

CURRICULUM VITAE

Rex E. Gantenbein
Professor

CURRENT JOB DESCRIPTION

15% Teaching 25% Research 10% Service 50% Administration

EDUCATION

Year	Institution	Degree
1972	Iowa State University, Ames, Iowa	B.S. with Honors and Distinction in Mathematics
1983	University of Iowa, Iowa City, Iowa	M.S. in Computer Science
1986	University of Iowa, Iowa City, Iowa	Ph.D. in Computer Science

PROFESSIONAL EXPERIENCE

ADMINISTRATIVE POSITIONS

(2003-present) Director, Center for Rural Health Research and Education, University of Wyoming
(2000-2003) Technical Director, Center for Rural Health Research and Education, University of Wyoming

ACADEMIC POSITIONS

(2004-present) Professor, Medical Education and Public Health, University of Wyoming
(2004-present) Adjunct Professor, Department of Computer Science, University of Wyoming
(1998-present) Affiliate Professor, Biomedical and Health Informatics, University of Washington
(1997-2004) Adjunct Professor, College of Health Sciences, University of Wyoming
(1996-2004) Professor, Department of Computer Science, University of Wyoming
(1991-96) Associate Professor, Department of Computer Science, University of Wyoming
(1985-91) Assistant Professor, Department of Computer Science, University of Wyoming

SABBATICALS

(1994-95) Visiting Scientist, Universities Space Research Association, Division of Space and Life Sciences, NASA Johnson Space Center, Houston, Texas

OTHER POSITIONS

(1981-85) Half-time graduate assistant, State Health Registry of Iowa, Department of Preventive Medicine, University of Iowa, Iowa City, Iowa.
(1980-81) Test specialist, American College Testing Program, Test Development Division, Iowa City, Iowa.
(1978-80) Industrial Engineer, Sundstrand Hydro-Transmission, Ames, Iowa.

AWARDS AND HONORS

(2001) Speakers Bureau, Wyoming Council for the Humanities
(2000) University of Wyoming, College of Arts and Sciences, Class of 2000 Top Ten Teacher
(2000) Speakers Bureau, Wyoming Council for the Humanities
(1999) University of Wyoming, College of Arts and Sciences, Class of 1999 Top Teacher
(1999) Who's Who in the West, 27th edition
(1998) University of Wyoming, College of Arts and Sciences, Class of 1998 Top Ten Teacher
(1998) University of Wyoming Center for Academic Advising, Excellence in Advising Award
(1996-97) Speakers Bureau, Wyoming Council for the Humanities
(1997) Who's Who in Media and Communications, 1st edition
(1996) Who's Who in the West, 25th edition
(1996) Who's Who in Science and Engineering, 3rd edition
(1995) Membership in Sigma Xi, The Scientific Research Society

- (1994) Summer Faculty Research Fellowship, National Aeronautics and Space Administration/ American Society of Engineering Education
- (1994) Outstanding Referee Award, IEEE Computer Society Press
- (1993) Extraordinary Merit Teaching Award, University of Wyoming
- (1993) Extraordinary Merit Advising Award, University of Wyoming
- (1993) Summer Faculty Research Fellowship, National Aeronautics and Space Administration/ American Society of Engineering Education
- (1992) Summer Faculty Research Program Award, Air Force Office of Scientific Research
- (1991) Summer Faculty Research Program Award, Air Force Office of Scientific Research
- (1991) John P. Ellbogen Meritorious Classroom Teaching Award, University of Wyoming
- (1991) Extraordinary Merit Teaching Award, University of Wyoming
- (1988) Nominee, National Science Foundation, Presidential Young Investigator Program
- (1987) Nominee, Office of Naval Research, Young Investigator Program
- (1986) Nominee, National Science Foundation, Presidential Young Investigator Program

RESEARCH AND SCHOLARSHIP

GRANTS AND FUNDING

Funded Proposals as PI/co-PI

- (2008-11) Wyoming Network for Telehealth, Rural Health Network Development Grant, Office of Rural Health Policy, Health Resources and Services Agency, \$540,000
- (2008-11) Wyoming Network for Telehealth, Federal Communications Commission Rural Health Care Pilot Program, \$778,765
- (2008-09) Wyoming HISPC Provider Education Toolkit, RTI International, \$177,921
- (2008-09) Wyoming Network for Telehealth Matching Funds, Office of Rural Health, Wyoming Department of Health, \$15,000
- (2007-09) Western Regional Biomedical Collaboratory, Integrated Advanced Information Management Systems Planning Grant, National Library of Medicine, \$299,990
- (2007-08) Southeast Wyoming Telehealth Network, Rural Health Network Development Planning Grant, Office of Rural Health Policy, Health Resources and Services Agency, \$84,990
- (2007) Wyoming Health Information Privacy and Security Resource, RTI International, \$149,956.
- (2006-07) Wyoming Health Information Security and Privacy Collaboration, RTI International/National Governors Association, \$317,055
- (2005-06) Wyoming Go Local, National Library of Medicine, \$24,970
- (2004) Maternal and child health needs assessment, Wyoming Department of Health, \$13,500
- (2003) State Planning Grant supplement, Department of Health and Human Services Health Resources and Services Administration, \$185,000
- (2002-03) State Planning Grant, Department of Health and Human Services Health Resources and Services Administration, \$1,023,472 to Wyoming Department of Health (subcontract \$793,872 to UW)
- (2002-03) Wyoming pregnancy risk assessment monitoring system, Wyoming Department of Health, \$6,000
- (2001-04) Creation of an on-line portal for rural health research and education, National Library of Medicine, \$432,622
- (2001-04) Development of statistical analysis component (co-PI, Dr. Robert O. Kelley, UW College of Health Sciences), Wyoming Department of Health, \$175,000
- (2001-04) Development of a decision support system and databases for agrochemical management (co-PIs, Dr. Renduo Zhang, Jeffrey D. Hamerlinck, Dr. Larry C. Munn, and Dr. George Vance), Wyoming Agricultural Experiment Station Competitive Grant Program, \$120,660
- (2001-03) Development of Wyoming Health Workforce Registry, Wyoming Health Resources Network, \$36,410
- (2001-02) "To Your Health: A Reading and Discussion Series on Values, Health, and Community" (co-PI, Emily Quarterman, Wyoming Health Resources Network), National Endowment for the Humanities Model Humanities Project implementation grant, \$10,000
- (2001) Wyoming Breast Health Web (co-PI, Kristi Wallin, UW College of Health Sciences), Susan G. Komen Breast Cancer Foundation, Wyoming Affiliate Office, \$10,500

- (2000) System and network administration instruction laboratory, University of Wyoming, College of Arts and Sciences, \$18,696
- (1999-2001) Secure Internet access to life sciences research data, NASA Johnson Space Center, Life Sciences Research Laboratories, \$70,850
- (1999) A security model for collaborative science environments, Wyoming Space Grant Consortium faculty fellowship, \$7,052
- (1998-2001) Distributing scientific data from computer-controlled acquisition systems, NASA Graduate Student Researchers Program, NASA Johnson Space center, \$66,000
- (1998) An information-based infrastructure to support primary prevention of cancer in Wyoming, Whedon Cancer Foundation, \$5,000
- (1997) Internet-based instruction in telemedical technology, Wyoming Space Grant Consortium faculty fellowship, \$7,618
- (1997) Investigating learning environments in the classroom (co-PI, Dr. Karl Branting), University of Wyoming, College of Arts and Sciences Faculty Basic Research Grant, \$1,000
- (1996) Course development: Ethics for the Computer Age, Center for the Advancement of Ethics, University of Wyoming, \$1,000
- (1995-96) Real-time data acquisition and stimulus control, Krug Life Sciences Inc., NASA Johnson Space Center, \$31,609
- (1995) Client-server computing architectures for biomedical data acquisition and stimulus control, University of Wyoming, Planetary and Space Science Center faculty fellowship, \$9,000
- (1995) Analysis of voter and interface protocols, Avionics Systems Division, NASA Johnson Space Center, \$10,000
- (1994-95) Computer-aided software engineering tools for reliable space-based software systems, University of Wyoming, Planetary and Space Science Center, \$11,677
- (1994) Program development/travel to First European Dependable Computing Conference in Berlin, University of Wyoming International Program Development, \$1,000
- (1994) Detection of signal loss in computer-based communications systems, University of Wyoming, Planetary and Space Science Center Undergraduate Research Seed Money Program, \$3,000
- (1993-94) Dependability of computer-based tracking and communication systems, University of Wyoming, Planetary and Space Science Center, \$11,674
- (1993-94) Fault detection, isolation, and recovery in communications systems, Tracking and Communications Division, NASA Johnson Space Center, \$29,730
- (1992-93) Graduate research methods and writing course development, University of Wyoming, Center for Teaching Excellence Multidisciplinary Curriculum Innovation Project, \$9,645
- (1992-93) Testbeds for survivable space-borne computing, University of Wyoming, Planetary and Space Science Center, \$8,000
- (1991-92) Survivability and adaptivity in distributed C3I systems, U.S. Air Force Office of Scientific Research, Research Initiation Program, \$46,643
- (1990) Structured design of distributed computing systems, University of Wyoming, College of Arts and Sciences Faculty Basic Research Grant, \$450
- (1989-92) Studies of testing strategies (co-PI, Dr. John H. Rowland), National Science Foundation, \$103,716
- (1988) Modifiable, continuously available distributed systems for real-time applications, Motorola Computer X, Inc., \$62,445
- (1987) Applications for dynamic binding in fault-tolerant computing, University of Wyoming, Faculty Grant-in-Aid Program, \$1,400
- (1985) Study of dynamically modifiable software systems, University of Wyoming, College of Arts and Sciences Faculty Basic Research Grant, \$2,700
- (1985) Applications of dynamic binding in an operating system environment, University of Wyoming, Summer Session Faculty Development Award, \$2,500
- (1985) Development of a real-time, fault-tolerant software system, Intel Corporation, \$8,500

