

I. PERSONAL DATA

Name: Diane T. (Thiede) Rover

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II. EDUCATION

Ph.D. Computer Engineering, Iowa State University, 1989

M.S. Computer Engineering, Iowa State University, 1986

B.S. Computer Science, Iowa State University, 1984

III. ACADEMIC EXPERIENCE

Full Professor (8/01 - present), Dept. of Electrical and Computer Engineering, Iowa State University, Ames, IA.

Faculty Director (2/11 – present), SP@ISU Program, Iowa State University (NSF I³ Program, 2010-15)

Alliance Director (10/11 – present), IINSPIRE Program, Iowa State University (NSF LSAMP Program, 2011-2016)

Administrative Fellow (2010-11), ISU ADVANCE Program, Office of the Executive Vice President and Provost, Iowa State University

Associate Chair for Undergraduate Education (5/03 – 7/04)

Associate Dean for Academic and Student Affairs (7/05-6/10), Interim Associate Dean for Academic Programs and Budget (7/04 – 6/05), College of Engineering, Iowa State University, Ames, IA.

Associate Professor (7/97 - 8/01), Dept. of Electrical and Computer Engineering, Michigan State University, East Lansing, MI.

Interim Department Chairperson (8/00 - 8/01)

Director, Computer Engineering Program (7/97 - 6/00)

Assistant Professor (9/91 - 6/97), Dept. of Electrical Engineering, Michigan State University.

IV. INDUSTRIAL AND OTHER EXPERIENCE

Visiting Researcher (6/92 - 7/92), Scalable Computing Laboratory, Ames Laboratory (US-Department of Energy), Ames, IA

Postdoctoral Researcher (9/89 - 8/91), Scalable Computing Laboratory, Ames Laboratory (US-Department of Energy), Ames, Iowa.

Summer Graduate Intern (5/87 to 8/87), Computer Sciences Dept., IBM T.J. Watson Research Center, Yorktown Heights, New York.

Summer Graduate Intern (5/86 to 8/86), Digital Computer and Software Engineering Dept., McDonnell Douglas Corp., St. Louis, Missouri.

Graduate Teaching Assistant (8/86 to 5/87), Dept. of Electrical and Computer Engineering, Iowa State University.

Graduate Research Assistant (6/84 to 7/85), Dept. of Electrical and Computer Engineering, Iowa State University.

Consulting (Industry). 21st Century Systems, Incorporated (1998); Whirlpool Corporation (1995); IBM Corporation (1988-92).

V. HONORS AND AWARDS

Women Impacting ISU, Carrie Chapman Catt Center, 2015

ASEE Fellow, 2012 (for contributions to engineering and computing education, administrative and program leadership, broadening participation in engineering, and service to ASEE)

Tau Beta Pi, Eminent Engineer, 2009

Iowa Women of Innovation award finalist, Academic Innovation and Leadership, Technology Association of Iowa, 2008

IEEE Computer Society International Conference on Microelectronic Systems Education, Best Paper Award, 2007

Iowa State University Wakonse Teaching Fellow, 2004

Senior Member, IEEE, 2001

Iowa State University Professional Progress in Engineering Award, 1998

Michigan State University Teacher-Scholar Award, 1998

Michigan State University Lilly Teaching Fellowship, 1996-97

National Science Foundation CAREER Award, 1996

MSU College of Engineering Withrow Teaching Excellence Award, 1994

MasPar Challenge Award, 1994

R&D 100 Award, R&D Magazine, <http://www.rd100awards.com>, 1991

Iowa State University Graduate Research Excellence Award, 1989

IBM Graduate Fellowship, 1985-1988

Various honor societies and academic achievements as undergraduate/graduate student and student-athlete

VI. ACADEMIC AREAS OF SPECIALIZATION

Teaching and Research Expertise: Embedded computer systems, Digital logic design, Hardware/software systems, Reconfigurable hardware, Integrated program development and performance environments for parallel and distributed systems, Visualization, Performance monitoring and evaluation, Engineering education.

Teaching

Iowa State University

Courses Taught:

CPRE 211, Introduction to Microcontrollers: F01, F02, S03, F03

CPRE 388, Embedded Systems II – Mobile Platforms, F12, F13 (team-taught with A. Tyagi)

CPRE 588, Embedded Computer Systems: S02, S03, S04, S05, S06, S07 (team-taught with J. Zambreno), S11, S12, S15

2003-12: both on-campus and online sections via Engineering Distance Education

2015: on-campus and online sections, with online support from Engineering-LAS Online

Senior Design Team Mentoring:

CPRE 491/2, Senior Design: F01, S02, F02, S03, F03, S04, F04, S05, F10, S11, F11, S12, F12, S13, F13, S14, F14, S15 (see Additional Information)

Other Course-based Student Mentoring:

CPRE/EE 294, Program Discovery: F10, S11, F11, F12, F13, F14

CPRE/EE 394, Program Exploration: F11, F12, S13, F13, F14

Other Curriculum Collaboration:

ENGR 110X, E2020 Scholars Program freshman seminar (2010-12): course supervision and development with collaborators (**documented in education publications; curriculum innovation developed under NSF STEP/S-STEM grants**)

ENGR 210X, E2020 Scholars Program sophomore seminar (2010-13): course supervision and development with collaborators (**documented in education publications; curriculum innovation developed under NSF STEP/S-STEM grants**)

CPRE 211, Introduction to Microcontrollers (2002-03): course and lab revision with collaborators (**documented in education publications**)

CPRE 281X/282X, Digital Logic, Processors and Programming I / Integrated Computer Systems Organization and Logic Design I; CPRE 381X/382X, Digital

Logic, Processors and Programming II / Integrated Computer Systems Organization and Logic Design II (2004-06): course assessment with collaborators (**documented in education publications; curriculum innovation developed under NSF DLR grant**)

CPRE 488X, Embedded Systems Design (2004-05): course development and evaluation with Z. Zhang and collaborators (**documented in education publications**)

Michigan State University

Courses Taught:

ECE 330, Digital Logic Fundamentals: F91, W91, F94, F95, S96, F96

ECE 331, Microprocessors & Digital Systems: S93, F93, S94

ECE 381, Capstone: Professionalism, Communication, and Ethics: Su97, team-taught with P.D. Fisher

ECE 411, Electronic Design Automation: F98

ECE 482, Capstone: Computer System Design: Su97-S99, team-taught with P.D. Fisher; F99, team-taught with T. Grotjohn

CSE 479, Capstone: Software Tools for Concurrent Systems: F97

ECE 802, Special Topics: FPGAs & Application Specific Computing Systems: S95

ECE 809, Algorithms & Their Hardware Implementation: F92, S00, F00

ECE 921, Performance Instrumentation and Visualization of Concurrent Computers: S92, S97

Senior Design Team Mentoring:

ECE 482, Capstone-Computer System Design: Su97, F97, S98, F98, S99, F99, S00, S01 (see Additional Information)

Other Curriculum Collaboration:

ECE 331, Microprocessors & Digital Systems: lab supervision

ECE 411, Electronic Design Automation: course and lab development (documented in education publications)

ECE 482, Capstone-Computer System Design: lab supervision; course and lab development with collaborators (documented in education publications; curriculum innovation developed under NSF CRCD grant)

ECE 809, Algorithms & Their Hardware Implementation: course revision

Synergistic Activities

Innovation in education: Coordinated curriculum development and assessment on the social context of engineering through the National Academy of Engineering's attributes

of the engineer of 2020, including leadership, entrepreneurship and innovation, systems thinking, and global awareness (NSF STEP and S-STEM grants). Developed media to improve the public understanding of engineering and broaden participation in engineering using the NAE's Changing the Conversation study (NSF STEP grant). Collaborated on program development and outcomes assessment for technological literacy (NSF CCLI grant). Collaborated on the development of the Engineering Leadership Program (3M Foundation gift). Investigated and implemented curriculum integration techniques (NSF DLR and CCLI grants, **Best Paper Award**). Disseminated applications of cooperative learning techniques (Wakonse Conference on College Teaching, Journal of Engineering Education Academic Bookshelf). Introduced the 513C learning model (NSF Career grant, Lilly Teaching Fellowship). Integrated the concepts of hardware-software codesign and remote/networked access to embedded systems into the curriculum (NSF CRCD grants). Co-developer of a series of embedded systems courses (sophomore to graduate level). Co-developer of computer engineering capstone design course that emphasizes embedded-system product design, cross-functional teaming, and student self-assessment.

Mentoring of students: IINSPIRE Alliance director (NSF LSAMP grant). E2020 Scholars Program director (NSF S-STEM grant). Course-based mentoring in ISU ECE Department. Various undergraduate/graduate student research, women/minority undergraduate students, honors projects, and programs to introduce engineering to pre-college groups. Mentor for Engineering Leadership Program student directors (2006-2010). Mentor for Mechanical Engineering graduate student in Preparing Future Faculty (PFF) Program (ISU, 2007-08). Co-PI on U.S. Dept. of Education GAANN award (ISU, 2006). Mentor for ISU design team competing as finalist in 2005 Microsoft Windows Embedded Student Challenge competition. Co-PI on MSU GAANN award (2001). Advisor for the MSU Chapter of Eta Kappa Nu (1995-2000).

