

DATE	This document was prepared on May 29, 2017.	
CONTACT INFO	Department of Computer Science Sonoma State University 1801 East Cotati Avenue Rohnert Park, CA 94928 USA	Phone: (707) 664-3337 Email: rivoire@sonoma.edu Web: <a href="http://rivoire.cs.sonoma.edu">http://rivoire.cs.sonoma.edu</a>
ACADEMIC POSITIONS	<b>Sonoma State University</b> , Rohnert Park, CA Associate Professor of Computer Science (tenured) Assistant Professor of Computer Science	2014–present 2008–2014
EDUCATION	<b>Ph.D. in Electrical Engineering</b> , Stanford University Dissertation: <i>Models and Metrics for Energy-Efficient Computer Systems</i> Advisor: Christos Kozyrakis	2008
	<b>M.S. in Electrical Engineering</b> , Stanford University	2003
	<b>B.S. in Electrical Engineering</b> (Highest Honors), University of Texas-Austin	2001
TEACHING EXPERIENCE	<b>Sonoma State University</b> <ul style="list-style-type: none"> <li>• <i>Instructor</i>, CS 115: Programming I Spring 2015 and 10 prior semesters</li> <li>• <i>Instructor</i>, CS 210: Introduction to Unix Fall 2010</li> <li>• <i>Instructor</i>, CS 215: Programming II Spring 2011, Fall 2010</li> <li>• <i>Instructor</i>, CS 242: Discrete Structures Fall 2013</li> <li>• <i>Instructor</i>, CS 252: Computer Organization Spring 2010, Fall 2009</li> <li>• <i>Lab Instructor</i>, CS 315: Data Structures Spring 2017 and 2 prior semesters</li> <li>• <i>Instructor</i>, CS 351: Computer Architecture Spring 2017 and 10 prior semesters</li> <li>• <i>Instructor</i>, CS 355: Database Management Systems Design Spring 2009</li> <li>• <i>Instructor and Course Creator</i>, CS 385: Multicore and Manycore Programming Spring 2013, Spring 2009</li> <li>• <i>Instructor</i>, CS 425: Parallel Computing Fall 2015</li> <li>• <i>Instructor</i>, CS 450: Operating Systems Spring 2017 and 2 prior semesters</li> <li>• <i>Instructor</i>, ES 210: Digital Circuit &amp; Logic Design Spring 2012</li> <li>• <i>Lab Instructor</i>, SCI 120A: Sustainability in My World Fall 2012</li> </ul>	
	<b>Stanford University</b> <ul style="list-style-type: none"> <li>• <i>Co-Instructor</i>, EE 282: Computer Systems Architecture Spring 2007 Graduate lecture course offered in-person and through the distance learning program at Stanford Center for Professional Development</li> <li>• <i>Grader</i>, EE 275: Logic Design Winter 2004</li> <li>• <i>Grader</i>, EE 182: Computer Architecture Fall 2002</li> </ul>	
	<b>University of Texas at Austin</b> <ul style="list-style-type: none"> <li>• <i>Grader</i>, EE 345L: Microprocessor Design Lab Fall 2000</li> <li>• <i>Tutor</i>, Women in Engineering Program Fall 1999–Spring 2001</li> </ul>	
STUDENTS SUPERVISED	<b>Graduate Thesis</b> <i>Early Classification of Application Power Traces</i> , Jorge Cabrera MS, Computer & Engineering Science	May 2017

### Senior Research Projects

- *Source Code Stylometry*, Tyler Holland Spring 2017
- *Unit Testing of Power Signature Analysis Tool*, Hanani Ikeh Spring 2017
- *Distributed Computing on a Raspberry Pi Cluster*, Rigoberto Moreno Delgado Spring 2017
- *High-Performance Power Phase Detection*, Jacob Probst Spring 2017
- *MIPS Single-Cycle Processor Visualization*, Mark Ayala Spring 2016
- *MIPS ISA Emulator*, Matt Smith Spring 2016
- *Fine-grained application power and performance signatures*, Scott Walker Spring 2016
- *Updating Legacy Power Modeling and Measurement Software*, Alex Madias Fall 2015
- *Comparing Mechanisms for Inter-Core Register Accesses*, Marty McFadden Fall 2015
- *Energy-Efficient Scheduling Simulation*, Kelsey Rangel Spring 2015
- *Power Signature Clustering and Classification*, Jacob Combs Spring 2014
- *Power Signature Analysis in the Frequency Domain*, David Tran Spring 2014
- *Power Signature Analysis*, Matt Hardwick Spring 2013
- *Power Modeling with GPUs*, Ben Morrison Spring 2009