Funded Proposals, other PIs

- (2004-09) UW Northern Rockies Regional INBRE (PI, Dr. Robert O. Kelley, UW College of Health Sciences), National Institutes of Health, \$13,502,946

- (2004-07) Wyoming Network for Telehealth (PI, Fran Cadez, Wyoming Department of Health), Health Resources and Services Administration, \$1,515,605
- (2003-06) BRIN Western Regional Infonet (PIs, Dr. Gwen Jacobs, Montana State University and Ron Johnson, University of Washington), National Institutes of Health/National Center for Research Resources, \$9,225,000
- (2003-06) Intermountain Consortium for Building Research Infrastructure and Capacity (PI, Denise Love, National Association of Health Data Organizations), Agency for Healthcare Research and Quality, \$100,000
- (2001-04) UW Northern Rockies Biomedical Research Infrastructure Network (PI, Dr. Robert O. Kelley, UW College of Health Sciences), National Institutes of Health, \$5,998,602
- (2001) Evaluation of outcomes from integrated primary health care for low-income uninsured persons (PI, Dr. Linda Gore Martin, UW School of Pharmacy; Co-PIs: Dr. Mary E. Burman, UW School of Nursing, Sarah Strauss, UW Department of Anthropology, Dr. Michael J. Doherty, UW College of Business), University of Wyoming Faculty Grant-in-Aid Program, \$7,500
- (1997) CISE Instrumentation Program (PI, Dr. Matt Haines), National Science Foundation, \$83,633

PUBLICATIONS

Refereed Journal Articles

- C.Y. Shim, **R.E. Gantenbein**, and S.Y. Shin, "Developing a Probabilistic Security Measure Using a Software Reliability Model," *Information* 4,4 (October 2001), 409-418.
- M. Zhang, **R.E. Gantenbein**, S. Shin, and C.C. Hung, "Artificial Neural Network Techniques for Information Management Systems," *ACIS Int. J. Computer and Information Science* 2,2 (June 2001), 49-58.
- J.-K. Hong, **R.E. Gantenbein**, and S.Y. Shin, "Computer-Aided Design Validation of Safety-Critical Software Systems," *ACIS Int. J. Computer and Information Science* 1,1 (Winter 2000), 20-35.
- R.E. Gantenbein**, J.-K. Hong, and S.Y. Shin, "Validating Embedded System Designs Through Simulation," *Int. J. Computers and Their Applications* 5,3 (September 1998), 138-149.
- R. Gantenbein**, S. Roach, and M. Zimmerman, "Software Prototyping as a Tool for Evaluating Real-Time Fault Management Algorithms: A Case Study," *J. Computer Science and Information Management* 1,1 (1998), 1-10.
- R.E. Gantenbein** and S.Y. Shin, "A Practical Method for Design Verification of Critical Software Systems," *CrossTalk: The Journal of Defense Software Engineering* 8,8 (August 1995), 23-26.
- R.E. Gantenbein**, T.F. Lawrence, and S.Y. Shin, "Adaptive Fault Management in Survivable Distributed Systems," *Int. J. Reliability, Quality, and Safety Engineering* 1,3 (September 1994), 391-412.
- R.E. Gantenbein** and F.G.F. Davis, "Responding to Catastrophic Errors: A Design Technique for Fault-Tolerant Software," *J. Systems and Software* 17,3 (March 1992), 243-251.
- R.E. Gantenbein**, "Dynamic Binding in Strongly Typed Programming Languages," *J. Systems and Software* 14,1 (January 1991), 31-38.
- R.E. Gantenbein**, "The Design and Implementation of a Dynamic Binding Feature for a High-Level Language," *J. Systems and Software* 8,3 (September 1988), 259-273.
- F.G.F. Davis and **R.E. Gantenbein**, "Recovering from a Computer Virus Attack," *J. Systems and Software* 7,4 (December 1987), 253-258.

Non-Refereed Journal Articles

- R.E. Gantenbein**, "The Cowboy State Corrals Providers into a Telehealth Network," *Behavioral Healthcare* 28,4 (April 2008).
- R.E. Gantenbein** and B.J. Robinson, "Decoding CODECs," *J. Telemedicine and Telecare* 14 (2008), 59-61.
- K. Zimmerman, J. Lockwood, **R. Gantenbein**, and S. Schell, "Mapping Grasshopper Population Dynamics," *ArcUser: The Magazine for ESRI Software Users* 4,1 (January-March 2001), 26-28.
- R.E. Gantenbein**, "A Bibliography of Dependable Distributed Computing," *Operating Systems Review* 26,2 (April 1992), 60-81.
- R.E. Gantenbein** and G.S. Alijani, "Nearly Continuous Operational Task Scheduling Scheme in Hard Real-Time Distributed Systems," *Real-Time Systems Newsletter* 6,4 (Fall 1990), 17-22.
- R.E. Gantenbein**, "A Dynamically Modifiable Real-Time Control System," *The Human Interface* 5,1 (January 1988).

R.E. Gantenbein, "Support for Dynamic Binding in Strongly Typed Languages," *ACM Sigplan Notices* 22,6 (June 1987), 69-75.

