CURRICULUM VITAE

CAULIGI S. RAGHAVENDRA

Vice Dean for Global Academic Initiatives
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Education

Ph. D. (Computer Science), University of California at Los Angeles, 1982.
M. E. (Electrical Communication Engineering), Indian Institute of Science, 1978.
B. E. (Electronics and Communications Engineering), Indian Institute of Science, 1976.
B. Sc (Hons.) Physics, Bangalore University, India, 1973.

Professional Experience

July 1, 2011 – Vice Dean for Global Academic Initiatives
Responsible for coordinating all global academic external relations overseas (including international research initiatives), and head the efforts for Academic Initiatives in India, China, and other countries where Engineering is strong. The vision and goals are:

- Build strong brand of Viterbi School of Engineering globally
- Attract top talent globally for graduate and PhD programs
- Establish collaborations with academia and industry
- Friendraise and fundraise globally

The goal is to establish partnerships with top academic institutions abroad with the purpose of attracting top talent to our programs, effectively compete for joint international research programs, and understand challenges and opportunities in different countries.

In May 2015, established a partnership and MOU with Science and Engineering Research Board (SERB), Government of India, that funds 5 PhD fellowships annually for 4 years.

Working with the Dean established the India Advisory Board for VSoE. This board has 15 members who are industry leaders in India. This board meets annually in December in India.

Support faculty in competing for international joint research programs in finding suitable partner institutions and researchers.

With a common USC/Tsinghua Univ. alum donor we have established a research and education

program between VSoE and THU. Since 2006 we hold an annual USC-THU research symposium alternating between the two campuses. Each year work on the program for this faculty forum in getting faculty to present their work, meet faculty from THU for future collaborative research projects.
This fund also supports summer research program for undergraduate students. Each year 10-12 THU students spend 6 weeks at USC and 4-6 USC students spend 2 months at THU. Coordinate selection of students and faculty mentors for this program.
Established dual degrees with Tsinghua University in Computer Science and with Taipei Medical University in Chemical Engineering and Materials Sceince.

Established the Viterbi-India summer research program since summer 2011 that is funded by the Indo US Science and Technology Forum that supports 20 students from India to conduct summer research at USC. Additional funds are raised from a donor family to support this program.

Established strong ties with many top institutions around the world including IITs, IISc, Indo US Science and Technology Forum (IUSSTF), Infosys in India, Tsinghua, SJTU, Peking Univ. and others in China, CONACyT and UNAM in Mexico, and with several universities in Korea.

July 1, 2006 – June 30, 2011 Senior Associate Dean for Strategic Initiatives, USC
During the last 5 years worked on several initiatives:

- Established international partnerships with many leading institutions in China, India, Korea, and other countries. With a funded program with Tsinghua University in Beijing, organized annual faculty workshops alternately held at Tsinghua University and at USC. Established a summer research program with Tsinghua University for their students to come to USC and USC students going there.
- With a funded program with IIT Kharagpur in India, hosted IIT faculty at USC each year, and brought 10 to 15 summer interns from IIT each summer.
- Developed summer research programs for junior level international students to conduct research at USC. This summer research program has now expanded to student interns coming from India, China, Korea, Mexico, and across US.
- As director of the Division of Engineering Education (DEE) worked on innovative educational programs for the school; this includes a joint capstone design course between engineering, business, and fine arts schools; established X-prize lab at USC in support of X-prize foundation for a course where students come up with ideas for the next X-prize
- Coordinated the development of several new Master of Science programs working with faculty from different departments; these include MS in Green Technologies, MS in Financial Engineering, and MS in Wireless Health Technologies.
- Worked with the Provost's office on the faculty database project for capturing all faculty activities.
- Conceived, organized and participated in information sessions in India cities to recruit graduate students. VSoE representatives visit several cities in India to meet potential graduate students and give information about VSoE programs. This has been replicated in China, Brazil, Turkey, and other countries by the VSoE GAPP office.

