CURRICULUM VITAE

Neeraj Mittal

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EDUCATION

Doctor of Philosophy (Ph.D.) in Computer Science, The University of Texas at Austin, USA, May 2002, (GPA: 4.0/4.0).

Dissertation Title: Techniques for Analyzing Distributed Computations
Advisor: Vijay K. Garg
Abstract: Designed, implemented and evaluated global fault detection and recovery algorithms for tolerating software faults in distributed programs.

Master of Science (M.S.) in Computer Science, The University of Texas at Austin, USA, May 1997, (GPA: 4.0/4.0).

Bachelor of Technology (B.Tech.) in Computer Science and Engineering, Indian Institute of Technology, Delhi, India, May 1995, (GPA: 9.75/10.0).

PROFESSIONAL EMPLOYMENT

August 2002 - Present: **Assistant/Associate Professor**, Department of Computer Science, *The University of Texas at Dallas*, Richardson, Texas, USA.

July 2004 - August 2004: **Visiting Professor**, Department of Computer Science, *RWTH (Rhine-Westphalia Technical University) Aachen*, Germany.

June 2002: **Post-Doctoral Fellow**, Electrical and Computer Engineering Department, *The University of Texas at Austin*, Austin, Texas, USA.

May 1999 - August 1999: **Summer Research Intern**, Content Management Group, *IBM Almaden Research Center*, San Jose, California, USA.

May 1997 - August 1997: **Summer Research Intern**, Quality of Service (QOS) Group, *Lucent Bell Laboratories*, Murray Hill, New Jersey, USA.

May 1994 - July 1994: **Software Engineer Intern**, *CMR Design Automation Pvt. Ltd.*, New Delhi, India.

PROFESSIONAL ACTIVITY

August 1999 - May 2002: **Graduate Research Assistant**, Electrical and Computer Engineering Department, *The University of Texas at Austin*, USA.

June 1996 - May 1999: **Graduate Teaching Assistant**, Department of Computer Sciences, *The University of Texas at Austin*, USA.

HONORS AND AWARDS

- **Outstanding Service Award:** Awarded by the Department of Computer Science, The University of Texas at Dallas, December 2010.
- **Distinguished Teacher of the Year, Department of Computer Science:** Awarded by the Erik Jonsson School of Engineering and Computer Science, The University of Texas at Dallas, 2009 - 2010.
- **MCD Graduate Fellowship**: Awarded by University of Texas at Austin for graduate studies, 1995 - 1997.
- **Suresh Chandra Memorial Award**: Awarded by Indian Institute of Technology, Delhi, for the best undergraduate software project, 1995.
- **Certificate of Merit**: Awarded by Indian Institute of Technology, Delhi, for securing the highest grade point average, 1991 - 1994.
- Secured **6th** rank among more than 100,000 candidates in the Joint Entrance Examination (JEE) for the Indian Institute of Technologies (IIT's), 1991.
- **Gold Medal** for securing first position in Mathematics Examination conducted by Ramanujan Society of Born Mathematicians, New Delhi, India, 1991.
- **Junior Science Talent Search Scholarship**: Awarded by Directorate of Education, Delhi, India for two years, 1987 - 1989.

RESEARCH GRANTS

1. *MRI Consortium: Development of Wireless Networking Testbed and Emulator (WiNeTestEr)*, October 1, 2010 - September 30, 2013, Total amount: $985,958, UTD's component: $498,230. Investigators: Ravi Prakash (PI), S. Venkatesan (co-PI), Neeraj Mittal (co-PI) and Bhaskar Banerjee (co-PI). Funding Organization: National Science Foundation (NSF).
2. *Efficient Algorithms for Not-Filtering*, January 2010, Unrestricted Gift, $13,000. Investigator: Neeraj Mittal. Funding Organization: Tektronix, Inc.
3. *Collaborative Research: IUCRC Center Proposal: Net-Centric Software and Systems*, March 1, 2009 - February 28, 2011, $249,417. Investigators: Farokh Bastani (PI), Gopal Gupta (co-PI), Dung T. Huynh (co-PI), Neeraj Mittal (co-PI) and I-Ling Yen (co-PI). Funding Organization: National Science Foundation (NSF).

4. *Concurrent Data Structures for Multi-Core Systems*, January 16, 2009 - January 15, 2010, $42,654. Investigator: Neeraj Mittal (PI). Funding Organization: Tektronix, Inc.

5. *Concurrent Data Structures for Multi-Core Systems*, September 1, 2008 - January 15, 2009, $21,569. Investigator: Neeraj Mittal (PI). Funding Organization: Tektronix, Inc.

6. *Texas Networking Testbed*, June 1, 2008 - May 31, 2009, $673,000. Investigators: S. Venkatesan (PI), Ravi Prakash (co-PI) and Neeraj Mittal (co-PI). Funding Organization: Defense Microelectronic Activity/Crane Aerospace.

7. *I/UCRC: A Planning Activity for Joining the Center for Embedded Systems*, September 1, 2007 - February 28, 2009, $10,000. Investigators: Farokh Bastani (PI), Gopal Gupta (co-PI), Dung T. Huynh (co-PI), Neeraj Mittal (co-PI) and I-Ling Yen (co-PI). Funding Organization: National Science Foundation (NSF).