Refereed Conference Proceedings/Transactions

- R.E. Gantenbein** and B.J. Robinson, "An Evaluation of Providing Mental Health Services through Telemedicine in Wyoming," American Telemedicine Association Annual Symposium (April 2008).
- A.W. Wallace and **R.E. Gantenbein**, "A Lightweight Approach to Interoperable Health Information Exchange," *Proc. 22nd Int. Conf. on Computers and Their Applications* (March 2007).
- J.-Y. Kim and **R.E. Gantenbein**, "Automated Anomaly Detection Using Time-Variant Normal Profiling," *Proc. 2006 World Automation Conf./Int. Symp. On Soft Computing for Industry* (July 2006).
- S.A. Cumbie, J.E. Earls, and **R.E. Gantenbein**, "Technical Innovations in Rural Health Care," *Proc. 21st Int. Conf. on Computers and Their Applications* (March 2006), 242-245.
- G.D. Hampe, B.D. Grandjean, and **R.E. Gantenbein**, "A Descriptive and Prescriptive Model of the Uninsured," *Proc. Society for the Study of Social Problems 54th Annual Meeting* (August 2004), San Francisco, California.
- J. Thomson and **R. Gantenbein**, "An Evolutionary Pedagogical System Implementing Multiple-Level Morphological Analysis," *Proc. World Automation Congress, Vol. 4*, (June 2004), paper #ISSCI009.
- R. Gantenbein** and C.O. Sung, "Task Scheduling in Distributed Data Mining for Medical Applications," *Proc. 16th Int. Conference on Computer Applications in Industry and Engineering* (November 2003), 250-253.
- J.J. Thomson, **R.E. Gantenbein**, and T. Nielson, "Feature Mining through Distance Minimization Learning," *Proc. 12th Int. Conference on Intelligent and Adaptive Systems and Software Engineering* (July 2003), 110-113.
- R.E. Gantenbein**, "Using Geographic Information Systems for Health Care Planning and Decision Making," *Proc. 4th Int. Workshop on Biosignal Interpretation* (June 2002), 347-350.
- R.E. Gantenbein**, "Designing an Internet-Based Collaboratory for Biomedical Research," *Biomedical Sciences Instrumentation* 39 (April 2002), 399-404.
- M. Burgin and **R.E. Gantenbein**, "Knowledge Discovery, Information Retrieval, and Data Mining," *Proc. 17th Int. Conf. On Computers and Their Applications* (April 2002), 55-58.
- R.E. Gantenbein** and C.O. Sung, "Affordable Knowledge Discovery Through Distributed Data Mining," *Proc. 17th Int. Conf. On Computers and Their Applications* (April 2002), 180-183.
- R.E. Gantenbein**, T.L. James, and J.Y. Kim, "Providing Secure Internet Access to Health Care Information," *Proc. 17th Int. Conf. On Computers and Their Applications* (April 2002), 327-330.
- S.Y. Shin, J.Y. Kim, **R.E. Gantenbein**, and C.M. Lundquist, "A Working Model for Secure Data Transfer Using a Data Mart," *Proc. 14th Int. Conf. On Computer Applications in Industry and Engineering* (November 2001), 66-69.
- R.E. Gantenbein** and C.O. Sung, "Integrating Knowledge Discovery and Spatial Data Visualization for Health Care Research," *Proc. 16th Int. Conf. On Computers and Their Applications* (March 2001), 294-297.
- Y.S. Shim and **R.E. Gantenbein**, "A Methodology for Developing a Probabilistic Security Measure using a Software Reliability Model," *Proc. 16th Int. Conf. On Computers and Their Applications* (March 2001), 517-520.
- S. Wang and **R.E. Gantenbein**, "An Enterprise e-Tax Solution," *Proc. 16th Int. Conf. On Computers and Their Applications* (March 2001), 417-420.
- R.E. Gantenbein** et al., "A Multi-level Security Model for Sharing Sensitive Information via the Internet," *Proc. Software Technology Conference 2000* (May 2000).
- R.E. Gantenbein**, S.Y. Shin, and R.Y. Lee, "Design Issues for Developing Secure Object-Oriented and Distributed Systems," *Proc. 1st Int. Conf. On Computer and Information Science* (April 2000).
- R.E. Gantenbein** et al. "Analyzing Security in Distributed Collaborative Systems," *Proc. 15th Int. Conf. on Computers and Their Applications* (March 2000), 72-75.
- M. Zhang and **R.E. Gantenbein**, "Artificial Neural Network Techniques for Information Management Systems," *Proc. 14th Int. Conf. on Computers and Their Applications* (April 1999), 5-9.
- R.E. Gantenbein** and H. Gu, "A Web-Based Multiuser Interface to Medical Information Systems," *Proc. 14th Int. Conf. on Computers and Their Applications* (April 1999), 14-17.
- S. Shin, C. Shim, and **R.E. Gantenbein**, "The Optimal Data Interval for Message Passing to Update Checkpointed States in Fault-Tolerant Distributed Systems," *Proc. 13th Int. Conf. on Computers and Their Applications* (March 1998), 376-379.

- R.E. Gantenbein**, T.L. James, J.R. Cowles, and W.H. Paloski, "TELELAB: A Virtual Laboratory for Scientific Data Distribution on the Internet," *Proc. 13th Int. Conf. On Computers and Their Applications* (March 1998), 89-92.
- S.M. Aluisio and **R.E. Gantenbein**, "Educational Tools for Writing Scientific Papers," *VIII Simposio Brasileiro de Informatica na Educacao*, Sao Jose dos Campos, SP, Brazil, (November 1997), 239-253.
- S.M. Aluisio and **R.E. Gantenbein**, "Towards the Application of Systemic Functional Linguistics in Educational Tools for Writing Scientific Papers," *International Systemic-Functional Congress* (June 1997).
- R.E. Gantenbein**, "Secure Remote Access to Physiological Data," (abstract), *Proc. 12th Man in Space Symposium* (June 1997), 150-151.
- S.M. Aluisio and **R.E. Gantenbein**, "Towards the Application of Systemic Functional Linguistics in Writing Tools," *Proc. 12th Int. Conf. on Computers and Their Applications* (March 1997), 181-185.
- Frank G.F. Davis and **R.E. Gantenbein**, "A Safety-Critical System Model Utilizing Adaptive Fault Tolerance and Security," *Proc. 9th Int. Conf. on Computer Applications in Industry and Engineering* (December 1996), 138-141.
- R.E. Gantenbein** and Z. Yu, "A Distributed Fault-Tolerance Mechanism in UNIX," *Proc. 9th Int. Conf. on Computer Applications in Industry and Engineering* (December 1996), 146-149.
- R.E. Gantenbein**, "Real-Time Biomedical Data Acquisition for Astronaut Testing," *Proc. 1996 Wyoming Space Grant Symposium* (October 1996), 47-48.
- J.-K. Hong, **R.E. Gantenbein**, and S.Y. Shin, "Computer-Aided Cost-Effective Validation of Safety-Critical Requirements," *Proc. 14th Annual Conf. of Int. Assoc. of Management* (August 1996), 121-127.
- R.E. Gantenbein**, "An Object-Oriented Model for Secure, Distributed Biomedical Data Acquisition and Stimulus Control Systems," *Proc. Eleventh Int. Conf. on Computers and Their Applications* (March 1996), 170-173.
- R.E. Gantenbein**, D.R. Avresky, and S.Y. Shin, "Formal Testing of Fault Tolerance in a Space-Based Communications System," *Proc. Eighth Int. Conf. on Computer Applications in Industry and Engineering* (November 1995), 99-102.
- J.-K. Hong and **R.E. Gantenbein**, "A Cost-Effective Formal Validation Method for Embedded Systems," *Proc. 13th Ann. Conf. of Assoc. of Management* (August 1995), 153-158.
- R.E. Gantenbein**, S. Roach, and M. Zimmerman, "Validating Fault Management Algorithms Through Prototyping," *Proc. 13th Ann. Conf. of Assoc. of Management* (August 1995), 191-196.
- R.E. Gantenbein** and W.H. Paloski, "Object-Oriented Software for Laboratory Data Acquisition and Stimulus Control," *Proc. 1995 AIAA/NASA Life Sciences and Space Medicine Conference* (April 1995), 89-90.
- R.E. Gantenbein** and W.H. Paloski, "Object-Oriented Software for Real-Time Biomedical Data Acquisition and Stimulus Control," *Proc. Int. Conf. on Computer Applications in Engineering and Medicine* (March 1995), 49-53.
- R.E. Gantenbein** and S.Y. Shin, "Formal Verification of Embedded Systems Using a Computer-Aided Design Tool," *Proc. Second ISSAT Int. Conf. on Reliability and Quality in Design* (March 1995), 21-25.
- R.E. Gantenbein**, S. Roach, and M. Zimmerman, "Software Prototyping as a Tool for Evaluating Real-Time Fault Management Algorithms: A Case Study," *Proc. 12th Ann. Conf. of Assoc. of Management* (August 1994), 92-97.
- R.E. Gantenbein** and S.Y. Shin, "Using Multiple Fault-Tolerance Strategies in Survivable Systems," *Proc. ISSAT Int. Conf. on Reliability and Quality in Design* (March 1994), 340-344.
- S.Y. Shin, **R.E. Gantenbein**, and A. Salehnia, "Using CASE Tools to Design Highly Reliable Software Systems," *Proc. ISSAT Int. Conf. on Reliability and Quality in Design* (March 1994), 345-349.
- R.E. Gantenbein**, S.Y. Shin, and J.D. Gradecki, "A Software Development Environment for Fault-Tolerant Distributed Systems," *Proc. 1993 IASTED Int. Conf. on Reliability, Quality Control, and Risk Assessment* (October 1993), 109-112.
- S.Y. Shin, **R.E. Gantenbein**, and V. Gopalakrishnan, "Adaptive Response to Failures in Distributed Systems," *Proc. 1993 IASTED Int. Conf. on Reliability, Quality Control, and Risk Assessment* (October 1993), 113-116.
- S.Y. Shin, A.R. Salehnia, K. Ko, **R.E. Gantenbein**, and H. Pournaghshband, "CASE Tools for Reliable Software-Fault Tolerant Systems," *Proc. 11th Ann. Conf. of Assoc. of Management* (August 1993), 16-20.
- R.E. Gantenbein** and S.Y. Shin, "Adaptive Fault Management for Dependability in Distributed Systems," *Proc. Int. Conf. on Computer Applications in Design, Simulation, and Analysis* (March 1993), 29-32.
- S.Y. Shin, **R.E. Gantenbein**, A.R. Salehnia, and B. Cong, "Evaluation of Software Fault Tolerance Approaches to Distributed Systems," *Proc. IASTED Int. Conf. on Reliability, Quality Control, and Risk Assessment* (November 1992), 70-73.