### External Student Research Competition Participants

- *Recognizing Phases from Supercomputing Power Consumption Traces*, Joseph Granados, Jacob Probst, Nicholas Armour, Jeffrey Bahns California State University Student Research Competition (undergraduate) 2017
- *Power Signature Analysis of Supercomputing Applications*, Rachelle Thysell Grace Hopper Celebration of Women in Computing 2014
- *Classification of Supercomputing Applications by Power Consumption*, Jolie Nazor Consortium for Computing Sciences in Colleges Southwestern Regional Conference (CCSC-SW) 2014
- *Characterizing the Power Consumption of Supercomputing Applications*, Jacob Combs and Matthew Hardwick California State University Student Research Competition (undergraduate) 2013
- *Modeling the Power Consumption of Computer Systems with Graphics Processing Units (GPUs)*, Stephanie Schmidt 2012
  - Grand Finalist, ACM Student Research Competition (one of 14 undergraduates worldwide)
  - California State University Student Research Competition (undergraduate)
  - Third place undergraduate, ACM Student Research Competition held at the SIGCSE Technical Symposium on Computer Science Education

### Research Assistants

- *Power Signature Analysis* 2012–2016
  - 22 SSU undergrads, 2 high school interns
  - Funded by Oak Ridge National Laboratory, the Computing Research Association, and internal SSU funds
- *Source Code Stylometry* Summer 2015
  - 2 SSU undergrads
  - Funded by SSU Research, Scholarship, and Creative Activity Program (RSCAP)

*Evaluating the Effectiveness of Program Visualization Tools*  
(co-PI with Elizabeth Giuliani)

Summer 2012

2 high school interns

Funded by SSU/Sonoma County Office of Education Summer High School Internship Program

*Modeling the Power Consumption of Computer Systems with Graphics Processing Units*

Summer 2009–Fall 2011

3 SSU students, 2 high school interns

Funded by Computing Research Association Collaborative Research Experiences for Undergraduates (CREU) program and SSU internal funds

### **Undergraduate Course Assistants**

- CS 115W student workshop instructors: 16 students over 11 semesters
- CS 115 lab assistants: 18 students over 7 semesters
- CS 315 lab assistants: 4 students over 3 semesters

### TEACHING ACTIVITIES

#### **Faculty Learning Communities**

- Member of pilot faculty cohort for multi-campus, NSF-funded “Reinventing the College Lecture” project for active learning in STEM Spring 2014–Spring 2015
- Member of Faculty Learning Community for multi-campus, US Department of Education-funded EnACT~PTD project (Ensuring Access through Collaboration and Technology Partnerships, Technology & Dissemination). The community consists of 5 faculty members working on implementing Universal Design for Learning and accessibility technology in their classrooms. Spring 2009–Spring 2011
- Member of Sonoma State University’s Moodle Pilot Project to reinvent the Introduction to Unix course using the Moodle course management system (one of 14 faculty selected) Fall 2010

### PAPERS

#### **Peer-Reviewed Publications**

Authors marked with \* were SSU undergraduates.

Granados, J.\*, Probst, J.\*, Armour, N.\*, Bahns, J.\*, Rivoire, S., and Hsu, C.-H. Phase Recognition from Power Traces of HPC Workloads. Short paper, 7th International Workshop on Performance Modeling, Benchmarking and Simulation of High Performance Computer Systems (PMBS) (Salt Lake City, UT, Nov. 2016)

Combs, J.\*, Nazon, J.\*, Thysell, R.\*, Santiago, F.\*, Olson, L.\*, Hardwick, M.\*, Rivoire, S., Hsu, C.-H., and Poole, S.W. Power signatures of high-performance computing workloads. In *Proceedings of the 2nd Workshop on Energy-Efficient Supercomputing (E2SC)* (New Orleans, LA, Nov. 2014).

