Sridhar Radhakrishnan

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1. Education

Ph.D.	*Computer Science*, August 1990. Louisiana State University, Baton Rouge, Louisiana. **Dissertation**: *Fast Parallel Algorithms for a class of Graph Related Computational Problems with Applications in Computer Networks and Relational Databases*
M.S.	*Systems Science*, August 1987. Louisiana State University, Baton Rouge, Louisiana. **Project**: *Design and Implementation of Non-First-Normal-Form Relational Database System with Procedurally Defined Attributes*.
M.L.I.S.	*Information Retrieval*, December 1986. Louisiana State University, Baton Rouge, Louisiana.
B.S.	*Computer Science*, April 1985. University of South Alabama, Mobile, Alabama. Graduated with Magna Cum Laude.
B.Sc.	*Physics*, April 1983. Vivekananda College, University of Madras, Tamil Nadu, India.

2. Professional Experience

- *Director*, School of Computer Science, University of Oklahoma, Norman, July 2010 – Present.
- *Founding Co-Director*, Graduate Program in Data Science and Analytics (fully online and traditional), July 2013 – Present.
- *Founding Co-Director*, Data Science and Analytics Institute, July 2019 – Present.
- *Interim Director*, School of Computer Science, University of Oklahoma, Norman, October 2009 – June 2010.
- *Director*, Center for Infrastructure Protection and Hardening Through Education and Research, University of Oklahoma, May 2003 – August 2013.
- *Williams Professor*, School of Computer Science, University of Oklahoma, Norman, January 2018 – Present
- *Professor*, School of Computer Science, University of Oklahoma, Norman, Oklahoma, August 2002 –Present.
- *Associate Professor*, School of Computer Science, University of Oklahoma, Norman, Oklahoma, August 1996 – July 2002.
- *Assistant Professor*, School of Computer Science, University of Oklahoma, Norman, Oklahoma, August 1990 – July 1996.
- *Advisory Member*, Center for Telemedicine, University of Oklahoma, Health Sciences Center, Oklahoma City, Oklahoma, January 1995 – 1997.
- *Teaching Assistant*, Department of Computer Science, Louisiana State University, Baton Rouge, Louisiana, August 1988 – July 1989.
- *Research Associate*, Computer Aided Design and Geographical Information Systems Research Laboratory, Louisiana State University, Baton Rouge, Louisiana, May 1985 – July 1988.

2.1 Leadership Role Achievement Highlights

- Developed strategic plans for the school and ensured that action plans outlined are followed.
- Raised private funds to the tune over $3M for the School of Computer Science and $3.5M for the Data Science and Analytics Institute (DSAI).
- Spearheaded the school through three successful ABET Computing Accreditation visits and each time our self-study was chosen as a model.
- Managed the 300%+ enrollment growth in the undergraduate programs with no increase in faculty or staff strength.
- Developed the document "Computing Oklahoma's Future," to serve as a plan to hire 10+ faculty members in Computer Science over the next few years. This plan was approved.
- Co-Directing and Co-founded the DSAI. Create graduate programs including graduate certificates, master's and doctoral programs in Data Science and Analytics. The graduate program has graduated 170+ students

and consistently enrolls on the average 120 students. Also, created undergraduate certificates programs in Data Science and Analytics. Sought and recruited 4 faculty lines for DSAI. Created mini-campuses with private funds in Oklahoma City, Oklahoma and in Austin, Texas to engage with industry for their upskilling and applied research needs.

- Developed a strategic plan to create a satellite department at our campus in Tulsa, Oklahoma. At this campus, we will offer all our degree programs in Computer Science. This plan was approved, and we are currently recruiting faculty lines for our Tulsa campus.
- Developed the online MS program in Computer Science.
- Sought and obtained funding from state and private sources to the tune of $1M+ for creating a Cyber Range at the OUs campus in Tulsa, Oklahoma.
- Created the CodeSooner program (codesooner.org) that has serves over 2000+ high school students, 50+ schools, and 60+ teacher across high schools in Oklahoma.

3. Awards and Honors

- *Outstanding Faculty*, for advocacy for the advancement of women in engineering, The OU Women in Engineering Program, 2017
- *Innovator of the year 2011,* Journal Record, Oklahoma, 2011.
- WirelessWhere, Inc. Recognized as an "On the Brink Honoree" at the 10th Annual Innovator of the Year Program, sponsored by the Journal Record, Tulsa, Oklahoma, April 5, 2007.
- *OU-Tulsa T-Com Faculty Award*, University of Oklahoma, 2001.
- *ACM National Lecturer*, Association of Computing Machinery, August 1993 to 1995.
- *Junior Faculty Summer Research Fellowship Award*, University of Oklahoma, Norman, Oklahoma, Summer 1992.
- *Outstanding Student Award, Outstanding Academic Achievement Award, Outstanding Performance Award, Magna Cum Laude*, University of South Alabama, Mobile, Alabama, 1985.

4. Research

4.1 Grants Awarded [Total $25M+; Attributable to me $12M]

1. Principal Investigator: "Hydra: Implementation of Multi-Threaded Software for Reconnaissance," Boeing Defense and Space Group, $167,720, September 1, 2020 – December 31, 2020 (with Dean Hougen, Christan Grant, Charles Nicholson, John Antonio)
2. Principal Investigator: "Skynet: Artificial Intelligence and Machine Learning Improvements for Reconnaissance," Boeing Defense and Space Group, $87,710, September 1, 2020 – December 31, 2020 (with Dean Hougen, Christan Grant, Charles Nicholson, John Antonio)
3. Principal Investigator: "Transit Operations: Administering the Compliance Program – Drug and Alcohol Policies," OK-DOT, (Federal Flow Through from Federal Transit Administration), October 1, 2019-September 30, 2021 $520K
4. Principal Investigator: "Software for Paratransit operations," OK-DOT (Federal Flow Through from Federal Transit Administration), July 16, 2010 to 2019, $4.9M
5. co-Principal Investigator: "A Watershed Approach to Ecosystems Conservation, Management and Restoration: Support for Grand Lake of the Cherokees Watershed Planning," Grand Lake Authority, August 17, 2015 – July 31, 2019, $1,883,613 (with Robert Narin, Robert Knox, and Randy Kolar).
6. Principal Investigator: "WxButler: An Artificial Intelligence Planning System for Maritime Logistics," WeatherNews, Inc, August 8, 2016 to December 31, 2017, $160,000 (with Dean Hougen and Christan Grant).
7. co-Principal Investigator: "CC*IIE Engineer: A Model for Advanced Cyberinfrastructure Research and Education Facilitators," National Science Foundation, September 16, 2014 – September 15, 2016, $400,000 (with Henry Neeman and many Senior Personal).