8. *Texas Networking Testbed*, June 1, 2007 - May 31, 2008, $326,017. Investigators: S. Venkatesan (PI), Ravi Prakash (co-PI) and Neeraj Mittal (co-PI). Funding Organization: Defense Microelectronic Activity/Crane Aerospace.

9. *A Robust Distributed Messaging Architecture based on Publish-Subscribe Framework*, January 1, 2007 - December 31, 2007, $34,592. Investigator: Neeraj Mittal (PI). Funding Organization: Tektronix, Inc.

10. *Network-Centric Operations and Warfare Modelling and Simulation Integration Center*, August 22, 2005 - August 31, 2006, $200,000. Investigators: S. Venkatesan (PI), Ravi Prakash (co-PI) and Neeraj Mittal (co-PI). Funding Organization: Rockwell Collins, Inc.

AREAS OF RESEARCH

Distributed systems, Distributed algorithms, Software fault tolerance, Testing and debugging, Security in wireless networks, and Cognitive radio networks

RESEARCH COLLABORATORS

1. Prof. Vijay K. Garg, Department of Electrical and Computer Engineering, The University of Texas at Austin

2. Prof. S. Venkatesan, Department of Computer Science, The University of Texas at Dallas

3. Prof. Felix C. Freiling, Department of Computer Science, University of Mannheim, Germany

4. Prof. Ravi Prakash, Department of Computer Science, The University of Texas at Dallas

5. Prof. R. Chandrasekaran, Department of Computer Science, The University of Texas at Dallas

6. Dr. Hui-I Hsiao, IBM Almaden Research Center

7. Dr. Chakarat Skawratananond, IBM Austin

8. Prof. Alper Sen, Department of Computer Engineering, Bogazici University, Istanbul, Turkey

9. Prof. Mukesh Singhal, Department of Computer Science, The University of Kentucky, Lexington

10. Prof. Ajay D. Kshemkalyani, Department of Computer Science, University of Illinois at Chicago

11. Prof. Thuc D. Nguyen, Faculty of Information Technology, University of Natural Sciences, Vietnam National University of Ho Chi Minh City

12. Prof. Kamil Sarac, Department of Computer Science, The University of Texas at Dallas

13. Prof. Turgay Korkmaz, Department of Computer Science, The University of Texas at San Antonio

PUBLICATIONS

A. Refereed Journal Publications

1. Ramon Novales and Neeraj Mittal. Parameterized Key Assignment for Confidential Communication in Wireless Networks. *Ad Hoc Networks* (accepted for publication), January 2011.

2. Neeraj Mittal and Ramon Novales. Cluster-Based Key Pre-Distribution Using Deployment Knowledge. *IEEE Transactions on Dependable and Secure Computing (TDSC)*, volume 7, number 3, pages 329–335, July-September 2010.

3. Neeraj Mittal, Srinivasan Krishnamurthy, R. Chandrasekaran, S. Venkatesan and Yanyan Zeng. On Neighbor Discovery in Multi-Channel Cognitive Radio Networks. *Journal of Parallel and Distributed Computing (JPDC)*, volume 69, issue 7, pages 623–637, July 2009.

4. Neeraj Mittal, Kuppahalli L. Phaneesh and Felix C. Freiling. Safe Termination Detection in an Asynchronous Distributed System when Processes may Crash and Recover. *Theoretical Computer Science (TCS) (Special Issue on Selected Papers from OPODIS 2006)*, volume 410, numbers 6–7, pages 614–628, February 2009.

5. Srinivasan Krishnamurthy, Neeraj Mittal, R. Chandrasekaran and S. Venkatesan. Neighbor Discovery in Multi-Receiver Cognitive Radio Networks. *International Journal of Computers and Applications (IJCA)*, volume 31, number 1, pages 50–57, January 2009.

6. Tarun R. Belagodu and Neeraj Mittal. On Maximum Key Pool Size for a Key Pre-Distribution Scheme in Wireless Sensor Networks. *International Journal of Computers and Applications (IJCA)*, volume 31, number 1, pages 30–35, January 2009.

7. Neeraj Mittal, Felix C. Freiling, S. Venkatesan and Lucia D. Penso. On Termination Detection in Crash-Prone Distributed Systems with Failure Detectors. *Journal of Parallel and Distributed Computing (JPDC)*, volume 68, issue 6, pages 855–875, June 2008.

8. Srinivasan Krishnamurthy, Mansi Thoppian, Srikant Kuppa, R. Chandrasekaran, Neeraj Mittal, S. Venkatesan and Ravi Prakash. Time-efficient Distributed Layer-2 Auto-configuration for Cognitive Radio Networks. *Computer Networks (COMNET) (Special Issue on Cognitive Wireless Networks)*, volume 52, issue 4, pages 831–849, March 2008.

9. Vinay Madenur and Neeraj Mittal. A Delay-Optimal Group Mutual Exclusion Algorithm for a Tree Network. *Journal of Information Science and Engineering (JISE)*, volume 24, number 2, pages 573–583, March 2008.