Scogland, T., Azose, J., Rohr, D., Rivoire, S., Bates, N., and Hackenberg, D. Node variability in large-scale power measurements: perspectives from the Green500, Top500 and EEHPCWG. In *Proceedings of the International Conference on High Performance Computing, Networking, Storage and Analysis (SC)* (Austin, TX, Nov. 2015). Acceptance rate: 22%.

doi:10.1145/2807591.2807653

- Combs, J.\*, Nazor, J.\*, Thysell, R.\*, Santiago, F.\*, Olson, L.\*, Hardwick, M.\*, Rivoire, S., Hsu, C.-H., and Poole, S.W. Power signatures of high-performance computing workloads. In *Proceedings of the 2nd Workshop on Energy-Efficient Supercomputing (E2SC)* (New Orleans, LA, Nov. 2014).  
doi:10.1109/E2SC.2014.9
- Hsu, C.-H., Combs, J.\*, Nazor, J.\*, Santiago, F.\*, Thysell, R.\*, Rivoire, S., and Poole, S.W. Application power signature analysis. In *Proceedings of the 10th Workshop on High-Performance, Power-Aware Computing (HPPAC)* (Phoenix, AZ, May 2014).  
doi:10.1109/IPDPSW.2014.90
- Davis, J.D., Rivoire, S., Goldszmidt, M., and Ardestani, E.K. CHAOS: Composable highly accurate OS-based power models. In *Proceedings of the IEEE International Symposium on Workload Characterization (IISWC)* (San Diego, CA, Nov. 2012), pp. 153–163. Acceptance rate: 38%.  
doi:10.1109/IISWC.2012.6402920
- Davis, J.D., Rivoire, S., Goldszmidt, M., and Ardestani, E.K. Including variability in large-scale cluster power models. *Computer Architecture Letters*, 11, 2 (Jul.–Dec. 2012), pp. 29–32. [condensed version of EXERT 2011]  
doi:10.1109/L-CA.2011.27
- Davis, J.D., Rivoire, S., Goldszmidt, M., and Ardestani, E. Accounting for variability in large-scale cluster power models. In *Proceedings of the 2nd Exascale Evaluation and Research Techniques Workshop (EXERT)* (Newport Beach, CA, Mar. 2011).
- Rivoire, S. Learning to teach. *IEEE Potentials*. 29, 4 (Jul./Aug. 2010), pp. 17–20.  
doi:10.1109/MPOT.2010.937461
- Keys, L., Rivoire, S., and Davis, J.D. The search for energy-efficient building blocks for the data center. In *Proceedings of the 2<sup>nd</sup> Workshop on Energy-Efficient Design* (St. Malo, France, June 2010).
- Rivoire, S. A breadth-first course in multicore and manycore programming. In *Proceedings of the 41<sup>st</sup> ACM SIGCSE Technical Symposium on Computer Science Education* (Milwaukee, WI, Mar. 2010), pp. 214–218. Acceptance rate: 34%.  
doi:10.1145/1734263.1734339
- Ranganathan, P., Rivoire, S., Moore, J. Models and metrics for energy-efficient computing. In *Advances in Computers, vol. 75: Computer Performance Issues*, M.V. Zelkowitz, Ed. Elsevier, Apr. 2009, pp. 159–233.  
doi:10.1016/S0065-2458(08)00803-6
- Rivoire, S., Ranganathan, P., Kozyrakis, C. A comparison of high-level full-system power models. In *Proceedings of the 1st Workshop on Power-Aware Computing and Systems (HotPower)* (San Diego, CA, Dec. 2008). Acceptance rate: 30%.
- Rivoire, S., Shah, M.A., Ranganathan, P., Kozyrakis, C., Meza, J. Models and metrics to enable energy-efficiency optimizations. *IEEE Computer*. 40, 12 (Dec. 2007), pp. 39–48.  
doi:10.1109/MC.2007.436
- Rivoire, S., Shah, M.A., Ranganathan, P., Kozyrakis, C. JouleSort: a balanced energy-efficiency benchmark. In *Proceedings of the ACM SIGMOD International Conference on Management of Data* (Beijing, China, June 2007), pp. 365–376. Acceptance rate: 15%.  
doi:10.1145/1247480.1247522
- Rivoire, S., Schultz, R., Okuda, T., Kozyrakis, C. Vector lane threading. In *Proceedings of the International Conference on Parallel Processing* (Columbus, OH, Aug. 2006), pp.

55–64. Acceptance rate: 32%.  
doi:10.1109/ICPP.2006.74

Economou, D., Rivoire, S., Kozyrakis, C., Ranganathan, P. Full-system power analysis and modeling for server environments. In *Proceedings of the 2nd Workshop on Modeling, Benchmarking, and Simulation (MoBS)* (Boston, MA, June 2006), pp. 70–77. Acceptance rate: 47%.