June 1, 2005 -- June 30, 2006, Senior Associate Dean for Academic Affairs, USC

As Dean of faculty responsible for handling faculty hires, promotion and tenure cases and overseeing academic programs of the School. Working with Marshall Business School Vice Dean developed a joint capstone design course between Electrical Engineering and Business.

July 03 -- June 05, Professor and Chairman, Dept. EE-Systems, USC
At USC, EE-Systems is a large department with over 60 faculty members. Oversaw all aspects of running this Dept. including managing Dept. budget, hiring faculty in new and upcoming areas of research, and working with the Dean's office on promotion and tenure cases.

Established for the first time EE Advisory Board with members from leading industry. Helped establish a strong tie with BEI electronics for funded research efforts with Dept. faculty.

September 02 -- July 03, Professor, and Associate Chairman, Dept. EE-Systems, USC
Associate Chairman's role is on various aspects of academic affairs, including TAs and Fellowships, course coordination, and programmatic issues.

January 02 -- Present: Professor, Dept. of Computer Science
September 01 -- Present: Professor, Dept. of EE-systems, USC
October 99 -- September 01: Research Professor, Dept. of EE-systems, USC
August 97 -- October 99: Senior Engineering Specialist, The Aerospace Corporation.
January 92 -- July 97: Boeing Centennial Chair Professor in Computer Eng., Washington State University. Pullman, WA
Sept. 90 -- Jan. 91: Acting Associate Chairman, Dept. EE-Systems, USC.
Sept. 87 -- Dec. 91: Associate Professor of Electrical Engineering, USC.
Sept. 82 -- Sept. 87: Assistant Professor of Electrical Engineering, USC.

Research Interests

Wireless Networks and Mobile Computing, Sensor Networks, Computer Networks, Parallel and Distributed Computing, Machine Learning for Medical Applications.

Awards and Honors

National Scholarship for Study Abroad, 1979. This is one of 20 awards given nationwide for study abroad with full scholarship and tuition for PhD at a chosen institution.
Presidential Young Investigator Award, 1985. Given for upcoming young faculty to support research for 5 years at $100K per year with matching funds from industry.
Elected to IEEE Fellow in 1997 for "Contributions to Design and Analysis of Interconnection Networks and Fault-Tolerant Computing".
Editor-in-Chief for Special Issues, *Cluster Computing Journal*, Springer Publishers.
Co-Editor-in-Chief for Book Series, *Network Theory and Applications*, Springer Publishers.
Subject Area Editor for the *Journal of Parallel and Dist. Comp.*
Member of Editorial Board, *Wireless Networks*, ACM/Kluwer, 2001-2010.
Member of Editorial Board, *IEEE Transactions on Parallel and Distributed Systems*, 2004-2008.

General Vice Chair, IEEE SECON Conference, 2004
General Chair, Active Middleware Services Workshop, 2001, 2002
General Co-Chair, Active Middleware Services Workshop, 2003
Program Co-Chair, WSNA 02, Workshop on Wireless Sensor Networks and Applications
General Co-Chair, WSNA 03, Workshop on Wireless Sensor Networks and Applications
Program Co-Chair, WMAN 03, Workshop on Mobile Wireless Ad Hoc Networks
General Co-Chair, WMAN 04, Workshop on Mobile Wireless Ad Hoc Networks
Program Chair, Heterogeneous Computing Workshop, held in conjunction with IPDPS 2000
Program Vice Chair for Communication Networks, HiPC01
Program Committee Co-Chair, HPDC-2 Conference, 1993
Guest Editor, Special Issue in IEEE Transactions on Reliability, 1991
Guest Editor, Special Issue in Concurrency: Practice and Experience, June 1994
Guest Editor, Special Issue on "Algorithms for Networks" in Journal of Interconnection Networks.
Steering Committee member, HPDC 2-10 Conferences
Program Committee member, IPPS 93, 94, 95 Conference
Program Committee member, Int. Conf. Par. Proc. ICPP 1995, 1997, 1998, 2001
Program Committee member, 27th Int. Symp. on Fault Tolerant Computing
Program Committee member, PRFTS 97, ICPADS 97, INFOCOM 98, PDCS 98
Program Committee member, HCW03, PerCom03, MobiHoc03

Consulting Services

Professional consulting services have been provided to the following companies: Hughes Aircraft Co., TRW Inc., The Aerospace Corporation, Aerojet Electro-Systems, AT&T Bell Labs, Lucent Technologies.