10. Sathya Peri and Neeraj Mittal. Improving the Efficacy of a Termination Detection Algorithm. *Journal of Information Science and Engineering (JISE)*, volume 24, number 1, pages 159–174, January 2008.

11. Neeraj Mittal, Alper Sen and Vijay K. Garg. Solving Computation Slicing using Predicate Detection. *IEEE Transactions on Parallel and Distributed Systems (TPDS)*, volume 18, number 12, pages 1700–1713, December 2007.

12. Ranganath Atreya, Neeraj Mittal and Sathya Peri. A Quorum-Based Group Mutual Exclusion Algorithm for a Distributed System with Dynamic Group Set. *IEEE Transactions on Parallel and Distributed Systems (TPDS)*, volume 18, number 10, pages 1345–1360, October 2007.

13. Neeraj Mittal, S. Venkatesan and Sathya Peri. A Family of Optimal Termination Detection Algorithms. *Distributed Computing (DC)*, volume 20, number 2, pages 141–162, August 2007.

14. Neeraj Mittal and Prajwal K. Mohan. A Priority-Based Distributed Group Mutual Exclusion Algorithm when Group Access is Non-Uniform. *Journal of Parallel and Distributed Computing (JPDC)*, volume 67, issue 7, pages 797–815, July 2007.

15. Ranganath Atreya, Neeraj Mittal, Ajay D. Kshemkalyani, Vijay K. Garg and Mukesh Singhal. An Efficient Algorithm for Detecting a Locally Stable Predicate in a Distributed Computation. *Journal of Parallel and Distributed Computing (JPDC)*, volume 37, issue 4, pages 369–385, April 2007.

16. Vijay K. Garg, Chakarat Skawratananond and Neeraj Mittal. Timestamping Messages and Events in a Distributed System using Synchronous Communication. *Distributed Computing (DC)*, volume 19, number 5-6, pages 387–402, April 2007.

17. Vijay K. Garg and Neeraj Mittal. A Critique of Java for Concurrent Programming. *IEEE Distributed Systems Online*, volume 6, number 9, September 2005.

18. Neeraj Mittal and Vijay K. Garg. Techniques and Applications of Computation Slicing. *Distributed Computing (DC)*, volume 17, number 3, pages 251–277, March 2005.

19. Neeraj Mittal and Vijay K. Garg. Finding Missing Synchronization in a Distributed Computation using Controlled Re-execution. *Distributed Computing (DC)*, volume 17, number 2, pages 107–130, August 2004.

B. Refereed Conference, Symposium and Workshop Publications

1. Neeraj Mittal, Yanyan Zeng, S. Venkatesan and R. Chandrasekaran. Randomized Distributed Algorithms for Neighbor Discovery in Multi-Hop Multi-Channel Heterogeneous Wireless Networks. In *Proceedings of the 31st IEEE International Conference on Distributed Computing Systems (ICDCS)* (accepted for publication), Minneapolis, Minnesota, USA, June 2011. (Acceptance rate: 15%)

2. Suhel Patel, Kamil Sarac, R. Chandrasekaran, Turgay Korkmaz and Neeraj Mittal. Relay Assignment in AMT-based Multicast Content Distribution. In *Proceedings of the 9th Annual Conference on Communication Networks and Services Research (CNSR)* (accepted for publication), Ottawa, Ontario, Canada, May 2011.

3. Chanaka Liyana Arachchige, S. Venkatesan, R. Chandrasekaran and Neeraj Mittal. Minimal Time Broadcasting in Cognitive Radio Networks. In *Proceedings of the 12th International Conference on Distributed Computing and Networking (ICDCN)*, pages 364–375, Bangalore, India, January 2011. (Acceptance rate: 25%)

4. Yanyan Zeng, Neeraj Mittal, S. Venkatesan and R. Chandrasekaran. Fast Neighbor Discovery with Lightweight Termination Detection in Heterogeneous Cognitive Radio Networks. In *Proceedings of the 9th International Symposium on Parallel and Distributed Computing (ISPDC)*, pages 149–156, Istanbul, Turkey, July 2010. (Acceptance rate: 38%)

5. Ramon Novales, Neeraj Mittal and Kamil Sarac. SKAIT: A Parameterized Key Assignment Scheme for Wireless Networks. In *Proceedings of the 9th International Symposium on Parallel and Distributed Computing (ISPDC)*, pages 157–164, Istanbul, Turkey, July 2010. (Acceptance rate: 38%)

6. Ehsan Nourbakhsh, Jeff Dix, Paul Johnson, Ryan Burchfield, S. Venkatesan, Neeraj Mittal and Ravi Prakash. ASSERT: A Wireless Networking Testbed. In *Proceedings of the 6th International Conference on Testbeds and Research Infrastructures for the Development of Networks & Communities (TridentCom)*, pages 209–218, Berlin, Germany, May 2010.

7. Aravind Natarajan and Neeraj Mittal. False Conflict Reduction in the Swiss Transactional Memory (SwissTM) System. In *Proceedings of the 15th International Workshop on High-Level Parallel Programming Models and Supportive Environments (HIPS)*, Atlanta, Georgia, USA, April 2010.