### Invited Papers and Technical Reports

Davis, J.D., Rivoire, S., and Goldszmidt, M. Star-Cap: Cluster Power Management Using Software-Only Models.

- In *Proceedings of the 3rd International Workshop on Power-aware Algorithms, Systems, and Architecture (PASA)* (Minneapolis, MN, Sep. 2014).  
doi:10.1109/ICPPW.2014.27
- Expanded version: Microsoft Research Technical Report MSR-TR-2012-107 (Oct. 2012).

Davis, J.D., Rivoire, S., Goldszmidt, M., and Ardestani, E.K. No hardware required: Building and validating composable highly accurate OS-based power models. Microsoft Research Technical Report MSR-TR-2011-89 (Jul. 2011).

Davis, J.D. and Rivoire, S. Building energy-efficient systems for sequential I/O workloads. Microsoft Research Technical Report MSR-TR-2010-30 (Mar. 2010).

### Other

Rivoire, S. Women under-represented in science and technology. Editorial for Voices of Diversity series, *Sonoma State Star*, April 9, 2012.

TALKS,  
POSTERS,  
PANELS

### Invited Talks

- “Power Signatures of HPC Workloads” Aug. 2016  
Workshop on High-Performance Computing Power Management (Hanover, MD)
- “Metrics and Models for Power-Aware Large-Scale Computing” Oct. 2015  
EECS Technical Seminar Series, UC Merced
- “Power-aware large-scale computing” Oct. 2015  
CSU Stanislaus (Turlock, CA)
- “Black-box characterization of computer systems’ power consumption” Nov. 2014  
Computer Science Research Group meeting, Oak Ridge National Laboratory (Oak Ridge, TN)
- “Modeling and managing computers’ power consumption” Mar. 2013  
SSU Engineering Science Lecture Series
- “Women in Science” series, SSU Library Mar. 2012
- “Generic full-system power modeling” VMWare (Palo Alto, CA) Jan. 2011
- “Talks on Texts” series, SSU Library Oct. 2010
- “Energy-efficient computing” SSU Energy Forum Apr. 2010
- “A breadth-first course in multicore and manycore programming” Apr. 2010  
Stanford University Pervasive Parallelism Lab (Palo Alto, CA)
- “Models and metrics for energy-efficient computer systems”
  - Accenture Technology Labs (San Jose, CA) Oct. 2008
  - Microsoft Research-Silicon Valley (Mountain View, CA) Jun. 2008
- “Real-time power modeling with Mantis and energy-efficiency benchmarking with JouleSort”
  - Microsoft Research-Redmond (Redmond, WA) Dec. 2007
  - Google (Mountain View, CA) Apr. 2007
  - UC-Berkeley RAD Lab retreat (Santa Cruz, CA) Jan. 2007

## Posters

Authors marked with \* were SSU students.

- SSU Science Symposium May 2017
  - Holland, T.\* and Rivoire, S. “Source Code Stylometry”
  - Ikeh, H.\* and Rivoire, S. “Unit Testing of Power Signature Analysis Tool”
  - Moreno Delgado, R.\* and Rivoire, S. “Distributed Computing on a Raspberry Pi Cluster”
  - Probst, J.\* and Rivoire, S. “High-Performance Power Phase Detection”
- SSU Science Symposium May 2016
  - Ayala, M.\* and Rivoire, S. “Visualizing the data path: What really happens in a processor?”
  - Smith, M.\* and Rivoire, S. “Efficient Implementation of Machine Code Interpreters for Software Emulation”
  - Walker, S.\* and Rivoire, S. “Towards Fine Grained Power and Performance Signatures of High Performance Computing Workloads”
- Rangel, K.\* and Rivoire, S. “Energy-Aware Scheduling in High-Performance Computing,” SSU Science Symposium May 2015
- Jaffe, K. E., Rivoire, S., and Wilson, P.\* “It Takes a Village: Building Environmental Enrichment for Lemurs at the Oakland Zoo Requires Interdisciplinary Collaboration”, SSU Faculty Research Exposition Apr. 2015
- Tran, D.\* and Rivoire, S., “Power Signature Analysis in the Frequency Domain,” SSU Science Symposium May 2014
- Nazor, J.\* and Rivoire, S., “Classification of Supercomputing Applications by Power Consumption,” SSU Faculty Exposition of Scholarship and Sponsored Research Mar. 2014
- Combs, J.\*, Hardwick, M.\*, and Rivoire, S.\*, “Characterizing the Power Consumption of Supercomputing Applications,” SSU School of Science and Technology Science Symposium May 2013
- Davis, J. D., Goldszmidt, M., Rivoire, S. and Ardestani, E.K., “Modeling and Managing the Power Consumption of Large-Scale Computing Facilities,” SSU Faculty Exposition of Scholarship and Sponsored Research Mar. 2013
- Schmidt, S.\* and Rivoire, S., “Modeling the power consumption of computer systems with graphics processing units (GPUs),” SSU Faculty Exposition of Scholarship and Sponsored Research Mar. 2012
- Rivoire, S., “Universal Design for Learning in CS1,” ACM SIGCSE Technical Symposium on Computer Science Education (Dallas, TX) Mar. 2011
- Rivoire, S. “Modeling computer systems’ power consumption”
  - SSU Faculty Exposition of Scholarship and Sponsored Research Mar. 2009
  - Computing Research Association Programming Languages, Operating Systems, and Architecture Workshop (Washington, DC) Mar. 2009