- S.Y. Shin, B. Cong, A. Salehnia, **R.E. Gantenbein**, and K. Ko, "Implementation of a Natural Language Query Generator Using DSGs," *Proc. Sixth Int. Conf. on Symbolic and Logical Computing (ICEBOL6)* (October 1992), 217-227.
- R.E. Gantenbein** and S.Y. Shin, "Using Modeling to Design Highly Reliable Software Systems," *Proc. 5th ISMM/IASTED Int. Conf. on Parallel and Distributed Computing and Systems* (October 1992), 199-203.
- S.Y. Shin, A.R. Salehnia, B. Cong, and **R.E. Gantenbein**, "Implementation Issues of Software Fault-Tolerant Systems with CASE Tools," *Proc. Information Systems Education Conf. (ISECON '92)* (October 1992).
- R.E. Gantenbein**, Z. Wang, and S.Y. Shin, "Mechanisms for Supporting Distributed Software Fault Tolerance," *Proc. First Int. Conf. on Computer Communications and Networks (IC3N)* (June 1992), 270-274.
- R.E. Gantenbein**, S.Y. Shin, and Z. Wang, "Software Fault Tolerance in a Distributed Real-Time Control System," *Proc. 4th ISMM/IASTED Int. Conf. on Parallel and Distributed Computing and Systems* (October 1991), 61-64.
- R.E. Gantenbein**, S.Y. Shin, and J.R. Cowles, "Evaluation of Combined Approaches to Distributed Software-Based Fault Tolerance," *Proc. 1991 Pacific Rim Int. Symp. on Fault-Tolerant Systems* (September 1991), 70-75.
- R.E. Gantenbein**, "Programming as Process: A 'Novel' Approach to Teaching Programming," *Papers of the 20th SIGCSE Tech. Symp. on Computer Science Education: SIGCSE Bulletin* 21,1 (February 1989), 22-26.
- R.E. Gantenbein** and D.W. Jones, "Dynamic Binding of Separately Compiled Objects Under Program Control," *Proc. 1986 ACM Annual Computer Science Conf.* (February 1986), 287-292.

Non-Refereed Proceedings/Transactions

- R.E. Gantenbein**, "Software-Implemented Fault Tolerance in Communications Systems," *Proc. Dual-Use Space Technology Transfer Conference* (February 1994).

Other (e.g. lab texts, book reviews, technical reports, in-house reports)

- R.E. Gantenbein**, "Evaluating Fault Detection, Isolation, and Recovery Techniques in Space-Based Communications Systems," Final Report, NASA Grant NAG9-722 (September 1994).
- R.E. Gantenbein**, "Validation of Space/Ground Antenna Control Algorithms Using a Computer-Aided Design Tool," Final Report, 1994 ASEE/NASA Summer Faculty Fellowship Program (August 1994).
- R.E. Gantenbein**, "Evaluating Fault Detection, Isolation, and Recovery in the Space Station Communications Subsystem," Midyear Report, NASA Grant NAG9-722 (February 1994).
- R.E. Gantenbein**, "Failure Detection, Isolation, and Recovery in the Assembly/Contingency Subsystem," Final Report, 1993 ASEE/NASA Summer Faculty Fellowship Program (August 1993).
- R.E. Gantenbein**, "A Framework for Adaptive Fault Management in Survivable C3I Systems," Final Report, 1992 AFOSR Research Initiation Program (December 1992).
- R.E. Gantenbein**, "Issues in Adaptive Fault Management for Survivable C3I Systems," Final Report, 1992 AFOSR Summer Faculty Research Program (August 1992).
- R.E. Gantenbein**, "A Taxonomy for Adaptive Fault Management in Survivable C3 Systems," Final Report, 1991 AFOSR Summer Faculty Research Program (August 1991).
- R.E. Gantenbein** and T.A. Bailey, *UW Computer Science 1010 Laboratory Manual, Version 2.0* (August 1991).

PRESENTATIONS, INVITED LECTURES, SEMINARS, WORKSHOPS

- (2008) "Telehealth in Wyoming," Wyoming Health Information Organization Health IT Summit, Casper WY.
- (2008) "A Lightweight Approach to Federated Health Information Exchange," Wyoming Health Information Organization meeting, Cheyenne WY.
- (2007) "Health Information Exchange: Why Centralized Data Banks Won't Work," Wyoming Health Information Organization meeting, Cheyenne WY.
- (2007) "Why Health Information Exchanges Need a Federated Implementation," CMS Regional Health IT Summit, Denver CO.
- (2007) "Promoting Private and Secure HIE Through an Online Information Portal," National Health Information Security and Privacy Collaboration meeting, Washington DC.
- (2007) "Western Regional Biomedical Collaboratory," poster presented at the American Medical Informatics Association Biomedical and Health Informatics meeting, Chicago IL.
- (2007) "Southeast Wyoming Telehealth Network," poster presented at the Office of Rural Health Policy All Programs meeting, Washington DC.

- (2007) "Wyoming Health Information Security and Privacy Collaboration," American Health Information Community Meeting, Mountain View, California.
- (2007) "Establishing the Wyoming HIE Policy Center," Privacy and Security Solutions for Interoperable Health Information Exchange National Conference, Bethesda, Maryland.
- (2006) "Using Geographic Information Systems in Public Health Research," Wyoming Geographic Information Systems Center, University of Wyoming, Laramie, Wyoming.
- (2006) "Advances in Health Informatics and Telehealth in Wyoming," Division of Biomedical and Health Informatics, University of Washington, Seattle, Washington.
- (2005) "Using Data to Inform Policy Development," Wyoming Rural Health Conference/Minority Health Committee Data Forum, Cheyenne, Wyoming.
- (2005) "Wyoming Network for Telehealth," College of Health Sciences, University of Wyoming, Laramie, Wyoming.
- (2005) "Identifying Maternal/Child and Women's Health Care Concerns in Rural Wyoming," poster presented at the 28th Annual Conference of the National Rural Health Association, New Orleans, Louisiana. Cumbie, S., and Gantenbein, R.
- (2005) "Improving Rural Health Care through Telehealth," panel presentation, 5th Annual Wyoming Rural Health Conference, Casper, Wyoming. Cadez, F., Gantenbein, R., and Stamm, B.
- (2004) "Identifying Traumatic Stress in Clinical and Community Service Models," poster presented at the 20th Annual Meeting of the International Society for Traumatic Stress Studies, New Orleans, LA. Stamm, B., Piland, N., Massad, P., Larsen, D., Kirkwood, A., Jorgensen, M., Gray, M., Paul, L., Bieber, S., & Gantenbein, R.
- (2004) "Establishing a Rural Telehealth Project: the Wyoming Network for Telehealth," 26th Annual Int. Conf. of the IEEE Engineering in Medicine and Biology Society, San Francisco, California.
- (2004) "An Index for Measuring Public Health in a Rural State," poster presented at 27th Annual Conference of the National Rural Health Association, San Diego, California. Gantenbein, R., Poliudov, S., and Porter, J.
- (2004) "Using Data and Geographic Information Systems to Understand Public Health Issues," Wyoming Public Health Leadership Institute, Laramie, Wyoming.
- (2003) "Telehealth Technology: Wyoming's Efforts to Facilitate Research and Service in a Rural State," Wyoming Alzheimer's Association Meeting, Cheyenne, Wyoming.
- (2003) "Wyoming State Planning Grant Project," Laramie Rotary Club, Laramie, Wyoming.
- (2003) "Using Data and Geographic Information Systems to Understand Public Health Issues," Wyoming Public Health Leadership Institute, Laramie, Wyoming.
- (2003) "The Wyoming State Planning Grant Project," Third Annual Wyoming Rural Health Conference, Cheyenne, Wyoming (co-presenter: Linda O'Grady, Wyoming Department of Health).
- (2003) "Using Research to Assist Strategic Planning: The Wyoming State Planning Grant Project," Annual Wyoming Health Education Conference, Cheyenne, Wyoming (co-presenter: Linda O'Grady, Wyoming Department of Health).
- (2002) "GIS and Public Health," Wyoming Public Health Leadership Institute, Laramie, Wyoming.
- (2002) "Analyzing Rural Health Care Availability Using Geographic Information Systems," Second Annual Wyoming Rural Health Conference, Casper, Wyoming (co-presenters: H.J. Baldwin, University of Wyoming School of Pharmacy, and Sharla L. Allen, Wyoming Health Resources Network).
- (2001) "eHealth: Using Information and Communications Technology to Improve Health Care," keynote address, 3rd International Conference on Information Reuse and Integration (IRI-2001), Las Vegas, Nevada.
- (2001) "Authorized Access Only: Providing Secure Internet Access to Patient Information Using Windows 2000 Server," Windows on HealthCare 2001, San Diego, California.
- (2001) "Using Technology for Public Health: The UW Center for Rural Health Research and Education," Wyoming Public Health Association/Environmental Health Association/Food Safety Coalition Annual Education Conference, Casper, Wyoming
- (2001) "Using GIS for Public Health Issues," Wyoming Rural Health Conference, Laramie, Wyoming.
- (2001) "Telehealth Technology; Wyoming's Efforts to Facilitate Research and Service in a Rural State," American Stroke Association Conference, Ft. Lauderdale, Florida.
- (2000) "Recent Developments in Medical Informatics in Wyoming," University of Wyoming, Department of Computer Science, Laramie, Wyoming.
- (1998) "Remote Monitoring and Distribution of Scientific Data on the Internet," seminar, Department of Computer Science, Inner Mongolia University, Hohhot, Inner Mongolia, People's Republic of