Service: IEEE Education Society Board of Governors, 2013-present. ABET Engineering Accreditation Commission, IEEE Commissioner, 2009-2014. ASEE ECE Division Secretary/Treasurer, 2009-10; Chair Elect 2010-11; Chair 2011-12. ASEE ECE Division Program Chair, 2010. U.S. DOE Office of Science PECASE panel, 2010. NSF Committee of Visitors for the Division of Engineering Education and Centers, 2010. Program Co-chair for the 12th Annual Colloquium on International Engineering Education, 2009. IEEE Committee on Engineering Accreditation Activities (CEAA), Member-At-Large, 2006-09. NAE Engineering Education Leadership Institute, resource person, 2006. Senior Associate Editor (for the Academic Bookshelf), *ASEE Journal of Engineering Education*, 2000-08. IEEE ABET/EAC Program Evaluator (Computer Engineering), 2002-present. ACM/IEEE SC (Supercomputing) Conference committees, 2008 Technical Papers Committee member, 2006 Tutorials Program Co-Chair, 2003 Technical Papers Program Chair. Steering Committee for the Colloquium on International Engineering Education, 2006-11 (University of Rhode Island).

International activities: ISU Languages and Cultures for Professions (LCP) Advisory Board, 2009-11. Steering Committee for the Colloquium on International Engineering Education, 2006-11 (University of Rhode Island). Program Co-chair for the 12th Annual Colloquium on International Engineering Education hosted by ISU, 2009. ISU College of

Engineering delegation to Dubai, U.A.E., and Pilani, India, visits to Birla Institute of Science and Technology, Dubai and Pilani campuses, November 2007. ISU College of Engineering delegation to Turkey, visits to Middle East Technical University (Ankara) and Bogazici University (Istanbul), April 2006. Supervisor of students visiting MSU in the Kaiserslautern University (Germany) Exchange Program with the ECE Department (ten students, 1992-2000). Participation in joint workshops on high-performance computing (U.S.-Venezuela, April 2000, NSF-sponsored; U.S.-Japan, September 1994, DOE-sponsored). Lecturer at National University of Sciences and Technology, College of Signals, Rawalpindi, Pakistan (January 1994), as part of MSU College of Engineering outreach and exchange with NUST.

Research

STEM student success (2010-present)
 Student learning and the social/professional context of engineering (2008-present)
 Cognition and learning (2006-present)
 Curriculum integration in engineering education (2004-present)
 System-level design methodology and performance optimization (2002-present)
 Hardware-software codesign (1998-present)
 Problem-based learning models in engineering education (1998-present)
 Uniform Resource Visualization services and components for performance monitoring of distributed systems (2000-2006)
 Network-enabled embedded systems (1998-2001)
 Instrumentation system architecture and management (1997-2001)
 BRISK distributed instrumentation system (1995-1998)
 Online visualization technology, VOML (1995-1998)
 Design and analysis of high-performance applications (pattern matching on reconfigurable computer, 3D plasma simulation on massively parallel processor) (1993-1995)

VII. GRANTS AND CONTRACTS

Grants/Contracts

Current

“EAGER: Understanding and Strengthening STEM Faculty Engagement, the Institutional Environment and Transformative Research,” **National Science Foundation** (Early Concept Grants for Exploratory Research), Grant No. 1449187, 9/15/14 - 8/31/16, \$299,991, 1 of 5 PIs (lead PI: D. Rover; L. Larson, S. Gahn M. Shelley, B. Schmittmann; Senior Personnel: M. Heitmann)

“RCN: Broader Impacts and Outreach Network for Institutional Collaboration (BIONIC),” **National Science Foundation** (Research Coordination Networks), Grant No. 1408736, 8/1/14-7/31/19, \$499,956, 1 of 5 PIs (lead PI: S. Renoe (Univ. Missouri); D. Rover, J. Horwitz (Univ. Penn.), K. Jona (Northwestern Univ.), K. Niemi (Univ.

Wisconsin); Senior Personnel: M. Heitmann (ISU), A. Pratt (Northwestern), K. Storm (Stanford)). All funds administered through the University of Missouri.
www.broaderimpacts.net

“Broader Impacts Infrastructure Summit 2014,” **National Science Foundation** (EPSCoR Workshop grant), 2014, \$40,000, 1 of 2 PIs (lead PI: Susan Renoe (Univ. Missouri); D. Rover). Workshop held April 16-18, 2014. Funds administered through Univ. of Missouri.
broaderimpactssummit.missouri.edu

“Iowa/Illinois/Nebraska STEM Partnership for Innovation in Research and Education (IINSPIRE),” **National Science Foundation** (Louis Stokes Alliance for Minority Participation (LSAMP) Program), Grant No. 1102461, 8/15/11-7/31/16, \$2,499,023. 5 PIs from 5 institutions (lead PI: D. Holger (Associate Provost)). D. Rover: internal ISU co-PI and alliance director.
www.iinspirelsamp.iastate.edu

“Strengthening the Professoriate at Iowa State University (SP@ISU): A Campus Network to Enable Strong Science and Diverse Communities,” **National Science Foundation** (Innovation through Institutional Integration (I³) Program), Grant No. 0963584, 7/1/10 – 6/30/15, \$1,248,727, 1 of 4 PIs (lead PI: S. Nusser (VPR); D. Rover, M. Shelley, B. Bowen (retired), S. Quisenberry (emeritus)).
www.spisu.iastate.edu

Pending

“Reinventing the Instructional and Departmental Enterprise to Advance the Professional Formation of Electrical and Computer Engineers,” **National Science Foundation** (Improving Undergraduate STEM Education/Professional Formation of Engineers: Revolutionizing Engineering Departments (IUSE/PFE:RED) Program), 7/1/15 – 6/30/20, \$1,999,991, 1 of 5 PIs (lead PI: D. Jiles (Department Chair); D. Rover, M. Mina, J. Zambreno, P. Jones; Senior Personnel: M. Shelley, L. Larson, K. Constant, D. Jacobson, S. Yilmaz, B. Burt). Submitted November 26, 2014.

Previous

“E2020 Scholars: Advancing the NAE Vision,” **National Science Foundation** (Scholarships in STEM (S-STEM) Program), Grant No. 0807051, 7/15/08-6/30/13, \$600,000, 1 of 4 PIs (lead PI: D. Rover; M. Bruning, M. Shelley (Statistics/Political Science), S. Mickelson (ABE); Senior Personnel: T. Brumm, J. Johnson, P. Castleberry). No-cost extension through 6/30/14.
www.engineering.iastate.edu/e2020/

“Collaborative Project: SEEC: Student Enrollment and Engagement Through Connections,” **National Science Foundation** (Science, Technology, Engineering, and Mathematics Talent Expansion Program (STEP)), Grant No. 0653236, 7/15/07-6/30/12,

\$1,499,945, 1 of 5 PIs at ISU (lead PI: D. Rover; M. Bruning, F. Laanan (SOE), S. Mickelson (ABE), M. Shelley (Statistics/Political Science); Senior Personnel: L. Zachary, K. Zunkel, M. Goodwin, M. Mina); ISU as lead institution, collaborative with Des Moines Area Community College (additional \$500,000 to DMACC, lead PI: H. McMaken; K. Hensen). No-cost extension through 6/30/15.
www.engineering.iastate.edu/seec/

“Creating Effective Future Faculty in Engineering,” **National Science Foundation** (Course, Curriculum, and Laboratory Improvement Program (CCLI)), Grant No. 0837314, 7/1/09-6/30/12, \$150,000, 1 of 3 PIs at ISU (lead PI: M. Mina; D. Rover, M. Shelley (Statistics/Political Science)). No-cost extension through 6/30/14.

“Improving Embedded System Education with Software Engineering Methodologies,” **National Science Foundation** (Course, Curriculum, and Laboratory Improvement Program (CCLI)), Grant No. 0737029, 3/1/08-2/28/10, \$149,999, 1 of 4 PIs at ISU (lead PI: Tien Nyugen; Z. Zhang, D. Rover, M. Shelley (Statistics/Political Science)). No-cost extension.

“Graduate Education for Icube,” **U.S. Department of Education** (Graduate Assistantships in Areas of National Need (GAANN) Program), 8/15/06-8/14/09, \$504,000; 1 of 5 PIs at ISU (lead PI: A. Somani; S. Aluru, D. Rover, J. McCalley, R. Kanwar (ABE)).

“The Women Engineering Faculty Leadership Network,” **National Science Foundation**, Grant No. 0245084, 7/1/03-6/30/06, \$218,962; collaborative proposal with Louisiana State University, Syracuse University, University of Central Florida, University of Connecticut, and University of Utah, total approx. \$700,000), 1 of 2 PIs at ISU (lead PI: Judy Vance).
No-cost extension through 6/30/07.

“VIE: Vertical Integration of Computer, Electrical, and Mechanical Engineering Education (Planning Grant),” **National Science Foundation** (Department-Level Reform of Undergraduate Engineering Education Program), Grant No. EEC 0431924, 8/1/04-7/31/05, \$99,986, 1 of 5 PIs (lead PI: D. Rover; M. Mina, J. Dickerson, M. Shelley, D. Flugrad; Senior Personnel: B. Hand, G. Luecke, A. Chandra).
No-cost extension through 7/31/06.

“Wireless Multimedia for Virtual Environments,” **National Science Foundation**, (Combined Research- Curriculum Development (CRCDD) Program), Grant No. EEC-0088071, 1/01-12/04, \$499,891, 1 of 4 PIs (ISU; lead PI: J. Dickerson; R. Weber, C. Cruz-Neira, D. Rover).
REU Supplement, 2004, \$10,000.
No-cost extension through 12/31/05.

“Acquisition of a Cluster for Experimental Parallel Computing Research in Scientific Computing and Computational Biology,” **National Science Foundation** (CISE Research

Resources), Grant No. 0130861, 9/01-9/03, \$166,518, 1 of 5 PIs (ISU; lead PI: S. Aluru; S. Balasubramaniam, V. Brendel, S. Kothari and D. Rover).