8. co-Principal Investigator: "Oklahoma Friction Free Network," National Science Foundation, September 4, 2013 – August 20, 2016, $499,961 (with Henry Neeman and Many Senior Personal).
9. co-Principal Investigator and Associate Director: "Intermodal Containerized Freight Security," DOT-FHWA, June 13, 2006 to August 15, 2009, $12M + $2.4M in matching (with Thomas L. Landers, Dean, College of Engineering).
10. Principal Investigator: "Methods and Tools for Studying and Improving Paratransit Services," DOT-FTA, August 16, 2006 to August 15, 2010, $406,618.00 (with Mary Court).
11. Principal Investigator: "Sensor System for Determining Turning Movements," OK- TRAN, October 1, 2005 to September 30, 2006, $32,995.00
12. Principal Investigator: "Paratransit Service Quality and Cost Enhancement through Information Technologies," DOT-FTA, July 15, 2004 to July 14, 2009, $419,092.00.
13. Principal Investigator: "System Design and Development for Accessing Traffic Data through the Web," OK-TRAN, October 1, 2004 to September 30, 2007, $135,000.00
14. co-Principal Investigator: "CI TEAM Demonstration: Scalable Cyberinfrastructure for Bioinformatics and Beyond," National Science Foundation, September 14, 206 to August 30, 2007, $126,721 (with Henry Neeman and Many Senior Personal).
15. Principal Investigator: "Improving Work Zone Safety: Real-Time Information and Forewarning Systems," Oklahoma Transportation Center, January 1, 2003 to December 31, 2003, $89,000.
16. Principal Investigator: "Remote Monitoring of Work Zones," Oklahoma Transportation Center, January 16, 2002 to September 30, 2002, $50,000 (with Dean Hougen).
17. Principal Investigator: "Design of Novel User Interfaces for Mobile Devices," Air Logistics Center, Tinker Air force Base, Oklahoma City, Oklahoma, May 16, 2002 to August 15, 2002, $40,000.
18. Principal Investigator: "Information Fusion Methods for Fault Source Detection and Determination of Fault Propagation on the Internet," Department of Energy – Oak Ridge National Laboratory, February 15, 2001 to February 14, 2002, $60,000.
19. co-Principal Investigator: "Design and Evaluation of a Hierarchical Highway Network Structure and a Decision Support System with Surveillance Information to Enhance Business Partnerships in the E-Marketplace," National Science Foundation, August 16, 2000 to August 15, 2001, $100,000 (with Simin Pulat, Joeseph Havelecek, and Jim Sluss).
20. co-Principal Investigator: "Artificial Intelligence Based Inventory and Forecasting," Lucent Technologies, January 1, 2000 to December 31, 2000, $248,428 (with Monte Tull, Joeseph Havelecek, Jim Sluss).
21. Principal Investigator: "Quality of Service Routing Issues in Distributed Sensor Net- works," Department of Energy – Oak Ridge National Laboratory and $10,000 Supplemental grant from Graduate College, University of Oklahoma, November 1, 1999 to September 31, 2000, $40,000.
22. Principal Investigator: "Simulation in Networks," Small Research Grants, Graduate College, University of Oklahoma, March 1999, $1,000.
23. co-Principal Investigator: "Extended Forecasting and Inventory Planning Models," Lucent Technologies, January 1, 1999 to December 31, 1999, $232,754. (with Monte Tull, Joeseph Havelecek, Jim Sluss)
24. co-Principal Investigator: "Artificial Intelligence Based Inventory Planning Models," Lucent Technologies, January 1, 1998 to December 1, 1998, $229,288 (with Monte Tull, Joeseph Havelecek, Jim Sluss)
25. Principal Investigator: "EMC Clearing House Project," Amount – $27,250, Electro Magnetic Compatibility Center, University of Oklahoma, January 1, 1996 to July 31, 1996.
26. co-Principal Investigator: "Self-Advisor Project," Amount – $32,200, OU Associates Grant, University of Oklahoma, Awarded December 1996. (with Linda DeBrunner)
27. Principal Investigator: "Telemedicine Project", Health Sciences Center, University of Oklahoma, $20,000, August 15, 1995 to June 30, 1996.
28. Principal Investigator: "Telemedicine Software", McGee Eye Institute, Health Sciences Center, University of Oklahoma, $6,000, June 1, 1995 to July 31, 1995.
29. Principal Investigator: "Medical Information Superhighway: Design and Implementation", Health

Sciences, University of Oklahoma, $45,397, April 1, 1995 to March 31, 1996.

30. co-Principal Investigator: "A Telecommunications Laboratory", National Science Foundation – ILI Program and matching funds from Spectron, Inc. and University of Oklahoma, $256,656, (with L. DeBrunner and V. DeBrunner)
31. Principal Investigator: "Design and Implementation of Telemedicine Software", Department of Commerce (thru Health Sciences, University of Oklahoma), $74,312, January 1, 1994 to May 30, 1995.
32. co-Principal Investigator: "Multistart Techniques in Interior Point Methods", Center for Information Technology, School of Computer Science, University of Oklahoma, $5,000, May 15 to June 30, 1995. (with Theodore Trafalis)
33. Principal Investigator: "Design and Implementation of Data Structures for Information Retrieval", Dean's Halliburton Funds, University of Oklahoma, $5,000, June 1 1993 to June 30, 1993.
34. Principal Investigator: "Efficient Algorithms on Chordal Graphs", University of Oklahoma, Summer Research Fellowship Award, $5,000, June 1, 1992 to July 31, 1992.

4.2 Publications

4.1 Journal Publications (underlined authors are my students)

1. Qiang Zhu, Min Xu, Krishnaiyan Thulasiraman, Sridhar Radhakrishnan, "Hybrid PMC(HPMC) Fault Model and Diagnosability of Interconnection Networks," Journal of Graphs and Combinatorics, Accepted, 2020, Elsevier.
2. Elliott D Ross, Smita S Gupta, Asif M Adnan, Thomas L Holden, Joseph Havlicek, Sridhar Radhakrishnan, "Neurophysiology of spontaneous facial expressions: II. Motor control of the right and left face is partially independent in adults," Cortex, vol. 111, pp. 164-182, 2019, Elsevier
3. Guo, Wei, Mahendran, V, Radhakrishnan, Sridhar, "Join and spilt TCP for SDN networks: Architecture, implementation, and evaluation," Computer Networks, vol. 137, pp. 160-172, 2018, Elsevier
4. Sweeney, Patrick W, Starly, Binil, Morris, Paul J, Xu, Yiming, Jones, Aimee, Radhakrishnan, Sridhar, Grassa, Christopher J, Davis, Charles C, "Large-scale digitization of herbarium specimens: Development and usage of an automated, high-throughput conveyor system," Taxon, vol. 67, no. 1, pp. 165-178, 2018, International Association for Plant Taxonomy
5. Khondker S. Hasan, John K. Antonio, Sridhar Radhakrishnan, "A model-driven approach for predicting and analyzing the execution efficiency of multi-core processing," International Journal of Computational Science and Engineering, vol. 14, no. 2, pp. 105-125, 2017.
6. Elliott D. Ross, Smita S. Gupta, Asif M. Adnan, Thomas L. Holden, Joseph Havlicek, Sridhar Radhakrishnan, "Neurophysiology of spontaneous facial expressions: I. Motor control of the upper and lower face is behaviorally independent in adults," Cortex, vol. 76, pp. 28-42, 2016.
7. Chandrika J. Satyavolu, Sridhar Radhakrishnan, Venkatesh Sarangan, Thomas L. Landers, Mahendran Veeramani, "Mobile RFID tag reading with non-overlapping tandem readers on a conveyor belt," Ad Hoc Networks, vol. 45, pp. 22-33, 2016.
8. Yuh-Rong, Chen, Sridhar Radhakrishnan, Sudarshan Dhall, Suleyman Karabuk, "The service overlay network design problem for interactive internet applications," Computers & Operations Research, vol. 57, pp. 73-82, 2015.
9. Maher Maalouf, Cameron A. MacKenzie, Sridhar Radhakrishnan, Mary Court, "A new fuzzy logic approach to capacitated dynamic Dial-a-Ride problem," Fuzzy Sets and Systems, vol. 255, pp. 30-40, 2014.
10. Alman Chatterjee, Sridhar Radhakrishnan, John K. Antonio, "Data structures and algorithms for counting problems on graphs using GPU," International Journal of Networking and Computing, vol. 3, no. 2, pp. 264-288, 2013.
11. Yuh-Rong, Chen, Sridhar Radhakrishnan, Sudarshan Dhall, Suleyman Karabuk, "On multi-stream multi-source multicast routing," Computer Networks, vol. 57,no. 15, pp. 2916-2930, 2013.
12. Tao Zheng, Sridhar Radhakrishnan, Venkatesh Sarangan, "A switch agent for wireless sensor nodes with dual interfaces: Implementation and evaluation," Tsinghua Science and Technology, vol. 17, no. 5, pp. 586-598,

2012.