Patents

1. X.Chen, V.P.Kumar, C.S.Raghavendra, "Multicast Routing In Self-Routing Multistage Networks," September 9, 1997, Patent Number 5,666,360.
2. R. Venkateswaran, C. S. Raghavendra, X. Chen, V. Kumar, "System and Method for Hierarchical Multicast Routing in ATM Networks," November 3, 1998, Patent Number 5,831,975.
3. R. Venkateswaran, C. S. Raghavendra, X. Chen, V. Kumar, "Dynamic Distributed Multicast Routing Protocol," August 31, 1999, Patent Number 5,946,316.
4. V. Kumar, X. Chen, C.S. Raghavendra and R. Venkateshwaran, "Technique For Efficiently Transporting Information Through An Asynchronous Transfer Mode (ATM) Network, Nov. 7, 2000, Patent Number 6,144,666.
5. Yintao Liu, Ke-Thia Yao, Shuping Liu, C. S. Raghavendra, Oluwafemi Balogun, Lanre Olabinjo, "System and Method For Failure Prediction For Artificial Lift Systems," March 24, 2015, U.S. Patent No. 8,988,237.
6. Yintao Liu, Ke-Thia Yao, Shuping Liu, C. S. Raghavendra, Oluwafemi Balogun, Lanre Olabinjo, Fatma Burcu Serena, Sanaz Seddighrad, Dinesh Babu Chinnapparaja Gunasekaran, "System and Method For Failure Prediction For Rod Pump Artificial Lift Systems," March 24, 2015, U.S. Patent No. 8,988,236.

7. Yintao Liu, Ke-Thia Yao, C. S. Raghavendra, Dong Guo, Anqi Wu, Jingwen Zheng, Oluwafemi Balogun, Lanre Olabinjo, Iraj Ershaghi, "Global Model for Failure Prediction in Rod Pump Artificial Lift Systems," approved in May 2015.
8. Shuping Liu, C. S. Raghavendra, Yintao Liu, Ke-Thia Yao, Oluwafemi Balogun, Olanrewaju Olabinjo, Dinesh Babu Gunasekaran, "System and Method For Failure Detection For Artificial Lift Systems," approved in November 2015.

Grants and Contracts

During the past 30 years, Prof. Raghavendra has been PI or Co-PI on over $12M in various funded projects related to parallel and distributed computing, power aware computing and communication, wireless and sensor networks, and machine learning techniques to oil field applications.

- PI C. S. Raghavendra, "Efficient and Robust Bulk Data Multicast for Geographically Dispersed Virtual Data Centers," Gift from Cisco Systems, 10/1/2018 to 12/31/2019.
- Co-PI: CiSoft Cold Oil Project, 1/1/2019 to 12/31/2019.
- Co-PI: CiSoft SEA, 1/1/2018 to 12/31/2018.
- PIs Viktor Prasanna, Yogesh Simmhan, C. S. Raghavendra, "GoFFish: Graph Oriented Framework for Foresight and Insight Using Scalable Heuristics," DARPA XDATA program, 8/15/2012 to 2/15/2017.
- Co-PI C. S. Raghavendra, and several Co-PIs "SOSNet: Smart Oilfield Safety Net," CiSoft, Chevron, 7/1/2013 to 12/31/2017.
- PIs Ke-Thia Yao, C. S. Raghavendra, "Smart Engineering Apprentice," CiSoft, Chevron, 1/1/2008 to 12/31/2016.
- PI C. S. Raghavendra, "Viterbi India Program," Indo US Science and Technology Forum (IUSSTF), 9/1/2010 to 8/31/2019.
- PIs Viktor Prasanna, C. S. Raghavendra, "Integrated Asset Modeling," CiSoft Project, 1/1/05 to 12/31/08.
- John Heidemann, C. S. Raghavendra, "Asset Modeling and Optimizations", CiSoft, Chevron, Project, 8/1/04 to 12/31/05.
- PIs Viktor Prasanna, C. S. Raghavendra, "Parallel Algorithms, Complexity Analysis and Architecture Tradespace Analysis," part of CEARCH Project, DARPA ACIP Program, ISI-East Lead., 8/16/04 to 12/31/06.
- PIs K. P. Psounis, C. S. Raghavendra, "Efficient Routing in Delay Tolerant Networks," NSF, 8/15/05 to 8/15/08.
- PIs Viktor Prasanna, C. S. Raghavendra, "PARIS: Power Aware Remote Information System," DARPA, 7/1/02 - 9/30/04 (Phase 2 of PAC/C Program). Subcontract from Raytheon.
- PIs Viktor Prasanna, C. S. Raghavendra, "PASTA: Power Aware Sensing and Tracking," DARPA, 4/1/02 - 9/30/05 (Phase 2 of PAC/C Program). Bob Parker of ISI-East is the lead in this team project and members include USC, UCB, UCLA, MIT, BAE Systems, and Rockwell.