“Scalable Video for Wireless Devices,” **Michigan Economic Development Corporation**, 1/1/02-12/31/04, \$150,000, 1 of 2 PIs (MSU; lead-PI: H. Radha). *Did not participate due to change of institution.*

“GAANN Fellows in Enabling Technologies for Micro and Nano Engineering Systems,” **U.S. Department of Education** (Graduate Assistantships in Areas of National Need (GAANN)), Grant Number P200A010421, 8/15/01 - 8/14/04, \$201,999 (year 1), 1 of 4 PIs (MSU; lead-PI: P. Pierre; J. Asmussen, D. Rover, and M. Shanblatt). *Did not participate due to change of institution.*

“Integration of System Performance: Tools & Technologies in Research and Education,” **National Science Foundation** (Faculty Early Career Development (CAREER) Program), Grant No. ACI-9624149, 6/1/96-5/31/00, \$200,000.
REU Supplement, 1997, \$10,000.
REU Supplement, 2000, \$10,000.
No-cost extension through 5/31/03.

“VESL: Visions for Embedded Systems Laboratories,” with M. Mutka and B. Cheng (Computer Science and Engineering Department, MSU), and C.-L. Wey (ECE Department, MSU), **National Science Foundation** (Combined Research- Curriculum Development (CRCD) Program), Grant No. EEC-9700732, 6/1/97-5/31/00, \$396,657. With subawards to Lake Superior State Univ. and Saginaw Valley State Univ. Additional funding from MSU cost-sharing: \$133,208.
REU Supplement, 1998, \$10,000.
No-cost extension through 5/31/02.

“Instrumentation and Visualization for Design and Test of Real-Time Embedded Systems (PGRT),” with M. Mutka (CSE Department, MSU), **Defense Advanced Research Projects Agency** (DOD), 7/16/95–7/15/98, \$496,344.

“Filtering and Matching on Splash 2,” with A. Jain (CSE Department, MSU), **Department of Defense**, 10/1/94–12/31/95, \$135,356.

“An Integrated Environment for Parallel Image Processing Using Splash 2,” with A. Jain and L. Ni (CSE Department, MSU), **Supercomputing Research Center** (Institute for Defense Analyses), 5/15/93–8/15/94, \$115,000.

“An Exploratory Performance Environment for Parallel Systems (VISTA),” **National Science Foundation**, Research Planning Grant, Grant No. CCR-9296029 (Computer Systems), 9/1/91–8/31/93, \$18,000.

Non-co-PI Grant Collaboration

Team member, Diversity Task Force (Broader Impacts), Iowa NSF EPSCoR, “Harnessing Energy in the Biosphere to Build Sustainable Energy Systems,” led by T. Heindel, **National Science Foundation**, Grant No. EPS-1101284, <http://iowaepsco.org>.
Current

Other Gifts and Grants

“Engineering Leadership Program,” **3M Foundation**, 10/1/05-4/30/08, \$500,000; 1 of 4 PIs at ISU (lead PI: M. Kushner; D. Rover, L. Zachary, K. Athreya).
 New award, 2008, \$250,000 (as part of a total new commitment of \$500,000 through 2010, for a total investment of \$1M)

Various support (\$5000-\$25,000) from corporate foundations and companies, including equipment/software grants, for research and education
 “Electronic System-Level Design Education,” **Rockwell Collins University Grant Program**, \$15,000, 2004-05.

Various institutional grants (\$5000-\$25,000) for student programs and laboratory development, MSU and ISU
 “A Proposal to Upgrade Two Computer Engineering Instructional Laboratories,” prepared by the Computer Engineering Task Force (Enbody, McKinley, Mutka, Resh, Rover, Wey) and P.D. Fisher, 1997; funded by the ECE and CSE Departments, the College of Engineering, and **Michigan State University**, 1997-98, \$346,500.

VIII. TECHNICAL PUBLICATIONS

*: student

Reviewed Journal Papers

1. M. Laugerman*, M. Shelley, S.K. Mickelson, and D.T. Rover, “The Engineering Admissions Partnership Program: A Navigation Strategy for Community College Students Seeking a Pathway into Engineering,” *International Journal of Engineering Education*, vol. 29, no. 6, November/December 2013, pp. 1260-1269.
2. D. T. Rover, R. Mercado*, Z. Zhang, M. Shelley, and D. Helvick*, “Reflections on Teaching and Learning in an Advanced Undergraduate Course in Embedded Systems,” invited, *IEEE Transactions on Education*, 51, no. 3 (August 2008): 400-412.
3. N.G. Santiago*, D. T. Rover, Domingo Rodriguez, “A Statistical Approach for the Analysis of the Relation Between Low-Level Performance Information, the Code, and the Environment,” *Information*, International Information Institute, Vol. 9, No. 3, May 2006, pp. 503-517, ISSN 1343-4500, www.information-iii.org.

4. M. Bakic*, W. Mutka, D. T. Rover, "An On-Line Performance Visualization Technology," *Software -- Practice and Experience*, Wiley, Vol. 33, No. 15, December 2003, pp. 1447-1469 (<http://www3.interscience.wiley.com/cgi-bin/jhome/1752>, <http://www3.interscience.wiley.com/cgi-bin/jissue/106564949>).
5. D. T. Rover, A. Bakic*, M. Mutka, and A. Waheed*, "Performance Optimization of Distributed Applications in an Extensible, Adaptive Environment," *Future Generation Computer Systems Journal*, Elsevier, 18(1), pp. 131-145, September 2001.
6. A. Bakic*, M. W. Mutka, D. T. Rover, "BRISK: A Portable and Extensible Distributed Instrumentation System," *Software -- Practice and Experience*, vol. 30, pp. 1353-1373, Oct. 2000.
7. A. Waheed*, D. T. Rover, M. Mutka, H. Smith*, A. Bakic*, "Modeling, Evaluation, and Adaptive Control of an Instrumentation System," *Int. Journal of Parallel and Distributed Systems and Networks*, ACTA Press, 2(3), 1999.
8. R. Wright*, M. Shanblatt, and D. Rover, "A Visualization Tool-Set for Partitioned-Based Switching Activity Estimation of CMOS Circuits," *Int. Journal of Parallel and Distributed Systems and Networks*, ACTA Press, 2(3), 1999.
9. H. Smith*, M. W. Mutka, D. T. Rover, "A Feedback-based Rate Control Algorithm for Multicast Transmitted Video Conferencing," *Journal of High-Speed Networks*, 7(3-4), 1998, pp. 259-279.
10. A. Waheed*, D.T. Rover, and J. Hollingsworth "Modeling and Evaluating Design Alternatives for an On-Line Instrumentation System: A Case Study," *IEEE Transactions on Software Engineering*, 24(6), June 1998, pp. 451-470.
11. D.T. Rover, A. Waheed*, M. Mutka, and A. Bakic*, "Software Tools for Complex Distributed Systems: Toward Integrated Tool Environments," *IEEE Concurrency*, Engineering of Complex Distributed Computing Systems theme, 6(2), April-June 1998, pp. 40-54.
12. M. Heath, A. Malony, and D.T. Rover, "The Visual Display of Parallel Performance Data," *IEEE Computer*, 28(11), November 1995, pp. 21-28. Special issue on Performance Evaluation Tools for Parallel and Distributed Systems.
13. M. Heath, A. Malony, and D.T. Rover, "Parallel Performance Visualization: From Practice to Theory," *IEEE Parallel and Distributed Technology*, 3(4), Winter 1995, pp. 44-60. Special issue on Performance Evaluation Tools for Parallel and Distributed Systems.
14. Y.-K. Chu* and D.T. Rover, "An Effective Two-Dimensional Mesh Partitioning Strategy," *Parallel Processing Letters*, World Scientific Publishing Company, December 1995, (12 pages). Special issue on Partitioning and Scheduling for Parallel and Distributed Systems.
15. X-H. Sun and D. T. Rover, "Scalability of Parallel Algorithm-Machine Combinations," *IEEE Transactions on Parallel and Distributed Systems*, 5(6), June 1994, pp. 599-613.
16. D. T. Rover, "Vista: Visualization and Instrumentation of Scalable Multicomputer Applications," Project Summary, *IEEE Parallel and Distributed Technology: Systems and Applications*, Special issue on Parallel and Distributed Systems - From Theory to Practice, 1(3), p. 83, August 1993.

17. D. T. Rover and C. T. Wright, "Visualizing the Performance of SPMD and Data-Parallel Programs," *Journal of Parallel and Distributed Computing*, Special Issue on Tools and Methods for Parallel Systems and Computations, Vol. 18, No. 2, June 1993, pp. 129-146.
18. D. T. Rover, V.W. Tsai*, Y-S. Chow*, and J.L. Gustafson, "Signal Processing Algorithms on Parallel Architectures: A Performance Update," *Journal of Parallel and Distributed Computing*, Special Issue on Massively Parallel Computation, Vol. 13, No. 2, October 1991, pp. 237- 245.
19. J. Gustafson, D. T. Rover, S. Elbert, and M. Carter*, "The Design of a Scalable, Fixed-Time Computer Benchmark," *Journal of Parallel and Distributed Computing*, Special Issue on Modeling of Parallel Computers, Vol. 12, No. 4, August 1991, pp. 388-401.
20. D. Jacobson, S. Gaitonde*, J. Kim*, J. Lee*, D. Rover*, M. Sarwar*, and M. Shafiq*, "A Master/Slave Monitor Measurement Technique for an Operating ETHERNET Network," *IEEE Network*, Vol. 1, No. 3, July 1987, pp. 543-550.

