

Soheil Ghiasi

University of California
Department of
Electrical and Computer Engineering
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Research Area

Embedded Computing Systems: Platforms and Design Methodologies Software and Hardware Synthesis, Model-based Design, Platform Architectures and Compilation (multiprocessors, FPGAs and SoCs), System-Level Electronics Design Automation, Cyber-Physical Systems, Emerging Applications of Computing

Professional Experience/Employment

Department Vice-Chair for Undergrad Studies University of California, Davis, CA
7/2014 - Present Department of Electrical and Computer Engineering

Associate Professor University of California, Davis, CA
7/2010 - Present Department of Electrical and Computer Engineering

Visiting Scholar University of California, Berkeley
9/2010-12/2010 Center for Embedded and Hybrid Software Systems (CHESS)

Assistant Professor University of California, Davis, CA
10/2004 - 6/2010 Department of Electrical and Computer Engineering

Education

Ph.D. in Computer Sci. University of California at Los Angeles (UCLA), Los Angeles, CA
12/2001 - 9/2004 Computer Science Department

MS. in Computer Sci. University of California at Los Angeles (UCLA), Los Angeles, CA
9/2000 - 12/2001 Computer Science Department

BS. in Computer Eng., Sharif University of Technology, Tehran, Iran
9/1994 - 06/1998 Computer Engineering Department

Publications

Refereed Journal Publications

1. Soheil Ghiasi, Ankur Srivastava, Xiaojian Yang, Majid Sarrafzadeh, "Optimal Energy Aware Clustering in Sensor Networks", *SENSORS Journal*, Vol. 2, Issue 7, pp. 258-269, July 2002
2. Xiaojian Yang, Maogang Wang, Ryan Kastner, Soheil Ghiasi and Majid Sarrafzadeh, "Congestion Reduction During Placement with Provably Good Approximation Bound", *ACM Transactions on Design Automation of Electronic Systems (TODAES)*, Vol. 8, No. 3, pp. 316-333, July 2003
3. Soheil Ghiasi, Ani Nahapetian, Majid Sarrafzadeh, "An Optimal Algorithm for Minimizing Runtime Reconfiguration Delay", *ACM Transactions on Embedded Computing Systems (TECS)*, Vol. 3, No 2, pp. 237-256, May 2004.
4. Elaheh Bozorgzadeh, Soheil Ghiasi, Atsushi Takahashi, Majid Sarrafzadeh, "Optimal Integer Delay Budget Assignment on Directed Acyclic Graphs", *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD)*, Vol. 23, No 8, pp. 1184-1199, August 2004
5. Soheil Ghiasi, Hyun J. Moon, Ani Nahapetian, Majid Sarrafzadeh, "Collaborative and Reconfigurable Object Tracking", *Kluwer Journal of Supercomputing*, Vol. 30, No 3, pp. 213-238, December 2004
6. Soheil Ghiasi, Ani Nahapetian, Hyun J. Moon, Majid Sarrafzadeh, "Reconfiguration in Network of Embedded Systems: Challenges and Adaptive Tracking Case Study", *Journal of Embedded Computing (JEC)*, Vol. 1, No 1, pp. 147-166, 2005
7. Soheil Ghiasi, Karlene Nguyen, Elaheh Bozorgzadeh, Majid Sarrafzadeh, "Efficient Timing Budget Management for Accuracy Improvement in a Collaborative Object Tracking System", *Springer Journal of VLSI Signal Processing*, Vol. 42, No. 1, pp. 43-55, January 2006
8. Roozbeh Jafari, Hyduke Noshadi, Soheil Ghiasi, Majid Sarrafzadeh, "Adaptive Electrocardiogram Feature Extraction on Distributed Embedded Systems", *IEEE Transactions on Parallel and Distributed Systems (TPDS)*, Vol. 17, No. 8, pp. 797-807, August 2006