- Sr. investigator, PI Prof. Viktor Prasanna, “MILAN: A Model Integrated simuLatioN framework,” DARPA PAC/C Program. This is a joint project between USC and Vanderbilt University.
- PIs Viktor Prasanna, C. S. Raghavendra, “Framework and Energy Efficient Algorithms for Distributed Battlesite/Sensor Networks,” DARPA, 6/1/2000 - 9/30/2002 (Phase 1 of PAC/C program) Subcontractor Prof. Suresh Singh, Portland State University.
- P. I. C. S. Raghavendra, “USC/Aerospace Technical Support for DARPA NMS Program,” DARPA, 9/1/2003 to 12/31/2004. with Kirstie Bellman of The Aerospace Corporation.
- P. I. C. S. Raghavendra, “NVAT: Network Vulnerability Analysis Toolkit,” DARPA FTN Program, with Joseph Bannister of ISI, and Salim Hariri of University of Arizona (Subcontract), 6/23/02 to 9/30/04.
- PIs C. S. Raghavendra, Viktor Prasanna, “Distributed Signal Processing over Wireless Networks,” DARPA/AFRL, 8/14/01 to 8/13/04.
- PIs Viktor Prasanna, C. S. Raghavendra, “A Model-Based Framework for Adaptive Algorithm Design” NSF NGS Program, 10/1/02 - 9/30/03.
- P.I. C. S. Raghavendra, “Research in Active Networks Technical Program Support and Distributed Simulations for Active Networks,” DARPA, 3/1/00 - 3/1/03.
- PIs Viktor Prasanna and C. S. Raghavendra, “Information Theoretic Complexity Models for Performance Evaluation of AICE,” DARPA, USC and The Aerospace Corporation, 2/1/99 to 6/30/2000.
- P. I. C. S. Raghavendra, “Multicast Routing in ATM Networks,” Lucent Technologies, Bell Labs, 3/1/97 to 12/31/97.
- P. I. C. S. Raghavendra, “Multicast Routing in ATM Networks,” Lucent Technologies, Bell Labs, 3/1/96 to 12/31/96.
- P. I. C. S. Raghavendra, “Admission Control and Routing Algorithms for ATM Networks,” Rome Laboratory, 7/1/94 to 6/30/97.
- P.I. C. S. Raghavendra, “Task Reconfiguration Problems in High Performance Distributed-Memory Machines,” NSF, 10/1/91 to 3/31/94.
- P.I. C. S. Raghavendra, “Study of Point-to-Point Networks,” Grant from Aerojet Electro-Systems, 12/1/89 to 10/31/90.
- P.I. C. S. Raghavendra, “Study of Point-to-Point Networks,” Grant from Aerojet Electro-Systems, 11/1/88 to 8/31/89.
- P.I. C. S. Raghavendra, “Research in Parallel Architectures and Algorithms,” NSF Presidential Young Investigator Award, Grant from TRW Inc., 9/1/88 to 8/31/89.
- P.I. C. S. Raghavendra, “Research in Interconnection Networks, Parallel and Distributed Systems,” Grant from AT&T, 7/1/88 to 8/31/90.
- P.I. C. S. Raghavendra, “Research in Parallel Architectures and Algorithms,” Matching Grants from TRW Inc., Grant from Martin Marietta Corp., and Grant from Aerojet Electro-systems, 9/1/87 to 8/31/88.
- P.I. C. S. Raghavendra, “Research in Parallel Architectures and Algorithms,” NSF Presidential Young Investigator Award, 9/1/87 to 8/31/88.
- P.I. C. S. Raghavendra, “Research in Parallel and Distributed Systems,” NSF Presidential Young Investigator Award, Grant from AT&T Information systems, and TRW Inc., 9/1/86 to 8/31/87.