Contributed Journal Papers

21. D. T. Rover, "Summary: Reflections on Teaching and Learning in an Advanced Undergraduate Course in Embedded Systems," *Annals of Research on Engineering Education*, 4, no. 2, (Winter 2009).
22. D. T. Rover, "Reflective Essay: Reflections on Teaching and Learning in an Advanced Undergraduate Course in Embedded Systems," *Annals of Research on Engineering Education*, 4, no. 2, (Winter 2009).
23. D. T. Rover, "Attention Engineering Educators," Academic Bookshelf, *ASEE Journal of Engineering Education*," vol. 97, no. 4, October 2008, pp. 531-534.
24. D. T. Rover, "Engineering Identity," Academic Bookshelf, *ASEE Journal of Engineering Education*," vol. 97, no. 3, July 2008, pp. 389-392.
25. D. T. Rover, "Learning from Mathematics Education Research," Academic Bookshelf, *ASEE Journal of Engineering Education*," vol. 97, no. 2, April 2008, pp. 223-225.
26. D. T. Rover, "Engineering Education in a Global Context," Academic Bookshelf, *ASEE Journal of Engineering Education*," vol. 97, no. 1, January 2008, pp. 105-108.
27. D. T. Rover, "Integrative Learning," Academic Bookshelf, *ASEE Journal of Engineering Education*," vol. 96, no. 3, July 2007, pp. 275-277.
28. D. T. Rover, "Effective Teaching," Academic Bookshelf, *ASEE Journal of Engineering Education*," vol. 96, no. 2, April 2007, pp. 167-169.
29. D. T. Rover, "Space to Learn," Academic Bookshelf, *ASEE Journal of Engineering Education*," vol. 96, no. 1, Jan. 2007, pp. 79-81.
30. D. T. Rover, "Teaching Engineering to a Wider Audience," Academic Bookshelf, *ASEE Journal of Engineering Education*," vol. 95, no. 4, Oct. 2006, pp. 347-349.
31. D. T. Rover, "Curriculum Leadership," Academic Bookshelf, *ASEE Journal of Engineering Education*," vol. 95, no. 3, July 2006, pp. 255-256.
32. D. T. Rover, "Closing the Distance," Academic Bookshelf, *ASEE Journal of Engineering Education*," vol. 95, no. 2, April 2006, pp. 175-176.

33. D. T. Rover, "Policymaking and Engineers," Academic Bookshelf, *ASEE Journal of Engineering Education*, vol. 95, no. 1, Jan. 2006, pp. 93-95.
34. D. T. Rover, "New Economy, New Engineer," Academic Bookshelf, *ASEE Journal of Engineering Education*, vol. 94, no. 4, Oct. 2005, pp. 427-428.
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13. D.T. Rover and C.T. Wright, "Pictures of Performance: Highlighting Program Activity in Space and Time," *Proceedings of the Fifth Distributed Memory Computing Conference*, IEEE Computer Society, pp. 1228-1233, 1990.
14. D.T. Rover*, G.M. Prabhu, and C.T. Wright, "Visualizing the Performance of Concurrent Computers: A Picture Is Worth a Thousand Numbers," *Proceedings of the Fourth Conference on Hypercubes, Concurrent Computers, and Applications*, Los Altos, CA: Golden Gate Enterprises, pp. 245-248, 1989.
15. P.A. Basore, A.W. Smith*, and D.T. Rover*, "PC-1D Version 2: Enhanced Numerical Solar Cell Modeling," *Conference Record of the Twentieth IEEE Photovoltaic Specialists Conference*, Las Vegas, Nevada, September 1988.
16. D.T. Rover*, G.M. Thorson* and P.A. Basore, "Solar Cell Modeling on Personal Computers," *Conference Record of the Eighteenth IEEE Photovoltaic Specialists Conference*, Las Vegas, Nevada, October 1985. (Outstanding Poster Award)

Impact of Published Papers

Google Scholar h-index: 17

Technical Reports/Documents for Research Contracts

Various annual and technical reports on federally funded projects (NSF, DARPA, DOD).
Various software documentation and manuals.

Other Creative Works

Various department, college, and professional society newsletter articles at ISU and MSU.

D. Rover, "Critical Elements of STEP-funded Project at Iowa State University and Des Moines Area Community College," posted to STEPPing into the Future: Sustaining STEP's Mission in the New Funding Landscape, Community Working Group, stepcentral.net, July 21, 2014.

D. Rover, R. Walstrom*, J. Schneider*, "The PowerBox Case Study: Website and Video Demonstrations," CD-ROM, Dept. of Electrical and Computer Engineering, Iowa State University, November 2003. (used and distributed in FIE03 workshop)

Graduate Theses:

"Visualization of Program Performance on Concurrent Computers," Ph.D. Dissertation, Iowa State University, 1989. (Research Excellence Award)

“Implementation of a Multiple Processor Architecture for Boundary Value Problems,”
M.S. Thesis, Iowa State University, 1986.

IX. TECHNICAL PRESENTATIONS

The following lists exclude presentations/posters that appeared as publications in proceedings.

Invited Lectures and Presentations

1. S. Quisenberry, D. Rover, and M. Heitmann, “SP@ISU: Documenting Broader Impacts,” breakout session, Broader Impacts Infrastructure Summit, Columbia, Missouri, April 25, 2013, <http://muconf.missouri.edu/broaderimpacts/>.
2. D. T. Rover and Kuk-Jin Lee*, “Uniform Resource Visualization: Software and Services,” Dagstuhl Seminar – Performance Analysis and Distributed Computing, Dagstuhl, Germany, August 2002.
3. D. T. Rover and Kuk-Jin Lee*, “Performance Visualization: Usability and Reusability,” U.S.-Venezuela Workshop on High-Performance Computing, Puerto La Cruz, Venezuela, April 2000.
4. D. T. Rover and K. Wright*, “Multi-level Performance Analysis of MPI Programs,” Minisymposium on Performance Analysis and Visualization Tools for Scientific Computation, 1998 SIAM Annual Meeting, Toronto, July 1998.
5. D. T. Rover, M. W. Mutka, A. Bakic*, and A. Waheed*, “Performance Optimization of Distributed Applications in an Extensible, Adaptive Environment,” Workshop on Performance Data Mining, part of 1997 International Conference on Supercomputing, Vienna, Austria, July 1997.
6. D. T. Rover, “Performance Tools in Real-Time Systems,” Panel on New Frontiers-or Back to the Future, ACM SIGMETRICS 1996 Symposium on Parallel and Distributed Tools, part of the Federated Computing Research Conference, Philadelphia, May 1996.
7. D. T. Rover, A. K. Jain, N. Ratha*, and S. Choi*, “New FPGA Applications,” Panel on Designing with FPGAs-What’s New, 1996 IEEE Great Lakes Symposium on VLSI, Ames, Iowa, March 1996.
8. D. T. Rover and A. Waheed*, “A Structured Approach to Instrumentation System Development and Evaluation,” Panel on Data Interpretation and Experiment Planning in Performance Tools, Hot Topics Session, ACM SIGMETRICS ‘95 Conference, Ottawa, Canada, May 1995.
9. D. T. Rover, “Analyzing the Scalability of Parallel Programs,” U.S.–Japan Performance Evaluation Workshop, Kona, Hawaii, September 1994.

Industry/Government/University

10. D. T. Rover, “System Visualization,” panel on visualization technology, DARPA Information Technology Office, Washington, D.C., October 1996 (briefing for program managers).

11. D. T. Rover, "The Visual Display of Parallel Performance Data," Cornell Theory Center Lectures, Ithaca, New York, October 1994.
12. D. T. Rover, "Performance Visualization," Hewlett Packard Labs, Palo Alto, California, July 1994.
13. D. T. Rover, "Performance Visualization," NCR Corp. (AT&T), Naperville, Illinois, August 1994.
14. D. T. Rover, "Performance Evaluation of Scalable Computer Systems," Smiths Industries, Grand Rapids, September 1992.

Education

15. D. Rover, panelist, "Selected Research in Online Teaching & Learning," in Workshop: What is the Role of MOOCs in Engineering Education?, 2014 ASEE Annual Conference, Indianapolis, IN, June 2014.
16. Diane T. Rover and Shannon L. Miner, "Strategic Planning, International Program Breadth, and Student Participation," panelist, Annual Colloquium on International Engineering Education, Newport, Rhode Island, November 5, 2010.

Contributed Lectures and Presentations

1. D. T. Rover, M. W. Mutka, A. Bakic*, and A. Waheed*, "Extensible Tool Environment Support for Distributed Systems," Workshop on Program Visualization and Instrumentation, part of IEEE Symposium on Parallel and Distributed Processing, New Orleans, October 1996.
2. D. T. Rover, "Performance Evaluation: Integrating Techniques and Tools into Environments and Frameworks," panel, Supercomputing '94 Conference, Washington, D.C., November 1994.
3. D. T. Rover, "Summary of Working Group on Integrated Environments vs. Toolkits," Workshop on Performance of Parallel Computer Systems (Debugging and Performance Tuning), Chatham, Massachusetts, October 1994.
4. D. T. Rover, "Machine and Data Visualization in Concurrent Computing," Argonne NL/DOE CHAMMP Performance Visualization Workshop, Argonne National Laboratory, July 1990.

Industry/Government/University

5. M. Darrow, K. Hensen, D. Koua, and D. Rover, "Supporting Community College Transfers," breakout session II-2, NSF STEP Grantees Meeting, Washington, D.C., March 14, 2013, presented as a joint workshop with the University of Virginia and Thomas Nelson Community College. SEEC materials at STEP Central for this session: <http://stepcentral.net/groups/posts/736/>
6. C. Rehmann and D. Rover, "Introduction to Systems Thinking," workshop, Learning Communities Mid-Year Institute, Iowa State University, February 1, 2013.
7. D. Rover, "Building Strong Two-Year/Four-Year Partnerships," panel session, NSF STEP Grantees Meeting, Washington D.C., March 15, 2012.