13. Sridhar Radhakrishnan, Shankar M. Banik, Venkatesh Sarangan, Chandra N. Sekharan, "Delay Constrained Subtree Homeomorphism Problem with Applications," IEEE Transactions on Parallel and Distributed Systems, vol. 22, no. 12, pp. 1978-1985, 2011.
14. Chandra N. Sekharan, Shankar M. Banik and Sridhar Radhakrishnan, "On the Heterogeneous Postal Delivery Model for Multicasting," Journal of Communications and Networks, vol. 13, no. 5, pp. 536-543, 2011.
15. Pavan K. Pothuri, Divya L. Ranganathan, Venkatesh Sarangan, Sridhar Radhakrishnan, "Energy-Efficient Routing in Wireless Sensor Networks for Delay Sensitive Applications," International Journal of Ad Hoc and Ubiquitous Computing, vol. 5, no. 2, pp. 103-116, 2010.
16. Aravind Mohanoor, Sridhar Radhakrishnan and Venkatesh Sarangan, "Online Energy Aware Routing in wireless networks," Journal of Ad Hoc Networks, vol. 7, Issue 5, pp. 918-931, 2009.
17. Shankar M Banik, Sridhar Radhakrishnan, Venkatesh Sarangan, Chandra N Sekharan, "Implementation of Distributed Floor Control Protocol on Overlay Networks," IEEE Transactions on Parallel and Distributed Systems, vol. 19, No. 8, pp.1057-1070, 2008.
18. Venkatesh Sarangan, Mallareddy Devarapalli, and Sridhar Radhakrishnan, "A Frame- work for Fast RFID Tag Reading in Static and Mobile Environments," Computer Networks Journal, vol. 52, no. 5, pp. 1058-1073, 2008.
19. Shankar M. Banik, Sridhar Radhakrishnan, Chandra N. Sekharan, "Multicast Routing with Delay and Delay Variation Constraints for Collaborative Applications on Overlay Networks," IEEE Transactions on Parallel and Distributed Systems, vol. 18, no. 3, pp. 421-431. 2007.
20. Jonghyun Kim, Sridhar Radhakrishnan, and Jongsoo Jang, "Cost Optimization in SIS Model of Worm Infection," ETRI Journal, vol.28, no.5, pp.692-695, 2006.
21. Mahnhoon Lee, Sridhar Radhakrishnan, "Efficient parallel algorithm to compute a double perfect elimination ordering of a doubly chordal graph," Discrete Applied Mathematics, vol. 152, no. 1-3, pp. 266-272, 2005.
22. Nageswara S. V. Rao, William Grimmell, Sridhar Radhakrishnan, and Young-Cheol Bang, "On Algorithms for Quickest Paths under Different Routing Modes," IEICE Transactions on Communications, vol. E87-B, no. 4, pp. 1002-1006, 2004.
23. Sridhar Radhakrishnan, Gopal Racherla, Chandra N. Sekharan, Nageswara S.V. Rao, and S.G. Bastell, "Protocol for Dynamic Ad-Hoc Networks Using Distributed Spanning Trees," ACM/Balzer Journal of Wireless Networks, vol. 9, pp. 673–686, 2003.
24. Nageswara S.V. Rao, Young-Cheol Bang, Sridhar Radhakrishnan Qishi Wu, S. Sitharama Iyengar, and Hyunseung Choo, "NetLets: measurement-based routing daemons for low end-to-end delays over networks," Computer Communications, vol. 26, no. 8, pp. 834-844, 2003.
25. Gopal Racherla, Sridhar Radhakrishnan, and Chandra N. Sekharan, "Performance Evaluation of Wireless TCP With Rerouting in Mobile Networks," Computer Communications, vol. 26, no. 6, pp.542-551, 2003.
26. Tarab H. Ali, Sridhar Radhakrishnan, Simin Pulat, and Nagaiah C. Gaddipati, "Relay Network Design in Freight Transportation Systems," Journal of Transportation Research - Part E, vol. 32, no. 1, pp. 61-72, 2002.
27. John G. Del Greco, Chandra N. Sekharan, and Sridhar Radhakrishnan, "Fast Reordering and Isomorphism Testing of *K*-trees," Algorithmica, vol. 44, no. 1, pp. 61-72, 2002.
28. Gopal Racherla, Sridhar Radhakrishnan, B. John Oommen, "Enhanced Layered Segment Trees: a pragmatic data structure for real-time processing of geometric objects," Journal of Pattern Recognition, vol. 35, pp. 2303-2309, 2002.
29. Victor DeBrunner, Linda DeBrunner, and Sridhar Radhakrishnan, "The Telecomputing Laboratory: A Multi-Purpose Laboratory," IEEE Transactions on Education, vol. 44, issue 4, pp. 302-310, 2001.
30. Bang Young Cheol, Sridhar Radhakrishnan, and N.S.V. Rao, "On update algorithms for Quickest Paths," Computer Communications, vol. 23, pp. 1064-1068, 2000.

31. Art Kazmierczak and Sridhar Radhakrishnan, "Distributed Algorithm for Ear Decomposition with Applications," IEEE Trans on Parallel and Distributed Computing, vol. 11, no. 1, pp. 110-118, 2000.
32. R. Gopal, Sridhar Radhakrishnan, and Linda DeBrunner, "Parameterization of Efficient Dynamic Reconfigurable Trees," Journal of Systems Architecture, vol. 46, pp. 951-954, 2000.
33. Victor DeBrunner, Linda DeBrunner, Longji Wang and Sridhar Radhakrishnan, "Robust Transmission of Block-Coded Still Images in Packet Switched Networks," IEEE Communication Surveys, vol. 3. no. 1, pages 14, 2000.
34. Longji Wang, Victor DeBrunner, Linda DeBrunner, and Sridhar Radhakrishnan, "Introduction to Still Image Compression," Vision Systems Design – A Pennwell Publication, vol. 4., no. 9, 1999. *Article in Website: www.vision-systems- design.com.*
35. D.Z. Chen, D.T. Lee, Sridhar Radhakrishnan, and Chandra N. Sekharan, "Solving the All-Pair Query Problem on Interval and Circular-Arc Graphs," Networks, an International Journal, vol. 28, pp. 249-257, 1998
36. K. Han, Sridhar Radhakrishnan, and Chandra N. Sekharan, "Unified Algorithms for the All-Pair Shortest Path Problem in the Chordal hierarchy," Discrete Applied Mathematics, vol. 77, pp. 59-71, 1997.
37. N. Chandrasekharan, V. Goel, and Sridhar Radhakrishnan. "Load Balancing Methods for Ray-Tracing and Binary Tree Computing Using PVM," Parallel Computing, vol. 21, pp. 1963-1978,1995.
38. Sridhar Radhakrishnan and Chandra N. Sekharan, "Highly Parallelizable Problems on Sorted Intervals," Parallel Computing, vol. 21, pp. 433-446, 1995.
39. Sridhar Radhakrishnan, K. Han and Chandra N. Sekharan, "Efficient Algorithms for Shortest Distance Queries on Special Classes of Polygons," Theoretical Computer Science, vol. 140, pp. 291-300, 1995.
40. D.S. Joshi, Sridhar Radhakrishnan and Chandra N. Sekharan, "The *K*-Neighbor *r*- Domination Problem on Interval Graphs," European Journal of Operational Research, vol. 79, pp. 352-368, 1994.
41. R. Subbiah, S.S. Iyengar, Sridhar Radhakrishnan, and R.L. Kashyap, "An Optimal Distributed Algorithm To Recognize Mesh Networks," Theoretical Computer Science, vol. 120, pp. 261-278, 1993.
42. Sridhar Radhakrishnan, R. Subbiah and S.S. Iyengar, "Range Search In Parallel Using Distributed Data Structures," Journal of Parallel and Distributed Computing, vol. 15, no. 1, pp. 70-74, 1992.
43. N.S.V. Rao, Sridhar Radhakrishnan, and S.S. Iyengar, "An $O(n. \log n)$ Set Partitioning Algorithm," International Journal of Computer Mathematics, vol. 40, pp. 129- 138, 1991.
44. Sridhar Radhakrishnan, R. Subbiah and S.S. Iyengar, "Efficient Parallel Algorithm for Range Searching," Databases: Theory, Design and Applications, N. Rishe, S. Navathe and D. Tal (eds.), IEEE Computer Society Press, pp. 23-40, 1991.
45. S. Kundu and Sridhar Radhakrishnan, "An $O(k.n. \log n)$ Algorithm for Decomposing a Set of Polygons into *D*-Separable Components," Journal of Pattern Recognition, vol. 23, no. 7, pp. 735-743, 1990.
46. L.P. Jones, E.W. Gassie, Jr. and Sridhar Radhakrishnan, "INDEX: The Statistical Basis for an Automatic Conceptual Phrase-Indexing System," Journal of American Society for Information Science, vol. 31, pp. 121-135, 1990.
47. L.P. Jones, E.W. Gassie, Jr. and Sridhar Radhakrishnan, "PROTREP: A Portable Repeated String Finder," Software Practice and Experience, vol. 19, no. 1, pp. 63-78, 1989.
48. Chandra N. Sekharan, Sridhar Radhakrishnan and S.S. Iyengar, "On the Minimum Vocabulary Problem," Journal of the American Society for Information Science, vol. 20, pp. 231-238, 1987.