## Panels

- Lin, J., Mookerjee, M., Rivoire, S., Shi, H., Works, C. Undergraduate Research Panel, SSU-Agilent Summer Research Academy Jun. 2013
- Malpica, D. M., Mookerjee, M., Paolucci-Callahan, M., Parker, J., Rivoire, S. Mentor Faculty Panel, SSU New Faculty Orientation Aug. 2011
- Ayala, E., Bozman-Moss, D., Ely, K., Kroll, C., Rivoire, S., Severson, S., Wilson, B. “Universal Design for Learning Faculty Workshop,” SSU Disability Awareness Week May 2010
- Ayala, E., Christie, B., Rivoire, S., Severson, S., Wilson, B. “Universal Design and Accessibility (EnACT),” California State University “Meet the Experts” webinar series Apr. 2010
- Mitchell, A., Jain, J., Rivoire, S., Carmody, W., Albrecht, J., Grit, L. “Learning by doing: using internships to discover where you belong,” Oct. 2007

Grace Hopper Celebration of Women in Computing (Orlando, FL)

**Video and Press**

- “College program gives young scientists lab time,” *Santa Rosa Press Democrat*, 2014  
August 8, 2014. <http://www.pressdemocrat.com/home/2478175-181/college-program-gives-young-scientists>
- Intel Teach Parallel series: “Introducing Undergraduates to Parallelism” 2011  
<http://software.intel.com/en-us/blogs/2011/03/31/dr-susan-rivoire-introducing-undergraduates-to-parallelism/>
- MERLOT ELIXR Case Study: “Teaching Computer Science.” 2010  
<http://elixr.merlot.org/case-stories/understanding--meeting-students-needs/universal-design-for-learning-udl/teaching-computer-science2>

FUNDING

**External Funding**

- *Towards Automatic Task Classification*, PI 2015–2016  
Award amount: \$131,561  
US Department of Energy, subcontract with Oak Ridge National Laboratory
- *Travel Support for the 2015 IEEE International Symposium on Performance Analysis of Systems and Software*, PI 2015  
Award amount: \$10,000 in student travel support  
National Science Foundation, Division of Computing and Communication Foundations
- *Support for Power Efficiency Task*, PI 2013–2014  
Award amount: \$233,496.19  
US Department of Energy, subcontract with Oak Ridge National Laboratory
- *Classifying Application-Level Power Consumption Patterns*, PI 2013–2014  
Award amount: \$7,000 in student stipends and travel support  
Computing Research Association, Collaborative Research Experiences for Undergraduates program
- *S3: Stepping up STEM at Sonoma State University*, senior personnel 2011–2016  
Award amount: \$791,636  
National Science Foundation, Division of Undergraduate Education
- *Student Support for Power Efficiency Task*, senior personnel 2012  
Award amount: \$26,433  
US Department of Energy, subcontract with Oak Ridge National Laboratory
- *Travel Support for the 2012 IEEE International Symposium on Performance Analysis of Systems and Software*, PI 2012  
Award amount: \$5,000 in student travel support  
National Science Foundation, Division of Computing and Communication Foundations
- *Modeling the Power Consumption of Computer Systems with Graphics Processing Units (GPUs)*, PI 2010–2011  
Award amount: \$16,800 in student stipends and travel support  
Computing Research Association, Collaborative Research Experiences for Undergraduates program