8. F. Laanan, D. Rover, S. Mickelson, and M. Shelley, "Assessing your STEP Project: An Approach to Disentangling the Effects of Interwoven Project Strategies," breakout session workshop, NSF STEP Grantees Meeting, March 17, 2011.
9. D. Rover, S. Mickelson, M. Shelley, M. Bruning, "ISU SEEC Project," breakout session on Effectively Managing Your Project – Early Years, NSF STEP Grantees Meeting, March 12-13, 2009.
10. D. T. Rover and M. W. Mutka, "Real-Time System Visualization," DARPA ITO Embeddable Systems PI Meetings, Atlanta, 1996; Santa Fe, 1997; Orlando, 1998.
11. D. T. Rover, "Cross-Functional Teaming," MSU Faculty Workshop on Cooperative Learning (led by K. Smith, University of Minnesota), August 1997.
12. M. W. Mutka and D. T. Rover, "Real-Time System Visualization," Naval Surface Warfare Center, Dahlgren, Virginia, May 1996 (related to DARPA- sponsored PGRT Project).

Education

13. D. Rover, panelist, session on ABET Educational Innovations, 2014 ASEE Annual Conference, Indianapolis, IN, June 2014.
14. Frank Vahid, Smita Bakshi, Diane Rover, and Yacob Astake, "The online revolution, from e-books to MOOCs: Coping, adapting, embracing," pre-conference workshop, 2013 ASEE Annual Conference, Atlanta, GA, June 2013.
<http://www.cs.ucr.edu/~vahid/asee2013/>
15. D. Rover, panelist, "Work/Life Balance for New Engineering Educators," 2010 ASEE Annual Conference, New Engineering Educators Division, Louisville, KY, June 2010.
16. D. Rover, "Using the Jigsaw Method in the Classroom," Wakonse Conference on College Teaching, Camp Miniwanca, Michigan, May 2004.
17. D. Rover, "Communities of Practice in Engineering Education," panel, 2003 IEEE/ASEE Frontiers in Education Conference, Boulder CO, November 7, 2003.
18. D. Rover and A. Striegel*, "The PowerBox Case Study: A 32-Bit Microcontroller Platform for Introductory Embedded Programming," workshop presenters, 2003 IEEE/ASEE Frontiers in Education Conference, Boulder CO, November 5, 2003.
19. D. T. Rover, M. W. Mutka, and A. Niemi, "Embedded System Design in VESL," NSF/CRCD Projects Session, 2000 ASEE Annual Conference, June 2000.
20. P.D. Fisher, J. Fairweather, L. Haston*, and D. T. Rover, "Linking Service Courses with Design," Workshop, 2000 ASEE Annual Conference, June 2000.
21. K. Smith and D. T. Rover, "Project Management, Teamwork, and Leaders," Workshop, 2000 ASEE Annual Conference, June 2000.
22. D. T. Rover, "Teaching: Methodology and Course Content," Workshop on Academic Careers in Computer Science and Engineering, part of Federated Computing Research Conference, Philadelphia, May 1996.

Posters

1. D. Rover, M. Shelley, and M. Heitmann, "Strengthening the Professoriate through Broader Impacts Infrastructure," poster, Innovation through Institutional Integration Conference: Improving the Undergraduate STEM Experience, National Academy of Sciences, Washington, D.C., March 13, 2014. Also presented at: 2014 Broader Impacts Infrastructure Summit, Arlington, VA, April 2014.
2. D. Rover, K. Hensen, S. Mickelson, M. Bruning, M. Shelley, F. S. Laanan, M. Darrow, "SEEC: STEM Student Enrollment and Engagement through Connections," poster, National Science Foundation STEP Grantees Meeting, Washington, D.C., March 6, 2014.
3. D. Rover, M. Darrow, and D. Mitchell, "Iowa Illinois Nebraska STEM Partnership for Innovation in Research and Education," poster, 2013 Louis Stokes Midwest Center of Excellence Conference, Indianapolis, IN, October 21, 2013, <http://lsmce.org/annual-conference/>.
4. S. Quisenberry, D. Rover, B. Bowen, and M. Heitmann, "SP@ISU: Creating Synergies to Broaden Participation at Iowa State University," poster, Broader Impacts Infrastructure Summit, Columbia, Missouri, April 25, 2013.
5. D. Rover, S. Mickelson, M. Bruning, M. Shelley, F. S. Laanan, K. Hensen (DMACC) et al., "SEEC: STEM Student Enrollment and Engagement through Connections," poster, National Science Foundation STEP Grantees Meeting, Washington, D.C., March 14, 2013.
6. S. Quisenberry, D. Rover, B. Bowen, and M. Heitmann, "SP@ISU: Creating Synergies to Broaden Participation at Iowa State University," poster, National Science Foundation Joint Annual Meeting, Washington D.C., June 2012.
7. D. Holger, D. Rover, M. Darrow, D. Mitchell, and K. Hensen (DMACC), "Iowa Illinois Nebraska STEM Partnership for Innovation in Research and Education," poster, National Science Foundation Joint Annual Meeting, Washington D.C., June 2012.
8. A. Williams*, M. Bruning, D. Rover, M. Laingen*, S. Mickelson, T. Brumm, and M. Shelley, "E2020 Scholars Program," poster, Teaching Poster Symposium, Iowa State University, Center for Excellence in Learning and Teaching, April 10, 2012.
9. D. Rover, S. Mickelson, M. Bruning, M. Shelley, F. S. Laanan, K. Hensen (DMACC) et al., "SEEC: STEM Student Enrollment and Engagement through Connections," poster, National Science Foundation STEP Grantees Meeting, Washington, D.C., March 15, 2012.
10. A. Williams*, M. Bruning, D. Rover, M. Laingen, S. Mickelson, T. Brumm, M. Shelley, "E2020 Scholars Program," Iowa State University Student Success Summit, March 24, 2011.
11. D. T. Rover, S. K. Mickelson, M. Bruning, M. Shelley, F. S. Laanan, M. Laugerman, M. Darrow, H. McMaken, et al., "SEEC: STEM Student Enrollment and Engagement through Connections," National Science Foundation STEP Grantees Meeting, Washington, D.C., March 2011.
12. D. T. Rover, S. K. Mickelson, M. Bruning, M. Shelley, F. S. Laanan, R. Cooper, M. Darrow, M. Goodwin, H. McMaken, et al., "SEEC: STEM Student Enrollment and

- Engagement through Connections,” National Science Foundation STEP Grantees Meeting, Arlington, VA, March 2010.
13. D. T. Rover, S. K. Mickelson, M. Bruning, M. Shelley, F. S. Laanan, R. Cooper, M. Darrow, M. Goodwin, H. McMaken, et al., “SEEC: STEM Student Enrollment and Engagement through Connections,” National Science Foundation STEP Grantees Meeting, Arlington, VA, March 2009.
 14. D. T. Rover, S. K. Mickelson, M. Bruning, M. Shelley, F. S. Laanan, R. Cooper, M. Darrow, H. McMaken, et al., “SEEC: STEM Student Enrollment and Engagement through Connections,” National Science Foundation STEP Grantees Meeting, Arlington, VA, March 2008.
 15. Kukjin Lee*, D. T. Rover, “System Performance Visualization for Grid Environments,” International Symposium on Modern Computing (JVA03), Ames, Iowa, October 31 -November 1, 2003. (Student Poster)
 16. N.G. Santiago*, D. T. Rover, and D. Rodriguez, “Subset Selection of Performance Metrics Describing System-Software Interactions,” ACM/IEEE Supercomputing 2002 Conference, Baltimore, November 2002.
 17. N.G. Santiago* and D. T. Rover, “Statistical analysis of the relation between low-level performance information, the program, and the environment,” 2nd Los Alamos Computer Science Institute (LACSI), Santa Fe, Oct. 2001.
 18. D. T. Rover, “Integration of System Performance,” National Science Foundation, 1999 Career Program PI Meeting, Washington, D.C., January 1999.
 19. A. Waheed* and D. T. Rover, “Instrumentation System Design and Evaluation,” Workshop on Software Tools for High Performance Computing Systems, Chatham, Massachusetts, October 1996.
 20. A. Waheed* and D. T. Rover, “Instrumentation System Modeling, Management, and Implementation,” Workshop on Performance of Parallel Computer Systems (Debugging and Performance Tuning), Chatham, Massachusetts, October 1994.
 21. A. Jain, D.T. Rover, N. Ratha*, and S. Dhameja*, “Image Processing Applications on Splash 2,” Scalable High Performance Computing Conference, May 1994.
 22. A. Waheed* and D. T. Rover, “Performance Visualization and Analysis Using Multiple Domains,” Supercomputing’93 Conference, November 1993.
 23. A. Waheed*, M. Doetsch*, and D. T. Rover, “Advanced Methods of Performance Data Processing and Analysis,” Supercomputing ‘92 Conference, November 1992.
 24. D. T. Rover, “Scalable Representations of Parallel Program Performance,” Gordon Research Conference on Software Tools and Libraries for Concurrent Supercomputers, July 1992.
 25. D. T. Rover, “Machine Visualization and SLALOM,” Workshop on Parallel Computer Systems: Software Tools, Sante Fe, October 1991.
 26. V.W. Tsai*, Y-S. Chow*, D. T. Rover, and J.L. Gustafson, “Performance of the Burg Algorithm on the MasPar MP-1 and the nCUBE 2 Parallel Supercomputers,” Supercomputing ‘90 Conference, November 1990.

X. EXTENSION/OUTREACH ACTIVITIES

Outreach

The following lists are representative of outreach activities.

Speaker/Panelist:

Co-presenter (with C. Rehmann), “Systems Thinking,” workshop, Spring 2013 Learning Community Task Team Retreat, College of Engineering, Iowa State University, May 14, 2013.

Co-presenter (with D. Rollins, D. Mitchell, S. Johnson, and M. Quintero), “Graduating Underrepresented Students in STEM: The IINSPIRE-LSAMP Program,” presentation at the Iowa State Conference on Race and Ethnicity (ISCORE) Conference, Ames, IA, March 1, 2013.