4.2 Books and Book Chapters

49. Sridhar Radhakrishnan, Gopal Racherla, and David Furnun, "Mobile Ad-Hoc Networks: Principles and Practices," Chapter 17, Wireless Internet Handbook: Technologies, Standards, and Applications, pp. 381-403, CRC Press, 2003.
50. Gopal Racherla and Sridhar Radhakrishnan, "Handoffs and Rerouting in Wireless Data Networks," Chapter 16, Wireless Internet Handbook: Technologies, Standards, and Applications, pp. 265-305, CRC Press, 2003.

51. Gopal Racherla and Sridhar Radhakrishnan, "Cellular Data Networks: Handoff and Rerouting," Encyclopedia of Wireless and Mobile Communications, CRC Press, Taylor & Francis Group, 2008.
52. Raj Acharya, Sridhar Radhakrishnan, Venkatesh Sarangan, Aravindhan Venkateswaran, "MANET: Network Mobility as a Control Primitive," Encyclopedia of Wireless and Mobile Communications, CRC Press, Taylor & Francis Group, 2008.
53. Gopal Racherla and Sridhar Radhakrishnan, "Rerouting Schemes: Performance Evaluation," Encyclopedia of Wireless and Mobile Communications, CRC Press, Taylor & Francis Group, 2008.
54. Sridhar Radhakrishnan, Lee Wise, and Chandra N. Sekharan, "Object-Oriented Data Structures Featuring C++," Pages 800, *Currently, used as a textbook for Data Structures at the University of Oklahoma*, 2010.

4.3 Peer Reviewed Conference Publications

55. Michael Nelson, Sridhar Radhakrishnan, Chandra N Sekharan, "Billion-Scale Matrix Compression and Multiplication with Implications in Data Mining," 2019 IEEE 20th International Conference on Information Reuse and Integration for Data Science (IRI), pp. 395-402, 2019.
56. Michael Nelson, Sridhar Radhakrishnan, Chandra N Sekharan, "Queryable Compression on Time-Evolving Social Networks with Streaming," 2018 IEEE International Conference on Big Data (Big Data), pp. 146-151, 2019.
57. Nelson, Michael, Radhakrishnan, Sridhar, Chatterjee, Amlan, Sekharan, Chandra N, "Queryable compression on streaming social networks," 2017 IEEE International Conference on Big Data, pp. 988-993, 2017, IEEE.
58. K. S. Hasan, J. K. Antonio, and S. Radhakrishnan, "A new multi-core CPU resource availability prediction model for concurrent processes," in Proceedings of the International MultiConference of Engineers and Computer Scientists, vol. 1, 2017.
59. Y. Xu, V. Mahendran, W. Guo, and S. Radhakrishnan, "Fairness in fog networks: Achieving fair throughput performance in MQTT-based IoTs," in Consumer Communications & Networking Conference (CCNC), 2017 14th IEEE Annual, pp. 191–196, IEEE, 2017.
60. W. Guo, V. Mahendran, and S. Radhakrishnan, "End-user agnostic join and fork framework for TCP flows in SDN," in Consumer Communications & Networking Conference (CCNC), 2017 14th IEEE Annual, pp. 616–617, IEEE, 2017.
61. W. Guo, V. Mahendran, and S. Radhakrishnan, "Improved video throughput and reduced gaming delay in wlan through seamless SDN-based traffic steering," in Consumer Communications & Networking Conference (CCNC), 2017 14th IEEE Annual, pp. 1–4, IEEE, 2017.
62. Y. Xu, V. Mahendran, and S. Radhakrishnan, "Towards SDB-based fog computing: MQTT broker virtualization for effective and reliable delivery," in Communication Systems and Networks (COMSNETS), 2016 8th International Conference on, pp. 1–6, IEEE, 2016.
63. Y. Xu, V. Mahendran, and S. Radhakrishnan, "Internet of hybrid opportunistic things: A novel framework for interconnecting IoTs and DTNs," in Computer Communications Workshops (INFOCOM WKSHPS), 2016 IEEE Conference on, pp. 1067–1068, IEEE, 2016.
64. Y. Xu, V. Mahendran, and S. Radhakrishnan, "SDN Docker: Enabling application autodocking/undocking in edge switch," in Computer Communications Workshops (INFOCOM WKSHPS), 2016 IEEE Conference on, pp. 864–869, IEEE, 2016.
65. W. Guo, V. Mahendran, and S. Radhakrishnan, "Achieving throughput fairness in smart grid using SDN-based flow aggregation and scheduling," in Wireless and Mobile Computing, Networking and Communications (WiMob), 2016 IEEE 12th International Conference on, pp. 1–7, IEEE, 2016.
66. Chatterjee, M. Levan, C. Lanham, M. Zerrudo, M. Nelson, and S. Radhakrishnan, "Exploiting topological structures for graph compression based on quadtrees," in Research in Computational Intelligence and Communication Networks (ICRCICN), 2016 Second International Conference on, pp. 192–197, IEEE, 2016.
67. M. Nelson, S. Radhakrishnan, A. Chatterjee, and C. N. Sekharan, "On compressing massive streaming graphs with quadtrees," in Big Data (Big Data), 2015 IEEE International Conference on, pp. 2409–2417,

IEEE, 2015.

68. M. Veeramani, C. J. Satyavolu, S. Radhakrishnan, and V. Sarangan, "Block the blocker: A blocker-tag agnostic aloha-based tag reading protocol in dense RFID system," in Advanced Networks and Telecommunications Systems (ANTS), 2014 IEEE International Conference on, pp. 1–6, IEEE, 2014.
69. J. Badarinath, S. Radhakrishnan, V. Sarangan, and V. Mahendran, "Distributed sink tree construction in wireless sensor networks with promiscuous learning," in Vehicular Technology Conference (VTC Fall), 2014 IEEE 80th, pp. 1–5, IEEE, 2014.
70. C. J. Satyavolu, M. Veeramani, S. Radhakrishnan, and J. Ruyle, "Close-coupled chips can coordinate to contain collisions," in Vehicular Technology Conference (VTC Fall), 2014 IEEE 80th, pp. 1–5, IEEE, 2014.
71. K. S. Hasan, A. Chatterjee, S. Radhakrishnan, and J. K. Antonio, "Performance prediction model and analysis for compute-intensive tasks on GPUs," in IFIP International Conference on Network and Parallel Computing, pp. 612–617, Springer, Berlin, Heidelberg, 2014.
72. K. S. Hasan, J. K. Antonio, and S. Radhakrishnan, "A new composite CPU/memory model for predicting efficiency of multi-core processing," in he 20th IEEE International Symposium on High Performance Computer Architecture (HPCA-2014) workshop, 2014.
73. Chatterjee Amlan, S. Radhakrishnan, and C. N. Sekharan, "Connecting the dots: Triangle completion and related problems on large data sets using GPUs," in Big Data (Big Data), 2014 IEEE International Conference on, pp. 1–8, IEEE, 2014.
74. J. Satyavolu, M. Veeramani, and S. Radhakrishnan, "Item-level tagging sees more tags: Analyzing the performance of EPC gen-2 protocol in large-scale RFID systems," in Global Communications Conference (GLOBECOM), 2014 IEEE, pp. 380–385, IEEE, 2014.
75. K. S. Hasan, S. Radhakrishnan, and J. K. Antonio, "Composite prediction model and task distribution on a cloud of multi-core processors," in IEEE International Conference on High Performance Computing (HiPC 2014) Workshop, Bangalore, India (December 2013), 2013.
76. D. Bailey, Y.-R. Chen, S. Radhakrishnan, and S. Karabuk, "Multi-source IPTV networks: Zap time and bandwidth optimization," in Computing, Networking and Communications (ICNC), 2013 International Conference on, pp. 665–670, IEEE, 2013.
77. Chatterjee Amlan, S. Radhakrishnan, and J. K. Antonio, "On analyzing large graphs using GPUs," in Parallel and Distributed Processing Symposium Workshops & PhD Forum (IPDPSW), 2013 IEEE 27th International, pp. 751–760, IEEE, 2013.
78. M. Long, S. Radhakrishnan, S. Karabuk, and J. Antonio, "On zap time minimization in IPTV networks," in Computing, Networking and Communications (ICNC), 2012 International Conference on, pp. 713–718, IEEE, 2012.
79. Chatterjee Amlan, S. Radhakrishnan, and J. K. Antonio, "Counting problems on graphs: GPU storage and parallel computing techniques," in Parallel and Distributed Processing Symposium Workshops & PhD Forum (IPDPSW), 2012 IEEE 26th International, pp. 804–812, IEEE, 2012.
80. M. Maalouf, C. A. MacKenzie, S. Radhakrishnan, and Mary Court, "A new fuzzy logic approach to dynamic dial-a-ride problem," in IIE Annual Conference. Proceedings, Institute of Industrial and Systems Engineers (IISE), 2012.
81. C. J. Satyavolu, S. Radhakrishnan, V. Sarangan, and T. L. Landers, "Framework for cooperative RFID tag reading in mobile environments with multiple readers," in Computing, Networking and Communications (ICNC), 2012 International Conference on, pp. 1172–1177, IEEE, 2012.
82. Zheng, Tao, Sridhar Radhakrishnan, and Venkatesh Sarangan. "A routing layer sleep scheme for data gathering in wireless sensor networks." In Communications (ICC), 2012 IEEE International Conference on, pp. 735-739. IEEE, 2012.
83. T. Zheng, S. Radhakrishnan, and V. Sarangan, "Modeling and performance analysis of DMAC for wireless sensor networks," in Proceedings of the 14th ACM international conference on Modeling, analysis and simulation of wireless and mobile systems, pp. 119–128, ACM, 2011.
84. Y.-R. Chen, S. Radhakrishnan, S. K. Dhall, and S. Karabuk, "On the game server network selection with

