

Biographical Sketch of D. Manivannan

EDUCATION

M.S. Mathematics, March 1992, The Ohio State University, Columbus, Ohio.

M.S. Computer and Information Science, March 1993, The Ohio State University, Columbus, Ohio.

Ph.D. Computer and Information Science, August 1997. The Ohio State University, Columbus, Ohio.

APPOINTMENTS:

1998-Present: *Assistant/Associate Professor*, Computer Science Department, University of Kentucky, Lexington, KY.

1997-98: *Visiting Faculty*, Department of Computer and Information Science, Temple University, Philadelphia, PA.

PUBLICATIONS:

Selected list of Journal Publications:

1. D. Manivannan, Shafika Showkat Moni and Sherali Zeadally. "Secure Authentication and Privacy-Preserving Techniques in Vehicular Ad-hoc NETWORKS (VANETs)", *Vehicular Communications* journal (**Impact factor: 4.7**), vol. 25, October 2020, Elsevier.
2. Qiangfeng Jiang and D. Manivannan. "Triangle-based Routing for Mobile ad hoc Networks". *Pervasive and Mobile Computing* journal (**Impact factor: 2.7**), Volume 33, 108-126, December 2016, Elsevier.
3. Kiho Lim and D. Manivannan. "An Efficient Scheme for Authenticated and Secure Message Delivery in Vehicular Ad Hoc Networks". *Vehicular Communications* (**Impact factor: 4.7**) Journal, Volume 4, pp 30-37, April 2016, Elsevier.
4. James Bernsen and D. Manivannan. "RIVER: A Reliability-based Routing Protocol for Vehicular ad hoc Networks". *Computer Networks* (**Impact factor: 3.1**), 56(17): 3795 - 3807 , November 2012, Elsevier.
5. Yi Luo and D. Manivannan. "HOPE: A Hybrid Optimistic Checkpointing and Selective Pessimistic Message Logging Protocol for Large Scale Distributed Systems", *Future Generation Computer Systems* (**Impact factor: 6.2**), 28(8):1217 - 1235, October 2012, Elsevier.
6. Yi Luo and D. Manivannan. "Theoretical and Experimental Evaluation of Communication-Induced Checkpointing Protocols in F_E Family". *Performance Evaluation* Journal (**Impact factor: 1.6**), 68(5): 429 - 445, May 2011, Elsevier.
7. Jiang Wu, D. Manivannan and Bhavani Thuraisingham. "Necessary and Sufficient Conditions for Transaction-Consistent Global Checkpoints in a Distributed Database System". *Information Sciences* (**Impact factor: 5.5**), 179(20):3659-3672, September 2009, Elsevier.
8. Yi Luo and D. Manivannan. "FINE: A Fully Informed and Efficient Communication-Induced Checkpointing Protocol for Distributed Systems". *Journal of Parallel and Distributed Computing* (**Impact factor: 2.3**), 69(2): 153-167, February 2009, Elsevier.
9. James Bernsen and D. Manivannan. "Unicast Routing Protocols for Vehicular Ad Hoc Networks: A Critical Comparison and Classification". *Pervasive and Mobile Computing* (**Impact factor: 2.7**), 5(1):1-18, February 2009, Elsevier.
10. D. Manivannan, Q. Jiang, J. Yang and M. Singhal. "A Quasi-Synchronous Checkpointing Algorithm that Prevents Contention for Stable Storage". *Information Sciences* (**Impact factor: 5.5**), 178(15):3109-3116, August 2008, Elsevier.
11. Qiangfeng Jiang, Yi Luo and D. Manivannan "An Optimistic Checkpointing and Message Logging Approach for Consistent Global Checkpoint Collection in Distributed Systems". *Journal of Parallel and Distributed Computing* (**Impact factor: 2.3**), 68(12): 1575-1589, December 2008, Elsevier.
12. K. E. Persson, D. Manivannan and M. Singhal. "Bluetooth Scatternet Formation: Criteria, Models and Classification". *Ad Hoc Networks* journal (**Impact factor: 3.64**), 3(6):777-794, November 2005, Elsevier Science.
13. Jianchang Yang, Qiangfeng Jiang, D. Manivannan and Mukesh Singhal. "A Fault-Tolerant Distributed Channel Allocation Scheme for Cellular Networks". *IEEE Transactions on Computers* (**Impact factor: 4.14**), 54(5):616-629, May, 2005, IEEE.