Co-presenter (with J. Petrich), “Characteristics of a Strong Postdoctoral Fellow,” Graduate College forum, Iowa State University, February 19, 2013.

Co-presenter (with C. Rehmann), “Systems Thinking,” Learning Communities Mid-Year Institute, Iowa State University, February 1, 2013.

Panelist, “Why I Love Being a Professor,” Preparing Future Faculty Program, Iowa State University, 2012-2013.

Panelist, Faculty Panel for Family Members, Summer Orientation, Iowa State University, 2012, 2013.

Various speaking activities associated with engineering college outreach and recruitment functions, 2004-2010.

Speaker, “Making a Difference and Becoming a Leader Through Pursuit of Excellence,” ISU WISE Leadership Conference, Program for Women in Science and Engineering, March 27, 2010.

Panelist, Adobe Connect Virtual Summit, informational session on NSF SEEC Project and E-TEC Scholarships (Engineering Talent in Every County), 4-H Youth Development Programs, ISU Extension, February 26, 2008.

Speaker, Engineers’ Impact Academy, summer program for high school seniors, College of Engineering, Iowa State University, July 23, 2007.

Moderator, “Discover Your Styles of Engineering Leadership,” 2007 Global Marathon For, By and About Women in Engineering, National Engineers’ Week Foundation, March 23, 2007.

http://www.eweek.org/site/news/eweek/2007_marathon/schedule.shtml

http://www.eng.iastate.edu/prospective/global_marathon.asp

Welcome, Invent Iowa 2007 State Invention Convention, Hilton Coliseum, April 21, 2007; State of Iowa MathCounts middle-school math competition, ISU College of

Engineering representative, 2003; ISU College of Engineering “Beyond the B.S.” panel moderator, 2003; MSU/Engineering GE Faculty for the Future Program, discussion on teaching and learning, 2000; MSU ROSES (Residential Option for Science & Engineering Students) Program, introduction to computer engineering; IEEE Southeastern Michigan Section Spring Meeting, student session, “Performance Tools for Parallel and Distributed Systems,” 1998; MSU Upward Bound Program Career Fair, introduction to electrical/computer engineering, 1998; MSU Society of Women Engineers student chapter panel on “Pursuing your Masters or Ph.D.,” 1997; MSU President’s Discussion Hour on Cooperative Learning, panel, 1997; MSU Faculty Workshop on Cooperative Learning (led by K. Smith), guest session on “Cross-Functional Teaming,” 1997; MSU Math, Science, and Technology (MST) Program for 7th-8th graders, lecture and lab on “Computers and Digital Information,” 1997; CRA/NSF Workshop on Academic Careers in Computer Science and Engineering, session on “Teaching,” 1996; National Univ. of Sciences and Technology, College of Signals, Rawalpindi, Pakistan, lectures on high-performance computing, 1994; MSU Emerging Scholars Program, “Math and Engineering,” 1993; ISU Women in Science and Engineering Program activities, including “Being a Graduate Student,” “Balancing Career & Family,” and “Family Math,” and role-model speaker at Denison High School, 1989-91.

Mentor/Adviser:

Faculty mentor and department representative, Grace Hopper Celebration of Women in Computing Conference, Minneapolis, MN, October 2-4, 2013, <http://news.engineering.iastate.edu/2013/10/15/ecpe-students-attend-grace-hopper-celebration-of-women-in-computing/>. Teamed with students at department exhibit booth (w. K. Stolee).

Mentor, Preparing Future Faculty Program, ISU, 2007-08; Freshman Honors Mentor Program, ISU, Discussion Group Facilitator, 2007, 2008; Mentor, NSF Research Experiences for Undergraduates, ISU, 2003-04; Mentor, ISU Honors Program, 2001-03; Mentor, NSF Research Experiences for Undergraduates, MSU, 1997-2001; Adviser, MSU Student Chapter of Eta Kappa Nu (HKN), Electrical/Computer Engineering Honor Society, 1995-2000; Mentor, MSU-Kaiserslautern University Student Exchange Program, 11 students, 1992-2000; MSU McNair/SROP Program (Summer Research Opportunities Program for minorities); MSU DREAMS Program (Developing Research Expertise at Michigan State); ISU Women in Science and Engineering Program, pre-college/undergraduate summer interns, 6 students, 1988-91.

XI. PATENTS

None

XII. POSTDOCTORAL SCHOLARS AND GRADUATE STUDENTS*Postdoctoral Research Associates*

Mary Darrow, Summer 2012-present, NSF IINSPIRE LSAMP project, Iowa State University

Research expertise: STEM community college students and their educational and career trajectories, community college student engagement, and community college transfer policy and practice

PhD: Education

Marcia Laugerman, Fall 2014-present, NSF SEEC project, post-completion, College of Engineering, Iowa State University

Research expertise: Policy and program evaluation, curriculum design and assessment, and academic leadership in STEM education

PhD: Industrial Technology (minor Statistics)

Doctoral

Mihir Awatramani, CpE PhD, 2011-present, co-supervised with J. Zambreno, “Application Aware Techniques for Scheduling General Purpose Workloads on Graphics Processing Units,” Summer 2014 internship at Nvidia Corp., Preliminary Exam passed in December 2014, degree expected Fall 2015.

Zhongbo (Jerry) Cao, CpE PhD, 2007-2012, “High-Level Concurrency Modeling and Early Embedded Memory Architecture Exploration,” Preliminary Exam passed in May 2009, accepted employment at Marvell Semiconductors (Chandler, Arizona) in December 2010, degree completion expected Summer/Fall 2015.

Ramon Mercado, CpE PhD, 2005-2011, “A Probabilistic Approach to Performance Estimation at Higher Abstraction Levels for Communication-Based System-Level Design,” Iowa State University Teaching Excellence Award in Spring 2006, GAANN Fellow, accepted employment at U.S. Patent and Trade Office (Virginia) in September 2010, degree awarded Fall 2011.

Kukjin Lee, CpE PhD, 2001-2006, “Uniform Resource Visualization,” accepted employment at Microsoft Corp. (Redmond, Washington) in 2004, degree awarded Summer 2006.

Nayda Santiago, EE PhD, 1997-2003, “Evaluating Performance Information for Mapping Algorithms to Architectures,” accepted employment at University of Puerto Rico – Mayaguez in Spring 2001, degree awarded Summer 2003 (MSU).

David Pierce, EE PhD, 1995-2001, “Performance Analysis for Complex Systems over a System Lifespan,” employed full-time at Smiths Industries (Grand Rapids, MI) while obtaining degree, degree awarded Fall 2001 (MSU).

Abdul Waheed, EE PhD, 1992-1997, “Design, Modeling, and Evaluation of Instrumentation Systems,” degree awarded Spring 1997 (MSU), accepted employment at NASA Ames Research Center.

Also: EE MS degree awarded December 1993, “Performance Data Modeling, Transformations, and Multiple-Domain Analysis Methods”

Yung-Kang Chu, EE PhD, 1992-1995, “Job Scheduling and Processor Allocation in Two-Dimensional Mesh Systems,” degree awarded Summer 1995 (MSU), accepted employment at AT&T.

Total number of doctoral degree advisory committee memberships, including as chairperson: 38

Doctoral student interaction resulting in co-authored publications, other than as chairperson of advisory committee:

Marcia Laugerman (ABE ISU, 2012); SEEC project

Mary Darrow (Education ISU, 2012); SEEC project; Placement: Iowa State University

Mark Laingen (ABE ISU, 2014): E2020 project; Placement: Illinois State University

Andrew Ryder (Education ISU, 2011); SEEC and E2020 projects; Placement: University of North Carolina - Wilmington

Aaron Striegel (CPE ISU, 2003); Embedded systems laboratory; Placement: University of Notre Dame

Aleks Bakic (CS MSU, 2000); DARPA/PGRT project; Placement: Motorola Corp.

Sea Choi (CS MSU, 1995); DOD/Splash 2 project; Placement: Texas Instruments

Manuel Jimenez (EE MSU, 1999); DOD/Splash 2 project; Employment: University of Puerto Rico - Mayaguez

Nalini Ratha (CS MSU, 1996); DOD/Splash 2 project; Placement: IBM Research

Hugh Smith (CS MSU, 1999); DARPA/PGRT project

Ronnie Wright (EE MSU, 1999)

Masters

Mengduo Ma, CpE MS, Creative Component: “System-Level Design Patterns for Embedded Systems Design,” degree awarded Spring 2014, accepted employment at Proplanner.NET (Ames).

Daniel Helvick, CpE Master of Engineering, lead author on 2007 MSE Conference Best Paper Award, Iowa State University Teaching Excellence Award in Spring 2007, accepted employment at Garmin (Kansas City) in Summer 2007, degree awarded Fall 2011.

Andrew Riha, CpE MS, Creative Component: “A Simulink/MySQL Framework for the Delfi-C3 Attitude Determination Subsystem,” degree awarded Spring 2008, accepted employment at Boeing (California).

Joe Schneider, CpE MS, “Low-level Estimation at High Levels of Abstraction in System-Level Design,” Iowa State University Teaching Excellence Award in Fall 2004, degree awarded Spring 2007, accepted employment at John Deere.

Ziyu Zhang, CpE MS, “Distributed Real-time Operating System (DRTOS) Modeling in SpecC,” degree awarded Fall 2006, accepted employment at Garmin (Kansas City).

Robert Walstrom, CpE MS, “System-Level Design Refinement Using SystemC,” Iowa State University Teaching Excellence Award in Spring 2003, degree awarded Summer 2005, accepted employment at Seagate Technology (Minnesota).