- (1998) Invited participant, "Developing Dynamic Controlling Information Systems using Sixth-Generation Computing," planning meeting, Scientific and Technology Commission of Inner Mongolia, People's Republic of China.
- (1998) "TELELAB: A Virtual Laboratory for Remote Monitoring and Distribution of Medical Data on the Internet," Selected Topics in Health Informatics Lecture, University of Washington School of Medicine/School of Public Health and Community Medicine.
- (1998) "The Ethics of Information: Protecting Privacy in the Computer Age," Casper College Humanities Festival, Casper, Wyoming.
- (1997) "Privacy in the Information Age," keynote address, 10th International Conference on Computer Applications in Industry and Engineering, San Antonio.
- (1997) "Ethics and Computing," College of Arts & Sciences Morning of Courses, Laramie, Wyoming.
- (1997) "Electronic Medical Conferencing," American College of Physicians, Wyoming Chapter Scientific Meeting, Laramie, Wyoming.
- (1997) "Free Speech and Privacy in the Information Age," Sweetwater County Library System Spring meeting, Green River, Wyoming.
- (1997) "The Ethics of Information: Protecting Privacy in the Computer Age," Laramie Lyceum, Laramie, Wyoming.
- (1997) "Using Technology to Teach Technology: Distance Education in Computer Science," Wyoming Space Grant Consortium Virtual University Workshop, Laramie, Wyoming.
- (1997) Invited participant, Conference on Technology and its Impact on Privacy, Civic Discourse, and Higher Education, American Bar Association Commission on College and University Legal Studies, Charleston, South Carolina.
- (1997) "Teaching Ethics in the Computer Science Curriculum," Wyoming Mathematics, Statistics, and Computer Science Articulation Conference, Sheridan, Wyoming.
- (1996) "Shouting 'Fire' in Cyberspace: Free Speech and the Internet," Sheridan College, S.Y. Thickman Memorial Ethics Lecture, Sheridan, Wyoming.
- (1996) "An Object-Oriented Model for Security in Distributed Data Acquisition Systems," University of Wyoming, Department of Computer Science.
- (1995) "Building Object-Oriented Laboratory Data Acquisition Systems," Space Biomedical Research Institute, NASA Johnson Space Center, Houston, Texas.
- (1995) "A Graphical Object-Based Programming Environment for Biomedical Laboratory Software," University of Wyoming, Department of Computer Science.
- (1994) "Computers DO Make Mistakes: The Limits of Computer Reliability," Galveston Bay Section, IEEE, Houston, Texas.
- (1994) "Fault Detection and Recovery in the Space Station Communications Subsystem," Denver-Pikes Peak Joint Chapter, IEEE Reliability Society, Denver, Colorado.
- (1993) "A Software Development Environment for Fault-Tolerant Distributed Systems," University of Wyoming, Planetary and Space Science Center.
- (1993) "Fault Detection and Recovery in the Space Station Communications Subsystem," University of Wyoming, Department of Computer Science.
- (1992) "Issues in Adaptive Fault Management for Survivable C3I Systems," Syracuse University, Electrical and Computer Engineering, Syracuse, New York.
- (1992) "Adaptive Fault Management for Survivable C3I Systems," University of Wyoming, Department of Computer Science.
- (1992) "Adaptivity and Survivability in Distributed Systems," South Dakota State University, Department of Computer Science, Brookings, South Dakota.
- (1992) "Using the Writing Center to Assist ESL Research Writers," (with Judith K. Powers), Rocky Mountain Regional TESOL Convention, Denver, Colorado.
- (1991) "Adaptive Fault Management in Survivable Distributed Systems," University of Wyoming, Department of Computer Science.
- (1990) "Software Reliability in a Hard Real-Time Distributed Environment," Colorado State University, Department of Computer Science, Fort Collins, Colorado.
- (1990) "Computers Do Make Mistakes: The Limits of Computer Reliability," Wyoming Shorthand Reporters Association, annual convention, Laramie, Wyoming.
- (1990) "Dependable Distributed Real-Time Computing Systems," University of Wyoming, Department of Electrical Engineering.

- (1990) "Computers Do Make Mistakes: The Limits of Software Dependability," University of Wyoming, Department of Petroleum Engineering.
- (1989) "A Probabilistic Evaluation of Software Fault Tolerance in Real-Time Systems," University of Wyoming, Department of Computer Science.
- (1989) "Software Fault Tolerance in Distributed Real-Time Systems," University of Wyoming, Computer Science Department.
- (1989) "Computer Viruses: Strategies to Protect Your System," Data Processing Management Association, University of Wyoming chapter.
- (1989) "Software Fault Tolerance in Distributed Real-Time Systems," Association for Computing Machinery, Boulder, Colorado.
- (1988) "Computer 'Terrorism': What is It and How Can We Fight It?" University of Wyoming, Department of Computer Science.
- (1988) "Computers Do Make Mistakes: The Limits of Computer Reliability," Laramie Senior Lyceum, Laramie, Wyoming.
- (1987) "The MOSCA Project: Modifiable Software, Continuously Available," University of Wyoming, Department of Computer Science.

WORK IN PROGRESS

Grant Proposals

None pending at this time

Publications

"Usage and Knowledge of Telehealth among Health Care Providers in Wyoming," in preparation.

GRADUATE STUDENT RESEARCH SUPERVISION

Current Graduate Advisees

Le Zhou, Ph.D. in Computer Science
 Thomas James, Ph.D. in Computer Science
 Stormy J. Knight, M.S. in Computer Science

Current Graduate Committee Chairmanships

Garrace DeGroot, Ph.D. in Computer Science
 Anthony Wallace, Ph.D. in Computer Science

Graduate Degrees Completed Under Supervision

- Sung Yun Shin, Plan B paper: "Some Approaches to Software Fault Tolerance" (December 1986). M.S. in Computer Science.
- Chin-Lern Jin, Plan B paper: "Programming Recovery Blocks with Dynamic Binding" (September 1987). M.S. in Computer Science.
- Steven E. Covington, Plan B paper: "Using Dynamic Binding in Automatic Control Systems" (November 1987). M.S. in Computer Science.
- Jung M. Lee, Plan B paper: "Implementing the XINU Operating System" (April 1988). M.S. in Computer Science.
- Robert M. Derrick, Plan B paper: "The Design and Implementation of a Multidisciplinary Tool for Recording and Processing a Computer Session" (April 1988). M.S. in Computer Science.
- Shi-Kai Chang, Plan B paper: "Implementation of Communication Mechanisms for a Distributed Multiprocessor Operating System" (May 1988). M.S. in Computer Science.
- David S. Thiel, Plan B paper: "Software Fault Tolerance" (May 1989). M.S. in Computer Science.
- Frank G.F. Davis, Plan B paper: "Catastrophic Errors, Overdesign, and Fault Tolerance" (July 1989). M.S. in Computer Science.
- Kenneth R. Carnes, Plan B paper: "An Introduction to the Ward-Mellor Methodology with Application" (October 1990). M.S. in Computer Science.

