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 I[3] 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 NON-ACADEMIC 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

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, 1991
Iowa State University 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

Courses Taught:
Iowa State University

CPRE 211, Introduction to Microcontrollers: F01, F02, S03, F03 (includes **course and lab development**)

CPRE 281X/282X, Digital Logic, Processors and Programming I / Integrated Computer Systems Organization and Logic Design I: **course development/evaluation** (offered in F04, F05)

CPRE 381X/382X, Digital Logic, Processors and Programming II / Integrated Computer Systems Organization and Logic Design II: **course development/evaluation** (offered in S05, S06)

CPRE 488X, Embedded Systems Design: **course development**, 04-05 (first offering in F05)

CPRE 491/2, Senior Design, **faculty advisor/team mentor**: F01, S02, F02, S03, F03, S04, F04, S05, F10/S11, F11/S12

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

ENGR 110X, E2020 freshman seminar: **course development**, S10, F10, S11, S12

ENGR 210X, E2020 sophomore seminar: **course development**, F10, S11, F11, S12

CPRE/EE 294, Program Discovery, **faculty mentor**, F10, S11, F11

CPRE/EE 394, Program Exploration, **faculty mentor**, F11

Michigan State University

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

ECE 331, Microprocessors & Digital Systems: S93, F93, S94 (includes lab supervision)

ECE 381, Capstone-Professionalism, Communication, and Ethics (1 credit): Su97, team-taught with P.D. Fisher

ECE 411, Electronic Design Automation: F98 (includes **course and lab development**)

ECE 482, Capstone-Computer System Design: Su97, F97, S98, F98, S99, F99 (includes **course and lab development**, lab supervision, team supervision); Su97-S99, team-taught with P.D. Fisher; F99, team-taught with T. Grotjohn

ECE 482, Capstone-Computer System Design, team facilitator/mentor: S00, S01

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
(includes **course development**)
ECE 921, Performance Instrumentation and Visualization of Concurrent Computers: S92, S97

Synergistic Activities

Innovation in education: Coordinating 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). Developing media to improve the public understanding of engineering and broaden participation in engineering using the NAE's Changing the Conversation study (NSF STEP grant). Collaborating 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 5I3C 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: 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: U.S. DOE Office of Science PECASE panel, 2010. NSF Committee of Visitors for the Division of Engineering Education and Centers, 2010. ABET Engineering Accreditation Commission, IEEE Commissioner, 2009-present. ASEE ECE Division Secretary/Treasurer, 2009-10; Chair Elect 2010-11; Chair 2011-12. ASEE ECE Division Program Chair, 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). IEEE Senior Member.

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 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

"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 (I^3) Program), Grant No. 0963584, 7/1/10 – 6/30/15, $1,248,727, 1 of 3 PIs (lead PI: S. Quisenberry (VP – Research and Economic Development), B. Bowen (EEOB, ISU ADVANCE), D. Rover (added 2/28/11).
www.spisu.iastate.edu

"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 5 PIs (lead PI: D. Rover; M. Bruning, M. Shelley (Statistics/Political Science), K. Athreya, S. Mickelson (ABE); Senior Personnel: T. Brumm, J. Johnson, P. Castleberry).
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 (ELPS), 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).
www.engineering.iastate.edu/seec/

"Creating Effective Future Faculty in Engineering," **National Science Foundation** (Course, Curriculum, and Laboratory Improvement Program (CCLI)), Grant No. 0837314, 7/1/09-6/30/11, $150,000, 1 of 3 PIs at ISU (lead PI: M. Mina; D. Rover, M. Shelley, Statistics/Political Science).

"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.

Pending

"RET in Engineering and Computer Science Site: Biomath – Linking Biology and Math to Train Bioengineers," National Science Foundation (Research Experiences for Teachers (RET)-Site), 8/15/11-8/14/14, $499,705; 1 of 2 PIs at ISU (lead PI: T. Bigelow).

"Designing Collaborative Innovation Ecosytems: A Multi-University EHR-ENG STEP Center for Educating Innovation Engineers," **National Science Foundation** (STEP Centers Program), 7/1/11-6/30/16, $1,400,000; 1 of 5 PIs at ISU (lead PI: J. Vance, ME;

S. Gilbert, HCI, E. MacDonald, ME, D. Rover, B. Dougherty, ELPS, J. Heise, ME; Penn State University as lead institution, lead PI: T. Simpson).

Previous

"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, ECE, R. Kanwar, ABE).

"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)

"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.

"Electronic System-Level Design Education," **Rockwell Collins** University Grant Program, $15,000. 7/04-7/05.

"Wireless Multimedia for Virtual Environments," **National Science Foundation**, (Combined Research- Curriculum Development (CRCD) 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 <u>through 5/31/03</u>.

"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.

Other Gifts and Grants

Various support ($5000-$25,000) from corporate foundations and companies, including equipment/software grants, for research and education

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**, 1997-1998, $346,500.

VIII.   TECHNICAL PUBLICATIONS AND PRESENTATIONS

*: student

Reviewed Journal Papers

1. 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.
2. 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, ISNN 1343-4500, www.information-iii.org.
3. 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)**.**
4. 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.
5. 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.
6. 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.
7. 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.
8. 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.

9. 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.

10. 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.

11. 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.

12. 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.

13. 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.

14. 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.

15. 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.

16. 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.

17. 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.

18. 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.

19. 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.

Other Journal Papers – Archival Journal

1. 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).

2. 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).

3. D. T. Rover, "Attention Engineering Educators," Academic Bookshelf, *ASEE Journal of Engineering Education*," vol. 97, no. 4, October 2008, pp. 531-534.

4. D. T. Rover, "Engineering Identity," Academic Bookshelf, *ASEE Journal of Engineering Education*," vol. 97, no. 3, July 2008, pp. 389-392.

5. D. T. Rover, "Learning from Mathematics Education Research," Academic Bookshelf, *ASEE Journal of Engineering Education*," vol. 97, no. 2, April 2008, pp. 223-225.

6. 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.

7. D. T. Rover, "Integrative Learning," Academic Bookshelf, *ASEE Journal of Engineering Education*," vol. 96, no. 3, July 2007, pp. 275-277.