- J9. Soheil Ghiasi, Po-Kuan Huang, Roozbeh Jafari “Probabilistic Delay Budgeting for Soft Realtime Applications”, *IEEE Transactions on Very Large Scale Integration Systems (TVLSI)*, Vol. 14, No. 8, pp. 843-853, August 2006
- J10. Soheil Ghiasi, Elaheh Bozorgzadeh, Po-Kuan Huang, Majid Sarrafzadeh, “A Unified Theory of Timing Budget Management”, *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (ICAD)*, Vol. 25, No. 11, pp. 2364-2375, November 2006
- J11. Soheil Ghiasi, “An Effective Combinatorial Algorithm for Gate-Level Threshold Voltage Assignment”, *ASP Journal of Low Power Electronics*, Vol. 2, No. 3, pp. 365-377, December 2006
- J12. Po-Kuan Huang, Soheil Ghiasi “Efficient and Scalable Compiler-Directed Energy Optimization for Realtime Applications”, *ACM Transactions on Design Automation of Electronic Systems (TODAES)*, Vol. 12, No. 3, August 2007
- J13. Matin Hashemi, Soheil Ghiasi, “Throughput-Driven Synthesis of Embedded Software for Pipelined Execution on Multi-Core Architectures”, *ACM Transactions on Embedded Computing Systems (TECS)*, Vol. 8, No. 2, January 2009
- J14. Ani Nahapetian, Philip Brisk, Soheil Ghiasi, Majid Sarrafzadeh, “An Approximation Algorithm for Scheduling on Heterogeneous Reconfigurable Resources”, *ACM Transactions on Embedded Computing (TECS)*, Vol. 9, No. 1, October 2009
- J15. Po-Kuan Huang, Soheil Ghiasi, "Energy-Aware Compilation for Embedded Processors with Technology Scaling Considerations", *ASP Journal of Low Power Electronics*, Vol. 5, No. 4, pp. 439-453, December 2009
- J16. Matin Hashemi, Soheil Ghiasi, “A Versatile Task Assignment Algorithm for Heterogeneous Soft Dual-Processor Platforms”, *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (ICAD)*, Vol 29, No. 3, pp. 414 - 425, 2010
- J17. Soheil Ghiasi, “On Incremental Component Implementation Selection in System Synthesis”, *IEEE Transactions on Very Large Scale Integration Systems (TVLSI)*, Vol. 18, No. 11, pp. 1578 – 1589, 2010
- J18. Mohammad H. Foroozannejad, Matin Hashemi, Trevor L. Hodges, Soheil Ghiasi, “Post-Scheduling Buffer Management Tradeoffs in Synthesis of Streaming Applications”, *ACM Transactions on Design Automation of Electronic Systems (TODAES)*, Vol. 17, No. 3, 2012
- J19. Matin Hashemi, Soheil Ghiasi, “Throughput-Memory Tradeoff in Synthesis of Streaming Software on Embedded Multiprocessors”, *ACM Transactions on Embedded Computing Systems (TECS)*, Vol. 13, No. 3, December 2013
- J20. Faisal Khan, Chen-Nee Chuah, Soheil Ghiasi, “A Dynamically Reconfigurable System for Closed-Loop Measurements of Network Traffic”, *IEEE Transactions on Computers (TC)*, Vol. 63, No. 2, pp. 263-275, 2014
- J21. Faisal Khan, Nicholas Hosein, Soheil Ghiasi, Chen-Nee Chuah, Puneet Sharma, “Streaming Solutions for Fine-Grained Network Traffic Measurements and Analysis”, *IEEE Transactions on Networking (ToN)*, Vol. 22, No. 2, pp. 377-390, 2014
- J22. Mohammad H. Foroozannejad, Matin Hashemi, M. Mahini, Bevan Baas, Soheil Ghiasi, “Time-Scalable Mapping for Circuit-Switched GALS-Based Chip Multiprocessor Platforms”, *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD)*, Vol. 33, No. 5, pp. 752-762, May 2014
- J23. Mohammad H. Foroozannejad, Mohammad Motamedi, Soheil Ghiasi, “Memory Access Analysis and Optimization for Efficient Streaming Software Synthesis”, submitted to *ACM Transactions on Embedded Computing Systems (TECS)*, 2015