delay and delay variation constraints," in Communication Systems and Networks (COMSNETS), 2011 Third International Conference on, pp. 1–10, IEEE, 2011.

85. Tao Zheng, Sridhar Radhakrishnan, and Venkatesh Sarangan, "Modeling and Performance Analysis of DMAC for Wireless Sensor Networks," MSWiM '11: The 14th ACM International Conference on Modeling, Analysis and Simulation of Wireless and Mobile Systems, Miami, FL, 2011.
86. Chen, Yuh-Rong, Radhakrishnan, Sridhar; Dhall, Sudarshan K.; Karabuk, Suleyman, "On the game server network selection with delay and delay variation constraints," Third International Conference on Communication Systems and Networks (COMSNETS), pp. 1-10, Bangalore, India, 2011.
87. Aravind M. Canthadai, Sridhar Radhakrishnan, and Thomas Hughes, "Vector based adaptive sampling in wireless sensor networks," CCNC'10: Proceedings of the 7th IEEE conference on Consumer communications and networking conference, CCNC 2010, pp. 832-833, Las Vegas, Nevada, 2010.
88. Sejin Choi, Venkatesh Sarangan, Johnson Thomas, Sridhar Radhakrishnan, "Secure Access Control Protocol for WSNs with Inter-Network Roaming," 35th Annual IEEE Conference on Local Computer Networks and Workshops, LCN 2010, pp. 260- 263, Denver, Colorado, 2010.
89. Aravind M. Canthadai, Sridhar Radhakrishnan, and Venkatesh Sarangan, "Multi- Radio Wireless Sensor Networks: Energy Efficient Solutions for Radio Activation," Proceedings of the Global Communications Conference, IEEE GLOBECOM, 2010, pp. 1-5, Miami, Florida, 2010.
90. Chen, Yuh-Rong, Radhakrishnan, Sridhar; Dhall, Sudarshan K.; Karabuk, Suleyman, "Server selection with delay constraints for online games," IEEE GLOBECOM, 2010, pp. 882-887, Miami, Florida, 2010.
91. Robert Huck, Al Akkoumi, Mouhammad K., Herath, Ruchira W., Sluss, James J., Jr., Radhakrishnan, Sridhar, Landers, Thomas L., "A demonstration of a low cost approach to security at shipping facilities and ports," Sensors, and Command, Control, Communications, and Intelligence (C3I) Technologies for Home- land Security and Homeland Defense IX., Edited by Carapezza, Edward M. Proceedings of the SPIE, Volume 7666, pp. 76662J-76662J-10 2010.
92. Tao Zheng, Sridhar Radhakrishnan, and Venkatesh Sarangan, "A Switch Agent for Wireless Sensor Nodes with Dual Interfaces: Implementation and Evaluation", Sixth International Conference on Broadband Communications, Networks, and Systems, 2009. BROADNETS 2009, 14-16 Sept. Madrid, Spain, pp. 1-8, 2009.
93. R. Huck, M. Al-Akkoumi, S. Shammaa, J. Sluss, Jr., S. Radhakrishnan, and T. Landers, "A building block approach to security at shipping ports" in Proceedings SPIE Europe Security and Defense, Berlin, Germany, SPIE Vol. 7480, Unmanned - Unattended Sensors and Sensor Networks VI, 2009.
94. Moshe Gutman, Sridhar Radhakrishnan, Changwook Kim, Chandra N. Sekharan, Konstantin Laufer, "GroupSpeak: High-level Language Extension for Workflow Capability," IEEE International Conference on Web Services, pp. 1035-1036, 2009.
95. Xinjie Yu, Sinil Kim, Venkatesh Sarangan, Xiaolin Li, Sridhar Radhakrishnan and Tom Landers, "A Distributed Location Management Scheme for 3D Container Sensor Networks," 3rd International Workshop on Localized Algorithms and Protocols for Wireless Sensor Networks (LOCALGOS 2009), Marina Del Ray, California, June 2009.
96. Aravind Mohanoor, Sridhar Radhakrishnan and Venkatesh Sarangan, "A distributed algorithm for interference aware routing in wireless networks," IEEE Consumer Communications and Networking Conference (CCNC 2009), pp. 1-5, Las Vegas, Nevada, January 2009.
97. Aravind B Mohanoor, Sridhar Radhakrishnan and Venkatesh Sarangan, "Interference Aware Multi-path Routing in Wireless Networks", IEEE MASS 2008, pp.516-518, Atlanta, Georgia, Oct 2008.
98. Malla Reddy Devarapalli, Venkatesh Sarangan, and Sridhar Radhakrishnan, "AFSA: An Efficient Framework for Fast RFID Tag Reading in Dense Environments," ACM/IEEE QShine 2007, Vancouver, August 2007.
99. Aravind M. Canthadai, Sridhar Radhakrishnan, and Venkatesh Sarangan, "On Energy Aware Routing in Wireless Networks," IEEE Broadnets 2007, Raleigh, September 2007.
100. Shankar Banik and Sridhar Radhakrishnan, "Minimizing broadcast latency in ad hoc wireless networks," ACM Proceedings of the 45th annual southeast regional conference, pp. 533-534, 2007.