8. D. T. Rover, "Effective Teaching," Academic Bookshelf, *ASEE Journal of Engineering Education*," vol. 96, no. 2, April 2007, pp. 167-169.

9. D. T. Rover, "Space to Learn," Academic Bookshelf, *ASEE Journal of Engineering Education*," vol. 96, no. 1, Jan. 2007, pp. 79-81.

10. 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.

11. D. T. Rover, "Curriculum Leadership," Academic Bookshelf, *ASEE Journal of Engineering Education*," vol. 95, no. 3, July 2006, pp. 255-256.

12. D. T. Rover, "Closing the Distance," Academic Bookshelf, *ASEE Journal of Engineering Education*," vol. 95, no. 2, April 2006, pp. 175-176.

13. D. T. Rover, "Policymaking and Engineers," Academic Bookshelf, *ASEE Journal of Engineering Education*," vol. 95, no. 1, Jan. 2006, pp. 93-95.

14. D. T. Rover, "New Economy, New Engineer," Academic Bookshelf, *ASEE Journal of Engineering Education*," vol. 94, no. 4, Oct. 2005, pp. 427-428.

15. D. T. Rover, "Inclusive Practices," Academic Bookshelf, *ASEE Journal of Engineering Education*," vol. 94, no. 3, July 2005, pp. 349-350.

16. D. T. Rover, "Serious Play," Academic Bookshelf, *ASEE Journal of Engineering Education*," vol. 94, no. 2, April 2005, pp. 279-280.

17. D. T. Rover, "Centered on Education Research," Academic Bookshelf, *ASEE Journal of Engineering Education*," vol. 94, no. 1, Jan. 2005, pp. 195-197

18. D. T. Rover, "New Paradigms for Complexity," Academic Bookshelf, *ASEE Journal of Engineering Education*," vol. 93, no. 4, Oct. 2004, pp. 267-268.

19. D. T. Rover, "A Piece of the Puzzle," Academic Bookshelf, *ASEE Journal of Engineering Education*," vol. 93, no. 3, July 2004, pp. 181-182.

20. D. T. Rover, "A Liberal Dose of Education," Academic Bookshelf, *ASEE Journal of Engineering Education*," vol. 93, no. 2, April 2004, pp. 93-95.

21. D. T. Rover, "Learner-Centered Assessment: Asking the Right Questions," Academic Bookshelf, *ASEE Journal of Engineering Education*," vol. 93, no. 1, Jan. 2004, pp. 3-4.

22. D. T. Rover, "A Sense of Community: Learning About Versus Learning To Be," Academic Bookshelf, *ASEE Journal of Engineering Education*, vol. 92, no. 1, Jan. 2003, pp. 3-5.

23. D. T. Rover, "Interdisciplinary Teaching and Learning: What, Why, and How," Academic Bookshelf, *ASEE Journal of Engineering Education*, vol. 91, no. 4, Oct. 2002, pp. 369-370.
24. D. T. Rover, "Taking our Own Advice: Team Teaching," Academic Bookshelf, *ASEE Journal of Engineering Education*, vol. 91, no. 3, July 2002, pp. 265-266.
25. D. T. Rover, "A Case in Point," Academic Bookshelf, *ASEE Journal of Engineering Education*, vol. 90, no. 1, Jan. 2001, pp. 3-5.
26. D.T. Rover and M. Shanblatt, "Guest Editors' Introduction to the Special Issue on Measurement of Program and System Performance," *Int. Journal of Parallel and Distributed Systems and Networks*, ACTA Press, 2(3), 1999.

Book Sections/Chapters

1. Kukjin Lee* and D. T. Rover, "Uniform Resource Visualization: Software and Services," chapter in *Performance Analysis and Grid Computing*, Edited by V. Getov, M. Gerndt, A. Hoisie, A. Malony, B. Miller, Springer, 2003, pp. 145-159 (ISBN 978-1-4020-7693-0) (selected articles from the Workshop on Performance Analysis and Distributed Computing, August 2002, Dagstuhl, Germany), http://www.springer.com/computer/communication+networks/book/978-1-4020-7693-0.
2. D. T. Rover, "Program Visualization," in *Encyclopedia of Distributed Computing*, edited by P. Dasgupta and J. Urban, Kluwer Academic Publishers, 1998.
3. M. Heath, A. Malony, and D. Rover, "Visualization for Parallel Performance Evaluation and Optimization," in *Software Visualization: Programming as a Multimedia Experience*, edited by M. Brown, J. Domingue, B. Price, and J. Stasko, MIT Press, 1996.
4. A. Waheed* and D. T. Rover, Instrumentation Systems for Parallel Tools," in *State-of-the-Art in Performance Modeling and Simulation: Advanced Computer Systems*, edited by K. Bagchi, J. Walrand, and G. Zobrist, Gordon and Breach Publishers Inc., 1996.
5. A. Jain, N. Ratha* and D. Rover, "Fingerprint Matching on Splash 2," in *Splash 2: FPGAs in a Custom Computing Machine*, edited by D. Buell, J. Arnold, and W. Kleinfelder, IEEE Computer Society Press, 1996.
6. D. Rover, A. Malony, and G. Nutt, "Summary of Working Group on Integrated Environments Vs. Toolkits," in *Debugging and Performance Tuning for Parallel Computing Systems*, edited by A. Hayes, M. Simmons, J. Brown, and D. Reed, IEEE Computer Society Press, 1996.
7. X-H. Sun and D.T. Rover, "Scalability of Parallel Algorithm-Machine Combinations," in *Multiprocessor Performance Measurement and Evaluation*, edited by X. Zhang and L. Bhuyan, IEEE Computer Society Press, 1994.

Reviewed Conference/Workshop Proceedings Papers

1. R. Mercado*, Z. Cao*, and D. T. Rover, "Mixture Models for System-Level Communication Analysis at Higher Levels of Abstraction," *Proc. 2010 IEEE International Conference on Electro/Information Technology*, Normal, IL, May 2010.

2. Z. Cao*, R. Mercado*, and D. T. Rover, "System-Level Memory Modeling for Bus-Based Memory Architecture Exploration," *Proc. 2009 IEEE International Conference on Electro/Information Technology*, Windsor, Ontario, Canada, May 2009.