Selected Recent Conference Publications

- C1. Karlene Nguyen, Gavin Yueng, Soheil Ghiasi, Majid Sarrafzadeh, "A General Framework for Tracking Objects in a Multi-Camera Environment", *International Workshop on Digital and Computational Video (DCV)*, pp. 200-204, November 2002
- C2. Soheil Ghiasi, Majid Sarrafzadeh, "Optimal Reconfiguration Sequence Management", *Asia South Pacific Design Automation Conference (ASPDAC)*, pp. 359-365, January 2003
- C3. Ram Kumar, Soheil Ghiasi, Mani Srivastava, "Dynamic Adaptation of Networked Reconfigurable Systems", *Workshop on Software Support for Reconfigurable Systems (SSRS)*, February 2003
- C4. Soheil Ghiasi, Karlene Nguyen, Elaheh Bozorgzadeh, Majid Sarrafzadeh, "On Computation and Resource Management in an FPGA-based Computing Environment", A Poster in *International Symposium on Field-Programmable Gate Arrays (FPGA)*, page 243, February 2003
- C5. Elaheh Bozorgzadeh, Soheil Ghiasi, Atsushi Takahashi, Majid Sarrafzadeh, "Optimal Integer Delay Budgeting on Directed Acyclic Graphs", *Design Automation Conference (DAC)*, pp. 920-925, June 2003
- C6. Soheil Ghiasi, Hyun J. Moon, Majid Sarrafzadeh, "Collaborative and Reconfigurable Object Tracking", *International Conference on Engineering of Reconfigurable Systems and Algorithms (ERSA)*, pp. 13-20, June 2003
- C7. Soheil Ghiasi, Hyun J. Moon, Majid Sarrafzadeh, "Improving Performance and Quality thru Hardware Reconfiguration: Potentials and Adaptive Object Tracking Case Study", *Workshop on Embedded Systems for Real-Time Multimedia (ESTIMedia)*, pp. 149-155, October 2003

- C8. Soheil Ghiasi, Karlene Nguyen, Elahesh Bozorgzadeh, Majid Sarrafzadeh, "On Computation and Resource Management in Networked Embedded Systems", *International Conference on Parallel and Distributed Computing and Systems*, pp. 445-451, November 2003
- C9. Soheil Ghiasi, Karlene Nguyen, Majid Sarrafzadeh, "Profiling Accuracy-Latency Characteristics of Collaborative Object Tracking Applications", *International Conference on Parallel and Distributed Computing and Systems*, pp. 694-701, November 2003
- C10. Ani Nahapetian, Soheil Ghiasi, Majid Sarrafzadeh, "Task Scheduling on Heterogeneous Resources with Heterogeneous Reconfiguration Costs", *International Conference on Parallel and Distributed Computing and Systems*, pp. 916-921, November 2003
- C11. Eren Kursun, Soheil Ghiasi, Majid Sarrafzadeh, "Transistor Level Budgeting for Power Optimization", *International Symposium on Quality Electronic Design (ISQED)*, pp. 116-121, 2004
- C12. Taraneh Taghavi, Soheil Ghiasi, Abhishek Ranjan, Salil Rajee, Majid Sarrafzadeh, "Innovate or Perish: FPGA Physical Design", *International Symposium on Physical Design (ISPD)*, pp. 148-155, April 2004
- C13. Elahesh Bozorgzadeh, Soheil Ghiasi, Majid Sarrafzadeh, "Incremental Timing Budget Management", *International Conference on Engineering of Reconfigurable Systems and Algorithms (ERSA)*, pages 240-246, June 2004
- C14. Soheil Ghiasi, Elahesh Bozorgzadeh, Siddharth Choudhury, Majid Sarrafzadeh, "A Unified Theory for Timing Budget Management", *International Conference on Computer-Aided Design (ICCAD)*, pp 653-659, November 2004
- C15. Taraneh Taghavi, Soheil Ghiasi, Majid Sarrafzadeh, "Routing Algorithms: Enhancing Routability & Enabling ECO", A Poster in *International Symposium on Field-Programmable Gate Arrays (FPGA)*, page 266, 2005
- C16. Soheil Ghiasi, "Efficient Implementation Selection via Time Budgeting: Complexity Analysis and Leakage Optimization Case Study", *International Conference on Computer Design (ICCD)*, pp 127-129, 2005
- C17. Venkatesh Akella, Soheil Ghiasi, "Super-FPGA: Overcoming Von Neumann to Save Moore", A poster in DARPA Workshop on High Performance Embedded Computing, 2005
- C18. Po-Kuan Huang, Soheil Ghiasi, "Power-Aware Compilation for Embedded Processors with Dynamic Voltage Scaling and Adaptive Body Biasing Capabilities", *IEEE/ACM Design Automation and Test in Europe (DATE)*, pp. 943-944, March 2006
- C19. Roozbeh Jafari, Hyduke Noshadi, George Massoud, Soheil Ghiasi, Majid Sarrafzadeh, "Adaptive Medical Feature Extraction for Resource Constrained Distributed Embedded Systems", *IEEE International Workshop on Ubiquitous and Pervasive Health Care (UbiCare)*, pp. 506-511, March 2006
- C20. Soheil Ghiasi, Po-Kuan Huang, "Probabilistic Delay Budgeting for Soft Realtime Applications", *IEEE International Symposium on Quality Electronics Design (ISQED)*, pp. 141-146, March 2006
- C21. Taraneh Taghavi, Soheil Ghiasi, Majid Sarrafzadeh, "Routing Algorithms: Architecture Driven Rerouting Enhancement for FPGAs", *IEEE International Symposium on Circuits and Systems (ISCAS)*, May 2006
- C22. Alessandro Bissacco, Soheil Ghiasi, Stefano Soatto, "Fast Visual Feature Selection and Tracking in a Hybrid Reconfigurable Architecture", *Workshop on Applications of Computer Vision (ACV)*, May 2006
- C23. Jia Ming Mar, Alessandro Bissacco, Stefano Soatto, Soheil Ghiasi, "High Performance Feature Detection on a Reconfigurable Co-Processor", *IEEE Field-Programmable Custom Computing Machines (FCCM)*, pp. 341-342, April 2006
- C24. Soheil Ghiasi, "Improved Threshold Voltage Assignment via Combinatorial Implementation Selection", *ACM International Workshop on Logic and Synthesis (IWLS)*, pp. 94-101, 2006
- C25. Po-Kuan Huang, Soheil Ghiasi, "Leakage-Aware Intraprogram Voltage Scaling for Embedded Processors", *IEEE/ACM Design Automation Conference (DAC)*, pp. 364-369, 2006
- C26. Po-Kuan Huang, Soheil Ghiasi, "Scalable Compiler-Directed Energy Optimization for Realtime Applications", *IEEE/ACM Design Automation and Test in Europe (DATE)*, pp. 785-790, 2007
- C27. Roozbeh Jafari, Soheil Ghiasi, Majid Sarrafzadeh, "Medical Embedded Systems", *International Embedded Systems Symposium*, pp. 441-444, May 2007
- C28. Po-Kuan Huang, Matin Hashemi, Soheil Ghiasi, "Joint Throughput and Energy Optimization for Pipelined Execution of Embedded Streaming Applications", *ACM Conference on Languages, Compilers, and Tools for Embedded Systems (LCTES)*, pp. 137-139, June 2007
- C29. Soheil Ghiasi, "Incremental Component Implementation Selection: Enabling ECO in Compositional System Synthesis", *IEEE/ACM International Conference on Computer-Aided Design (ICCAD)*, pp. 131-134, Nov. 2007
(nominated for best paper award)
- C30. Matin Hashemi, Soheil Ghiasi, "Exact and Approximate Task Assignment Algorithms for Pipelined Software Synthesis", *IEEE/ACM Design Automation and Test in Europe (DATE)*, pp. 746-751, March 2008
- C31. Po-Kuan Huang, Matin Hashemi, Soheil Ghiasi, "System-Level Performance Estimation for Application-Specific MPSoC Interconnect Synthesis", *IEEE Symposium on Application Specific Processors*, June 2008
- C32. Faisal Khan, Lihua Yuan, Chen-Nee Chuah, and Soheil Ghiasi, "Programmable and Real-time Network Traffic Measurements", *IEEE/ACM Symposium on Architecture for Networking and Communications Systems (ANCS)*, pp. 109-118, November 2008

