

# BIOGRAPHICAL SKETCH

**Diane T. Rover**      **Assoc. Dean, Engineering, and Prof., Electrical & Computer Eng.**  
**www.eng.iastate.edu/~drover/**      **Marston Hall**  
**515-294-1309**      **Iowa State University**  
**drover@iastate.edu**      **Ames, IA 50011**

## Professional Preparation

B.S. in Computer Science, Dept. of Computer Science, Iowa State Univ., Ames, Iowa, 1984  
M.S. in Computer Engineering, Iowa State University, 1986  
Ph.D. in Computer Engineering, Dept. of Electrical and Computer Engineering, Iowa State Univ., 1989  
Postdoctoral Researcher, Scalable Computing Laboratory, Ames Laboratory (US-DOE), 1989-1991

## Professional Experience

Associate Dean for Academic and Student Affairs (7/04 to present), College of Engineering, ISU  
Professor (8/01 to present), Dept. of Electrical and Computer Engineering, Iowa State Univ.  
Associate Chair for Undergraduate Education (5/03 to 8/04)  
Interim Chairperson (8/00 to 8/01), Dept. of Electrical and Computer Engineering, Michigan State Univ.  
Associate Professor (7/97 to 8/01), Dept. of Electrical and Computer Engineering, Michigan State Univ.  
Director of Computer Engineering Program (7/97 to 6/00)  
Assistant Professor (9/91 to 6/97), Dept. of Electrical Engineering, Michigan State Univ.  
Summer Intern (5/87 to 8/87), Computer Sciences Dept., IBM T.J. Watson Research Center.  
Summer Intern (5/86 to 8/86), Digital Computer and Software Engineering Dept., McDonnell Douglas Corp.

## Funding Record

1. "SEEC: Student Enrollment and Engagement Through Connections," **National Science Foundation** (STEM Talent Expansion Program), Grant No. 0653236, 7/15/07-6/30/12, \$1,499,945, PI (co-PIs: M. Bruning, F. Laanan (ELPS), S. Mickelson (ABE), M. Shelley (ELPS); collaborative with Des Moines Area Community College, additional \$500,000 to DMACC).
2. "Engineering Leadership Program," **3M Foundation**, 10/05-10/09, \$750,000, co-PI (with M. Kushner, L. Zachary, C. Wiedmier)
3. "VIE: Vertical Integration of Computer, Electrical, and Mechanical Engineering Education (Planning Grant)," **National Science Foundation** (Department Level Reform Program), Grant No. 0431924, 8/04-7/06, \$99,986, PI (co-PIs: Mina, Dickerson, Shelley, Flugrad; Senior Personnel: Hand, Luecke, Chandra).
4. "Collaborative Research: The Women Engineering Faculty Leadership Network," **National Science Foundation**, Grant No. 0245084, 7/03-7/06, \$218,961, co-PI (lead PI: J. Vance; other institutions: Louisiana State Univ., Univ. of Conn., Syracuse Univ., Univ. of Central Florida, Univ. of Utah; total: \$700,000).
5. "Electronic System-Level Design Education," **Rockwell Collins Univ. Grant Program**, \$15,000. 7/04-7/05.
6. "Acquisition of a Cluster for Experimental Parallel Computing Research in Scientific Computing and Computational Biology," **National Science Foundation** (CISE Research Resources), Grant No. 0130861, 9/01-9/04, \$166,518, co-PI (lead PI: S. Aluru; V. Brendel, S. Kothari, D. Rover).
7. "Wireless Multimedia for Virtual Environments," **National Science Foundation**, (Combined Research-Curriculum Development (CRCDD) Program), Grant No. EEC-0088071, 1/01-12/04, \$499,891, co-PI (lead PI: J. Dickerson; R. Weber, C. Cruz-Neira, D. Rover).
8. "VESL: Visions for Embedded Systems Laboratories," **National Science Foundation** (CRCDD Program), Grant No. EEC-9700732, 6/1/97-5/31/02, \$406,657, PI (MSU; M. Mutka, B.Cheng, C.-L. Wey).
9. "Integration of System Performance: Tools & Technologies in Research and Education," **National Science Foundation** (Faculty Early Career Development (CAREER) Program), Grant No. ACI-9624149/ACR-0234252, 6/1/96-5/31/03, \$220,000, PI.
10. "Instrumentation and Visualization for Design and Test of Real-Time Embedded Systems (PGRT)," **Defense**

# BIOGRAPHICAL SKETCH

Advanced Research Projects Agency (DOD), 7/16/95–7/15/98, \$496,344, PI (MSU; M. Mutka).