- Sr. investigator, C. S. Raghavendra, P.I. A. Sawchuk, "Research in Optical Arithmetic and Data Representation," Sponsored by ONR, 7/1/86 to 9/30/89.
- P.I. C. S. Raghavendra, "Research in Parallel Architectures and Algorithms," NSF Presidential Young Investigator Award, 9/1/85 to 8/31/86.
- P.I. C. S. Raghavendra, "Research in Parallel Architectures and Algorithms," Grant from AT&T Information Systems, 9/1/85 to 8/31/86.
- Sr. Investigator: C. S. Raghavendra, P.I.: A. Sawchuk, "Research in Optical Interconnection Techniques," Sponsored by DARPA/ARO, 5/1/84 to 5/31/86.
- P.I. C. S. Raghavendra, "Performance and Reliability Analysis of Interconnection Networks," NSF, 8/1/83 to 2/28/86.

Current Graduate Students

1. Dong Guo, PhD student in CSCI, area of research is machine learning techniques to oil field problems
2. Mona Sharifi, PhD student in EE started in Summer 2014, research area will be applying machine learning techniques to oil field problems and brain image analysis
3. Ayush Jaiswal, new PhD student starting in Fall 2014, research area will be machine learning for medical applications
4. Mohammad Noormohammadpour, PhD student in EE since Fall 2014, research area is scheduling in data center networks

Ph. D Thesis Supervised

1. Anujan Varma, "Design and Analysis of Reliable Interconnection Network". Dr. Varma was at IBM from 3/86-12/90. Since January 91 he is a faculty member at UC Santa Cruz.
2. Salim Hariri, "Reliability Analysis and Optimization in the Design of Distributed Systems". He was a faculty member at Syracuse University from 1982-1998. Since September 1998 he is Professor at The University of Arizona.
3. Rajendra Boppana, "Self Routing and Parallel Memory Access in Multiprocessor networks". Since September 1991 he is Professor and Computer Science Dept. Chair at the University of Texas, San Antonio.
4. Ge-Ming Chiu, "Resource Allocation in Distributed Systems". He is a faculty member at the National Taiwan University of Science and Technology in Taiwan.
5. Suresh Babu Chalasani, "Efficient Algorithms for Connection Assignment in Interconnection Networks". He was a faculty member at the University of Wisconsin from 1991-1998. He is now a faculty member at Univ. of Wisconsin at Milwaukee.
6. Sing-Ban Tien, "Fault Tolerance Analysis of Hypercube Systems". He was a faculty member at the University of Southern Illinois at Carbondale. Now he is working at IBM.
7. Hwa-Chun Lin, "Dynamic Load Balancing in Distributed Systems". He is a faculty member at the Tsing-Hua University in Taiwan.
8. Pei-Ji Yang, "Embedding Task Graphs onto Faulty Hypercubes". After PhD he has returned to Taiwan and is working for industry.
9. Meera Balakrishnan, "Reliability Evaluation of Fault Tolerant Computing Systems and Networks". She was with Lucent Technologies, Naperville. She is now in India.