8. Tarun Bansal and Neeraj Mittal. A Scalable Algorithm for Maintaining Perpetual System Connectivity in Dynamic Distributed Systems. In *Proceedings of the 24th IEEE International Parallel and Distributed Processing Symposium (IPDPS)*, Atlanta, Georgia, USA, April 2010. (Acceptance rate: 24%)

9. Ramon Novales and Neeraj Mittal. TASK: Template-Based Key Assignment for Confidential Communication in Wireless Networks. In *Proceedings of the 28th IEEE Symposium on Reliable Distributed Systems (SRDS)*, pages 209–216, Niagara Falls, New York, USA, September 2009. (Acceptance rate: 28.8%)

10. Hai T. Vu, Thuc D. Nguyen, Neeraj Mittal and S. Venkatesan. PEQ: A Privacy-Preserving Scheme for Exact Query Evaluation in Distributed Sensor Data Networks. In *Proceedings of the 28th IEEE Symposium on Reliable Distributed Systems (SRDS)*, pages 189–198, Niagara Falls, New York, USA, September 2009. (Acceptance rate: 28.8%)

11. Paul Johnson and Neeraj Mittal. A Distributed Termination Detection Algorithm for Dynamic Asynchronous Systems. In *Proceedings of the 29th IEEE International Conference on Distributed Computing Systems (ICDCS)*, pages 343–351, Montreal, Quebec, Canada, June 2009. (Acceptance rate: 16.2%)

12. Chanaka Liyana Arachchige, S. Venkatesan and Neeraj Mittal. An Asynchronous Neighbor Discovery Algorithm for Cognitive Radio Networks. In *Proceedings of the 3rd IEEE Symposia on New Frontiers in Dynamic Spectrum Access Networks (DySPAN)*, Chicago, Illinois, USA, October 2008.

13. Tarun Bansal, Neeraj Mittal and S. Venkatesan. Leader Election Algorithms for Multi-Channel Wireless Networks. In *Proceedings of the International Conference on Wireless Algorithms, Systems and Applications (WASA)*, pages 310–321, Dallas, Texas, USA, October 2008.

14. Hai T. Vu, Ajay Kulkarni, Kamil Sarac and Neeraj Mittal. WORMEROS: A New Framework for Defending Against Wormhole Attacks on Wireless Ad Hoc Networks. In *Proceedings of the International Conference on Wireless Algorithms, Systems and Applications (WASA)*, pages 491–502, Dallas, Texas, USA, October 2008.

15. Thuc D. Nguyen, Duc H. M. Nguyen, Bao N. Tran, Hai T. Vu and Neeraj Mittal. A Lightweight Solution for Defending against Deauthentication/Disassociation Attacks on 802.11 Networks. In *Proceedings of the 17th IEEE International Conference on Computer Communications and Networks (ICCCN)*, pages 185–190, St. Thomas, Virgin Islands, USA, August 2008. (Acceptance rate: 26%)

16. Noun Choi, Alieza Mahdian, Ravi Prakash, S. Venkatesan, Neeraj Mittal, Albert J. Anderson, Eric Redding and Robert Butler. A Unified Framework of Node Mobility Models. In *Proceedings of the IEEE Military Communications Conference (MILCOM)*, Orlando, Florida, USA, October 2007.

17. Neeraj Mittal. Space-Efficient Keying in Wireless Communication Networks. In *Proceedings of the 3rd IEEE International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob) (Special Session on Security in Mobile Ad hoc Networks and Wireless Sensor Networks)*, White Plains, New York, USA, October 2007. (Acceptance rate: 25%)

18. Felix C. Freiling, Matthias Majuntke and Neeraj Mittal. On Detecting Termination in the Crash-Recovery Model. In *Proceedings of the 13th European Conference on Parallel and Distributed Computing (Euro-Par)*, pages 629–638, Rennes, France, August 2007. (Acceptance rate: 26.7%)

19. Hai T. Vu, Neeraj Mittal and S. Venkatesan. THIS: THreshold security for Information aggregation in Sensor networks. In *Proceedings of the 4th International Conference on Information Technology: New Generations (ITNG)*, pages 89–95, Las Vegas, Nevada, USA, April 2007.

20. Neeraj Mittal, Kuppahalli L. Phaneesh and Felix C. Freiling. Safe Termination Detection in an Asynchronous Distributed System when Processes may Crash and Recover. In *Proceedings of the 10th International Conference on Principles of Distributed Systems (OPODIS)*, pages 126–141, Bordeaux, France, December 2006. (Acceptance rate: 12.9%)

21. Felix C. Freiling, Matthias Majuntke and Neeraj Mittal. Termination Detection in an Asynchronous Distributed System with Crash-Recovery Failures (Brief Announcement). In *Proceedings of the 8th International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS)*, pages 572–573, Dallas, Texas, USA, November 2006.

22. Mansi Thoppian, S. Venkatesan, Hai T. Vu, Ravi Prakash, Neeraj Mittal and Jackson Anderson. Improving Performance of Parallel Simulation Kernel for Wireless Network Simulations. In *Proceedings of the IEEE Military Communications Conference (MILCOM)*, Washington, DC, USA, October 2006.