3. K. Lee*, D. Rover, "A Web Services and Ontology-based Performance Visualization Framework for Grid Environments," *Proc. 2005 IEEE Intl. Conf. on Cluster Computing*, September 2005.

4. Galen Faidley*, Jayme Hero*, Kukjin Lee*, Bernard Lwakabamba*, Rob Walstrom*, Feng Chen*, Julie A. Dickerson, Diane T. Rover, Robert J. Weber, Carolina Cruz-Neira, "Developing an Integrated Wireless System for Fully Immersive Virtual Reality Environments," *Proc. of International Symposium on Wearable Computers (ISWC)*, Oct. 2004, pp. 178-179

5. 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," Proc. of 4th Workshop on High Performance Scientific and Engineering Computing with Applications (HPSECA-02), at ICPP 2002, Vancouver, August 2002.

6. B. Graubard*, F. Chen*, Z. Min*, B. Lwakabamba*, R. J. Weber, D. Rover, C. Cruz-Neira, and J. A. Dickerson, "Lessons Learned: Installing a Wireless System in the C6 Virtual Reality Environment," *Proc. Immersive Projection Technology Symposium*, at IEEE Virtual Reality 2002, Orlando, March 2002.

7. Kuk-Jin Lee* and Diane T. Rover, "A Component-based Framework for Uniform Resource Visualization," *Proc. IEEE Symposium on Information Visualization* (InfoVis 2001), at IEEE Visualization 2001, San Diego, Oct. 2001.

8. D. Pierce* and D. Rover, "Multiple Abstraction Level Performance Data Mining", *Proceedings of the 14th International Conference on Parallel and Distributed Computing Systems*, Las Vegas, August 2001.

9. D.T. Rover and Kuk-Jin Lee*, "A Component-based Framework for Uniform Resource Visualization," *Proc. Software Visualization Workshop*, at 23rd Int. Conf. Software Engineering, Toronto, May 2001, pp. 11-16.

10. N. Ratha*, A.K. Jain and D. Rover, "FPGA-Based Coprocessor for Text String Extraction", *Proc. Computer Architecture for Machine Perception 2000*, Padova, September 2000.

11. D. Pierce* and D. Rover, "A Performance Analysis Framework for a System Lifespan", *Proceedings of 8th Symposium on Modeling, Analysis, and Simulation of Computer and Telecommunication Systems* (MASCOTS), IEEE Computer Society Press, August 2000, pp. 240-247.

12. D. Pierce* and D.T. Rover, "An Open Architecture for Performance Data Mining," *Proceedings of 5th International Workshop on Embedded/Distributed High-Performance Computing Systems and Applications* (EHPC 2000), at IEEE IPDPS 2000, Cancun, Mexico, May 2000.

13. A. Bakic*, M.W. Mutka, and D.T. Rover, "BRISK: A Portable and Extensible Distributed Instrumentation System," *Proceedings of the IEEE IPPS/SPDP 1999* (International Parallel Processing Symposium, Symposium on Parallel and Distributed Processing), April 1999, pp. 387-391.

14. A. Bakic*, M. W. Mutka, and D.T. Rover, "An On-Line Performance Visualization Technology," *Proceedings of the IEEE Heterogeneous Computing Workshop*, April 1999, pp. 47-59.

15. D.T. Rover, A. Bakic*, M. W. Mutka, "BRISK: A Portable and Flexible Distributed Instrumentation System," *Proc. of 2nd ACM SIGMETRICS Symposium on Parallel and Distributed Tools* (SPDT'98), August 1998, 2 pages. (with Poster)

16. M. Jimenez*, N. Santiago*, and D.T. Rover, "Development of a Scalable FPGA-based Floating-Point Multiplier," *Proceedings of 1998 Canadian Workshop on Field-Programmable Devices*, Montreal, June 1998, 6 pages.

17. A. Waheed*, M. Mutka, D.T. Rover, H. Smith*, and A. Bakic*, "Modeling, Evaluation, and Adaptive Control of an Instrumentation System," *Proc. of the Third IEEE Real-Time Technology and Applications Symposium*, June 1997.

18. A. Waheed*, D.T. Rover, and J. Hollingsworth, "Modeling, Evaluation, and Testing of Paradyn Instrumentation System," *Proceedings of Supercomputing '96 Conference*, ACM Press, November 1996. (CD-ROM/electronic proceedings only)

19. A. Waheed*, D.T. Rover, M. Mutka, A. Bakic, and D. Pierce*, "Vista: A Framework for Instrumentation System Design for Multidisciplinary Applications," *Proceedings of the 1996 International Workshop on Modeling, Analysis, and Simulation of Computer and Telecommunication Systems* (MASCOTS '96), February 1996, pp. 192-195.

20. A. Waheed* and D.T. Rover, "Performance Evaluation of an Integrated Instrumentation System," *Proceedings of the 1996 International Workshop on Modeling, Analysis, and Simulation of Computer and Telecommunication Systems* (MASCOTS '96), February 1996, pp. 267-271.

21. N. Ratha*, A. Jain, and D.T. Rover, "FPGA-based High Performance Page Layout Segmentation," *Proceedings of the 1996 Great Lakes Symposium on VLSI*, IEEE Computer Society, March 1996, pp. 29-34.

22. A. Waheed* and D.T. Rover, "A Structured Approach to Instrumentation System Development and Evaluation," *Proceedings of Supercomputing '95 Conference*, ACM Press, December 1995. (CD-ROM/electronic proceedings only)

23. A. Waheed*, D. Rover, and H. Hughes "A Resource Occupancy Model for Evaluating Instrumentation System Overheads," *Proceedings of CMG '95 Conference*, Computer Measurement Group, December 1995, pp. 1212-1223.

24. D. Rover and A. Waheed*, "A Schema for Specifying and Classifying Instrumentation Systems," *Proceedings of the 1995 International Workshop on Performance Measurement and Analysis* (PERMEAN '95), ACM Press, August 1995 (Beppu, Japan), pp. 42-51.

25. T. Grotjohn, V. Gopinath*, D.T. Rover, and Y.-K. Chu* "3-D Plasma Simulations on a Massively Parallel Processor," *Proc. of SIAM Conference on Parallel Processing for Scientific Computing*, February 1995.

