th International Conference on Parallel and Distributed Computing and Systems, 1996 (Program Committee).
108. The 27th Southeastern Conference on Combinatorics, Graph Theory and Computing, 1996 (Session Chairman).
109. The 1996 International Workshop on Computer-Aided Design, Test, and Evaluation for Dependability, 1996 (Program Committee).
110. The 16th International Conference on Distributed Computing Systems (ICDCS), 1996 (Program Committee).
111. The 16th International Conference on Distributed Computing Systems (ICDCS), 1996 (Session Chairman).
112. The 26th Southeastern Conference on Combinatorics, Graph Theory and Computing, 1995 (Session Chairman).
113. The 4th International Conference on Computer Communications and Networks, 1995 (Program Committee).
114. The 7th International Conference on Parallel and Distributed Computing Systems, 1994 (Session Chairman).
115. International Conference on Parallel Processing (ICPP), 1994 (Session Chairman).
116. The IEEE Southeastcon'94, 1994 (Session Organizer and Chairman)
117. The 25th Southeastern Conference on Combinatorics, Graph Theory and Computing, 1994 (Session Chairman).

118. The 3rd International Conference for Young Computer Scientist, 1993 (Program Committee).
119. The 3rd International Conference for Young Computer Scientist, 1993 (Session Chairman).
120. The 24th Southeastern Conference on Combinatorics, Graph Theory and Computing, 1993 (Session Chairman).
121. The 23rd Southeastern Conference on Combinatorics, Graph Theory and Computing, 1992 (Session Chairman).
122. The 23rd Pittsburgh Modeling and Simulation Conference, 1992 (Session Organizer and Chairman).
123. The IEEE Southeastcon '91, 1991, (Session Organizer and Chairman).
124. The 3rd ISMM International Conference on Parallel and Distributed Computing and System, 1990 (Session Chairman).
125. 1989 ACM Southeast Regional Conference, 1989 (Program Committee).

### **5.5 Panels (3)**

1. Panelist: Mobile Computing and Systems: Where is the Tofu?, *ACM MobiCom/MobiHoc*, 2007.
2. Panel Organizer: Network Systems in Challenging Environments: Hype or Reality, *IEEE INFOCOM*, 2008.
3. Panelist: Pervasive and Mobile Computing: Continued Challenges and Issues, *IEEE ICCCN*, 2008.

### **5.6 NSF-related Activities**

1. NSF Wireless Networks PI meeting, Chicago, July 2007.
2. NSF Workshops
  - Wireless Security, April 2008.
  - Mobility in Wireless Networks: Challenges and Opportunities, July 2007.
  - Bridging the Gap: Wireless Networking Technologies and Advances at the Physical Layer, August 2007.
3. Outreach/Site Visit (01/2007 - 12/2008)
  - Univ. of California at Los Angeles, Northeastern Univ., MIT, Harvard, George Washington Univ., Rutgers Univ., Univ. of California at Riverside, Univ. of Southern California, Indiana Univ. - Purdue Univ. Indianapolis, George Mason Univ., Univ. of Delaware, Univ. of Texas at Arlington, Stanford, and Univ. of California at Berkeley.

## 5.7 Professional Referee Service

### Proposals:

National Science Foundation: China, Cyprus, Taiwan, and United States.

Universities: City University of Hong Kong and Hong Kong Polytechnic University.

### Tenure/Promotion Reviews:

American University in Cairo, Georgia State University, Kent State University, Nanjing University, Nanyuan Technological University of Singapore, Old Dominion University, Simon Fraser University, SUNY at Stony Brook, University of Alabama, and Wayne State University.