23. Sathya Peri and Neeraj Mittal. Monitoring Stable Properties in Dynamic Peer-to-Peer Distributed Systems. In *Proceedings of the 25th IARCS Annual Conference on Foundations of Software Technology and Theoretical Computer Science (FSTTCS)*, pages 420–431, Hyderabad, India, December 2005. (Acceptance rate: 21.1%)

24. Neeraj Mittal and Prajwal K. Mohan. An Efficient Distributed Group Mutual Exclusion Algorithm for Non-Uniform Group Access. In *Proceedings of the 17th IASTED International Conference on Parallel and Distributed Computing and Systems (PDCS)*, pages 367–372, Phoenix, Arizona, USA, November 2005.

25. Srinivasan Krishnamurthy, Mansi Thoppian, Srikant Kuppa, S. Venkatesan, R. Chandrasekaran, Neeraj Mittal and Ravi Prakash. Time-efficient Layer-2 Auto-configuration for Cognitive Radios. In *Proceedings of the 17th IASTED International Conference on Parallel and Distributed Computing and Systems (PDCS)*, pages 459–464, Phoenix, Arizona, USA, November 2005.

26. S. Venkatesan, Maulin Patel and Neeraj Mittal. A Distributed Algorithm for Path Restoration in Circuit Switched Communication Networks. In *Proceedings of the 24th IEEE Symposium on Reliable and Distributed Systems (SRDS)*, pages 226–236, Orlando, Florida, USA, October 2005. (Acceptance rate: 29.9%)

27. Neeraj Mittal, Felix C. Freiling, S. Venkatesan and Lucia D. Penso. Efficient Reduction for Wait-Free Termination Detection in a Crash-Prone Distributed System. In *Proceedings of the 19th International Symposium on Distributed Computing (DISC)*, pages 93–107, Cracow, Poland, September 2005. (Acceptance rate: 18.8%)

28. Ranganath Atreya and Neeraj Mittal. A Dynamic Group Mutual Exclusion Algorithm using Surrogate-Quorums. In *Proceedings of the 25th IEEE International Conference on Distributed Computing Systems (ICDCS)*, pages 251–260, Columbus, Ohio, USA, June 2005. (Acceptance rate: 14.3%)

29. Neeraj Mittal, S. Venkatesan and Sathya Peri. Message-Optimal and Latency-Optimal Termination Detection Algorithms for Arbitrary Topologies. In *Proceedings of the 18th International Symposium on Distributed Computing (DISC)*, pages 290–304, Amsterdam, The Netherlands, October 2004. (Acceptance rate: 21.8%)

30. Sathya Peri and Neeraj Mittal. On Termination Detection in an Asynchronous Distributed System. In *Proceedings of the 17th ISCA International Conference on Parallel and Distributed Computing Systems (PDCS)*, pages 209–215, San Francisco, California, USA, September 2004. (Acceptance rate: 36.8%)

31. Neeraj Mittal, Alper Sen, Vijay K. Garg and Ranganath Atreya. Finding Satisfying Global States: One for All and All for One. In *Proceedings of the 18th International Parallel and Distributed Processing Symposium (IPDPS)*, Santa Fe, New Mexico, USA, April 2004. (Acceptance rate: 32%)

32. Ranganath Atreya, Neeraj Mittal and Vijay K. Garg. Detecting Locally Stable Predicates without Modifying Application Messages. In *Proceedings of the 7th International Conference on Principles of Distributed Systems (OPODIS)*, pages 20–33, La Martinique, France, December 2003. (Acceptance rate: 31.1%)

33. Neeraj Mittal and Vijay K. Garg. Software Fault Tolerance of Distributed Programs using Computation Slicing. In *Proceedings of the 23rd IEEE International Conference on Distributed Computing Systems (ICDCS)*, pages 105–113, Providence, Rhode Island, USA, May 2003. (Acceptance rate: 17.7%)

34. Bharat Goyal, Sriranjani Sitaraman, Neeraj Mittal and S. Venkatesan. Methods to Tackle Vulnerabilities Caused by Lack of Mutual Exclusion. In *Proceedings of the Texas Workshop on Security of Information Systems (TWSIS)*, pages 17–21, College Station, Texas, USA, April 2003.

35. Neeraj Mittal and Vijay K. Garg. Computation Slicing: Techniques and Theory. In *Proceedings of the 15th International Symposium on Distributed Computing (DISC)*, pages 78–92, Lisbon, Portugal, October 2001. (Acceptance rate: 32.8%)

36. Vijay K. Garg and Neeraj Mittal. On Slicing a Distributed Computation. In *Proceedings of the 21st IEEE International Conference on Distributed Computing Systems (ICDCS)*, pages 322–329, Phoenix, Arizona, USA, April 2001 **(nominated for the best paper award)**. (Acceptance rate: 34%)

37. Neeraj Mittal and Vijay K. Garg. On Detecting Global Predicates in Distributed Computations. In *Proceedings of the 21st IEEE International Conference on Distributed Computing Systems (ICDCS)*, pages 3–10, Phoenix, Arizona, USA, April 2001. (Acceptance rate: 34%)

38. Neeraj Mittal and Hui-I Hsiao. Database Managed External File Update. In *Proceedings of the 17th IEEE International Conference on Data Engineering (ICDE)*, pages 557–564, Heidelberg, Germany, April 2001.