10. Tong-Yee Lee, “Parallel Processing for Graphics Rendering on Distributed Memory Multicomputers”. He is a Professor at Tainan University in Taiwan.
11. Harikumar Sivaraman, “Automatic Porting of Programs to Network of Workstations”. He is at Compaq's Tandem Computers.
12. R. Venkateswaran, “Multicast Routing in High-Speed Networks”. He was with Lucent Technologies, Naperville. He is now in India.
13. Thrasyvoulos Spyropoulos, “Efficient Media Access and Routing in Wireless and Delay Tolerant Networks”, Assistant Professor at Eurecom, France.
14. Yu He, “Sensor Networks”. He is at Google Inc.
15. Caimu Tang, “Wireless Sensor Networks”. He is at Valtang, a company in US.
16. Shuping Liu, “Intelligent Control and Automatic Detection/Prediction in Sensor Based Systems”. He was at eBay, now at Conviva.
17. Joshua Train, “Routing Fountains: Leveraging Broadcast Channels to Improve the Dissemination of Control Information for Large Inter-Domain Networks”, He is at The Aerospace Corporation.
18. Yintao Liu, “Failure Prediction for Rod Pump Artificial Lift Systems”, He is at Google Inc.
19. Eric Coe, “Protocols, Algorithms, and Application Adaptation for Mobile Ad Hoc Network (MANET)-like Disruption Tolerant Networks (MDTNs),” He is with The Aerospace Corporation.

LIST OF PUBLICATIONS

Books Published

1. Varma, C. S. Raghavendra, Eds., “Tutorial on Interconnection Networks for Multiprocessors and Multicomputers: Theory and Practice”, IEEE Computer Society Press, January 1994.
2. S. Hariri, C. Lee, C. S. Raghavendra, Eds., “Active Middleware Services,” Kluwer Academic Press, August 2000.
3. C. S. Raghavendra, Krishna Sivalingam, Taeb Znati, Eds., “Wireless Sensor Networks,” Kluwer Academic Press, March 2004.

Journal Papers

- Mohamaad Noormohammadpour, Ajitesh Srivastava, C. S. Raghavendra, “On Minimizing the Completion Times of Long Flows over Inter-Datacenter WAN,” IEEE Communications Letters, December 2018, pp. 2475-2478.
- Mohammad Noormohammadpur, C. S. Raghavendra, Srikanth Kandula, Sriram Rao, “On Fast and Efficient Point to Multipoint Transfers over Inter-Datacenter Networks,” IEEE Transactions on Networking, Submitted, March 2018.
- Mohammad Noormohammadpur, C. S. Raghavendra, “Datacenter Traffic Control: Understanding Techniques and Trade-offs,” IEEE Communications Surveys and Tutorials, Second Quarter 2018, pp. 1492-1525.