26. T. Grotjohn, V. Gopinath*, D.T. Rover, and Y.-K. Chu*, "Parallelization and Performance of Three-Dimensional Plasma Simulation," *Proc. of Symposium on the Frontiers of Massively Parallel Computation* (Frontiers '95), February 1995, pp. 148-155.

27. Y.-K. Chu*, D.T. Rover, and I.-L. Yen "Guiding Processor Allocation with Estimated Execution Time for Mesh Connected Multiple Processor Systems," *Proc. of 28th Hawaii International Conference on System Sciences*, January 1995, pp. 163-172.

28. A. Waheed*, D. Rover, and V. Melfi, "A Model for Instrumentation System Management in Concurrent Computer Systems," *Proc. of 28th Hawaii International Conference on System Sciences*, January 1995, pp. 432-441.

29. N. Ratha*, A. Jain, and D. T. Rover, "Convolution on Splash 2," *Proceedings of IEEE Symposium on FPGAs for Custom Computing Machines* (FCCM '95), 1995, pp. 204-213.

30. N. Ratha*, A. Jain, and D. T. Rover "An FPGA-based Point Pattern Matching Coprocessor with Application to Fingerprint Matching," *Proceedings of 1995 Conference on Computer Architecture and Machine Perception* (CAMP '95), 1995, pp. 394-401.

31. Y-K. Chu*, D.T. Rover, and I-L. Yen, "Incorporating Job Scheduling for Processor Allocation on Two-Dimensional Mesh-Connected Systems," *Proc. International Conference on Parallel and Distributed Computing Systems*, October 1994.

32. A. Waheed*, B. Kronmueller*, D. Rover, and R. Sinha*, "A Toolkit for Advanced Performance Analysis," *Proceedings of the International Workshop on Modeling, Analysis, and Simulation of Computer and Telecommunication Systems* (MASCOTS '94), January 1994, pp. 376- 380.

33. A. Waheed*, B. Kronmueller*, and D. Rover, "A Matrix Approach to Performance Data Modeling, Analysis, and Visualization," *Proceedings of the International Workshop on Modeling, Analysis, and Simulation of Computer and Telecommunication Systems* (MASCOTS '94), January 1994, pp. 137-141.

34. D.T. Rover and A. Waheed*, "Performance Visualization of Parallel Programs," *Proceedings of Visualization '93*, pp. 61-71, October 1993. Also video published in companion videotape.

35. D.T. Rover and A. Waheed*, "Multiple Domain Analysis Methods," *Proceedings of the Third ACM/ONR Workshop on Parallel and Distributed Debugging*, pp. 53-63, 1993.

36. A. Waheed*, M. Doetsch*, and D. Rover, "Advanced Methods of Performance Data Processing and Analysis," *Proceedings of the Seventh International Parallel Processing Symposium* (IPPS7), pp. 609-613, April 1993.

37. J.M. Francioni and D. T. Rover, "Visual-Aural Representations of Performance for a Scalable Application Program," *Proceedings of the Scalable High-Performance Computing Conference '92*, pp. 433-440, April 1992.

38. D. T. Rover, "A Performance Visualization Paradigm for Data Parallel Computing," *Proceedings of the 25th Hawaii International Conference on System Sciences*, IEEE Computer Society, pp. 149-160, January 1992. (Best Paper nomination in Software Technology Track)

39. D. T. Rover, M.B. Carter* and J.L. Gustafson, "Performance Visualization of SLALOM," *Proceedings of the Sixth Distributed Memory Computing Conference*, IEEE Computer Society, pp. 543-550, 1991.

40. D. T. Rover, G.M. Prabhu and C.T. Wright, "Visualization of Program Performance on Concurrent Computers," Computing in the '90's: *Proceedings of the First Great*

Lakes Computer Science Conference (October 1989), N. Sherwani et al., Editors, Lecture Notes Series 507, Springer-Verlag, 1991.

*Reviewed Conference/Workshop Proceedings Papers – **Education***

1. Chris Rehmann, Diane Rover, Mark Laingen, Steve Mickelson, and Tom Brumm, "Introducing Systems Thinking to the Engineer of 2020," *ASEE Annual Conference*, Vancouver, BC, Canada, June 2011.
2. Frankie Santos Laanan, Diane Rover, et al., "Engineering Transfer Students: Characteristics, Experiences, and Student Outcomes," *ASEE Annual Conference*, Vancouver, BC, Canada, June 2011.
3. Marcia Laugerman, Steve Mickelson, Diane Rover, et al., "Characteristics of Community College Transfer Students that Successfully Matriculate and Graduate in Engineering," *ASEE Annual Conference*, Vancouver, BC, Canada, June 2011.
4. Krishna S. Athreya, Nidhi Bhandari, Michael T. Kalkhoff*, Diane T. Rover, Alexandra M. Black*, Elif Eda Miskioğlu*, and Steven K. Mickelson, "Engineering Leadership Program: A Thematic Learning Community", *Proc. 40th ASEE/IEEE Frontiers in Education Conf.,* session, October 2010.
5. Elif Eda Miskioğlu*, Krishna S. Athreya, Nidhi Bhandari, Michael T. Kalkhoff*, Diane T. Rover, Alexandra M. Black*, Nathan D. Meisgeier*, "Engineering Leadership Program: The First Year Experience", *Proc. 40th ASEE/IEEE Frontiers in Education Conf.,* session, October 2010.
6. Diane Rover, Monica Bruning, Steven Mickelson, Mack Shelley, Frankie Santos Laanan, Mary Darrow, Mary Goodwin, Jacqulyn Baughman*, Harry McMaken, "SEEC: Student Enrollment and Engagement Through Connections", *Proc. 2010 ASEE Annual Conference*, June 2010.
7. M. Mina, D. Rover, M. Shelley, "Creating Effective Future Faculty in Engineering," *Proc. 2010 ASEE Annual Conference*, June 2010.
8. Michael Kalkhoff*, Krishna S. Athreya, Diane Rover, Steven K Mickelson and Amy Joines*, "Highlights and Challenges of a Student Driven Co-Curricular Leadership Program," *Proc. 39th ASEE/IEEE Frontiers in Education Conf.,* session T4F, October 2009.
9. M. R. Aluru and D. T. Rover, "Work In Progress: An Interdisciplinary Initiative in Bioengineering Education," *Proc. 38th ASEE/IEEE Frontiers in Education Conf.,* October 2008.
10. K. S. Athreya, M. Kalkhoff*, G. McGrath*, A. Bragg*, A. Joines*, D. Rover, and S. K. Mickelson, "Work In Progress - Engineering Leadership Program: Tracking Leadership Development of Students using Personalized Portfolios," *Proc. 38th ASEE/IEEE Frontiers in Education Conf.,* October 2008.
11. G. Kumar*, R. Mercado*, G. Manimaran and D. T. Rover, "Enhancing Student Learning with Hands-On RTOS Development in Real-Time Systems Course," *Proc. 38th ASEE/IEEE Frontiers in Education Conf.,* October 2008.
12. K. S. Athreya, D. Rover, S. Walter*, S. K. Mickelson, G. McGrath*, M. Kalkhoff*, T. Rasmussen*, G. Starns, R. Wiley-Jones, K. Saunders, M. Shelley, "Work In