Brian Smith, CpE MS, “Performance Effects of Node Mapping on BlueGene/L,” degree awarded Spring 2005, accepted employment at IBM Corp. (Rochester, MN).

Brian Foulds, EE MS, “VHDL Fast Summation Algorithm Synthesis for STAR Project,” degree awarded Fall 2000 (MSU).

Habeel Ahmad, EE MS, “Partitioning Strategies in Hardware-Software Codesign,” degree awarded Fall 1998 (MSU).

Anthony Pappas, EE MS, “Implementation and Evaluation of μ C-OS Real-Time Operating System Kernel for the Handy Board,” degree awarded Summer 1998 (MSU).

Roy Wang, EE MS, “A Very Long Instruction Word Architecture Implemented on the Splash 2 FPGA Array,” degree awarded Spring 1996 (MSU).

Sandeep Dhameja, EE MS, “Bar Code Localization on Splash 2,” degree awarded Spring 1995 (MSU).

Eleven exchange students supervised as part of Kaiserslautern University, Germany, exchange program with MSU from 1992-2000, including thesis advisor (Studienarbeit or Diplomarbeit) for 9 (of 11) students.

Exchange Program with Kaiserslautern University (Germany)

Wolfgang Pfab - Studienarbeit (completed June 2000)
“Visualization of Design Documents using Seesoft”

Timo Vogt - Studienarbeit (completed written thesis in January 1999)
“Investigation of System-on-a-Chip Design using FPGA Cores”

Jules Lakoundji - Diplomarbeit (completed written thesis in May 1998)
“Hardware-Software Synthesis from High-Level Specifications”
Placement: Lattice Semiconductor

Thomas Wauer - Studienarbeit (completed written thesis in October 1997)

“Investigation of Hardware-Software Codesign via Application of Ptolemy”

Frank Keller - Studienarbeit (completed written thesis in October 1996)

“Simulation of a Distributed Real-Time Application to Investigate Performance Analysis Tools”

Martin Jahner - Diplomarbeit (completed written thesis in December 1995)

“Design and Implementation of a Software Tool for Partitioning FPGA Designs”

Placement: Texas Instruments

Bernd Kronmueller - Diplomarbeit (completed written thesis in January 1994)

“Prediction of Parallel Program System States from Observed Performance”

Antje Koschel - Studienarbeit (completed written thesis in November 1993)

“Execution-driven Simulation of Routing Events in Multicomputers with PICL and MultiSim”

Armin Teltschik - Studienarbeit (completed written thesis in October 1993)

“Installation of a VME-based Hardware Performance Measurement Board and Development of a Virtual Instrument Library to Access the Board with LabVIEW”

XIII. PROFESSIONAL ACTIVITIES

Professional Organizations and Service

ABET, Inc. (accreditation)

Commissioner, Engineering Accreditation Commission (EAC), representing IEEE
(2009-2014)

EAC Nominating Committee (2014) (one commissioner elected by the EAC)

Institute of Electrical and Electronics Engineers (IEEE)

IEEE Education Society Board of Governors (2013-present)

- Finance Committee, 2013-present
- Strategic Planning Committee, 2014-present
- Ben Dasher Award Committee Chair, 2014 FIE Conference

IEEE Committee on Engineering Accreditation Activities (CEAA)

- Training Coordinator (beginning 2014)
- Member-At-Large (2006-2009)
- Representative to CSAB Board of Directors, 2007-2009
- Co-coordinator for CEAA Mentoring, 2008

IEEE Technical Committee on Scalable Computing, Education Chair (2012-present)

Senior Member (2001)

ABET EAC Commissioner (2009-2014)

IEEE ABET/EAC Program Evaluator – Computer Engineering (2002-present)

- Training Workshop, May 2002
- Mock Visit, May 2008

IEEE Computer Society

IEEE Education Society

IEEE Southeastern Michigan Section, Director of Technical Activities (1996-1998)

American Society for Engineering Education (ASEE)

ASEE Fellow (2012)

ASEE Fellow Member Committee (2013-2016)

ECE Division, Secretary/Treasurer (2009-10), Program Chair (ASEE Annual Conference) (2010), Chair-Elect (2010-11), Chair (2011-12), Past Chair (2012-13)

Senior Associate Editor (for the Academic Bookshelf), *Journal of Engineering Education* (2000-2008)

Other Professional Service

National Center for Women and Information Technology (NCWIT)

Institutional Representative (with D. Jacobson), Iowa State University, Academic Alliance Member (2010-present)

Journals

Journal of Engineering Education, Senior Associate Editor (for the Academic Bookshelf), 2000-2008

Various IEEE and ACM conferences and journals (in the areas of engineering education, parallel and distributed computing, computers, software, performance, etc.), reviewer

Grant Review Panels

U.S. Department of Energy, Office of Science, PECASE (Presidential Early Career Awards for Scientists and Engineers), panel member, 2010.

National Science Foundation Committee of Visitors for the Division of Engineering Education and Centers, panel member, 2010.

Various National Science Foundation education and computing programs, panel member.

Other grant review: U.S. Dept. of Energy; State of Louisiana Board of Regents; University of Cape Town, South Africa

Government, Educational, or Corporate Advisory Committees

Center for Energy Efficient Electronics Science, NSF Science and Technology Center, University of California – Berkeley, member of External Advisory Board, Fall 2013-present, <http://www.e3s-center.org>

Michigan State University NSF STEP (STEM Talent Expansion Program) grant, member of External Advisory Committee, 2008-2013.

Conferences

Conference Organizing Committee/Chair: Program Co-chair for the 12th Annual Colloquium on International Engineering Education hosted by ISU, 2009. Steering Committee for the Annual Colloquium on International Engineering Education, 2006-2011 (University of Rhode Island); ACM/IEEE SC (Supercomputing) Conference committees, 2006 Tutorials Program Co-Chair, 2003 Technical Papers Program Chair, various committee memberships since 1994; International Symposium on Modern Computing (JVA03), Ames, Iowa, Oct. 31 – Nov. 1, 2003 (Conference Committee, Student Poster Chair, Session Chair); Session Chair, ASEE North Midwest Section Conference, Ames, Oct. 9-10, 2003; ASEE 2000 Spring Conference, North Central Section, hosted by MSU (Conference Committee; Publicity and Web Site Chair); 2000 IEEE Midwest Symposium on Circuits and Systems, hosted by MSU (Registration Chair); 96 Workshop on Software Tools for High Performance Computing Systems (Chair of Working Group on Technical Issues - Performance Tools); 96 Workshop on Program Visualization and Instrumentation, part of IEEE Symposium on Parallel and Distributed Processing (co-chair with M. Gergeleit, German National Research Center for Information Technology); 96 Workshop on Academic Careers in Computer Science and Engineering, part of Federated Computing Research Conference (Teaching session co-chair with J. Francioni), 95 International Workshop on Performance Measurement and Analysis (Japan) (Steering Committee)

Conference Program/Tutorial Committee: ACM/IEEE SC (Supercomputing) Conference – 2011 Tutorials Committee, 2008 Technical Papers Committee, 2007 Tutorials Committee, various committee memberships since 1994; 4th InterBalkan Forum and International Information Technology Conference, dedicated to Centenary of the Birth of John Atanasoff (Sofia, Bulgaria, Oct. 6-7 2003), SC 94/96/98/99/00 Conferences, 97/98/99 International Workshops on Parallel and Distributed Real-Time Systems, Software Technology Track of 98/99/00/01/02/03 Hawaii International Conferences on System Science (Advisory Committee), ACM SIGMETRICS 96 Symposium on Parallel and Distributed Tools

Public Service Activities

Various pre-college/youth, undergraduate and graduate student and family outreach activities at university, local, and state events. (see section X)

Communication to Public Audiences (recent examples):

D. Rover, "Guest post: Maximizing the broader impacts of faculty research," College of Engineering News, Dean's Blog, November 17, 2014,
<http://news.engineering.iastate.edu/2014/11/17/guest-post-maximizing-the-broader-impacts-of-faculty-research/> (appears online and in electronic newsletters)

"Iowa State to Help Lead NSF Expansion of Broader Impact Outreach Network," Iowa State Research News Release, September 16, 2014,
http://www.vpresearch.iastate.edu/index.cfm/48409/32642/iowa_state_to_help_lead_nsf_expansion_of_broader_impact_outreach_network (project co-PI at Iowa State)

"ISU student-designed app tracks butterflies and attracts worldwide attention," Iowa State University News Service, December 23, 2013,
<http://www.news.iastate.edu/news/2013/12/23/butterflyapp> (faculty mentor for senior design team)

- This news release led to articles/media in the Iowa State Daily, Ames Tribune, Des Moines Register, Cedar Rapids Gazette, Omaha World-Herald, WHO TV, and Iowa Public Radio.

Other Extension/Professional Practice Activities

IEEE Global Virtual Mini-Conference on Early Career Faculty Development (ECFD), Creating a Research Program, co-organizer and session leader/speaker, Broader Impacts Panel, December 2014.
http://www.ieee.org/education_careers/education/university_programs/early_career_faculty_conference.html

Michigan Technological University, consultant on NSF-funded workshop in Washington D.C. for new STEP (STEM Talent Expansion Program) awardees, August 2010.

National Academy of Engineering, Engineering Education Leadership Institute in Chicago, resource person, 2006.

Various professional meetings associated with NSF research and education projects.

International Partnering Activities

U.A.E. and India: Birla Institute of Science and Technology, Dubai, UAE, and Pilani, India, campuses; via ISU College of Engineering IMPACT delegation in relation to international program development, November 2007.