101. A. Venkateswaran, E. Chittimalla, V. Sarangan, Sridhar Radhakrishnan, and R. Acharya, "Mobility Controllable Relays for Conserving Power in a Network of Mobile Wireless Sensors: Usage and Issues" (invited paper), 2006 IEEE International Symposium on Intelligent Control, Munich, October 2006.
102. Divya Ranganathan, Pavan K. Pothuri, Venkatesh Sarangan, and Sridhar Radhakrishnan, "Energy-efficient routing in wireless sensor networks for delay sensitive applications," Fifth International Conference on Information Processing in Sensor Networks (IPSN) 2006.
103. Shankar Banik, Sridhar Radhakrishnan, Tao Zheng, and Chandra N. Sekharan, "Distributed Floor Control Protocols for Computer Collaborative Applications on Overlay Networks," IEEE First International Conference on Collaborative Computing : Networking, Applications and Worksharing (CollaborateCom 2005), 2005.
104. Tao Zheng, Sridhar Radhakrishnan, and Venkatesh Sarangan, "PMAC: An adaptive energy-efficient MAC protocol for Wireless Sensor Networks," 5th IEEE International Workshop on Algorithms for Wireless, Mobile, Ad Hoc and Sensor Networks, 2005.
105. Shankar Banik, Sridhar Radhakrishnan, and Chandra N. Sekharan, "Multicast Routing with Delay and Delay Variation Constraints for Multimedia Applications," 7th IEEE International Conference on High Speed Networks and Multimedia Communications, Toulouse, France, LNCS - Springer Verlag 3079, pp. 399-411, 2004.
106. Chandra N. Sekharan, Sridhar Radhakrishnan, Dumais Robert, and Raby John, "A Knowledge Environment for Interactive Semi-Autonomous Agents for the Future Force," 8th World Multiconference on Systemics, Cybernetics and Informatics (SCI 2004), Orlando, pp. 214-221, 2004.
107. Jonghyun Kim, Sridhar Radhakrishnan and S. K. Dhall, "Measurement and Analysis of Worm Propagation on Internet Network Topology," IEEE International Conference on Computers, Communications, and Networks (ICCCN 2004), pp. 495-500, 2004.
108. Kim, Jonghyun, Sridhar Radhakrishnan, and Sudarshan K. Dhall. "Optimal Control of Treatment Costs for Internet Worm." In Proceedings of WORM, vol. 4. 2004.
109. Waleed Al-Numay and Sridhar Radhakrishnan, "JTCP: Join Protocols for Improving Performance of TCP," 3rd International Conference on Networking (ICN'04), February 29-March 4, vol. 2, pp. 866-873, Guadeloupe, France, 2004.
110. Young-Cheol Bang, Nageswara S.V. Rao, and Sridhar Radhakrishnan "Algorithms for All-Pairs Reliable Quickest Paths," P.M.A. Sloot et al. (Eds.): ICCS 2003, LNCS 2658, Springer-Verlag, pp. 678-684, 2003.
111. Chandra N Sekharan, Sridhar Radhakrishnan, Shankar M Banik, Nageswara S V Rao, "Duplicating Delays in Network Multicasting: Model, Algorithm and Validation", Proceedings of the 2nd IASTED International Conference on Communications, Internet and Information Technology, November 17-19, Scottsdale, Arizona, USA, pp. 479-484, 2003.
112. Jonghyun Kim, Sridhar Radhakrishnan, Sudarshan K. Dhall, "On Intrusion Source Detection", Proceedings of the 2nd IASTED International Conference on Communications, Internet and Information Technology, November 17-19, Scottsdale, Arizona, USA, pp. 7-12, 2003.
113. Waleed S. Al-Numay, Sridhar Radhakrishnan, Tao Zheng and Chandra N. Sekharan, "Interaction of Wireless TCP Schemes and Rerouting: Analytical Models and Simulation," 23rd IEEE International Conference on Distributed Computing Systems Workshop: Wireless and Mobile Networks, May 19-22, Providence, Rhode Island, USA, pp. 883-889, 2003.
114. N. S. V. Rao, Sridhar Radhakrishnan, and Bang Young-Cheol, "NetLets: End-to- End Performance Guarantees for the Internet," in the proceedings of International Conference on Networking, vol. 1, pp. 184-193, pp. 0184-193 Lecture Notes in Computer Science, 2001.
115. Gopal Racherla, "Multicast Techniques for Wireless Networks," in the proceedings of 5th World Multiconference on Systemics, Cybernetics and Informatics (SCI 2001) and the 7th International Conference on Information Systems Analysis and Synthesis (ISAS 2001), (10 pages), 2001.
116. N.S.V. Rao, William C. Grimmel, Sridhar Radhakrishnan, and Bang Young Choel, "On Algorithms for Quickest Paths Under Different Modes," in the proceedings of ADCOM-2001 9th International

Conference on Advance Computing and Communications, (15 pages), 2001.

117. Sridhar Radhakrishnan and Gopal Racherla, "Parallelization of Dynamic Segment Trees," in the proceedings International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA'2001), (15 pages), 2001.
118. Sridhar Radhakrishnan and Gopal Racherla, "Concurrency Issues in Dynamic Segment Trees," in the proceedings International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA'2001), (12 pages), 2001.
119. Gopal Racherla, Sridhar Radhakrishnan, B. John Oommen, "A New Geometric Tool for Pattern Recognition - An Algorithm for Real Time Insertion of Layered Segment Trees," Advances in Pattern Recognition - ICAPR 2001, S. Singh, N. Mur- shed, and W. Kropatsch (Eds.): Springer-Verlag, LNCS 2013, pp. 212-221, 2001.
120. Sunghyuk Kim, Sridhar Radhakrishnan, and Monte Tull, "A New HandoffChannel Allocation Algorithm for Mobile Cellular Networks," in the Proceedings of the International Conference on Third Generation Wireless Communications, 2000.
121. R. Gopal and Sridhar Radhakrishnan, "A Survey of Security in Wireless and Mobile Networks," in the proceedings of COMNAM, 2000.
122. Janice McNair, Ian F. Akyildiz, R. Gopal, and Sridhar Radhakrishnan, "Handoff Rerouting Scheme for Multimedia Connections in ATM-based Mobile Networks," in the proceedings of IEEE Vehicular Technology Conference, 52nd, vol. 2, pp. 630-637, 2000.
123. Sridhar Radhakrishnan, R. Gopal, Chandra N. Sekharan, N.S.V. Rao, and Stephen Bastell "DST – A Routing Protocol for Ad Hoc Networks Using Distributed Spanning Trees," in the proceedings of IEEE Wireless Communications and Networking Conference, pp. 1543-1547, 1999.
124. Bang Young Cheol, Sridhar Radhakrishnan, and N.S.V. Rao, "On Multicasting with End-to-End Delays," in proceedings of Eighth International Conference on Communications and Networks, 1999.
125. R. Gopal and Sridhar Radhakrishnan "Performance Evaluation of Mobile-Mobile Rerouting Schemes for Connection-oriented Networks," in proceedings of 5th International Conference on Information Systems, Analysis, and Synthesis: Communications Systems, Internet and Mobile/Wireless Computing, pp. 645-652, 1999.
126. R. Gopal and Sridhar Radhakrishnan, "Comparative Evaluation of Rerouting Strategies in Connect-oriented Mobile Networks," in proceedings of 5th International Conference on Information Systems, Analysis, and Synthesis: Communications Systems, Internet and Mobile/Wireless Computing, pp. 637-644, 1999.
127. R. Gopal, Sridhar Radhakrishnan, and Chandra N. Sekharan, "A Distributed Rerouting Algorithm for Mobile-Mobile Connections in Connection-Oriented Networks," in proceedings of Seventh International Conference on Communications and Networks, pp. 40-44, 1998.
128. R. Gopal, Sridhar Radhakrishnan, and Chandra N. Sekharan, "Performance Evaluation of Various Wireless TCP under different Rerouting Schemes in Mobile Networks," in proceedings of IEEE TENCON, pp. 93-96, vol. 1, 1998.
129. M. Lee, Sridhar Radhakrishnan, and Chandra N. Sekharan, "Parallel Recognition of Doubly Chordal Graphs," High Performance Computing Conference, Asia'97, pp. 373-376, 1997.
130. V. DeBrunner, Sridhar Radhakrishnan, and L. DeBrunner, "The Telecomputing Laboratory: A Multipurpose Facility in DSP Education at the University of Oklahoma," ICASSP'96, Atlanta, GA, vol. II, pp. 1117-1120, May 1996
131. V. DeBrunner, Sridhar Radhakrishnan, and L. DeBrunner, "Moving DSP into New Curricular Areas," 30th Annual Asilomar Conference on Signals, Systems, and Computers, Pacific Grove, CA, vol. I, pp. 216-220, 1996.
132. J.S. Patrick, J.L. Sanders, V. DeBrunner, L. DeBrunner, and Sridhar Radhakrishnan, "JPEG Compression/Decompression via Parallel Processing," 30th Annual Asilomar Conference on Signals, Systems, and Computers, Pacific Grove, CA, vol. II, pp. 596-600, November 1996.
133. Sridhar Radhakrishnan and V.E. DeBrunner, "Computational Aspects of Telemedicine," in proceedings

of the 29th Annual Asilomar Conference on Signals, Systems, and Computers, Pacific Grove, California, November 1995. Invited Paper.