- C33. Mohammad H. Foroozannejad, Matin Hashemi, Trevor L. Hodges, Soheil Ghiasi, “Look into details: the benefits of fine-grain streaming buffer analysis”, *ACM Conference on Languages, Compilers, and Tools for Embedded Systems (LCTES)*, pp. 27-36, April 2010
- C34. Faisal Khan, Nicholas Hosein, Soheil Ghiasi, “BURAQ: A Dynamically Reconfigurable System for Stateful Measurement of Network Traffic”, *IEEE International Symposium on Field-Programmable Custom Computing Machines (FCCM)*, pp. 185-192, May 2010
- C35. Soheil Ghiasi, Matin Hashemi, Volodymyr Khibin, “Puzzle Solver Accelerators Make Excellent Capstone Design Projects”, *IEEE International Conference on Microelectronics System Education (MSE)*, June 2011
- C36. Faisal Khan, Nicholas Hosein, Chen-Nee Chuah, Soheil Ghiasi, “Streaming Solutions For Fine-Grained Network Traffic Measurements And Analysis”, *ACM/IEEE Symposium on Architectures for Networking and Communication Systems (ANCS)*, October 2011
- C37. Matin Hashemi, Soheil Ghiasi, “Towards scalable utilization of embedded manycores in throughput-sensitive applications”, *IEEE International High Level Design Validation and Test Workshop (HLDVT)*, pp. 110-115, November 2011 (invited paper)
- C38. Matin Hashemi, Mohammad H. Foroozannejad, Christoph Etzel, Soheil Ghiasi, “FORMLESS: Scalable Utilization of Embedded Manycores in Streaming Applications”, *ACM SIGPLAN/SIGBED Conference on Languages, Compilers and Tools for Embedded Systems (LCTES)*, 10 pages, June 2012
- C39. Mohammad H. Foroozannejad, Brent Bohnstiehl, Soheil Ghiasi, “BAMSE: A Balanced Mapping Space Exploration Algorithm for GALs-based Manycore Platforms”, *IEEE/ACM Asia-South Pacific Design Automation Conference (ASPDAC)*, pp. 479-484, 2013
- C40. Kamyar Mirzazad Barijough, Matin Hashemi, Volodymyr Khibin, Soheil Ghiasi, “Implementation-Aware Buffer-Throughput Tradeoff in Embedded Stream Applications”, *IEEE/ACM Design Automation and Test in Europe (DATE), Workshop on Model Implementation Fidelity*, March 2015.
- C41. Kamyar Mirzazad Barijough, Matin Hashemi, Volodymyr Khibin and Soheil Ghiasi, “Implementation-Aware Model Analysis: The Case of Buffer-Throughput Tradeoff in Streaming Applications”, *ACM SIGPLAN/SIGBED Conference on Languages, Compilers and Tools for Embedded Systems (LCTES)*, 10 pages, June 2015
- C42. Bin Liu, Mohammad H. Foroozannejad, Soheil Ghiasi, Bevan M. Baas, “Optimizing Power of Many-Core Systems by Exploiting Dynamic Voltage, Frequency and Core Scaling”, *IEEE International Mid-West Symposium on Circuits and Systems*, August 2015 (**nominated for best student paper award**)
- C43. Mohammad Motamedi, Philipp Gysel, Soheil Ghiasi, “Design Space Exploration of FPGA-Based Deep Convolutional Neural Networks”, submitted to *IEEE/ACM Asia-South Pacific Design Automation Conference (ASPDAC)*, 2016