### Journal Papers:

IEEE Computer

IEEE Software

IEEE Parallel and Distributed Technology

IEEE Transactions on Software Engineering

IEEE Transactions on Computers

IEEE Transactions on Parallel and Distributed Systems

IEEE Transactions on Mobile Computing

ACM Transactions on Knowledge and Data Engineering

ACM Transactions on Computer Systems

ACM Computing Reviews

The Computer Journal

Distributed Computing

Discrete Applied Mathematics

Computer Networks and ISDN Systems

International Journal of Mini and Micro Computers

International Journal of Parallel and Distributed Systems and Networks

International Journal of Computers and Their Applications

International Journal of Modeling and Simulation

Journal of Parallel and Distributed Computing

Journal of Systems and Software

Information Sciences: An International Journal

Computer System's Science and Engineering

Concurrency – Practice and Experience

Software – Practice and Experience

Journal of Information Resources Management

International Journal of Applied Intelligence

Computers & Electrical Engineering

Journal of Integrated Computer-Aided Engineering

### Conferences:

ACM International Symposium on Mobile Ad-Hoc Networking and Computing (MobiHoc)  
 International Conference of the IEEE Computer and Communications (INFOCOM)  
 IEEE Global Telecommunications Conference (GLOBECOM)  
 IEEE International Conference on Mobile Ad-hoc and Sensor Systems (MASS)  
 IEEE International Conference on Communications (ICC)  
 IEEE Semiannual Vehicular Technology Conference (VTC)  
 IEEE International Conference on Distributed Computing in Sensor Systems (DCOSS)  
 The 21st IEEE International Conference on Distributed Computing Systems  
 2001 International Conference on Parallel Processing  
 IASTED International Conference on Parallel and Distributed Computing Systems  
 2001 Workshop on Advances in Parallel and Distributed Computational Models  
 The 14th ISCA International Conference on Parallel and Distributed Systems  
 Workshop on Wireless Networks and Mobile Computing (in conjunction with ICPP 2001)  
 The 3rd Workshop on High Performance Scientific and Engineering Computing with Application (HPSECA-01) (in conjunction with ICPP 2001)  
 The 4th International Conference on Algorithms and Architectures for Parallel Processing  
 The 2nd International Conference on Parallel and Distributed Computing, Applications and Technologies  
 The 1st International Workshop on Parallel and Distributed Computing Issues in Wireless Networks and Mobile Computing (in conjunction with IPDPS 2001)  
 The 13th ISCA International Conference on Parallel and Distributed Computing Systems  
 The First International Conference on Parallel and Distributed Computing, Applications and Technologies  
 2000 Proc. of International Parallel and Distributed Processing Symposium  
 2000 International Conference on Parallel Processing  
 The 29th International Symposium on Fault-Tolerant Computing (FTCS-29)  
 1999 International Conference on Parallel Processing  
 1999 ISCA International Conference on Parallel and Distributed Computing Systems  
 The 5th IEEE International Symposium on High-Performance Computer Architecture  
 1998 International Conference on Parallel and Distributed Computing and Networks  
 1998 International Conference on Distributed Computing Systems  
 1998 International Parallel Processing Symposium and International Symposium on Parallel and Distributed Processing  
 1997 ISCA International Conference on Parallel and Distributed Computing Systems  
 1997 IASTED International Conference on Parallel and Distributed Computing and Systems  
 1997 ISCA International Conference on Computer Applications in Industry and Engineering  
 1997 International Conference on Parallel Processing  
 1997 International Parallel and Processing Symposium  
 The 7th International Symposium on Parallel and Distributed Processing  
 1996 IASTED International Conference on Parallel and Distributed Computing and Systems  
 1996 International Conference on Distributed Systems  
 1996 International Workshop on Computer-Aided Design, Test, and Evaluation for Dependability  
 The 3rd International Conference for Young Computer Scientists  
 1996 International Conference on Parallel Processing



The 6th International Symposium on Parallel and Distributed Processing  
 1995 International Conference on Parallel Processing  
 1994 International Conference on Parallel Processing  
 1993 International Conference on Parallel Processing  
 The 25th International Symposium on Fault-Tolerant Computing (FTCS-25)  
 The 23rd International Symposium on Fault-Tolerant Computing (FTCS-23)  
 The 11th Symposium on Reliable Distributed System (SRDS-11)  
 The 12th Symposium on Reliable Distributed System (SRDS-12)  
 1992 International Parallel Processing Symposium  
 1991 International Conference on Parallel Processing  
 The 3rd IEEE Symposium on Parallel and Distributed Systems  
 1990 PARBASE  
 The 5th IFIP WG 11.3 Working Conference on Database Security  
 Hawaii International Conference on System Science (HICSS-27)  
 The 13th International Computer Software and Applications Conference (COMPSAC '89)  
 The 5th ISMM Conference on Parallel and Distributed Computing Systems.