**Competitive Internal Funding**

- *Source Code Stylometry: The Substance of Coding Style* 2014–15  
Award amount: \$4,403 in student assistant funding  
SSU RSCAP Mini-Grant program
- *Classifying Application-Level Power Consumption Patterns*, faculty advisor 2013  
Award amount: \$375 in equipment funding  
SSU Undergraduate Research Grant awarded to Rachelle Thysell

- *Characterizing Power Consumption of Supercomputing Applications*, PI 2012–2013  
Award amount: \$4,102 in student assistant and equipment funding  
SSU RSCAP Mini-Grant program
- *Power Signature Analysis of Supercomputing Applications*, faculty advisor 2012  
Award amount: \$600 in equipment funding  
SSU Undergraduate Research Grant awarded to Matthew Hardwick
- *Power Signature Analysis*, PI 2012  
Award amount: \$5,000 in student assistant and faculty stipends  
Subaward from the S3 NSF STEP grant
- *Contextualizing the Literature of Introductory Programming Education*, PI 2010  
Award amount: \$1,000 in student assistant funding  
SSU Instructionally Related Activities Student Assistant program
- *Modeling the Power Consumption of Graphics Processors*, faculty advisor 2010  
Award amount: \$650 in equipment funding  
SSU Undergraduate Research Grant awarded to Benjamin Morrison

### Travel Grants

- SSU School of Science and Technology Professional Development Grants
  - Supercomputing 2015–2017
  - Intl. Conf. Parallel Processing 2013–2014
  - IEEE Intl. Symp. Performance Analysis of Systems and Software 2011–2013
  - ACM SIGCSE Tech. Symp. Computer Science Education 2011–2013
  - ACM/IEEE Intl. Symp. Computer Architecture (Austin, TX) 2009
  - Workshop on Power-Aware Computing and Systems (San Diego, CA) 2008
- Travel to Denice Denton Emerging Leaders Workshop (Madison, WI) 2016  
Funding sources: Anita Borg Institute; Computing Research Association
- Travel to Mid-Career Mentoring Workshop (Portland, OR) 2015  
Funding source: Computing Research Association, Committee on the Status of Women in Computing Research
- Travel to the Programming Languages, Operating Systems, and Architecture Mentoring Workshop (Washington, D.C.) 2009  
Funding source: Computing Research Association, Committee on the Status of Women in Computing Research / Coalition to Diversify Computing

REVIEWING  
AND EDITING

### Technical Program Committee Membership

- Intl. Conf. High-Performance Computing, Networking, Storage, and Analysis (SC) 2017, 2014
- Intl. Conf. Algorithms and Architectures for Parallel Processing (ICA3PP) 2017
- ACM Symp. High-Performance Parallel & Distributed Computing (HPDC), poster committee 2017
- IEEE Intl. Symp. Performance Analysis of Systems & Software (ISPASS) 2017, 2011
- IEEE/ACM Intl. Symp. Cluster, Cloud, and Grid Computing (CCGrid) 2017, 2016
- Workshop on High-Performance, Power-Aware Computing (HPPAC) 2012–2016
- ACM/SPEC Intl. Conf. Performance Engineering (ICPE) 2016
- Intl. Wkshp. Power-aware Algorithms, Systems, & Architectures (PASA) 2016, 2014
- Intl. Conf. on Parallel Processing (ICPP) 2013
- ACM Intl. Systems and Storage Conference (SYSTOR) 2013
- Workshop on Power Grid-Friendly Computing (PGFC) 2012
- Intl. Conf. Supercomputing (ICS) 2011
- ACM SIGCOMM Intl. Conf. Energy-Efficient Computing & Networking (e-Energy) 2010
- Workshop on Power-Aware Computing and Systems (HotPower) 2009
- Workshop on Modeling, Benchmarking, and Simulation (MoBS) 2009

### Editorial Board Membership



*Potentials*, the Institute of Electrical and Electronics Engineers (IEEE) student magazine:

- Contributing Editor 2013
- Associate Editor 2009–2012 and 2004–2006
- Editor-in-Chief 2007–2008
- Student Editor 2002–2004