39. Neeraj Mittal and Vijay K. Garg. Debugging Distributed Programs using Controlled Reexecution. In *Proceedings of the 19th ACM Symposium on Principles of Distributed Computing (PODC)*, pages 239–248, Portland, Oregon, USA, July 2000. (Acceptance rate: 27.4%)

40. Chakarat Skawratananond, Neeraj Mittal and Vijay K. Garg. A Lightweight Algorithm for Causal Message Ordering in Mobile Computing Systems. In *Proceedings of the 12th ISCA International Conference on Parallel and Distributed Computing Systems (PDCS)*, pages 245–250, Florida, USA, 1999.

41. Neeraj Mittal and Vijay K. Garg. Consistency Conditions for Multi-Object Distributed Operations. In *Proceedings of the 18th IEEE International Conference on Distributed Computing Systems (ICDCS)*, pages 582–589, Amsterdam, The Netherlands, May 1998. (Acceptance rate: 22.3%)

C. Refereed Abstracts and Brief Announcements

1. Ramon Novales and Neeraj Mittal. Templatized Assignment of Symmetric Keys for Confidential Communication in Wireless Networks. *Raytheon Information Systems and Computing Technology Network (ISaC) Technical Symposium*, Dallas, Texas, USA, April 2010.

2. Aravind Natarajan and Neeraj Mittal. Improving Swiss Transactional Memory (SwissTM) System Performance in the Presence of False Conflicts. *Raytheon Information Systems and Computing Technology Network (ISaC) Technical Symposium*, Dallas, Texas, USA, April 2010.

3. Srinivasan Krishnamurthy, R. Chandrasekaran, Neeraj Mittal and S. Venkatesan. Synchronous Distributed algorithms for Node Discovery and Configuration in Multi-channel Cognitive Radio Networks (Brief Announcement). In *Proceedings of the 20th International Symposium on Distributed Computing (DISC)*, pages 572–574, Stockholm, Sweden, September 2006.

4. Bharat Goyal, Neeraj Mittal and S. Venkatesan. A Dynamic Approach to Test Programs for Binding Based Race Condition Vulnerabilities. In *Proceedings of the South Central Information Security Symposium (SCISS)*, Houston, Texas, USA, April 2004.

5. Bharat Goyal, Sriranjani Sitaraman, Neeraj Mittal and S. Venkatesan. A Partial Order Approach to Detect Race Condition Attacks. In *Proceedings of the South Central Information Security Symposium (SCISS)*, Denton, Texas, USA, April 2003.

D. Articles in Edited Volumes

1. Vijay K. Garg and Neeraj Mittal. Time and State in Asynchronous Distributed Systems. *Wiley Encyclopedia of Computer Science and Engineering*, January 2008.

2. Vijay K. Garg, Neeraj Mittal and Alper Sen. Applications of Lattice Theory to Distributed Computing. *ACM Special Interest Group on Algorithms and Computation Theory (SIGACT) News Distributed Computing Column*, volume 34, number 3, pages 40–61, September 2003.

E. Invited Papers

1. Vijay K. Garg, Neeraj Mittal and Alper Sen. Using Order in Distributed Computing. *American Mathematical Society (AMS) Annual Meeting*, San Antonio, Texas, USA, January 2006.

F. Demonstrations

1. Paul Johnson, Ehsan Nourbakhsh, T. Ryan Burchfield, Jeff Dix, Ravi Prakash, S. Venkatesan and Neeraj Mittal. ASSERT: Advanced wireleSS Environment Research Testbed. In *Proceedings of the 7th ACM International Conference on Embedded Networked Sensor Systems (SenSys)*, pages 297–298, Berkeley, California, USA, November 2009.

G. Poster Presentations

1. Neeraj Mittal, Kamil Sarac and Suku Nair. A Robust Distributed Messaging System based on Publish-Subscribe Framework. *NSF Industry University Cooperative Research Center (I/UCRC) Planning Meeting*, Plano, Texas, USA, February 2008.

2. Sathya Peri and Neeraj Mittal. On Efficient Departure for Dynamic Asynchronous Systems (Poster Presentation). In *Annual ACM SIGACT-SIGOPS Symposium on Principles of Distributed Computing (PODC)*, Denver, Colorado, USA, July 2006.

H. Unpublished Technical Reports

3. Neeraj Mittal and Vijay K. Garg. Rectangles are Better than Chains for Encoding Partially Ordered Sets. *Technical Report UTDCS-07-05*, Department of Computer Science, The University of Texas at Dallas, February 2005.

4. Neeraj Mittal and Vijay K. Garg. A Rigorous Proof of $O(n^2)$ Bound on the Number of Moves for Stabilization of Dijkstra's 3-State Algorithm. *Technical Report TR-PDS-2001-005*, The Parallel and Distributed Systems Laboratory, Department of Electrical and Computer Engineering, The University of Texas at Austin, December 2001.