Book Chapters

- C1. Kamyar Mirzazad Barijough, Matin Hashemi, Volodymyr Khibin and Soheil Ghiasi, “Implementation-Aware Model Analysis: The Case of Buffer-Throughput Tradeoff in Streaming Applications”, invited to contribute the chapter to a book (editors: Anca Molnos, Suzanne Lesecq), scheduled for publication in 2016

Grants

- “Big Data in Agriculture: Automated Fruit Detection in Orchards”, **PI: Ghiasi**, Co-PI: Vougioukas, Lee, UC Davis Grants for Interdisciplinary Initiatives, \$16K, 2015-2016
- REU Supplement for “EAGER: Productive and Scalable Utilization of Manycores in Big Data Applications”, **PI: Ghiasi**, National Science Foundation, \$32K, 2014-16
- “EAGER: Productive and Scalable Utilization of Manycores in Big Data Applications”, **PI: Ghiasi**, National Science Foundation, \$128K, 2013-15
- “The Capstone of the Curriculum: Improving Senior Design Project Courses at UC-Davis ECE Department”, **PI: Ghiasi**, Co-PI: Amirtharajah, Knoesen, Lewis. Intel Corp, \$30K, 2010-11
- “Physically-Coupled Systems for Sport Medicine Applications: Building Blocks and ACL Injury Case Study”, **PI: Ghiasi**, Co-PI: Casazza and El-Farra. Center for Information Technology in the Interest of Society (CITRIS), \$75K, 2010-12
- “Architectures for Highly-Efficient 1000+ Core Chips for Compute and Data-Intensive Applications”, **PI: Baas**, **Co-PI: Ghiasi**, National Science Foundation (NSF), \$317K, 2009-2012
- “Architectures for Highly-Efficient 1000+ Core Chips for Compute and Data-Intensive Applications”, **PI: Baas**, **Co-PI: Ghiasi**, Semiconductor Research Corporation (SRC), \$120K, 2009-2012
- “Data Center 2020: Energy Efficient Large Scale Computing Platform using Nanophotonic Interconnects”, **PI: B. Yoo**, Co-PI: Akella, Amirtharajah, Baas, **Ghiasi** and Islam, Center for Information Technology in the Interest of Society (CITRIS), \$75K, 2008-09