Progress: Progression of an Engineering Leadership Program for the Future," *Proc. 37th ASEE/IEEE Frontiers in Education Conf.,* October 2007.

13. A. Riha*, J. Apple-Smith, S. Miner, J. Melsa, and D. Rover, "Growing Globalization of Engineering Practice: Raising National Awareness," *Proc. of 2007 ASEE Annual Conference*, June 2007.

14. D. Helvick*, R. Mercado*, Z. Zhang, and D.T. Rover, "Reflections on Implementing and Teaching an Advanced Undergraduate Course in Embedded Systems," *Proc. 2007 IEEE Computer Society Int'l Conference on Microelectronic Systems Education*, June 2007. One of six papers accepted for a talk (versus 68 posters). Invited submission to special issue of *IEEE Transactions on Education*. **Best Paper Award**.

15. M. Bezdek*, D. Helvick*, R. Mercado*, D. Rover, A. Tyagi, Z. Zhang, "Developing and Teaching an Integrated Series of Courses in Embedded Computer Systems," *Proc. 36th ASEE/IEEE Frontiers in Education Conference*, October 2006.

16. S. Walter*, K. Athreya, L. Zachary, D. Rover, "An Engineering Student Leadership Program for the Future," Work in Progress, *Proc. 36th ASEE/IEEE Frontiers in Education Conf.,* October 2006.

17. M. Mina, A. Somani, A. Tyagi, D. Rover, M. Feldmann, M. Shelley, "Learning Streams: A Case Study in Curriculum Integration," *Proc. 35th ASEE/IEEE Frontiers in Education Conference*, October 2005.

18. J. Schneider*, M. Bezdek*, Zi. Zhang*, Zh. Zhang, D. Rover, "A Platform FPGA-based Hardware-Software Undergraduate Laboratory," *Proc. IEEE Computer Society Int'l Conference on Microelectronic Systems Education*, June 2005. Accepted for a talk (versus poster presentation).

19. R. Walstrom*, J. Schneider*, and D. T. Rover, "Teaching System Level Design using SpecC and SystemC," *Proc. of IEEE Computer Society International Conference on Microelectronic Systems Education*, June 2005.

20. D. Rover, J. Dickerson, C. Cruz-Neira, , R. Weber, K. Lee*, G. Faidley*, J. Hero*, R. Walstrom*, B. Lwakabamba*, F. Chen*, "CRCD: Low-Power Wireless Communications for Virtual Environments – Design Document," *Proc. of 2004 ASEE Annual Conference*, Salt Lake City, June 2004, 16 pp. CD-ROM/Online.

21. D. Rover, J. Dickerson, C. Cruz-Neira, R. Weber, K. Lee*, and Z. Min*, "Using a Design Document to Support Interdisciplinary Learning," *Proc. of 2003 IEEE/ASEE Frontiers in Education Conference*, November 2003, pp. S3A-12 -17.CD-ROM/Online: http://fie.engrng.pitt.edu/fie2003/papers/1539.pdf.

22. J. Dickerson, D. Rover, R. Weber, C. Cruz-Neira, E. Eekhoff*, B. Lwakabamba*, F. Chen*, Z. Min*, K. Lee*, "CRCD: Low-Power Wireless Communications for Virtual Environments – Course Integration," *Proc. of 2003 ASEE Annual Conference*, Nashville, June 2003, 11 pp. CD-ROM/Online: http://www.asee.org/conferences/caps/document/2003-2508_Final.pdf.

23. D. Rover, "Panel: Communities of Practice in Engineering Education," panel summary, *Proc. 2003 IEEE/ASEE Frontiers in Education Conference*, Boulder CO, November 2003, pp. F2G-1.CD-ROM/Online: http://fie.engrng.pitt.edu/fie2003/papers/1580.pdf.

24. D. Rover and A. Striegel, "The PowerBox Case Study: A 32-Bit Microcontroller Platform for Introductory Embedded Programming," workshop summary, *Proc. 2003*

IEEE/ASEE Frontiers in Education Conference, Boulder CO, November 2003, pp. W3C-1.CD-ROM/Online: http://fie.engrng.pitt.edu/fie2003/papers/1546.pdf.

25. A. Striegel and D. Rover, "Enhancing Student Learning in an Introductory Embedded Systems Laboratory," *Proc. 2002 IEEE/ASEE Frontiers in Education Conference*, Boston, November 2002. (CD-ROM)

26. A. Striegel and D. Rover, "Problem-based Learning in an Introductory Computer-Engineering Course," *Proc. 2002 IEEE/ASEE Frontiers in Education Conference*, Boston, November 2002. (CD-ROM)

27. D. Rover and A. Niemi, "Senior Design as an Agent for Change in Engineering Education," *Proc. 2002 IEEE/ASEE Frontiers in Education Conference*, Boston, November 2002. (CD-ROM)

28. J.A. Dickerson, D. T. Rover, C. Cruz-Neira, R. J. Weber, B. Graubard*, Feng Chen*, and Zheng Min*, "CRCD: Low Power Wireless Communications for Virtual Environments," NSF/CRCD Projects Session, *Proc. 2002 ASEE Annual Conference*, Montreal, June 2002. (with Poster) (CD-ROM)

29. P.D. Fisher and D. T. Rover, "The Ups, the Downs, and the Ups of Responding to EC2000," *Proc. of 2001 ASEE Annual Conference*, June 2001. (CD-ROM)

30. D. T. Rover, "Perspectives on Learning in a Capstone Design Course," *Proc. of 2000 IEEE/ASEE Frontiers in Education Conference*, Kansas City, November 2000.