14. Jianchang Yang and D. Manivannan. “An Efficient Fault-Tolerant Distributed Channel Allocation Algorithm for Cellular Networks”. *IEEE Transactions on Mobile Computing* (**Impact factor:5.5**), 4(6):578-587, Nov.-Dec. 2005, IEEE.
15. D. Manivannan and M. Singhal. “An Efficient Distributed Algorithm for Detection of Knots and Cycles in a Distributed Graph”. *IEEE Transactions on Parallel and Distributed Systems* (**Impact factor:4.2**), 14(10):961-972, October, 2003, IEEE.
16. D. Manivannan and M. Singhal. “An Efficient Distributed Algorithm for Detection of Knots and Cycles in a Distributed Graph”. *IEEE Transactions on Parallel and Distributed Systems* (**Impact factor:4.2**), 14(10):961-972, October, 2003, IEEE.
17. D. N. Jayasimha, Loren Schwiebert, D. Manivannan and Jeff A. May. “A Foundation for Designing Deadlock-free Routing Algorithms in Wormhole Networks”. *Journal of the ACM* (**Impact factor:3.6**), 50(2):250-275, March 2003, ACM.
18. D. Manivannan and M. Singhal. “Asynchronous Recovery Without Using Vector Timestamps”. *Journal of Parallel and Distributed Computing* (**Impact factor:2.3**), Elsevier Science, 62(12):1695-1728, December 2002.
19. D. Manivannan and M. Singhal. “Quasi-Synchronous Checkpointing: Models, Characterization, and Classification”. *IEEE Transactions on Parallel and Distributed Systems* (**Impact factor:4.2**), 10(7):703-713, July 1999, IEEE.
20. D. Manivannan, Robert H. B. Netzer and M. Singhal. “Finding Consistent Global Checkpoints in a Distributed Computation”. *IEEE Transactions on Parallel and Distributed Systems* (**Impact factor:4.2**), 8(6):623-627, June 1997, IEEE.

SYNERGISTIC ACTIVITIES:

- **Involving Participation of Groups Underrepresented in Science:** Graduated one woman Ph.D student and five women M.S students in Computer Science. Currently supervising one other women Ph.D student.
- **Service to the Scientific Community:**
Journal Editorship (selected list): *Associate Editor/Editorial Board member for:* IEEE Transactions on Parallel and Distributed Systems, IEEE; IEEE Communications Magazine, IEEE; Wireless Personal Communications, Springer; Information Sciences, Elsevier; Internet of Things journal, Elsevier.
- **Reviewer for:**
Reviewed papers submitted to over 25 Journals which include: IEEE Transactions on Mobile Computing; IEEE Transactions on Parallel and Distributed Systems; IEEE Transactions on Dependable and Secure Computing; IEEE Transactions on Computers; IEEE Transactions on Knowledge and Data Engineering; IEEE Computer; Distributed Computing, Springer Verlag; Journal of Parallel and Distributed Computing, Elsevier; ACM Computing Surveys; ACM Journal on Special Topics in Mobile Networking and Applications; ACM Transactions on Information and System Security; IEEE Transactions on Wireless Communications; IEEE Transactions on Vehicular Technology;
Reviewed papers submitted to over 40 International conferences which include: Conference of the IEEE Communication Society (INFOCOM). ACM Symposium on Principles of Distributed Computing (PODC); IEEE International Conference on Distributed Computing Systems (ICDCS); IEEE Symposium on Reliable Distributed Systems (SRDS); International Symposium on Fault-Tolerant Computing; International Conference on High Performance Computing(HiPC); International Symposium on High-Performance Computer Architecture (HPCA); International Conference on Computer Communications and Networks (IC^3N); International Conference on Algorithms and Architectures for Parallel Processing; International Conference on Parallel Processing (ICPP); International Symposium on Distributed Computing (DISC);
National Science Foundation: Served on several proposal review panels of NSF.
- **Program committee member:** Served as Program Committee Member for over 50 IEEE International Conferences

COLLABORATORS and Co-EDITORS: Antonio Casimiro, University of Lisboa, Portugal; Xavier Defago, JAIST, Japan; Takahiro Hara, Osaka University, Japan;

GRADUATE ADVISOR: Mukesh Singhal, The Ohio State University, Columbus, Ohio.

CURRENT PH.D ADVISEES: Hassan Mistareehi and Shafika Showkat Moni.

GRADUATED PH.D ADVISEES: Jianchang Yang, Karl Persson, Yi Luo, Jiang Wu, Qiangfeng Jiang, Kiho Lim, Baban A. Mahmood, Ahmed F. Ibrahim (co-chair), Md. Tariqul Islam.