DOCTORAL DISSERTATIONS SUPERVISED

1. Ramon Novales, Fall 2010
2. Hai T. Vu, Summer 2009 (co-advised with S. Venkatesan)
3. Sathya Peri, Summer 2007

MASTER'S THESES SUPERVISED

1. Divya Chandrasekaran, Spring 2010
2. Paul Johnson, Fall 2009 (co-advised with S. Venkatesan)
3. Aravind Natarajan (Computer Engineering), Fall 2009
4. Lee H. Savoie, Fall 2009
5. Tarun Bansal, Summer 2009
6. Vasant Patil, Fall 2008
7. Chowdhury Sucharit Barua, Fall 2007
8. Kuppahalli L. Phaneesh, Summer 2006
9. Tarun R. Belagodu, Spring 2006
10. Matthias Majuntke, RWTH Aachen, Germany, Fall 2005 (co-advised with Felix C. Freiling)
11. Vinay Madenur, Fall 2005
12. Prajwal K. Mohan, Summer 2005
13. Vedha C. Bharathi, Spring 2005

14. Ranganath Atreya, Fall 2004

BACHELOR'S (SENIOR) THESES SUPERVISED

1. Paul Johnson, Spring 2008

SENIOR DESIGN PROJECTS SUPERVISED

1. Vitali Loseu, Spring 2007

CLARK RESEARCH SCHOLARS SUPERVISED

1. Sanner Barnes (co-advised with S. Venkatesan), Summer 2005

DOCTORAL COMMITTEES SERVED

1. Travis Steel, Fall 2010
2. Jinu Kurian, Fall 2009
3. Ajay Bansal, Fall 2007
4. Xu Zhe, Fall 2007
5. Srinivasan Krishnamurthy (Computer Engineering), Fall 2006
6. Maulin Patel, Fall 2006
7. Mansi R. Thoppian, Fall 2006
8. Ajay Mallya, Fall 2006
9. Luke Simon, Summer 2006
10. Sriranjani Sitaraman, Spring 2005

MASTER'S COMMITTEES SERVED

1. Suhel Patel, Summer 2010
2. Manoj Garg, Spring 2010
3. Gadigeppa Malagund, Fall 2009
4. Abhilash Tiwari, Summer 2009
5. Kunal Sahu, Summer 2008
6. Shrirang Khisti, Summer 2008

7. Parag Doshi, Fall 2007
8. Siddanagouda M. Khot, Fall 2006
9. Siddharth Chitnis, Fall 2006
10. Anshuman Jain, Fall 2005
11. Sriram S. Raman, Fall 2005
12. Ganesh Shanmuganathan, Spring 2004

PROFESSIONAL AND UNIVERSITY SERVICES

A. Editorial Boards of Journals

1. Member, Editorial Board, International Journal on Communications Antenna and Propagation (IRECAP), 2011 - Present
2. Member, Editorial Board, International Journal of Computer Networks and Distributed Systems (IJCNDS), 2009 - Present
3. Member, Editorial Board, International Journal on Applications of Graph Theory in Wireless Ad hoc Networks and Sensor Networks (GRAPH-HOC), 2009 - Present

B. Member/Chair, Program Committees of Conferences, Symposiums and Workshops

1. Member, Program Committee (Distributed Computing Track), Thirteenth International Conference on Distributed Computing and Networking (ICDCN), 2012
2. Member, Program Committee, First International Conference on Pervasive and Embedded Computing and Communication Systems (PECCS), 2011
3. Member, Program Committee, Ninth International Symposium on Parallel and Distributed Computing (ISPDC), 2010
4. Member, Program Committee, First International Conference on Parallel, Distributed and Grid Computing (PDGC), 2010
5. Member, Program Committee (Fault Tolerance and Dependability Track), Thirtieth IEEE International Conference on Distributed Computing Systems (ICDCS), 2010
6. Member, Program Committee (Algorithms Track), Twenty-Fourth IEEE International Parallel and Distributed Processing Symposium (IPDPS), 2010
7. Member, Program Committee (Distributed Computing Track), Eleventh International Conference on Distributed Computing and Networking (ICDCN), 2010
8. Member, Program Committee, Fourth International Conference on Mobile Ubiquitous Computing, Systems, Services and Technologies (UBICOMM), 2010
9. Member, Program Committee (Distributed Algorithms Track), Twenty-Ninth IEEE International Conference on Distributed Computing Systems (ICDCS), 2009
10. Member, Program Committee (Systems Safety and Security Track), Eleventh International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS), 2009