## Selected Publications

1. 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.
2. 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.
3. D. Helvick, R. Mercado, Z. Zhang, and D.T. Rover, “Reflections on Implementing and Teaching an Advanced Undergraduate Course in Embedded Systems,” *Proc. IEEE CS Int’l Conf. on Microelectronic Systems Education*, June 2007. Best Paper Award.
4. D. Rover, Academic Bookshelf editor, “Centered on Education Research,” *Journal of Engineering Education*, Jan. 2005; “Learner-Centered Assessment: Asking the Right Questions,” Jan. 2004.
5. D. Rover, J. Dickerson, R. Weber, and C. Cruz-Neira, “Using a Design Document to Support Interdisciplinary Learning,” *Proc. 2003 IEEE/ASEE Frontiers in Education Conference*, November 2003.
6. J. Dickerson, D. Rover, R. Weber, C. Cruz-Neira, E. Eekhoff, B. Lwakabamba, F. Chen, Z. Min, K. Lee, “CRCDD: Low-Power Wireless Communications for Virtual Environments – Course Integration,” *Proc. 2003 ASEE Annual Conference*, Nashville, June 2003. (CD-ROM)
7. 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)
8. 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)
9. D. T. Rover, “Perspectives on Learning in a Capstone Design Course,” *Proc. of 2000 IEEE/ASEE Frontiers in Education Conference*, Kansas City, November 2000. (CD-ROM)

## Synergistic Activities

**Mentoring of students:** Mentor for ISU design team competing as finalist in 2005 Microsoft Windows Embedded Student Challenge competition. Mentor of women/minority undergraduate students, and participant in programs to introduce engineering to pre-college groups. Co-PI on MSU GAANN award. Advisor for Eta Kappa Nu (MSU).

**Service:** IEEE Committee on Engineering Accreditation Activities (CEAA), Member-At-Large, July 2006-present. NAE Engineering Education Leadership Institute, resource person, 2006. Senior Associate Editor (for the Academic Bookshelf), *Journal of Engineering Education*, 2000-present. IEEE ABET/EAC Program Evaluator (Computer Engineering), 2002-present. ACM/IEEE SC (Supercomputing) Conference committees, 2006 Tutorials Program Co-Chair, 2003 Technical Papers Program Chair. Steering Committee for the Ninth Annual Colloquium on International Engineering Education, 2006 (University of Rhode Island). IEEE Senior Member.

**International activities:** Supervisor of students visiting MSU in the Kaiserslautern University (Germany) Exchange Program with the ECE Department (11 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).

**Honors and awards:** Iowa State University Professional Progress in Engineering Award, 1998; Michigan State University Teacher-Scholar Award, 1998; MSU Lilly Teaching Fellowship, 1996-97.

## Graduate Students Advised

Yung-Kang Chu (Ph.D. 1995), AT&T; Abdul Waheed (Ph.D. 1997), NASA Ames; David Pierce (Ph.D. 2001), Smiths Industries; Nayda Santiago (Ph.D. 2003), Univ. PR–Mayaguez; Kuk-Jin Lee (Ph.D. 2005), Microsoft; Robert Walstrom (M.S., 2005), Seagate Technology; Brian Smith (M.S., 2005), IBM; Ziyu Zhang (M.S., 2006), Garmin; Joseph Schneider (M.S. 2007), John Deere; Andrew Riha (M.S. 2008), Boeing; Ramon Mercado (Ph.D.), Jerry Cao (Ph.D.), Daniel Helvick (M.S.). Summary: 20 graduate student theses (M.S., Ph.D.), 30 Ph.D. advisory committees

## Graduate and Postdoctoral Advisors

Paul Basore (M.S.), Iowa State Univ.; Charles Wright (Ph.D.), ISU; John Gustafson (Postdoc), Ames Lab