- Narendra R. Kale, Plan B paper: “Specification and Design for a Fault-Tolerant Software System: A Case Study in Software Development” (May 1991). M.S. in Computer Science.
- Subirendu Mukherjee, Plan B paper: “Fault Tolerance by Design Diversity: An Experiment” (May 1991). M.S. in Computer Science.
- Sung Yun Shin, “Combined Approaches to Software Fault Tolerance” (May 1991). Ph.D. in Computer Science.
- Zhenpeng Wang, Plan B paper: “Dynamic Software Reconfiguration Mechanisms to Support Distributed Fault-Tolerant Systems” (November 1991). M.S. in Computer Science.
- Hiren D. Desai, Plan B paper: “A Distributed Mail Server System” (December 1992). M.S. in Computer Science.
- Ni (Jenny) Ye, Plan B paper: “A New Technique (TSH) to Tolerate Both Software and Hardware Failures in a Distributed System” (December 1992). M.S. in Computer Science.
- Jeffery D. Greenwald, Plan B paper: “A Study of Su's Algorithm to Reduce Unnecessary Context Switching in Message-Passing Based Systems” (January 1993). M.S. in Computer Science.
- Joseph D. Gradecki, “Parallel LAN System: A System for Parallel Processing” (February 1993). M.S. in Computer Science.
- Peter J. Madsen, “An Evaluation of N-Version Programming Using Simulation” (May 1993). M.S. in Computer Science.
- V. Gopalakrishnan, Plan B paper, “A Framework for Developing Objective Functions for Performance, Availability, and Safety” (May 1993). M.S. in Computer Science.
- Lili Zhang, Plan B paper, “Improvement and Application for a Technique Tolerating Software and Hardware Failures” (August 1993). M.S. in Computer Science.
- David C.H. Chang, Plan B paper, “Objective Functions for Adaptive Fault Management” (August 1993). M.S. in Computer Science.
- Geethanjali Narasimhan, Plan B paper, “Using Stochastic Petri Nets to Model Computer Systems” (May 1994). M.S. in Computer Science.
- Qing He Shuler, Plan B paper, “A More Secure User Authentication Scheme” (May 1994). M.S. in Computer Science.
- Scott Tisinger, Plan B paper, “The University of Wyoming Computer Writing Classroom: A Case Study” (May 1994). M.S. in Computer Science.
- Yuming Deng, “Developing an Efficient Knowledge Sharing Technique: A Two-Way Translation for EXPRESS and KIF” (August 1994). M.S. in Computer Science (co-chair with Dr. Jeffrey Van Baalen).
- Allyson J. Anderson, Plan B paper, “A Case Study Using the Prototyping Approach to Information Systems Development” (December 1994). M.S. in Computer Science.
- Yaping Du, Plan B paper, “Using Process Groups for the Development of Reliable Distributed Software” (December 1994). M.S. in Computer Science.
- Keith A. Martin, Plan B paper, “Availability Features of a Commercial System: A Study of the VAXCluster Corral” (December 1994). M.S. in Computer Science.
- Zhijian Yu, “A Distributed Fault Tolerance Mechanism on a UNIX Network” (December 1994). M.S. in Computer Science.
- Jin-Ki Hong, “Computer-Aided Cost-Effective Validation of Safety-Critical Requirements in Embedded Systems” (August 1996). Ph.D. in Computer Science.
- Haoxin Zhang, “A Comparison of Implementation Strategies for a Client/Server Database System” (May 1997). M.S. in Computer Science (co-chair with Dr. Matthew Haines).
- John C. Williams, Plan B paper, “Supporting Telemedicine Systems Through Telecommunications Technology” (August 1998). M.S. in Computer Science.
- Hong Gu, “Creating a Multiple-View Database Accessible Through the World-Wide Web” (August 1998). M.S. in Computer Science.
- Xuanyong Xu, “A Comparison of Data Transfer in TCP and UDP Protocols” (December 1998). M.S. in Computer Science.
- Martin Zimmerman, “Software Prototyping as a Tool for Evaluating Real-Time Fault Management Algorithms” (December 1998). M.S. in Computer Science.
- Xu Cao, “Evaluating Software Development through Complexity Metrics” (May 1999). M.S. in Computer Science.

- Zhipeng Zhao, “Development of a Web-Enabled Clinical Information Management System (CIMS)” (May 1999). M.S. in Computer Science.
- Yong Edward Qiu, “Building a Searchable Interface to Cancer Internet Resources” (July 1999). M.S. in Computer Science.
- Hongmei Luo, “Developing a 3-Tier Web Database Application Prototype on Unix with Java Servlets and Oracle” (July 1999). M.S. in Computer Science.
- Le Zhou, “Web-Based Access to Beaver Population Distribution in Wyoming” (July 1999). M.S. in Computer Science.
- Kiana M. Zimmerman, “A Spatial Model for Markov Chain Analysis of Grasshopper Population Dynamics in Wyoming” (December 1999). M.S. in Computer Science.
- Jianxin Meng, “DNA Sequence Abstraction: Efficient Database Storage, Sequence Homology Search, and Internet Transmission” (December 1999). M.S. in Computer Science.
- Jun Liu, “Developing a Client/Server Medical Information System” (May 2000). M.S. in Computer Science.
- Xiaoyi Zhang, “Evaluating Countermeasures for Security in Distributed Systems” (May 2000). M.S. in Computer Science.
- Harshi U. Lokupitiya-Allen, “Categorizing Security Threats for the Design of Secure Systems” (August 2000). M.S. in Computer Science.
- Kun Shao, “A Medical Information System” (December 2000). M.S. in Computer Science.
- Scott McDaniel, Plan B paper, “Authorized Access Only” (May 2001). M.S. in Computer Science.
- Jess Lacy, Plan B paper, “Internet Access to Rural Health Information” (May 2001). M.S. in Computer Science.
- Di Wu, “An Electronic Nursing Management System” (May 2001). M.S. in Computer Science.
- Yong-Sang (Charlie) Shim, “A Methodology for Developing a Probabilistic Security Measure using a Software Reliability Model” (August 2001). Ph.D. in Computer Science.
- Joseph P. Campbell, Plan B paper, “Software Engineering for One: Divining a Personal Process” (May 2002). M.S. in Computer Science.
- Suranga D. Hettiarachchi, “Using Data Marts to Create an Internet-Based System for Gathering Information” (August 2002). M.S. in Computer Science.
- Seaghan UiBreaslin, “Comparing Software Engineering Processes in Developing Web Sites” (August 2003). M.S. in Computer Science.
- Chang-Oan Sung, “Affordable Distributed Data Mining” (August 2004). Ph.D. in Computer Science.
- Knut Ortiz, “An Interface to Distributed Data Sharing Systems” (August 2006). M.S. in Computer Science.
- Sonja Parson, “An Internet-Based Medical Records System” (August 2006). M.S. in Computer Science.
- Joshua Mann, “Game Playing and Proof Systems” (August 2006). M.S. in Computer Science.
- Jung-Yeop Kim, “Automated Anomaly Detection using Time-Variant Normal Profiling” (May 2008). Ph.D. in Computer Science.

Graduate Degrees Completed (Committee Member)

- Weng-Wu Chung, Plan B paper: “Some Performance Tests of Heapsort and Smoothsort” (December 1986). M.S. in Computer Science; supervisor, Dr. Tom Bailey.
- Rafael E. Gallastegui, Plan B paper: “An Editor for Program Development” (June 1987). M.S. in Computer Science; supervisor, Dr. Henry Bauer.
- Annette F. Bergman, “An Algorithm for Distributing LISP Processes” (November 1987). M.S. in Computer Science; supervisor, Dr. Michael Magee.
- Daniel Fitzstevens, “Tech Noir: I’ll Be Back” (April 1988). M.A. in English; supervisor, Dr. Henry Laskowsky.
- James E. Bothamley, “Technical Analysis and Evaluation of Relational Database Management Systems” (August 1988). M.S. in Computer Science; supervisor, Dr. William Walden.
- Gregory D. Birdsong, Plan B paper: “The Emergence and Evolution of Structured Methods and System Development Models” (July 1989). M.S. in Computer Science; supervisor, Dr. John Rowland.
- Robert L. Morrison, “Data Communication in a Distributed Computing Environment” (April 1990). M.S. in Computer Science; supervisor, Dr. Ghasem Alijani.