31. Rover, D., Cheng, B., Wey, C.L., and Mutka, M., "Incorporating Large-scale Projects into a Multidisciplinary Approach to Embedded Systems," *Proc. Int. Conf. on Eng. Educ.*, Taiwan, August 2000.

32. P. D. Fisher, J. S. Fairweather, D. T. Rover, and L. A. Haston*, "Linking Engineering Service Courses with Engineering Design," *Proc. of 2000 ASEE Annual Conference*, St. Louis, June 2000. (CD-ROM)

33. D. T. Rover, N. Santiago*, M. Tsai*, "Active Learning in an Electronic Design Automation Course," *Proc. of IEEE Computer Society International Conference on Microelectronic Systems Education*, July 1999, pp. 78-79.

34. J. Hughes, D. T. Rover, and R. Enbody, "Towards a More Collegial and Consultative ABET Visit," *Proc. of 1999 IEEE/ASEE Frontiers in Education Conference*, November 1999, p. 13b8-4.

35. D. T. Rover and P. D. Fisher, "Student Self-Assessment in Upper-Level Engineering Courses," *Proc. of the 1998 IEEE/ASEE Frontiers in Education Conference*, November 1998.

36. B. Cheng, D. T. Rover, and M. Mutka, "A Multi-Pronged Approach to Bringing Embedded Systems into Undergraduate Education," *Proc. of the 1998 ASEE Annual Conference*, June 1998, 18 pp. (with Poster) (CD-ROM)

37. P. D. Fisher and D. T. Rover, "Cross-Functional Teaming in a Capstone Engineering Design Course," *Proc. of the 1997 IEEE/ASEE Frontiers in Education Conference*, November 1997.

38. M.W. Mutka and D.T. Rover, "A VESL for Real-Time Computing in an Undergraduate Computer Engineering Program," *Proc. of the 1997 IEEE Real-Time Education Workshop*, part of Third IEEE Real-Time Technology and Applications Symposium, June 1997.

39. G.M. Vogel*S, D.T. Rover, C.T. Wright, and G.M. Prabhu, "An Experiment for Teaching Fundamentals of Parallel Processing," Computing in the '90's: *Proc. of the*

First Great Lakes Computer Science Conference (October 1989), N. Sherwani et al., Editors, Lecture Notes Series 507, Springer-Verlag, 1991.

Other Conference/Workshop Proceedings Papers

1. D. T. Rover and Kuk-Jin Lee*, "Uniform Resource Visualization: Software and Services," Proc. of Dagstuhl Seminar No. 02341, Dagstuhl, Germany, August 2002. http://www.cs.wisc.edu/paradyn/PADC2002.html http://www.dagstuhl.de/02341/
2. A. Bakic*, M. Mutka, and D. Rover, "Real-Time System Performance Visualization and Analysis Using Distributed Visual Objects," *Proc. of IEEE Workshop on Middleware for Distributed Real-Time Systems and Services*, Dec. 1997.
3. J. Brown, A. Geist, C. Pancake, and D. Rover, "Software Tools for Developing Parallel Applications," Parts 1 & 2, Minisymposium on Parallel Software Tools, *Proc. 1997 SIAM Parallel Processing Conference*, March 1997.
4. D. T. Rover, "Summary of Working Group on Technical Issues: Performance," *Proc. Workshop on Software Tools for High Performance Computing Systems*, Chatham, Massachusetts, October 1996.
5. D. T. Rover, "Introduction to the Minitrack on Performance Evaluation and Prediction of Parallel and Distributed Systems," *Proc. of 28th Hawaii International Conference on System Sciences*, January 1995, pp. 390-391.
6. D. T. Rover, "Performance Evaluation: Integrating Techniques and Tools into Environments and Frameworks," Roundtable Summary, *Proceedings of Supercomputing '94 Conference*, November 1994, pp. 277-278.
7. S. Choi*, N. Ratha*, D. Rover, and M. Chung, "Signal Processing Applications using VHDL on Splash 2," *Proc. VHDL International Users Forum*, November 1994, pp. 6.11-6.19.
8. T. Grotjohn, V. Gopinath*, D. Rover, and Y-K. Chu*, "Microwave ECR Plasma Source Simulation in Three Dimensions," *Proc. International Workshop on Microwave Plasmas and its Applications*, Moscow, Russia, September 1994.
9. S. Dhameja* and D. Rover, "Mapping Compute- and Data-Intensive Algorithms to an FPGA-based Computing Machine," *Proc. Canadian Conference on Field Programmable Devices*, June 1994.
10. D. Rover and X.-H. Sun, "Visualizing the Scaling Behavior of Parallel Algorithm-Machine Combinations," *Proceedings of the 4th Symposium on the Frontiers of Massively Parallel Computation*, pp. 569-570, October 1992.
11. J.M. Francioni et al., "Summary of Working Group on Application Performance Issues," in *Summary of Workshop on Parallel Computer Systems: Software Tools*, ed., M. Simmons, A. Hayes, and D. Reed, Santa Fe, October 1991.
12. 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.
13. 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.

14. 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.
15. 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)

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, 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.

Conference/Workshop

1. D. T. Rover and Kuk-Jin Lee*, "Uniform Resource Visualization: Software and Services," Dagstuhl Seminar – Performance Analysis and Distributed Computing, Dagstuhl, Germany, August 2002. **Invited**
2. Kuk-Jin Lee* and D. T. Rover, "Uniform Resource Visualization," Industrial Grid Summit, Paris, France, June 2001.
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. **Invited**

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. **Invited**

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. **Invited**

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. **Invited**

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. **Invited**

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. **Invited**

9. D. T. Rover, "Analyzing the Scalability of Parallel Programs," U.S.–Japan Performance Evaluation Workshop, Kona, Hawaii, September 1994. **Invited**

10. 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.

11. D. T. Rover, "Performance Evaluation: Integrating Techniques and Tools into Environments and Frameworks," panel moderator, Supercomputing '94 Conference, Washington, D.C., November 1994.