134. V.E. DeBrunner, L.S. DeBrunner, Sridhar Radhakrishnan and W.D. Ballew, "An NSF Funded Laboratory: Telecomputing and Telecommunications Laboratory," in proceedings of the Annual Conference of the American Society of Engineering Educators, Anaheim, California, vol. 2, pp. 2271-2275, June 1995.
135. R. Gopal and Sridhar Radhakrishnan, "Parametrized Dynamic Reconfigurable Trees," in the proceedings of International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA' 95), Athens, Georgia, November 1995.
136. V.E. DeBrunner, L.S. DeBrunner, Sridhar Radhakrishnan, W.D. Ballew, "An NSF Funded Teaching Laboratory: Telecommunications and Telecomputing Laboratory," in the Proceedings of 1995 Annual Conference on ASEE, Anaheim, California, pp. 2271-2275,1995.
137. A. Kazmierczak and Sridhar Radhakrishnan, "Efficient Distributed Algorithms for Ear Decomposition with Applications to Biconnectivity and Outerplanarity Testing," in the Proceedings of the Fifth IEEE Symposium on Parallel and Distributed Processing, pp. 486-489,1993.
138. A. Kazmierczak and Sridhar Radhakrishnan, "Fast Distributed Algorithms for Dis- joint Paths and Connectivity," in the Proceedings of the Sixth ISCA International Conference on Parallel and Distributed Computing Systems, pp. 609-615, 1993.
139. D.S. Joshi, Sridhar Radhakrishnan and N. Chandrasekharan, "Efficient Algorithms for All-Pairs Shortest Path Problems on Interval, Circular-Arc, and Directed Path Graphs," in the Proceedings of the 5th International Conference on Computing and Information, pp. 31-35,1993.
140. S. Hannenhalli, K. Perumalla, N. Chandrasekharan and Sridhar Radhakrishnan, "A Distributed Algorithm for Ear Decomposition," in the Proceedings of the 5th International Conference on Computing and Information, pp. 180-184, 1993.
141. D.S. Joshi, Sridhar Radhakrishnan and N. Chandrasekharan, "A Fast Algorithm for Generalized Network Location Problems," in the Proceedings of the 1993 Symposium on Applied Computing, pp. 701-708, 1993.
142. A. Kazmierczak and Sridhar Radhakrishnan, "Optimal Distributed Algorithm for Most Vital Arc in a Shortest Path," in the Proceedings of ISMM International Conference on Parallel and Distributed Systems, pp. 167-169, 1992.
143. Sridhar Radhakrishnan and N. Chandrasekharan, "On the Recognition of Strongly Chordal Graphs," in the Proceedings of 29th Annual Allerton Conference on Communication, Control, and Computing, pp. 475-483, 1991.
144. N. Chandrasekharan and Sridhar Radhakrishnan, "Canonical Base of a *k*-Tree: Parallel Algorithms and Applications," in the Proceedings of Annual Conference on Graph Theory with Applications to Computer Science, Kalamazoo, pp. 285-289, 1991.
145. Sridhar Radhakrishnan and S.S. Iyengar, "Efficient Parallel Algorithms for Functional Dependency Manipulations," in Proceedings of Second International Symposium on Databases in Parallel and Distributed Systems, Dublin, Ireland, pp. 37-46, 1990.
146. Sridhar Radhakrishnan, R. Subbiah and S.S. Iyengar, "Range Search in Parallel Using Distributed Data Structures," in the Proceedings of International Conference on Parallel and Distributed Database Systems (PARBASE), pp. 130-139, 1990.
147. Sridhar Radhakrishnan and S.S. Iyengar, "Fast Parallel Algorithms to Recognize Strongly Chordal, Ptolemaic, and Block Graphs," in the Proceedings of 1990 International Parallel Processing Conference, pp. 256-261, 1990.
148. Sridhar Radhakrishnan and N.S.V. Rao, "Conversion of Inverted Files to Multiple Attribute Tree Data Structure," in the Proceedings of ACM Southeastern Conference, Mobile, Alabama, pp. 359-363, 1988.

5 Teaching

5.1 Highlights

- Taught 14 different courses (introduced 8 new courses) in Computer Science including the following: Introduction to Programming, Data Structures, Data Structure Theory, Advanced Data Structures, Computational Geometry, Computing Structures, Data Networks, Operating Systems, Wireless and Mobile Networks, Internet Programming, Parallel Programming, Software Engineering, Network Science, Algorithm Analysis, and Telecommunications Laboratory.
- Consistently received the rating of Excellent in teaching in the department's annual evaluation at the University of Oklahoma.
- Wrote a textbook on Data Structures titled "Data Structures Featuring C++: A Programmer's Perspective"
- Created many online courses including the course DSA 5005 – Computing Structures and CS 5483 – Network Science
- Directed over 120 independent and honors research for undergraduate and graduate students.
- Directed 17 PhD dissertation completions and 17 MS thesis completions.
- Supervised 3 post-doctoral fellows.
- Actively involved in the Telecommunications Program at Tulsa during its inception.
- Co-created the Online MS program in Data Science and Analytics
- Created the Online MS program in Computer Science
- Created the codesooner program at OU for teaching high school students programming. Currently it enrolls nearly 2000 high school students (www.codesooner.org)
- Created the undergraduate program in Computer Science at the OU Tulsa campus. Graduate programs to be added soon.

5.2 Supervision of PhD Students

1. Art Kazmierczak (Ph.D Fall 1993) – "Distributed Algorithms for Problems on Networks."
2. Keunhee Han (Ph.D Spring 1996) – "Graph Algorithms on Special Graphs."
3. Mahnhoon Lee (Ph.D Fall 1996) – "Algorithms and characterizations of special graphs in the chordal hierarchy"
4. Gopal Racherla (Ph.D Summer 1999) – "Algorithms for routing and rerouting in mobile wireless and ad hoc networks."
5. Bang Young Choel (Ph.D Summer 2000) – "Quality of Service Routing in Wide Area Networks."
6. Wahleed Al-Numay (Ph.D Fall 2003) – "Design and evaluation of protocols for wireless networks taking into account the interaction between transport and network layers."
7. Kim Jonghyun (Ph.D Spring 2005) – "Modeling, analysis and defense strategies against Internet attacks."
8. Shankar Banik (Ph.D, Spring 2006) – "Protocols for collaborative applications on overlay networks."
9. Aravind Mohanoor (Ph.D, Fall 2009) – "Data gathering techniques on wireless sensor networks."
10. Tao Zheng (Ph.D, Spring 2011) – "Energy-efficient protocol design and analysis for wireless sensor networks."
11. Yuh-Rong Chen (Ph.D, Spring 2012) – "On multimedia content delivery and multicasting."
12. Khondkar Hasan (Ph.D, Spring 2014) – "Prediction models for estimating the efficiency of distributed multi-core systems." (co-Advised with John K. Antonio)
13. Amlan Chatterjee (Ph.D, Spring 2014) – "Parallel algorithms for counting problems on graphs using graphics processing units."
14. Chandrika Satyavolu (Ph.D, Fall 2014) – "Framework for improving performance of protocols for reading radio frequency identification tags."
15. Yiming Xu (Ph.D, Fall 2017) – "Design, Implementation, and Evaluation of an In-house Controller for

Software Defined Networking with Applications."
16. Wei Guo (Ph.D, Fall 2017) - "Design, Implementation, and Evaluation of Join and Split Strategy for Transmission Control Protocol Running on Software Defined Networks."
17. Michael Nelson (Ph.D, Fall 2019) – "Compressing Massively Streaming Graphs."
18. Sudhindra Gopal (Ph.D Expected Spring 2022) – "Parallel Execution Models for Extreme-Scale Networks."
19. Aditya Narasimhan (Ph.D Expected Spring 2022) – "Algorithms for Executing Algorithms on Compressed Structures."
20. Reza Gheibi (Ph.D. Expected Summer 2023), "Computing in Small Spaces: Theory and Practice"

5.3 Supervision of MS Thesis

21. Dipti S. Joshi (M.S, Fall 1993) – "Efficient Algorithms for Domination and Shortest Path Problems on Special Graphs."
22. Bernice Rhodes (M.S, Fall 1995) – "Algorithms for Spatial Data Structures."
23. Connie J. Nabors (M.S., Fall 1995) – "Comparison of On-Chip Cache Organizations."
24. Racherla V. Gopal (M.S. Fall 1995) – "Algorithms for Segment Trees."
25. Vijay Gajala (M.S. Spring 1996) – "Algorithms for Prefetching in the World Wide Web."
26. Nagiah Chowdhury (M.S. Fall 2002) – "Power Efficient Medium Access Protocols in the Ad hoc Network Environment."
27. Lalitha, Krishnamurthy (M.S., Fall 2002) – "Power Aware Medium Access Control Protocol."
28. Aravind Mohanoor, (M.S., Summer 2004)– "Shortest Path and Road Networks"
29. Bharath Ramanujam, (M.S., Summer 2004) – "Dynamic Tracking Updates for Wi-Fi Architectures."
30. Tarab Ali, (M.S., Spring 2002) – "Relay Networks for Freight Transportation."
31. Jayashree Badarinath, (M.S., Fall 2009) – "Promiscuous Learning in Distributed Sensor Networks."
32. Mattew G. Long, (M.S., Spring 2011) – "Improving Zap Time and Bandwidth Utilization in IPTV Networks."
33. Daniel Bailey, (M.S., Spring 2012) – "Improving Client and Channel Assignment in IPTV Multicast Networks."
34. Michael Nelson, (M.S, Spring 2014) – "Compressing Large Graphs with Quad-Trees."
35. Addison Womack (M.S., Spring 2019) – "Compressing DNA Sequences."
36. Dorian Selimovic (M.S., Fall 2019) – "Multiple Attribute Trees and Compression of DNA sequences."
37. Leslie Johnathan (M.S., Expected Summer 2021), "Approximate Sorting: Internal and External Methods."