#### **Published Reviews of Books and Articles:**

“Designing Tree-Based Barrier Synchronization on 2D Mesh Networks,” by J. -S. Yang and C. -T. King, *Computing Reviews*, Vol. 40, No. 2, February 1999, 115-116.

“Hierarchical Interconnection Structure for Field Programmable Gate Arrays,” by Y. -T. Lai and P. -T. Wang, *Computing Reviews*, Vol. 39, No. 2, February 1998, 113.

“A Hybrid Distributed Mutual Exclusion Algorithm” by Y-I Chang, *Computing Reviews*, Vol. 38, No. 10, October 1997, 506.

“A Bounded First-in, First-Enabled Solution to the 1-exclusion Problem ” by A. Yehuda et al, *Computing Reviews*, Vol. 36, No. 10, October 1995, 531.

“Network Programming in C” by N. Barry, *Computing Reviews*, Vol. 32, No. 10, 1991, 490-491.

“Dependability of Resilient Computers” by T. Anderson, *IEEE Computer*, Vol. 23, No. 8, 1990, 126.

## **5.8 IEEE Computer Society**

- Chairman: IEEE Technical Committee on Distributed Processing (12/2005-present)
- Secretary and Treasurer: IEEE Technical Committee on Distributed Processing (08/1999-12/2005)

## 5.9 Local Community Service

- The 5th Annual Statewide Florida SECME Olympiad (1990)
- Florida PE preparation classes (1990)

## 5.10 University Service

### **Dept. of Computer Science and Engineering, Florida Atlantic University**

Department Personnel Committee (09/2000-present)

Graduate and Research Committee (09/1993-09/1995, 09/1997-present)

Advisor of CE Graduate Students (09/1994-present)

TA/GA Committee (09/1991-09/1997; Chair, 09/2002-present)

Director of CSE Graduate Programs (09/1997-09/2002)

Executive Committee (09/1997-09/2002)

IEEE Student Advisor (09/1995-09/2001)

Research Committee (Chair, 09/1996-09/1997)

ACM Student Advisor (09/1994-09/1995)

Laboratory and Equipment Committee (09/1992-09/1993)

Coordinator of Computer Engineer Ph.D Qualifying Examination (02/1991-09/1992)

### **College of Engineering, Florida Atlantic University**

College Personnel Committee (09/2001-12/2006, chair: 11/2005-12/2006)

Graduate Studies (09/1993-09/1994)

Math Liaison (09/1990-09/1991)

### **Florida Atlantic University**

University Tenure and Promotion Committee (11/2005-12/2006)

## 6 Instructional Experience

### 6.1 Graduate Level Courses (11 courses, including 8 new courses)

1. Fault-Tolerant System Design – Florida Atlantic University
2. Concurrent Processing – Florida Atlantic University
3. Analysis of Algorithms – Florida Atlantic University
4. Ad Hoc Networks – Florida Atlantic University (new course)
5. Distributed Algorithms – Florida Atlantic University (new course)
6. Internet Routing Protocols – Florida Atlantic University (new course)

7. Design and Analysis of Parallel Algorithms – Florida Atlantic University (new course)
8. Distributed System Design – Florida Atlantic University (new course)
9. Formal Specification Methods – Florida Atlantic University (new course)
10. Introduction to Parallel Computers – Florida Atlantic University (new course)
11. Real-Time Software – Florida Atlantic University (new course)

## **6.2 Undergraduate Level Courses (12, including 1 new course)**

1. Design and Analysis of Algorithms – Florida Atlantic University
2. Data Structure and Algorithm Design Using C – Florida Atlantic University
3. Introduction to Computers – Florida Atlantic University
4. Data Structure and Algorithm Design Using C++ – Florida Atlantic University
5. Introduction to Logic Design – Florida Atlantic University
6. Structured Computer Architecture – Florida Atlantic University
7. Switching Systems – Florida Atlantic University
8. Senior Project – Florida Atlantic University
9. Senior Seminar – Florida Atlantic University
10. Engineering Design II – Florida Atlantic University
11. Programming Language Pascal – Shanghai University of Science and Technology
12. Programming Methodologies – Shanghai University of Science and Technology (new course)