### Reviewing

- ACM SIGCSE Tech. Symp. Computer Science Education 2010–2017
- Intl. Wkshp. Energy-Efficient Supercomputing (E2SC) 2016
- *Sustainable Computing: Informatics and Systems (SUSCOM)* 2017
- *ACM Transactions on Modeling and Performance Evaluation of Computing Systems (TOMPECS)* 2016
- ACM Tech. Conf. on Innovation and Technology in Computer Science Education (ITiCSE) 2013–2016, 2010–2011
- *IEEE Transactions on Cloud Computing* 2015
- Intl. Conf. Energy-Aware High Performance Computing (EnAHPC) 2015
- *IEEE Potentials* 2014–2015
- ACM Student Research Competition Grand Finals 2015
- IEEE/ACM Intl. Symp. Microarchitecture (MICRO) 2014, 2006
- IEEE Intl. Symp. High-Performance Computer Architecture (HPCA) 2014
- *IEEE Micro* 2011–2012
- *IEEE Transactions on Computers* 2010–2012
- ACM Intl. Conf. High-Performance and Embedded Architecture and Compilation (HiPEAC) 2011
- *IEEE Transactions on VLSI* 2009
- *IEEE Transactions on Services Computing* 2008
- ACM/IEEE Intl. Symp. Computer Architecture (ISCA) 2008
- IEEE Intl. Conf. Parallel Architecture & Compilation Techniques (PACT) 2006

### INDUSTRY EXPERIENCE

- Consulting Researcher, Oak Ridge National Laboratory (Oak Ridge, TN) 2012  
*Collaborators:* Dr. Chung-Hsing Hsu, Dr. Stephen W. Poole  
Conducted research on power analysis and management in high-performance computing environments.
- Consulting Researcher, Microsoft Research-Silicon Valley (Mountain View, CA) 2008–2012  
*Collaborators:* Dr. John D. Davis, Dr. Moises Goldszmidt  
Conducted research on power modeling, power management, and energy-efficient computer design for large-scale datacenter environments.
- Intern, Hewlett-Packard Labs (Palo Alto, CA) 2005–2006  
*Mentor:* Dr. Parthasarathy Ranganathan  
Conducted Ph.D. dissertation research on computer energy-efficiency metrics and power consumption models.
- Intern, Cray (Chippewa Falls, WI) 2003  
*Mentor:* Dr. Steve Scott  
Developed a theoretical model and lightweight simulator for a clustered vector supercomputer microarchitecture.
- Intern, Compaq Computer Corp. (Houston, TX) 2001  
*Mentor:* David Joy  
Benchmarked, debugged, and tested firmware for Integrated Lights-Out (iLO) server management product.

PATENT	<i>US Patent 8,904,209</i> : Davis, J.D., Goldszmidt, M., and Rivoire, S.M., “Estimating and Managing Power Consumption of Computing Devices Using Power Models”	2014
PROFESSIONAL SERVICE	<ul style="list-style-type: none"> <li>• IEEE Intl. Symposium on Performance Analysis of Systems and Software (ISPASS) <ul style="list-style-type: none"> <li>• Web chair 2018</li> <li>• General chair 2017</li> <li>• Student travel grant chair 2015, 2013, 2012, 2010</li> <li>• Registration chair 2014</li> </ul> </li> <li>• Member, IEEE Publication Products and Services Committee 2013–2014</li> <li>• Member, IEEE Publication Conduct Committee 2007–2010</li> <li>• Tester, IEEEEXTreme worldwide student programming contest 2009</li> <li>• Member, IEEE Publication Services and Products Board 2007–2008</li> <li>• Member, Conference No-show Policy ad-hoc subcommittee of IEEE Publication Services and Products Board 2008</li> <li>• Member, IEEE Student Activities Committee 2007–2008, 2002–2004</li> <li>• Newsletter editor, worldwide IEEE Women in Engineering 2006–2008</li> <li>• Newsletter editor, worldwide IEEE Graduates of the Last Decade (GOLD) 2006</li> </ul>	
UNIVERSITY SERVICE	<p><b>Sonoma State University: Committee Membership</b></p> <ul style="list-style-type: none"> <li>• Academic Planning, Assessment and Resources Committee (APARC) 2016–2017</li> <li>• Academic Senate 2013–2016 <ul style="list-style-type: none"> <li>Temporary at-large replacement to Executive Committee Nov.–Dec. 2015</li> </ul> </li> <li>• Search committee, Deputy CIO for Workstation Support and IT Help Desk 2015</li> <li>• Graduation Initiative Group 2012–2015</li> <li>• University Professional Development Subcommittee 2012–2015</li> <li>• Web Advisory Committee 2012–2014</li> <li>• University Scholarship Subcommittee 2010–2013</li> <li>• Dispute Resolution Board Spring 2009</li> </ul> <p><b>Sonoma State University: School and Departmental Service</b></p> <ul style="list-style-type: none"> <li>• Program Coordinator, School of Science and Technology (SST) Student High School Internship Program (SHIP) 2012–present</li> <li>• Faculty advisor, Women in Computer Science student organization 2011–present</li> <li>• Reappointment, Tenure, and Promotion (RTP) committees <ul style="list-style-type: none"> <li>• Computer Science Department 2015–2017</li> <li>• Environmental Studies and Planning 2016–2017</li> <li>• Geology Department 2015–2017</li> <li>• Library <ul style="list-style-type: none"> <li>• Chair 2016–2017</li> <li>• Committee member 2015–2016</li> </ul> </li> </ul> </li> <li>• Search committees, CS tenure-track faculty <ul style="list-style-type: none"> <li>• Chair 2016–2017</li> <li>• Committee member 2013–14, 2014–15, 2015–16</li> </ul> </li> <li>• CS department representative, Seawolf Decision Day 2017 and 4 prior years</li> <li>• SST Professional Development Committee <ul style="list-style-type: none"> <li>• Chair 2013</li> <li>• Department representative 2010–2016</li> </ul> </li> <li>• Faculty mentor, SST Summer High School Internship Program 2011–2013, 2009</li> <li>• Search committee member, CS/Geology Academic Support Coordinator 2012</li> <li>• Search committee member, ES Visiting Assistant Professor 2012</li> <li>• CS department volunteer, Latino Family Summit 2012, 2010</li> <li>• Volunteer, MESA Day 2011</li> </ul>	