- “Programmable Real-time Traffic Analysis on Many-Core Architectures”, **PI: Ghiasi**, Co-PI: C. Chuah, Center for Information Technology in the Interest of Society (CITRIS), \$75K, 2008-09
- “CEEL: Computer Engineering Education Laboratories with Wireless Networking Extension at UC Davis”, PI: C. Chuah, **Co-PI: Ghiasi**, Owens, Wilken, Mohapatra, Intel Inc. equipment donation (\$84K value), 2006
- Altera Inc, equipment donation (\$5K value), 2013
- Xilinx Inc. equipment donation (\$80K value), 2013
- Altera Inc, equipment donation (\$7K value), 2008
- Xilinx Inc. equipment donation (\$5K value), 2009
- Xilinx Inc. equipment donation (\$6K value), 2005
- Xilinx Inc. equipment donation (\$6K value), 2007
- Xilinx Inc. equipment donation (\$5K value), 2007

Awards

- Senior Member of IEEE
- Best Student Paper Award Nomination (winner to be selected in August 2016) for the paper “Optimizing Power of Many-Core Systems by Exploiting Dynamic Voltage, Frequency and Core Scaling”, IEEE International Symposium on Circuits and Systems, 2016
- Best Paper Award Nomination for the paper “Incremental Component Implementation Selection: Enabling ECO in Compositional System Synthesis”, *IEEE/ACM International Conference on Computer-Aided Design (ICCAD)*, 2007
- ACM SIGDA Outstanding PhD Dissertation Award nominee, 2004
- Harry M. Showman Prize, Henry Samueli School of Engineering and Applied Sciences (HSSEAS), UCLA. (Received the only award given to the outstanding graduating student of class 2004).
- Gold Medalist in Iranian National Chemistry Olympiad Competitions, Exempted from Iranian Nationwide University Entrance Exam (with ~1.5 million highschool student participants) due to extraordinary performance, Iran, 1994

Alumni

PhD:	Matin Hashemi (9/11) first employment: Assistant prof. at Sharif University of Technology, Iran Faisal Khan (6/12) first employment: Altera Mohammad Foroozannejad (5/15) first employment: Intel
MS:	Po-Kuan Huang (7/06) first employment: IMEC Adam Harbor (8/07) first employment: Spansion Trevor Hodges (12/08) first employment: Serra Volodymyr Khibin (12/11) first employment: Intel Yixing Jiang (7/16) first employment: Qualcomm

Professional Service

Technical Program Committee (member)	ACM International Workshop on Software and Compilers for Embedded Systems (SCOPES) 2012-present IEEE Healthcom 2015 IEEE Asia Symposium on Quality Electronic Design (ASQED) 2011-Present International Conference on Body Area Networks (BSN), 2013-present IEEE/ACM Design Automation Conference (DAC) PhD forum, 2009, 2010 IEEE/ACM Asia South-Pacific Design Automation Conference (ASPDAC), 2009, 2010 IEEE Symposium on Circuits and Systems (ISCAS), 2006, 07, 08, 09 IEEE International Conference on Computer Design (ICCD), 2007-Present IEEE/ACM International Conference on Computer-Aided Design (ICCAD), 2006, 07, 08 IEEE Interdisciplinary Engineering Design Education Conference, 2012-13
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Associate Editor	ACM Special Interest Group in Design Automation (SIGDA) newsletter 2008-2011 International Journal of Reconfigurable Computing, 1/2011 - presents
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Organized Tutorials “Medical Embedded Systems”, presented at International Embedded Systems Symposium, May 2007, Co-organized with colleagues from UCLA and UC-Berkeley.

Proposal Review National Science Foundation, Eng and CISE directorates, 2009-Present
Government of Quebec (Canada), 2011
State of Washington, Life Sciences Discovery Fund (LSDF), 2011, 12
University of California, France-Berkeley research program, 2009

Paper Review IEEE Transactions on Computers (TC)
IEEE Transactions on Computer Aided Design of Integrated Circuits and Systems (TCAD)
IEEE Transactions on Very Large Scale Integration Systems (TVLSI)
ACM Transactions on Embedded Computing Systems (TECS)
ACM Transactions on Design Automation of Embedded Systems (TODAES)
Elsevier Journal of Design Automation for Embedded System
Elsevier Integration, the VLSI journal
IEEE/ACM Design Automation Conference (DAC)
IEEE/ACM International Conference on Computer Aided Design (ICCAD)
IEEE/ACM Int’l Conference on HW/SW Co-design and System Synthesis (CODES+ISSS)
ACM International Symposium on Field Programmable Gate Arrays (FPGA)