- Daniel G. Amen, Mona Sharifi Sarabi, Kristen Willeumier, Derek Taylor, Cyrus Raji, Cauligi Raghavendra, "Functional SPECT Neuroimaging using Machine Learning Algorithms Distinguishes Autism Spectrum Disorder from Healthy Subjects," Journal of Systems and Integrative Neuroscience. April 2017, DOI: 10.15761/JSIN.1000160.
- Daniel G. Amen, Borhan Darmal, Cyrus A. Raji, Lantie Jordanby Quinones, Weining Bao, Somayeh Meyasmi, Cauligi S. Raghavendra, "Discriminative Properties of Hippocampal Hypoperfusion in Marijuana Users Compared to Healthy Controls: Implications for Marijuana Administration in Alzheimer's Dementia," Journal of Alzheimer's Disease, JAD 2017: 56(1):261-273.
- Daniel G. Amen, Kristen Willeumier, Bennet Omalu, Andrew Newberg, Cauligi Raghavendra, Cyrus A. Raji, "Perfusion Neuroimaging Abnormalities Alone Distinguish National Football League Players from a Healthy Population," Journal of Alzheimer's Disease : JAD. 2016;53(1):237-241.
- Shuping Liu, Anand Panangadan, Ashit Talukder, C. S. Raghavendra, "Markov Decision Process for Adaptive Control of Distributed Body Sensor Networks," in *Wireless Computing in Medicine: From Nano to Cloud with Ethical and Legal Implications*, John Wiley and Sons, July 2016, pp 263-296.
- Anand Panangadan, Shuping Liu, Ashit Talukder and C. S. Raghavendra, "Coordinated Sensing of Networked Body Sensors using Markov Decision Processes", International Journal of Applied Artificial Intelligence (Applied AI), 2012.
- Caimu Tang, Dapeng Oliver Wu, Anthony T. Chronopoulos, Cauligi S. Raghavendra, "Efficient multi-party digital signature using adaptive secret sharing for low-power devices in wireless networks," IEEE Transactions on Wireless Communications 8(2): 882-889, 2009.
- Akis Spyropoulos, Konstantinos Psounis, C. S. Raghavendra, "Efficient Routing in Intermittently Connected Mobile Networks: The Single Copy Case," IEEE Transactions on Networking, February 2008.
- Akis Spyropoulos, Konstantinos Psounis, C. S. Raghavendra, "Multiple Copy Routing in Intermittently Connected Mobile Networks," IEEE Transactions on Networking, February 2008.
- Akis Spyropoulos and C. S. Raghavendra, "Analyzing the Effect of Antenna Type and MAC Protocol on Wireless Ad-Hoc Network Capacity," *JSAC special issue on Wireless Ad-hoc Networks*, (submitted).
- G. Lu, B. Krishnamachari, C. S. Raghavendra, "Adaptive Energy-Efficient and Low-Latency MAC for Tree-based Data Gathering in Sensor Networks," Journal of Wireless Communications and Mobile Computing, 2007.
- Ngai-Man Cheung, Caimu Tang, A. Ortega, C. S. Raghavendra, "Efficient wavelet-based predictive Slepian-Wolf coding for hyperspectral imagery," Signal Processing, 2006.
- Yu He, C. S. Raghavendra, "Building Autonomic Routing Services for Sensor Networks," *J. of Computer Communication*, special issue on active networks (submitted).
- Yu He, C. S. Raghavendra, S. Berson, R. Braden "An Autonomic Routing Framework for Sensor Networks," *Cluster Computing*, April 2006, pp. 191-200.
- Caimu Tang, C. S. Raghavendra, "Energy Efficient Detection Algorithms for Wireless Sensor Networks," Book chapter in *Handbook on Theoretical and Algorithmic Aspects of Sensor, Ad Hoc Wireless, and Peer-to-Peer Networks*, edited by Jie Wu, CRC Press, June 2005.