### Sonoma State University: Other Service

- Name reader at Commencement 2011–2017
- Coauthor, SSU WASC accreditation self-study (1 of 4 faculty) 2017
- Presenter, Convocation Faculty Showcase (1 faculty member per school) 2015
- Interviewer, University Study Abroad program 2013, 2010
- Judge, School of Education’s Jack London Award 2010
- Reviewer, Undergraduate Research Grant applications 2008

### Stanford University

- Computer Systems Laboratory Student Ambassador 2004–2007
- “Big Sister” to three first-year graduate students through Stanford Women in Electrical Engineering 2004–2007
- Mentor to eight first-year graduate students through Stanford Electrical Engineering admissions office 2006–2007
- Member, Judicial Panel pool 2005–2006
- Webmaster, Assoc. Students of Stanford University Speakers Bureau 2003–2006

### COMMUNITY SERVICE

#### Expanding Your Horizons–Sonoma County

Expanding Your Horizons (EYH) is a 1-day conference introducing middle school girls to science and technology.

- Web chair 2014–present
- Workshop leader 2010–2013, 2015–2016
- Organizing Committee member in charge of printed materials 2013–2014
- Facilities Committee member 2014, 2012

#### Other Outreach Activities

- Panelist at screenings of *CODE: Debugging the Gender Gap*
  - Women in Tech, SSU Apr. 2017
  - MESA, Santa Rosa Junior College Mar. 2017
- Advisory Board of Santa Rosa Junior College CS 2008, 2015
- Volunteer scientist, MESA Schools Program “Dinner with a Scientist” (Santa Rosa, CA) 2014
- Judge, Sonoma County Office of Education Science Fair (Rohnert Park, CA) 2013
- Panelist, Professional Women’s Evening at Tech Trek math and science camp for middle school girls (Rohnert Park, CA) 2012
- Senior project mentor and judge, Novato High School (Novato, CA) 2012
- Faculty advisor, Novato High School MOUSE Squad, an organization that teaches IT support skills (Novato, CA) 2010–2011
- Workshop leader, Adelante program for 7th–12th grade students visiting Sonoma State University (Rohnert Park, CA) 2011
- Volunteer, Dare 2B Digital workshop for middle and high school girls (Los Altos Hills, CA) 2010
- Volunteer, San Francisco Support for Families of Children with Disabilities Parent-Professional Workshop and Halloween party (San Francisco, CA) 2010

### AWARDS

- President’s Award for Excellence in Scholarship (awarded to 2 faculty campuswide) 2015
- Nominated for Sonoma State University Excellence in Teaching Award 2012
- MOUSE Squad of Northern California Volunteer of the Year 2011
- Stanford Graduate Fellowship 2001–2005
- National Science Foundation Graduate Fellowship 2001–2004
- UT-Austin Electrical and Computer Engineering Department “Outstanding Scholar-Leader” (awarded to 1 graduating student) 2001

- UT-Austin Society of Women Engineers “Outstanding Student”  
(awarded to 1 graduating student)

2001