11. Member, Program Committee, Fourth IEEE International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob), 2009
12. Member, Program Committee, Third International Conference on Mobile Ubiquitous Computing, Systems, Services and Technologies (UBICOMM), 2009
13. Member, Program Committee, First Workshop on Applications of Graph Theory in Wireless Ad hoc Networks and Sensor Networks (GRAPH-HOC), 2009
14. Member, Program Committee (Distributed Computing Track), Tenth International Conference on Distributed Computing and Networking (ICDCN), 2009
15. Member, Program Committee, Second International Conference on Theories and Applications of Computer Science (ICTACS), 2009
16. Member, Program Committee, Fourth IEEE International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob), 2008
17. Member, Program Committee (Distributed and Parallel Algorithms Track), Twenty-Second IEEE International Conference on Advanced Information Networking and Applications (AINA), 2008
18. Member, Program Committee, Third International Conference on Internet Monitoring and Protection (ICIMP), 2008
19. Member, Program Committee (Algorithms and Theory Track), Twenty-Seventh IEEE International Conference on Distributed Computing Systems (ICDCS), 2007
20. Member, Program Committee, Third IFIP International Conference on Embedded and Ubiquitous Computing (EUC), 2007
21. Member, Program Committee, Second International Conference on Internet Monitoring and Protection (ICIMP), 2007
22. Member, Program Committee, Fifth IEEE International Workshop on Assurance in Distributed Systems and Networks (ADSN), 2006
23. Chair, Program Committee, First IASTED International Workshop on Distributed Algorithms and Applications for Wireless and Mobile Systems (DAAWMS), 2005

C. **Reviewer**, NSF (National Science Foundation) Panel, 2010

D. **Reviewer for Journals, Conferences, Symposiums and Workshops**

Journals:

- Distributed Computing (DC)
- IEEE Transactions on Parallel and Distributed Systems (TPDS)
- IEEE Transactions on Dependable and Secure Computing (TDSC)
- IEEE Transactions on Software Engineering (TSE)
- IEEE Transactions on Mobile Computing (TMC)
- Journal of Parallel and Distributed Computing (JPDC)
- Computer Networks (COMNET)
- Algorithmica
- ACM SIGOPS Operating Systems Review
- Ad Hoc Networks

- Computer Communications (COMCOM)
- The Computer Journal
- International Journal of Wireless and Mobile Computing (IJWMC)
- Journal of Systems and Software (JSS)
- Information Processing Letters (IPL)
- Advances in Software Engineering (ASE)
- EURASIP Journal on Wireless Communications and Networking (JWCN)
- Journal of Computers (JCP)
- International Journal on Applications of Graph Theory in Wireless Ad hoc Networks and Sensor Networks (GRAPH-HOC)

Conferences, Symposiums and Workshops:

- ACM Symposium on Principles of Distributed Computing (PODC)
- International Symposium on Distributed Computing (DISC)
- IEEE International Conference on Distributed Computing Systems (ICDCS)
- IARCS Annual Conference on Foundations of Software Technology and Theoretical Computer Science (FSTTCS)
- IEEE International Parallel and Distributed Processing Symposium (IPDPS)
- IEEE/IFIP International Conference on Dependable Systems and Networks (DSN)
- Annual European Symposium on Algorithms (ESA)
- IEEE International Conference on Advanced Information Networking and Applications (AINA)
- IEEE Symposium on Reliable Distributed Systems (SRDS)
- European Conference on Parallel Computing (Euro-Par)
- IEEE Conference on Local Computer Networks (LCN)
- IEEE International Conference On Networking, Sensing and Control (ICNSC)
- IEEE Symposia on New Frontiers in Dynamic Spectrum Access Networks (DySPAN)
- IEEE Vehicular Technology Conference (VTC)
- IEEE International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob)
- International Conference on Distributed Computing and Networking (ICDCN)
- Latin-American Symposium on Dependable Computing (LADC)
- International Symposium on Stabilization, Safety and Security of Distributed Systems (SSS)
- International Symposium on Parallel and Distributed Computing (ISPDC)
- International Conference on Parallel, Distributed and Grid Computing (PDGC)
- International Conference on Pervasive and Embedded Computing and Communication Systems (PECCS)
- Workshop on Self-Stabilizing Systems (WSS)
- International Conference on Software Engineering and Knowledge Engineering (SEKE)
- Annual International Conference on Advanced Computing and Communications (ADCOM)

E. **Professional Organizations Membership**

1. Association for Computing Machinery (ACM)
2. IEEE (Institute of Electrical and Electronics Engineers) Computer Society

F. **Service to the Program/Department**

1. Member, Annual Review Committee, Department of Computer Science, The University of Texas at Dallas, Spring 2010 - Present
2. Member, Graduate Admissions Committee, Department of Computer Science, The University of Texas at Dallas, Summer 2005 - Present
3. Member, Undergraduate Committee, Computer Engineering Program, The University of Texas at Dallas, Spring 2008 - Present
4. Member, Ph.D. Qualifying Examination Committee for CS 6378: Advanced Operating Systems, Spring 2003 - Fall 2008, Spring 2010 - Fall 2010 (Chair in Fall 2004 and Spring 2007)
5. Judge, ComputingFest Programming Competition, Department of Computer Science, The University of Texas at Dallas, Fall 2006, Spring 2007 and Spring 2008
6. Member, Computer Equipment Committee, Department of Computer Science, The University of Texas at Dallas, Fall 2004 - Spring 2007
7. Member, Ph.D. Qualifying Examination Committee for CS 6385: Algorithmic Aspects of Telecommunication Networks, Fall 2002

G. **Service to the University**

1. External Chair, Ph.D. Committees: Ling Liu (Summer 2008), Yanxin Na (Summer 2005) and David L. Seida (Summer 2003)