- Wen-Shui Chen, Plan B paper: “Design and Implementation of a Real-Time Task Scheduling Scheme Using a Multiprocessor System” (May 1991). M.S. in Computer Science; supervisor, Dr. Ghasem Alijani.
- Thomas Lee James, “Computer Imaging Applied to the Quantification of Cardiac Function in the Chick Embryo” (August 1991). M.S. in Computer Science; supervisor, Dr. Michael Magee.
- Kathleen Ely, “The Illusion of Authority: The Selling of the Church Universal and Triumphant” (December 1991). M.A. in English; supervisor, Dr. Henry Laskowsky.
- Jianwei Bei, “Functionality Assessment of the MC68332 Microcontroller for Applications in Random Pulse-Width Modulation Controller of Power Inverters” (December 1991). M.S. in Electrical Engineering; supervisor, Dr. Stanislaw Legowski.
- Alan R. Peery, Plan B paper: “Software Design of a Graphical Performance Analyzer for Parallel Loops on a Shared-Memory Multiprocessor” (May 1992). M.S. in Computer Science; supervisor, Dr. Henry Bauer.
- Jeffery A. Solheim, “Testing and Integration Strategies of Large Software Systems” (August 1992). Ph.D. in Computer Science and Mathematics; supervisor, Dr. John Rowland.
- On Seng Gee, Plan B paper, “Parallelizing Program Loops in the Presence of Pointers” (May 1994). M.S. in Computer Science; supervisor, Dr. Henry Bauer.
- Elaine J. Sinclair, “Continuous Speech Recognition to Control a Lotus Spreadsheet” (May 1995). M.S. in Computer Science; supervisor, Dr. Stanley Petrick.
- Samantha Z. Besler, “Improving The Continuous Speech Control of A Lotus System Using Three Different Error Recognition/Error Recovery Techniques” (August 1995). M.S. in Computer Science; supervisor, Dr. Stanley Petrick.
- Shanwei Wang, “Evaluation of Natural Language Processing Tools” (August 1995). Ph.D. in Computer Science; supervisor, Dr. Stanley Petrick.
- Steven J. Neff, “Crossed Fiber Analysis -- Image Extraction for Automated Measurement” (August 1996). M.S. in Computer Science; supervisor, Dr. Michael Magee.
- Tracy M. Hodge, “A Near-Infrared Fabry-Perot Imaging Study of Bright Planetary Nebulae” (August 1996). Ph.D. in Physics and Astronomy; supervisor, Dr. Charles Woodward.
- Lei Wu, “Flow Control in Group Communication” (May 1997). M.S. in Computer Science; supervisor, Dr. Shivakant Mishra.
- Norbert Pirzkal, “A High Resolution of Ae/Be Stars” (May 1997). Ph.D. in Physics and Astronomy; supervisor, Dr. Earl Spillar.
- David R. Ciardi, “Star Formation in the Filamentary Dark Cloud GF-9: A Multi-Wavelength Intra-Cloud Comparative Study” (August 1997). Ph.D. in Physics and Astronomy; supervisor, Dr. Charles Woodward.
- Sudhamadhuri Kuntur, “Improving the Performance of Group Communication Protocols Using Newsmonger Technique” (August 1997). M.S. in Computer Science; supervisor, Dr. Shivakant Mishra.
- James S. Ward, “Replicated Revision Control System” (August 1997). M.S. in Computer Science; supervisor, Dr. Shivakant Mishra.
- Mingjun Liu, “Mathematical Theory and Numerical Methods for the Valuation of American Stock Options” (August 1997). Ph.D. in Mathematics; supervisor, Dr. Junping Wang.
- Donna J. Kunselman, “Error-Correcting Speech Understanding Using Grammar-Specific Contexts” (December 1997). M.S. in Computer Science; supervisor, Dr. Stanley Petrick.
- Dongbin Fan, “Design and Implementation of a Timed Asynchronous Group Membership Service” (May 1998). M.S. in Computer Science; supervisor, Dr. Shivakant Mishra.
- Guozhao Pang, “Automated Availability Management Service in Distributed Systems” (May 1998). M.S. in Computer Science; supervisor, Dr. Shivakant Mishra.
- Mark Poltera, “Images of Big Brother in Literature: Four Views” (August 1998). M.A. in English; supervisor, Dr. Keith Hull.
- Lan Fei, “Using CORBA for the Implementation of the Timewheel Atomic Broadcast Protocol” (December 1998). M.S. in Computer Science; supervisor, Dr. Shivakant Mishra.
- Pak Shing Li, “Numerical Study of Interacting Galaxy Systems with Low Mass Companions” (July 1999). Ph.D. in Physics; supervisor, Dr. Harley Thronson.
- Kishore Venkatesan, “System Administration Tool” (July 1999). M.S. in Computer Science; supervisor, Dr. Shivakant Mishra.
- Shuxiang Yu, “Neuron-Adaptive Neural Network Models and Application” (October 1999). Ph.D. in Informatics; supervisor, Dr. Ming Zhang, University of Western Sydney – Macarthur (Australia).

- Suneng Zhuo, “Performance Analysis of Web Proxy Caching Algorithms” (December 1999). M.S. in Computer Science; supervisor, Dr. Matthew Haines.
- Harshavardhan R. Kuntur, “Security of DaAgent System” (May 2000). M.S. in Computer Science; supervisor, Dr. Shivakant Mishra.
- Michael McKenna, “Fuzzy System Implementation on a Field-Programmable Gate Array” (May 2000). M.S. in Electrical Engineering; supervisor, Dr. Bogdan M. Wilamowski.
- Rashmi Jagadish, “Dynamic Network Address Translation for Windows NT” (December 2000). M.S. in Electrical Engineering; supervisor, Dr. Jerry C. Hamann.
- Donnie Eggleston, “The Effects of Adding Environmental Noise on Automatically Derived Estimates of Female Voice Using CSpeechSP and the Multi-Dimensional Voice Program Software for CSL 4300B and Multi-Speech” (December 2000). M.S. in Speech-Language Pathology; supervisor, Dr. Cecyle Perry.
- Uditha Piyasena, “Initial Target Acquisition Using a CCD Camera System for the UW Hexapod” (December 2000). M.S. in Electrical Engineering; supervisor, Dr. John McInroy.
- Bergundi M. Binkie, Plan B paper, “Improving Classroom Effectiveness in Calculus Using Web Page Technology” (May 2002). M.S. in Computer Science; supervisor, Dr. John Cowles.
- Qian Yu, Plan B paper, “Cancer Clusters in Idaho and Wyoming: Using A Spatial Scan Statistic for Cluster Detection” (May 2002). M.S. in Statistics; supervisor, Dr. Richard Anderson-Sprecher.
- Julian Good, “University of Wyoming Family Nurse Practitioner Preceptors’ Interests in Internet-Based Continuing Education” (May 2002). M.S. in Nursing; supervisor, Dr. Fay Whitney.
- Wenlong Jin, Plan B paper, “Bluetooth Technology” (October 2002). M.S. in Electrical and Computer Engineering; supervisor, Dr. Robert Kubichek.
- Jeffrey R. Shmidl, Plan B paper, “An Empirical Study of Healthcare in Wyoming” (April 2005). M.S. in Economics; supervisors, Dr. David Aadlund and Dr. Mark Sunderman.

TEACHING

Course Number/Name	Year	Semester	Cr. Hrs.	Enrollment
HLSC 4700 (Health Care Informatics)	2008	Spring	4	9
HLSC 4700 (Health Care Informatics)	2006	Spring	3	5
HP 4151 (Values, Modern Health Care and Technology)	2005	Fall	3	16
HLSC 4700 (Health Care Informatics) <i>online</i>	2005	Spring	3	17
COSC 5050 (Research Writing)	2004	Spring	3	5
<i>Research Semester</i>	2003	Fall		
<i>Research Semester</i>	2003	Spring		
COSC 4740 (Operating Systems Design)	2002	Fall	4	27
<i>Research semester</i>	2002	Spring		
COSC 4840/5840 (Software Engineering/Management)	2001	Fall	3	39
COSC 4050 (Fundamentals of Computing, Part 3)	2001	Summer	4	8
COSC 5050 (Research Writing)	2001	Spring	3	16
<i>Research semester</i>	2000	Fall		
COSC 4050 (Fundamentals of Computing, Part 3)	2000	Summer	4	12
COSC 4850/5850 (Software Engineering Laboratory)	2000	Spring	3	16
COSC 4750 (System Programming and Administration)	2000	Spring	3	18
<i>Research semester</i>	1999	Fall		
COSC 4850/5850 (Software Engineering Laboratory)	1999	Spring	3	17
COSC 4750 (System Programming and Administration)	1999	Spring	3	19
COSC 4840/5840 (Software Engineering/Management)	1998	Fall	3	34
HP 4151 (Senior Honors Seminar)	1998	Fall	3	10
HLSC 4970 (Interdisciplinary Health Sciences Seminar)	1998	Fall	3	10
COSC 3900 (Computer Ethics)	1998	Spring	1	12
COSC 4750 (System Programming and Administration)	1998	Spring	3	35
HLSC 4970 (Interdisciplinary Health Sciences Seminar)	1998	Spring	3	8
COSC 4840 (Software Engineering)	1997	Fall	3	14
COSC 5840 (Software Engineering Management)	1997	Fall	3	11
COSC 5750 (Distributed Systems)	1997	Spring	3	8
Math/COSC 2300 (Discrete Structures)	1996	Fall	3	28
COSC 4840 (Software Engineering)	1996	Fall	3	12
COSC 5000 (Seminar)	1996	Fall	1	12
COSC 4850 (Software Engineering Laboratory)	1996	Spring	3	8
COSC 5050 (Research Writing)	1996	Spring	3	5
COSC 5770 (Fault-Tolerant Systems)	1995	Fall	3	5
<i>Sabbatical</i>	1995	Spring		
<i>Sabbatical</i>	1994	Fall		
COSC 5010 (Research Writing)	1994	Spring	3	12
COSC 1020 (Computer Science II)	1993	Fall	4	25
COSC 5840 (Software Engineering Management)	1993	Fall	3	10
COSC 4010/5010 (Independent Study)	1993	Fall	1-3	4