## **6.3 Theses and Dissertations**

### **6.3.1 Ph.D. Dissertations (14 completed and 4 in progress)**

1. A. Srinivasan, “Secured Broadcasting in Mobile Ad-Hoc Networks,” (Summer 2008).  
(Assistant Professor at Bloomburg University of Pennsylvania, Pennsylvania)
2. M. Lu, “Incentive Mechanisms in Mobile Ad-Hoc Networks,” (Summer 2008)  
(Software Engineer at Citrix, Florida), (Summer 2008)
3. S. Yang, “Connected Dominating Set (CDS) in Wireless Ad Hoc Networks: Variations with Applications,” (Fall 2007).

- (Post-doctor at Rensselaer Polytechnic Institute)
4. B. Wu, "Key Management in Secured Ad-Hoc Networks," (Fall 2006).  
(Assistant Professor at Fayetteville State University, North Carolina)
  5. X. Li, "Efficient Searching in Unstructured Peer-to-Peer Networks," (Fall 2006).  
(Assistant Professor at The University of North Carolina at Pembroke, North Carolina)
  6. I. Jawhar, "Quality of Service Support in TDMA-Based Mobile Ad-Hoc Networks," (Summer 2005).  
(Assistant Professor at United Arab Emirates University, UAE)
  7. F. Dai, "Localized Broadcasting in Ad-Hoc Wireless Networks," (Summer 2005).  
(Assistant Professor at North Dakota State University, North Dakota)
  8. W. Lou, "Broadcasting in Ad-Hoc Wireless Networks," (Summer 2004).  
(Assistant Professor at Hong Kong Polytechnic University, Hong Kong)
  9. Z. Jiang, "Fault-Tolerant Routing in Mesh-Connected Networks with Dynamic Faults," (Summer 2002).  
(Tenured Associate Professor at West Chester University, Pennsylvania)
  10. X. Chen, "Fault-Tolerant Routing in 2-D and 3-D Meshes," (Summer 1999).  
(Tenured Associate Professor at Texas State University, Texas)
  11. P. Goyal, "Cube-Connected-Cubes Multicomputers," (Fall 1998).
  12. K. Huang, "The Balanced Hypercube and Its Applications," (Summer 1997).
  13. Y. Wang, "A Uniform Hardware and Software Fault-Tolerant Model," (Fall 1995).
  14. L. Brown, "Fault-Tolerant Distributed Shared Memories," (Fall 1993).
  15. L. Cong, "Design and Implementation of Efficient Routing Protocols in Delay Tolerant Networks," (in progress).
  16. F. Li, "Uncertainty-aware Reputation System in Mobile Networks: Analysis and Applications," (in progress).
  17. J. Chen, "A New Privacy Model for Mobile Networking Applications," (in progress)
  18. Y. Zhao, "Pub/Sub in Delay Tolerant Networks," (in progress).