12. 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.

13. 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

1. 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.

2. D. Rover, M. Bruning, F. Laanan, S. Mickelson, M. Shelley, "ISU SEEC Project" Third Year Review, NSF STEP Grantees Meeting, March 3, 2010.

3. 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.

4. D. T. Rover and M. W. Mutka, "Real-Time System Visualization," DARPA ITO Embeddable Systems PI Meetings, Atlanta, 1996; Santa Fe, 1997; Orlando, 1998.

5. D. T. Rover, "System Visualization," panel on visualization technology, DARPA Information Technology Office, Washington, D.C., October 1996 (briefing for program managers). **Invited**
6. 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).
7. D. T. Rover, "Performance Tools for Parallel and Distributed Systems," Colloquium in Department of Electrical and Computer Engineering, Iowa State University, Ames, March 1996. **Invited**
8. D. T. Rover, M. W. Mutka, and D. Pierce*, "Instrumentation and Visualization for Design and Testing of Real Time Embedded Systems," Pre-award and on-site presentations, Washington, D.C., MSU, 1995.
9. D. T. Rover, "The Visual Display of Parallel Performance Data," Cornell Theory Center Lectures, Ithaca, New York, October 1994. **Invited**
10. D. T. Rover, "Performance Visualization," Hewlett Packard Labs, Palo Alto, California, July 1994. **Invited**
11. D. T. Rover, "Performance Visualization," NCR Corp. (AT&T), Naperville, Illinois, August 1994. **Invited**
12. D. T. Rover, "Performance Evaluation of Scalable Computer Systems," Smiths Industries, Grand Rapids, September 1992. **Invited**

Education

1. 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. **Invited**
2. D. Rover, panelist, "Work/Life Balance for New Engineering Educators," 2010 ASEE Annual Conference, New Engineering Educators Division, Louisville, KY, June 2010.
3. D. Rover, "Using the Jigsaw Method in the Classroom," Wakonse Conference on College Teaching, Camp Miniwanca, Michigan, May 2004.
4. D. Rover, "Panel: Communities of Practice in Engineering Education," panel moderator, 2003 IEEE/ASEE Frontiers in Education Conference, Boulder CO, November 7, 2003. Panelists: Karl Smith (Univ. Minnesota), Ruth Streveler (Colorado School of Mines), Jeff Froyd (Texas A&M Univ.), Susan Kemnizter (National Science Foundation). Slides: http://clue.eng.iastate.edu/~drover/fie03cop/ (over 50 attendees)
5. 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. Slides, etc.: http://class.ee.iastate.edu/cpre211/fie03 (3-hour workshop, ten participants)
6. D. T. Rover, M. W. Mutka, and A. Niemi, "Embedded System Design in VESL," NSF/CRCD Projects Session, 2000 ASEE Annual Conference, June 2000.
7. P.D. Fisher, J. Fairweather, L. Haston*, and D. T. Rover, "Linking Service Courses with Design," Workshop, 2000 ASEE Annual Conference, June 2000.

8. K. Smith and D. T. Rover, "Project Management, Teamwork, and Leaders," Workshop, 2000 ASEE Annual Conference, June 2000.
9. K. Smith and D. T. Rover, "Designing Group Experiences that Work," Workshop, Lilly Teaching Seminars and Faculty Development Programs, Conversations about Active Teaching and Learning series, Michigan State University, February 2000.
10. D. T. Rover, "Cross-Functional Teaming," MSU Faculty Workshop on Cooperative Learning (led by K. Smith, University of Minnesota), August 1997.
11. 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.
12. D. T. Rover, "Formal Cooperative Learning in Computer Engineering Courses," President's Discussion Hour: Cooperative Learning (panel), Michigan State University, October 1997.
13. D. T. Rover, Lectures on Digital Logic, Computer Architecture, and High Performance Computing Systems, NUST College of Signals, Rawalpindi, Pakistan, January 1994.

Posters

1. 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.
2. 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.
3. 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.
4. 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.
5. 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.
6. 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)
7. 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.

8. 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.

9. D. T. Rover, "Integration of System Performance," National Science Foundation, 1999 Career Program PI Meeting, Washington, D.C., January 1999.

10. A. Waheed* and D. T. Rover, "Instrumentation System Design and Evaluation," Workshop on Software Tools for High Performance Computing Systems, Chatham, Massachusetts, October 1996.

11. 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.

12. A. Jain, D.T. Rover, N. Ratha*, and S. Dhameja*, "Image Processing Applications on Splash 2," Scalable High Performance Computing Conference, May 1994.

13. A. Waheed* and D. T. Rover, "Performance Visualization and Analysis Using Multiple Domains," Supercomputing'93 Conference, November 1993.

14. A. Waheed*, M. Doetsch*, and D. T. Rover, "Advanced Methods of Performance Date Processing and Analysis," Supercomputing '92 Conference, November 1992.

15. D. T. Rover, "Scalable Representations of Parallel Program Performance," Gordon Research Conference on Software Tools and Libraries for Concurrent Supercomputers, July 1992.

16. D. T. Rover, "Machine Visualization and SLALOM," Workshop on Parallel Computer Systems: Software Tools, Sante Fe, October 1991.

17. 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:

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.

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

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.

Formal Mentor/Adviser:

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.   GRADUATE STUDENTS

Doctoral

Mihir Awatramani – CpE, research started Spring 2011

Ramon Mercado – CpE PhD Degree expected Summer 2011, ISU
"A Probabilistic Approach to Performance Estimation at Higher Abstraction Levels for Communication-Based System-Level Design"
Preliminary Exam, May 2009
Iowa State University Teaching Excellence Award, Spring 2006
GAANN Fellow
Employment: U.S. Patent and Trade Office (Virginia) (September 2010)

Zhongbo (Jerry) Cao – CpE PhD Degree expected Summer 2011, ISU
"Memory-Aware Design Framework for Early System Architecture Analysis and Exploration"
Preliminary Exam, May 2009
Employment: Marvell Semiconductors (Chandler, Arizona) (December 2010)

Kukjin Lee - CpE PhD Degree awarded Summer 2006, ISU
"Uniform Resource Visualization"
Employment: Microsoft Corp. (Redmond, Washington)