STATE AND UNIVERSITY SERVICE

State of Wyoming

Southeast Wyoming Telehealth Network Board of Directors (2007-present)
Wyoming Governor's Health Information Technology Task Force (2007)
Rural/Frontier Women's Health Coordinating Center Advisory Committee (2006-2007)
Wyoming Comprehensive Cancer Control Consortium (2004-2007)
 Chair, prevention workgroup (2005-2007)
Governor's Telemedicine Steering Committee (1999-2003)
 Chair, infrastructure subcommittee (2001-2003)

University of Wyoming

Wyoming Statistical Analysis Center for Rural Policy Studies, Advisory Committee (2001-2004)
President's Enrollment Management Committee, Graduate Enrollment Subcommittee (2000)
Academic Information Technology Committee (1993-94, 1995-2002)
 Chair (1993-94, 1997-2000)
Wyoming Space Grant Consortium Advisory Board (1995-2007)
North Central Accreditation Self-Study, Technology Committee (1998-99)
Faculty Senate (1996-1997)
Research Coordination Committee (1988-91)
 Chair (1990-91)
Search Committee, Vice-President for Research (1991)

College of Health Sciences, University of Wyoming

Research Committee (2005-2008)
Curriculum and Instruction Committee (2004-present)
 Chair (2005-present)
Academic Leadership Council (2003-present)
Interprofessional Task Force (2003-2008)

College of Arts and Sciences, University of Wyoming

A&S Extended Core Review Committee (1998-99)
Committee on Teaching (1993-94)
Tenure and Promotion Committee (1993)
Computer Committee (1988-91)
 Chair (1990-91)

Department of Computer Science, University of Wyoming

Research Committee (1995-2002)
Faculty Evaluations and Awards Coordinator (1998-2002)
Undergraduate Recruitment and Awards Committee (1998-2002)
Public Relations Coordinator (1998-2002)
Graduate Committee (1985-1993, 1995-1998, 1999-2004)
 Acting chair (1990-91)
 Chair (1992-93, 1995-1998, 1999-2000, 2001-2004)
Ph.D. Review Committee (1993)
Library Committee (1985-87)
Department Chairman Search Committee (1987)
Department Faculty Search Committee (1987, chair 1990, 1993)
Department representative, United Way campaign (1986)
Department representative, football recruiting (1987, 1989, 1997, 1998)

WWAMI Rural Health Research Center, University of Washington

Advisory Board (2003-2006)

PROFESSIONAL AND COMMUNITY SERVICE

Northwest Regional Telehealth Resource Center
Board of Directors, 2006-2008
Technical Subcommittee, 2007-present

International Society for Computers and Their Applications (elected to Senior Member 2003)
Board of Directors, 1993-2001
Membership Coordinator, 1993-1995
President, 1996-1998

Association for Computing Machinery
Special Interest Group on Operating Systems
Special Interest Group on Software Engineering

Institute for Electrical and Electronic Engineers (elected to Senior Member, 1999)
Computer Society (technical committees on software engineering and distributed computing)
Engineering in Medicine and Biology Society
Representative to IEEE-USA Transportation and Aerospace Policy Committee (2007-present)

Editorial Boards

International Journal of Computers and their Applications, 1994-2005; Associate Editor, 2002-2005
Journal of Computer Science and Information Management, 1996-2005
International Journal of Computer and Information Sciences, 1999-2001

ACM Symposium on Applied Computing
Program Committee, 2005

International Conference of the IEEE Engineering in Medicine and Biology Society
Track co-chair in telemedicine, 2004

International Conference on Intelligent and Adaptive Systems and Software Engineering
Session chair, 2003

International Conference on Computer Applications in Industry and Engineering
Chair, steering committee, 1995
Program committee, 1995, 1996
Session chair, 1995
Organizer and chair, special session on dependability, 1996
Organizer and chair, special session on medical applications, 2003

ISSAT International Conference on Reliability and Quality in Design
Organizer and chair, special session on fault tolerance in design, 1994

International Conference on Computers and their Applications
Organizing committee, 1996-2001
Program committee, 1996, 1997, 1999, 2000, 2001, 2005, 2006
Organizer and chair, special session on information management systems, 1999
Session chair, 1996, 1997, 1998, 1999, 2000, 2001, 2002
Co-program chair, 2002
Organizer and chair, special session on technology and rural health, 2006

International Conference on Information Reuse and Integration
Program committee, 1999

University of Wyoming Center for the Advancement of Ethics
Panelist, Ethics Symposium on Student Issues, 1996
Program committee, moderator, panelist, Ethics and the Cybersociety Symposium, 1996
Panelist, Brown Bag Seminar on Plagiarism in the Classroom, 1997

Wyoming Space Grant Symposium
Symposium chair, 1996, 2001

Wyoming Conference on Telehealth
Program committee, 2000
Panel chair, 2000

Article referee (journals)

J. of Systems and Software, Computer, Communications of the ACM, IEEE Transactions on Software Engineering, IEEE Transactions on Computers, IEEE Transactions on Parallel and Distributed Systems, Int. J. of Reliability, Quality, and Safety Engineering, IEEE Parallel and Distributed Technology, IEEE Concurrency, J. of Computer and Software Engineering, Int. J. of Computers and Their Applications, Int. J. of Intelligent Automation and Soft Computing, Int. J. of Computer and Information Sciences, Computer Journal

Paper referee (conferences)

ISMM/IASTED Int. Conf. on Distributed and Parallel Computing and Systems, Symp. on Reliable Distributed Systems, European Dependable Computing Conf., Int. Symp. on Fault-Tolerant Computing, Int. Conf. on Computer Applications in Industry and Engineering, Int. Conf. on Computers and Their Applications, Wyoming Space Grant Symposium, Int. Conf. On Software Engineering Applied to Networking and Parallel/Distributed Computing, Int. Conf. on Intelligent and Adaptive Systems and Software Engineering, ACM Symposium on Applied Computing

Proposal referee

National Science Foundation, University of Wyoming Agricultural Experiment Station, Canadian Foundation for Innovation, Texas Higher Education Coordinating Board, National Institutes of Health, National Library of Medicine, North Carolina Biotechnology Center

Book reviewer

Benjamin/Cummings, IEEE Computer Society Press, Prentice-Hall, Artech House, John Wiley & Sons (UK)

OTHER ACTIVITIES/ACCOMPLISHMENTS

Faculty advisor, High Plains Student Chapter of the Association for Computing Machinery (1986-94).

Judge, Wyoming State Science Fair (1992, 1993, 1996, 1999).

Sponsor, Z. Wang, visiting scholar from Daqing Petroleum Institute, Anda, People's Republic of China (1989-90).

Instructor in software design, software testing, and fault tolerance, IBM Corporation, Technical Education Division (1988-93, 1997-98).

Consultant in systems and software design, Gantenbein/Powers Associates, Laramie (1990-present).

Expert witness, Digital Development Corporation v. 3Com Corporation, Microdyne Corporation, and McAfee Associates, Inc. (1997-98).

Expert witness, Digital Development Corporation v. Intel Corporation (2001).