### 6.3.2 MS Theses (31 completed)

1. R. Thanawala, "Efficient Resource Discovery Technique in a Mobile Ad Hoc Network," (Fall 2008).
2. V. Ponce, "Improving Cooperation in P2P Networks: A Social Network Approach," (Fall 2007).
3. B. Qian, "Multi-Path Intelligent Virtual Mobile Nodes for Ad Hoc Networks," (Fall 2007).
4. T. Anantvalee, "Reputation-Based System for Encouraging the Cooperation of Nodes in Mobile Ad Hoc Networks," (Fall 2006).
5. J. Huang, "A Class-Based Search System in Unstructured Peer-to-Peer Networks," (Summer 2006).
6. T. Xu, "Quorum-Based IP Address Autoconfiguration in Mobile Ad Hoc Networks," (Summer 2006).
7. Y. Wang, "Label Routing Protocol: A New Cross-Layer Protocol for Multi-Hop Ad Hoc Wireless Networks," (Spring 2006).
8. J. Zhang, "XYZ: A Scalable, Partially Centralized Lookup Service for Large-Scale Peer-to-Peer Systems," (Summer 2005).
9. Q. Cheng, "Using Classification and Regression Tree to Detect Hematology Abnormalities," (Fall 2004).
10. J. Wood, "Active Networking and Innovation: An Evaluation of Active Networking as a Driver of Accelerated Internet Innovation," (Summer 2004).
11. C. Huang, "Enhanced Ticket-Based QoS Routing Protocols in Ad Hoc Networks," (Fall 2003).
12. Q. Dai, "Energy Efficient Routing in Ad Hoc Wireless Networks," (Summer 2003).
13. R. Khumanthem, "Mobile Agent and Its Application in Distributed Systems," (Summer 2003).
14. B. Wu, "Power-Aware Broadcasting and Activity Scheduling in Ad Hoc Wireless Networks Using Connected Dominating Sets," (Fall 2002).
15. K. Du, "Data Dissemination in Sensor Networks," (Summer 2002).
16. M. Gao, "Dominating-Set-Based Routing in Ad Hoc Wireless Networks," (Spring 2001).
17. J. Ibriq, "A Reduced Overhead Routing Protocol for Ad Hoc Wireless Networks," (Fall 2000).
18. H. Li, "Routing in Mobile Ad-Hoc Wireless Networks," (Fall 1999).
19. S. Cang, "Time-Step Optimal Broadcasting in Mesh Networks with Minimum Total Communication Distance," (Spring 1999).
20. H. Fu, "Load Balance of a Fire Model in a Network of Workstations," (Fall 1998).
21. H. Huang, "Parallel Algorithms for Domain Load Balance," (Fall 1997).

22. A. C. Wynn, "The Effect of Compression on Performance in a Demand Paging Operating System," (Summer 1997).
23. Y. Luo, "Embedding Binomial Trees in Faulty Hypercube Multiprocessors," (Fall 1996).
24. J. Pan, "Static and Dynamic Load Balance Strategies for a Class of Applications," (Summer 1996).
25. H. Qian, "Multitriangle: A New Interconnection Network," (Summer 1995).
26. W. Huang, "Stewart Platform Accuracy Enhancement," (Summer 1995).
27. H. More, "Load Balancing on Multiprocessor Systems," (Summer 1993).
28. K. Yao, "Fault-Tolerant Multicasting in Hypercube Multicomputers," (Spring 1993).
29. M. H. Fernandez, "Group Structures in Object-Oriented Database Authorization," (Fall 1992).
30. M. Gangadhar, "Fault-Tolerant Scheduling for Multiprocessor Systems," (Summer 1992).
31. M. Zhang, "Design and Modeling of Hybrid Software Fault-Tolerant Systems," (Spring 1992).

## **7 Professional Recognition**

- Outstanding Overseas Young Researcher Award, National Natural Science Foundation of China (NSFC), China, 2006.
- Fulbright Senior Specialist, Council for International Exchange of Scholars, 12/2006-12/2010.
- University Researcher of the Year Award at the Rank of Professor: Florida Atlantic University, 2006-2007.
- International Advisory Board: School of Electronics, Information and Electrical Engineering (SEIEE), Shanghai Jiaotong University, Shanghai, China, 2002 - present.
- Guest Professor: Shanghai Jiaotong University, Shanghai, China
- Guest Professor: National University of Defense Technology, Changsa, China.
- Guest Professor: Central South University, Changsa, China.
- Guest Professor: Shanghai University, Shanghai, China.
- Concurrent Professor: Nanjing University, Nanjing, China.
- IEEE Computer Society and ICDCS'03 Outstanding Service Award, May 2003.
- University Researcher of the Year Award at the Rank of Professor: Florida Atlantic University, 2001-2002.
- IEEE Distinguished Visitor: Computer Society, September 1998 - August 2001.

- Member of US delegation: Sino-American Technology and Engineering Conference, 1999.
- Outstanding Achievements Award: International Association of Science and Technology for Development, 1998.
- University Researcher of the Year Award at the Rank of Associate Professor: Florida Atlantic University, 1996-1997.
- Marquis Who's Who in Science and Engineering.
- Who's Who in Asian American.