Nayda Santiago - EE PhD Degree awarded Summer 2003, MSU
 "Evaluating Performance Information for Mapping Algorithms to Architectures"
Student employment: Cornell Theory Center
Employment: University of Puerto Rico - Mayaguez

David Pierce - EE PhD Degree awarded Fall 2001, MSU
"Performance Analysis for Complex Systems over a System Lifespan"
Employment: Smiths Industries (Grand Rapids, MI)

Abdul Waheed - EE PhD Degree awarded Spring 1997, MSU
"Design, Modeling, and Evaluation of Instrumentation Systems"
1996-97 Thoman Fellow
Student employment: Hewlett-Packard Labs
Placement: NASA Ames Research Center

Yung-Kang Chu - EE PhD Degree awarded Summer 1995, MSU
"Job Scheduling and Processor Allocation in Two-Dimensional Mesh Systems"
Placement: AT&T

Current number of doctoral degree advisory committee memberships, including as chairperson: 5

Total number of doctoral degree advisory committee memberships, including as chairperson: 34

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

Daniel Helvick, CpE Master of Engineering, Fall 2011
Emphasis area: System-level design of embedded computer systems
Iowa State University Teaching Excellence Award, Spring 2007
Employment: Garmin (Kansas City)

Andrew Riha, CpE MS Degree, Spring 2008
Creative Component: A Simulink/MySQL Framework for the Delfi-C3 Attitude Determination Subsystem
Placement: Boeing (California)

Joe Schneider, CpE MS Degree, Spring 2007
Thesis: Low-level Estimation at High Levels of Abstraction in System-Level Design
Placement: John Deere (Iowa)
Iowa State University Teaching Excellence Award, Fall 2004

Ziyu Zhang, CpE MS Degree, Fall 2006
Thesis: "Distributed Real-time Operating System (DRTOS) Modeling in SpecC"
Placement: Garmin (Kansas City)

Robert Walstrom, CpE MS, Summer 2005
Thesis: "System-Level Design Refinement Using SystemC"
Placement: Seagate Technology (Minnesota)
Iowa State University Teaching Excellence Award, Spring 2003

Brian Smith, CpE MS, Spring 2005
"Performance Effects of Node Mapping on BlueGene/L"
Placement: IBM Corp. (Rochester, Minnesota)

Brian Foulds - EE MS Degree awarded Fall 2000
"VHDL Fast Summation Algorithm Synthesis for STAR Project" (in collaboration with
MSU Cyclotron Lab)
Continued to PhD under new advisor

Habeel Ahmad - EE MS Degree awarded Fall 1998 (Pakistan NUST Program)
"Partitioning Strategies in Hardware-Software Codesign"

Anthony Pappas - EE MS Degree awarded Summer 1998
"Implementation and Evaluation of μC-OS Real-Time Operating System Kernel for the
Handy Board"

Roy Wang - EE MS Degree awarded Spring 1996
"A Very Long Instruction Word Architecture Implemented on the Splash 2 FPGA Array"
Placement: Xilinx, Inc.

Sandeep Dhameja - EE MS Degree awarded Spring 1995
"Bar Code Localization on Splash 2"

Abdul Waheed - EE MS Degree awarded December 1993
"Performance Data Modeling, Transformations, and Multiple-Domain Analysis
Methods"
Continued to PhD

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

ABET, Inc. (accreditation)
    Commissioner, Engineering Accreditation Commission (EAC), representing IEEE
        (2009-present)

Institute of Electrical and Electronics Engineers (IEEE)
    Senior Member (2001)
    ABET EAC Commissioner (2009-present)
    IEEE Committee on Engineering Accreditation Activities (CEAA), Member-At-
        Large (2006-2009)
        • Representative to CSAB Board of Directors, 2007-2009
        • Co-coordinator for CEAA Mentoring, 2008
    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)
    ECE Division, Secretary/Treasurer (2009-10), Program Chair (ASEE Annual
        Conference) (2010), Chair-Elect (2010-11)
    Senior Associate Editor (for the Academic Bookshelf), *Journal of Engineering
        Education* (2000-2008)

National Center for Women and Information Technology (NCWIT)
>   Institutional Representative (with D. Jacobson), Iowa State University, Academic
>   Alliance Member (2010-present)

Professional Service

Conferences, Journals, Agencies

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-present (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

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

Co-guest editor (with M. Shanblatt, MSU), special issue of International Journal of
Parallel and Distributed Systems and Networks on measurement of program and system
performance, 1999

Reviewer:
U.S. Department of Energy, Office of Science, PECASE (Presidential Early Career Awards for Scientists and Engineers) panel, 2010.
National Science Foundation Committee of Visitors for the Division of Engineering Education and Centers, 2010.

Various National Science Foundation panel reviews; local/ISU facilitator for NSF web-based workshops on proposal writing for the CCLI and TUES programs, 2009, 2010, 2011; various IEEE and ACM conferences and journals (in the areas of engineering education, parallel and distributed computing, computers, software, performance, etc.); U.S. Dept. of Energy; State of Louisiana Board of Regents; University of Cape Town, South Africa; publishers of textbooks in computer engineering

Other:
Michigan Technological University, consultant on NSF-funded workshop for new STEP (STEM Talent Expansion Program) awardees, workshop leader – Sheryl Sorby, August 2010.

Michigan State University, external advisory committee member for NSF STEP (STEM Talent Expansion Program) grant, 2008-2013.

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

Participation in 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
Retention Task Force, 2007-present (Provost Office and Student Affairs)

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

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)

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
Various committees and activities as associate dean, 2004-2010
National Academies Convocation on "Rising Above the Gathering Storm," Washington, D.C., Sep. 28, 2006
Intern/Co-Op Task Force, Fall 2003 – 2004

Department
Honors and Awards Committee (Chair), 2010-present
ABET Committee (Chair), 2010-present
Senior Design project mentor, 2001-2005, 2010-present
Faculty Advisor, Digital Women student organization, 2010-present
Various departmental service activities (e.g., 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

Participation in various student activities, meetings with/for industry, professional development activities, cross-department activities, and faculty mentoring

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

- F10-S11: Real-Time Environmental Monitoring, sdmay11-24
- 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