Turkey: Middle East Technical University (Ankara) and Bogazici University (Istanbul); via ISU College of Engineering IMPACT delegation in relation to international program development, April 2006

Pakistan: National University of Sciences and Technology (NUST); via MSU College of Engineering international outreach and Department of ECE Graduate Program collaboration

- Lecturer, College of Signals, Rawalpindi, Pakistan, 1/1/94-1/13/94
- Thesis/project adviser, EE MS students: Habeel Ahmad (1994, 1998), Masood Raza (1999)

Germany: Kaiserslautern University; via MSU Department of ECE / Kaiserslautern University Exchange Program

- Supervisor of 11 exchange students from Kaiserslautern University, 1992-2000
- Thesis advisor (Studienarbeit or Diplomarbeit) for 9 (of 11) students

Japan: via U.S.-Japan Performance Evaluation initiative (U.S. Department of Energy)

- Member of U.S. delegation, U.S.-Japan Performance Evaluation Workshop, Kona, Hawaii, September 1994 (a small closed workshop among U.S. and Japanese researchers on performance evaluation of high- performance computers as a means to advance mutual understanding in this technology area)
- Member of Steering and Program Committees for jointly organized International Workshop on Performance Measurement and Analysis (PERMEAN '95), Beppu, Japan, August 1995

Venezuela: U.S.-Venezuela Workshop on High-Performance Computing (U.S. National Science Foundation, Venezuela Conicit, and Universidad Simon Bolivar), Puerto La Cruz, April 2000

- Member of U.S. delegation

XIV. UNIVERSITY ACTIVITIES

Institutional Service

Iowa State University

University

Various activities representing the SP@ISU and IINSPIRE LSAMP programs, including co-organizing on-campus workshops and alliance annual conferences

Iowa EPSCoR Diversity Taskforce member, Broader Impacts team,
<http://iowaepscor.org/contact/broaderimpacts>, 2012-present

ISU Representative (with D. Jacobson), National Center for Women and Information Technology (NCWIT) Academic Alliance, 2011-present

Student Success Council, 2013-present; Retention Task Force, 2007-2012 (Provost Office and Student Affairs)

Member, Search Committee, ISU Undergraduate Research Coordinator, Fall 2014, led by ISU Honors Program

Member, ISU Taskforce on the Scholarship of Engagement and Outreach, 2013-14 (Provost Office), led by N. Franz and D. Chamberlin

Languages and Cultures for Professions (LCP) Advisory Board, Department of World Languages and Cultures, 2009-2010

Various activities representing the College of Engineering administration, 2004-2010
 Undergraduate Programs Council, 2007-2010 (Provost Office)
 Entrepreneurial Studies Supervisory Committee, 2007-2010 (Business College)
 Academic Personnel Workgroup, 2008 (Provost Office), with H. Eichorn
 ADVANCE Council, 2008-2010 (Provost Office)
 Languages and Cultures for Professions (LCP) Advisory Board, Department of World Languages and Cultures, 2009-2010

Iowa Energy Center Advisory Council, university representative, 2005-2008

Wakonse Fellow, 2004, participation in Wakonse Conference on College Teaching, May 2004, Shelby, MI, with Iowa State University team (<http://www.wakonse.org/>).

Information Technology Steering Committee, Office of the Provost, 2001 – 2004

College

First-Year Curriculum Review task force, College of Engineering, 2013-2014

Various committees and activities as associate dean, 2004-2010

Various activities representing the College of Engineering administration, such as:

- ISU COE IMPACT delegation, Birla Institute of Technology and Science (Dubai UAE and Pilani India campuses), international program development, November 2007.
- National Academies Convocation on “Rising Above the Gathering Storm,” Washington, D.C., Sep. 28, 2006
- ISU COE IMPACT delegation, Middle East Technical University (Ankara) and Bogazici University (Istanbul), international program development, April 2006.

Intern/Co-Op Task Force, Fall 2003 – 2004

Department

Curriculum Committee, 2013-present

Diversity and Inclusion Task Force, 2013-present

Facilitator for study by consultants (Partners for Educational Development) on department climate for women undergraduate students, 2014

ABET Committee, 2010-present

Curriculum Revision Task Force, 2013
 Honors and Awards Committee, 2010-13 (chair, 2010)
 Promotion and Tenure Review Committee, 2012-2013
 Senior Design project mentor, 2001-2005, 2010-present
 Faculty Advisor, Digital Women student organization, 2010-2012
 Various departmental service activities (e.g., Take a Professor to Lunch, peer teaching review), 2010-present
 Various activities as associate chair, 2003-2004
 Promotion and Tenure Committee, 2002-2004
 Undergraduate Curriculum Committee, 2002-2004
 Committee Chair, 2003-2004
 Faculty Search Committee (Chair), 2001-2003
 Computing Usage Committee, 2001-02
 Distinguished Lecture Series coordinator, Fall 2001

Michigan State University

University

Cooperative Learning Leadership group, Office of the Provost, Fall 1999 - 2001
 Faculty Work-Environment Implementation Team: Teaching and Learning, Office of the Provost, 1999-2000, implementation of the recommendations of the Faculty Work-Environment Improvement Committee

College

External Review of Graduate Education and Research Programs, 2000-01
 Director, Computer Engineering Program, 1997- 2000
 Communication and Marketing Task Force, 2000
 DECS Computing Services Advisory Committee, 1997- 2000
 Curriculum Committee, 1997- 99
 Computer Engineering Task Force, 1995 - 99
 Women's Advisory Committee to the Dean
 Cooperative Engineering Education, review and evaluation of student co-op reports

Department

Interim Department Chairperson, 2000-01
 Academic Program Planning & Review, 2001
 Strategic Planning Committee, 1999-2001
 Undergraduate Curriculum Committee, 1998 - 2000
 Advisory Committee, 1993-95; 1996-98
 Graduate Studies Committee, 1991- 97 (chair, 1996-97)
 Computing Resources Committee, 1991- (chair, 1995- 99)
 ABET EC 2000 Task Force, 1997-98 (CpE Program: self-study report co-author, site visit coordinator)
 Faculty Search Committees, 1995 - 2000
 Computer Engineering Labs Coordinator, 1997 - 2000

Adviser of Eta Kappa Nu (HKN) Electrical/Computer Engineering Honor Society, 1995-2000

Various faculty, staff and administrator search committees

XV. ADDITIONAL INFORMATION

Senior Design Project Supervision/Mentoring

Iowa State University

- F14-S15: Pre-Assessment Test System for ELAC (East Los Angeles College), May15-04, <http://may1504.ece.iastate.edu>
- F14-S15: Night Eye Guardian: SleepGuard, May 15-16, <http://may1516.ece.iastate.edu>
- S14-F14: UBR iOS Development, Dec14-16, <http://dec1416.ece.iastate.edu>
- F13-S14: Microsoft Imagine Cup, May14-28, <http://seniord.ece.iastate.edu/may1428/>
- F13-S14: SIDS Night Eye Guardian, May14-29, <http://seniord.ece.iastate.edu/may1429/>
- S13-F13: Butterfly Survey App, Dec13-08, <http://butterflies.ece.iastate.edu>
 - Article by ISU News Service: <http://www.news.iastate.edu/news/2013/12/23/butterflyapp>
 - Project design documented in education publications
- F12-S13: Parkinson's Therapeutic Game with the Microsoft Kinect (Phase 2), <http://seniord.ece.iastate.edu/may1304/>
- F11-S12: Parkinson's Therapeutic Game with the Microsoft Kinect, May12-19, <http://exsolvo.wordpress.com/>
- F10-S11: Real-Time Environmental Monitoring, <http://seniord.ece.iastate.edu/may1124/>
- F04-S05: Expert System for Microprocessor Selection, Rover and Zhang, <http://seniord.ece.iastate.edu/projects/current/may2005.html#23>
- F04-S05: Multiple Child Tracking System, <http://seniord.ece.iastate.edu/projects/current/may2005.html#24>, entry in IEEE Computer Society International Design Competition
- F03-S04: Integrating a Processor-based FPGA into the Curriculum, Chang, Rover, and Tyagi, <http://seniord.ee.iastate.edu/projects/current/may2004.html#28>
- F03-S04: Electronic Laboratory Virtual Instrumentation Suite (ELVIS) Lab Development - Phase 2, Rover and Mina, <http://seniord.ee.iastate.edu/projects/current/may2004.html#09>
- S03-F03: Implementaion of a FPGA Using National Instruments' LabVIEW FPGA Module, Rover and Mina, <http://seniord.ee.iastate.edu/projects/archive/dec2003.html#07>
- F02-S03: Educational Laboratory Virtual Instrumentation Suite (ELVIS) Lab Development, Rover and Mina, <http://seniord.ee.iastate.edu/projects/archive/may2003.html#19>

- S02-F02: PIC Evaluation/Development Board Implementation, Rover and Weber, <http://seniord.ee.iastate.edu/projects/archive/dec2002.html#12>
- F01: I/O Laboratory Development, <http://seniord.ee.iastate.edu/projects/archive/dec2001.html#04>

Michigan State University

Spring 2001

IEEE Computer Society 2nd Annual International Design Competition
MSU-LSSU cross-university distributed design team

Fall 2000

MSU-LSSU cross-university distributed design team

Spring 2000

IEEE Computer Society 1st Annual International Design Competition

Fall 1999

Spring 1999

ECE-ME interdepartmental design team

Spring 1997 - Fall 1998

Other Design Project Mentoring

- ISU, Spring 2005: Microsoft Windows Embedded Student Challenge, IEEE Computer Society International Design Competition, Project title: RADVIS, Student team: David Lawson, Adam Mishler, Andrew Riha, and Mike Schmitt
 - Finalist (one of thirty teams selected worldwide to compete at Microsoft)
 - “Going Beyond the Boundaries” in ECPE Connections newsletter, Vol. 22, No .1, Fall 2005, pp. 6-7, <http://www.ece.iastate.edu/files/2011/03/ecpe-connections-fall-2005.pdf>