6 Service Activities

6.1 School

- *Director* (2010 – Present), *Interim Director* (2009 – 2010)
  - Academic Programs (Undergraduate)
    - The undergraduate program saw a healthy growth from approximately 230 students in Fall 2009 to 600 students today (Fall 2020). This is in line with the national trends.
    - Conceived, planned, sought support and funding to create the new computer science programs at the University of Oklahoma's campus in Tulsa, Oklahoma.
    - Managed and continuing to manage enrollment growth by seeking funding for teaching assistants from internal and external sources.
    - The number of students minoring in Computer Science grew from approximately 40 (Fall 2009) students to over 180 students today (Fall 2020).
    - Create a new minor in Computational Technology with cognate disciplines such as Journalism, Geography, Library and Information Sciences, and others.
    - Worked with the School of Industrial and Systems Engineering (ISE) to create the Analytics track within ISE. Students take a variety of computer science courses as part of their degree program.
    - Worked with the undergraduate committee and faculty to make significant changes to the computer science curriculum. Now it allows students to minor in a field of their choice within the total required credit hours for the program.
    - Worked with faculty to create courses in Computational Thinking and Python Programming and obtained full funding for its delivery.
    - Worked with faculty (Deborah Trytten) to redesign the beginning programming course sequence in Computer Science with the goal of retaining students especially women students. Currently, approximately 18% of our students are women.
    - Created the teaching scholar's program with funding from private sources. Students selected in this program will serve as tutors for a variety of courses in the school.
    - Enhanced the experience in capstone courses (Software Engineering I and II) by approaching industry for projects and receiving funding for the same.
    - Supported various student groups in the school through funding from private sources, including the Association of Women in Computing for their travel to the Grace Hopper Women in Computing Conference.
    - Oversaw the successful (without any shortcomings) accreditation visit by the ABET Computing Accreditation Commission in 2010. Our self-study was chosen as a model and was displayed in ABET's annual conference.
    - **Software Studio**: Conceived and launched an environment for student experiential learning. Students form multidisciplinary teams and come up with software projects (including app development). Since Fall 2014, 20+ teams have participated impacting over 200 students. Software Studio has received private donation of $250K from William Kerber (a former student in the program), which will be used recruit student mentors for the teams.
    - **Software Business Accelerator**: Conceived and launched along with Department of Entrepreneurship in 2010 this environment allows students to understand interworking of startups. Students in this program are put this real-world projects and learn the entire life cycle of startup companies in the software world.

  - Academic Programs (Graduate)
    - Conceived and launched the Master of Science program in Data Science and Analytics (along with Randa Shehab (Former Director of School of Industrial and Systems Engineering and now the Associate Dean). This program is offered fully online and in the traditional format and it is growing at a tremendous rate (4 students in Fall 2014 to 120 students in Fall 2020). This program was also chosen to be one of exclusive program by AT&T, which allows their employees to pursue this graduate degree program with full

reimbursement.
- Conceived the MS in Computer Science, online program that is to be launched in Spring 2021.
- The School organizes an information session every semester on the accelerated degree program. Through this we were able to consistently recruit 15 – 20 of our top students (requirement of 3.5 GPA) to our graduate program.
- Conceived and launched the Hitachi Distinguished Lecture Series with funding from Hitachi Corporation. Annually between 2-3 distinguished lectures are brought to campus.

- Administrative Affairs
  - Created a new position 'Academic Programs Coordinator' to process all undergraduate advising interactions with faculty and engagement with undergraduate students. This individual is also responsible for all graduate administrative duties.
  - Managed the School's budget prudently amidst a total budget permanent reduction of 22% since 2008. In addition there were one time cost reduction to the tune of $100K. Note that the student population during the same time rose over 125% during the same time period.
  - Managed the hiring process to hire 6 high talented staff members to replace those who left voluntarily or chose to retire.
  - Completed two six-year Academic Program Review at the University of Oklahoma (2010 and 2016).
  - For the first time after 28 years, lead the committee to change the annual evaluation, tenure, and promotion document for the school. This addressed various issues relating to workload distributions.
  - Coordinated with the faculty to write the strategic planning document in 2013 and in 2017 and developed the new plan with faculty for years 2018-2022.
  - Processed 4 tenure and promotion applications and 3 promotions to full professorship. Additionally, each year processed several post-tenure and progress-towards-tenure applications.
  - Campaigned and obtained three faculty positions for the School. More than 70% of the startup funding (between $200K - $300K) came from saved up monies from 2008 to 2017.
  - With nominations from the Director the School faculty received 4 Presidential Professorship awards, 1 David Ross Boyd Professorship, 1 Regents Award for Superior Teaching, and 1 Oklahoma Higher Education Hall of Fame.
  - Coordinated all activities of all subcommittees in the school including: undergraduate committee, undergraduate advising committee, graduate studies committee, graduate and undergraduate engagement committee, research committee, computing committee, and others.

- Outreach and Engagement
  - **Code Sooner**: Conceived and launched a program to teach high school teachers the art of teaching computer science and programming. Produced video lectures for the entire academic year for high school AP Computer Science and AP Computer Science Principles course. The entire learning material is available online on the Janux Platform (OU's online platform) for teachers and high school students to use. This program enrolls nearly 500 high school students.
  - Organized the Annual Computer Science Education week, a forum to bring awareness. During this period we talk about CS with various constituents in the University and also bring middle school and high school students on campus to bring awareness about the discipline.
  - Conceived and implemented starting in 2010 the Annual Computer Science Welcome day to invite all CS majors to the school to celebrate. This program was fully funded from Industry.
  - Conceived and implemented starting in 2012 the Annual Computer Science Banquet the celebrated the many achievements for all our students. This program was fully funded from Industry.

- Development
  - Worked with development staff of Gallogly College of Engineering for development activities including funding for various activities and initiatives in the school including: capstone projects, graduate fellowships, teaching scholars, software studio mentors, travel to Grace Hopper Women in Computing,

High School Programming competition, CS education week, annual CS welcome party, annual CS Banquet, and others. Attracted private donor funding for the school in excess of over $1.5M.

- Others
  - Liaison with the Office of the Vice President for Research on various research initiatives that effects the school including the Informatics+ initiative.
  - Member of the Provost's Academic Programs Review committee for a couple of years.
  - Worked with the Provost to perform analysis on various statistics courses on campus.
  - Worked with the Provost to obtain funding for various schools' initiative including funding for new general education courses and the Code Sooner initiative.
  - Served on search committee for the many faculty positions in the college and our departments on campus including Dean positions.

- *Co-Director*, Graduate Program in Data Science and Analytics (with Randa Shehab)
  - Founding co-Director for the program
  - Curriculum Development including identifying multidisciplinary courses for development
  - Recruitment Campaign
  - Budgeting and Financial Management
  - Graduate Liaison
  - Advisory Board Liaison

- *Other School Committee Work* (Before Directorship)
  - Coach, ACM programming competition team, Member Computing Committee, Member Graduate Recruiting Committee, Graduate Liaison, Chair UG advising committee, Faculty Recruiting Committee, and Committee A member.

6.2 College

- Served on various committees including: Computing Committee, core-curriculum committee, awards and honors committee, faculty search member for other schools in the college, and the Deans Advisory council.

6.3 University

- Served on various committees including: University Library Committee, Faculty Search committee, Deans Search Committee, Member of Faculty Appeals Board, Member of Graduate Research Council, Member of Faculty Senate, Member of Athletics Council, Founding Member of the Center for Telemedicine Network at the Health Sciences Center in Oklahoma, and Director for the Center for Infrastructure Hardening Through Education and Research (along with John K. Antonio).

6.4 Professional Activities

- Senior Member, IEEE Computer Society
- Member, Association of Computing Machinery
- ABET Computing Accreditation Commission: Evaluator, Team Chair, and Commissioner
- Reviewer for many journals and conferences in areas of Computer Networks, Algorithms, and Parallel and Distributed Computing.
- Founder of WirelessWhere, Inc. – A company focused on the development of software for law enforcement (the software has been sold to a private company).