- Yu He, C. S. Raghavendra, "Building Programmable Routing Services for Sensor Networks," J. of Computer Communications (Elsevier Science), Special Issue on Activated and Programmable Internet, Vol. 28(6), April 2005, pp. 664-675.
- Caimu Tang, C. S. Raghavendra, "Energy Efficient Adaptation of Multicast Protocols in Power Controlled Wireless Ad hoc Networks," Mobile Networks and Applications, Kluwer, August 2004.
- S. Hariri, Guangzhi Qu, Tushneem Dharmagadda, Modukuri Ramkishore, C. S. Raghavendra, "Impact Analysis of Faults and Attacks in Large Scale Networks," *IEEE Security and Privacy*, October/November 2003.
- Prashant Bhat, C. S. Raghavendra, Viktor Prasanna, "Efficient Collective Communication in Distributed Heterogeneous Systems," *Journal of Parallel and Distributed Computing*, pp. 251-263, March 2003.
- Stephanie Lindsey, C. S. Raghavendra, "Energy Efficient Broadcasting for Situation Awareness in Ad hoc Networks," *Journal of Parallel and Distributed Computing*, pp. 15-21, January 2003.
- Fang Bian, Ashish Goel, C. S. Raghavendra, Xin Li, "Energy Efficient Broadcasting in Wireless Ad Hoc Networks: Bounds and Algorithms," Journal of Interconnection Networks, Vol. 3, Sept.-Dec. 2002.
- Stephanie Lindsey, C. S. Raghavendra, K. Sivalingam, "Data Gathering Algorithms in Sensor Networks Using Energy Metrics," *IEEE Transactions on Parallel and Distributed Systems*, September 2002.
- Stephanie Lindsey, K. Sivalingam, C. S. Raghavendra, "Power Optimization in Routing Protocols for Wireless and Mobile networks," in *Handbook of Wireless Networks and Mobile Computing*, Ed. Ivan Stojmenovic, John Wiley & Sons, 2001
- Ammar H. Alhusaini, Viktor Prasanna, C. S. Raghavendra, "A Unified Mapping Approach for Heterogeneous Computing Environments," *Cluster Computing*, (to appear).
- Prashant Bhat, Viktor Prasanna, C. S. Raghavendra, "Block-Cyclic Redistribution over Heterogeneous Networks," *Cluster Computing*, Vol. 3, No. 1, pp. 25-34, July 2000.
- Neungsoo Park, Viktor Prasanna, C. S. Raghavendra, "Efficient Communication Schedule for Block-Cyclic Array Redistribution Between Processor Sets," *IEEE Transactions on Parallel and Distributed Systems* , Vol. 10, No. 12, December 1999.
- Prashant Bhat, Viktor Prasanna, C. S. Raghavendra, "Adaptive Data Communication Algorithms for Distributed Heterogeneous Systems," *Journal of Parallel and Distributed Computing*, Vol. 59, No. 2, pp. 252-279, November 1999.
- C. S. Raghavendra, M. A. Sridhar, "Improved Algorithms for Computing with Faulty SIMD Hypercubes," *International Journal of Telecommunication Systems*, October 1998, pp. 149-156, Baltzer Science Publisher.
- C. S. Raghavendra, Suresh Singh, "PAMAS -- Power Aware Multi-Access protocol with Signaling for Ad Hoc Networks," *Computer Communication Review*, July 1998.
- R. Boppana, S. Chalasani, C. S. Raghavendra, "Resource Deadlocks and Performance of Wormhole Multicast Routing Algorithms," *IEEE Transactions on Parallel and Distributed Systems*, June 1998, pp. 535-549.
- A. Sengupta, C. S. Raghavendra, "All-to-all Broadcast and Matrix Multiplication in Faulty Hypercubes," *IEEE Transactions on Parallel and Distributed Systems*, June 1998, pp. 550-560.

- Tong-Yee Lee, C. S. Raghavendra, John B. Nicholas, “Parallel Implementation of a Ray Tracing Algorithm for Distributed Memory Parallel Computers,” *Journal Concurrency: Practice and Experience,* Vol. 9, No. 10, October 1997, pp. 947-965.
- Tong-Yee Lee, C.S Raghavendra, J.B. Nicholas, “Experimental Evaluation of Load Balancing Strategies for Ray Tracing on Parallel Processors,” *Integrated Computer-aided Engineering Journal,* Issue 4(4), October 1997, pp. 260-275.
- Hwa-Chun Lin, C. S. Raghavendra, “Modeling and Analyses of Dynamic Load-Balancing Policies by State Aggregation,” *International Journal of Modeling and Simulation,* Vol. 17, No. 1, 1997, pp. 20-28.
- Tong-Yee Lee, C. S. Raghavendra, John B. Nicholas, “Sort-Last Polygon Rendering on 2-D Mesh Parallel Computers,” *IEEE Trans. on Visualization and Computer Graphics,* Vol. 2, No. 3, September 1996, pp. 202-217.
- Hwa-Chun Lin, C. S. Raghavendra, “Approximating the Mean Response Time of Parallel Queues with JSQ Policy,” *Journal of Computers and Operations Research,* Vol. 23, No. 8, 1996, pp. 733-740.
- C. S. Raghavendra, M. A. Sridhar, “Dimension Ordering and Broadcast Algorithms in Faulty SIMD Hypercubes,” *Journal of Parallel and Distributed Computing,* May 25, 1996, pp. 57-66.
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