

**Gearold R. Johnson**  
*Curriculum Vitae, rev. April 2020*

**Personal**

Born: January 11, 1940; Des Moines, Iowa  
Married: Frances E. Stern; November 30, 1962  
Children: Kurt Gregory (July 11, 1969)  
Elizabeth Nan (August 22, 1972)  
Citizen: U.S.A.

**Present Positions**

Senior Research Scientist/Scholar, Mechanical Engineering Department. Colorado State University, Fort Collins, CO.  
Emeritus George T. Abell Endowed Chair in Engineering and Emeritus Professor, Mechanical Engineering Department, Colorado State University.

**Education**

NATO Post-doctoral Fellow: von Karman Institute for Fluid Dynamics, Rhode-Saint Genese, Belgium, 1970-1971  
Ph.D.: Mechanical Engineering, January 1972, Purdue University, West Lafayette, IN  
M.S.: Engineering, August 1968, Purdue University  
B.S.: Aeronautical Engineering, June 1962, Purdue University

**Experience**

2010-present Senior Research Scholar/Scientist, Mechanical Engineering Department, Colorado State University  
Fall 2015 Faculty member, Semester at Sea, Fall Semester, Atlantic Rim, Institute for Shipboard Education, University of Virginia, Charlottesville, VA  
Spring 2013 Faculty member, Semester at Sea, Spring Semester, Circumnavigation of the Globe, Institute for Shipboard Education, University of Virginia, Charlottesville, VA  
Summer 2011 Faculty member, Semester at Sea, Engineering a New Tomorrow (Short Term--Maymester) and Summer Session, Institute for Shipboard Education, University of Virginia, Charlottesville, VA  
1998-2010 Vice-President and Director, NTU Foundation  
1995-present Emeritus George T. Abell Endowed Chair in Engineering and Emeritus Professor, Colorado State University  
1994-2002 Academic Vice-President, National Technological University (retired 2002)  
1993-1995 George T. Abell Endowed Chair in Engineering, Professor of Mechanical Engineering and Director of the Center for Computer Assisted Engineering, Colorado State University (retired May 1995)  
1992-1993 Director, EuroSud Foundation, Paris, France (CSU Sabbatical Leave)  
1989-1992 George T. Abell Endowed Chair in Engineering, Professor of Mechanical Engineering and Director of the Center for Computer Assisted Engineering, Colorado State University; and member of the Curriculum Committee and Advisor, Computer Science and Engineering Graduate Faculty, National Technological University, Fort Collins, CO  
1986-1989 George T. Abell Endowed Chair in Engineering, Professor of Mechanical Engineering and Director of the Center for Computer

Summer 1987	Assisted Engineering, Colorado State University Faculty Fellow, Graphics Programming Laboratory, Information Systems Group, IBM, Boulder, Colorado
1985-1986	Visiting Scientist, Shape Data Ltd., Cambridge, England (CSU Sabbatical Leave)
1984-1985	George T. Abell Endowed Chair in Engineering (Colorado State University's first endowed chair); Professor of Mechanical Engineering, Director of the Center for Computer Assisted Engineering; Colorado State University
1983-1984	Visiting Professor of Mechanical Engineering, Division of Engineering and Applied Science, California Institute of Technology, Pasadena, California
1982-1983	Chair, Engineering Science; Professor of Mechanical Engineering; Director of the Center for Computer Assisted Engineering; and Associate Director of the University Computer Center, Colorado State University
1979-1982	Chair, Engineering Science; Associate Professor of Mechanical Engineering; Director of the Center for Computer Assisted Engineering; and Associate Director of the University Computer Center, Colorado State University
1978-1979	Visiting Professor, Computing Laboratory, University of Kent, Canterbury, England (CSU Sabbatical Leave)
1977-1978	Associate Professor of Mechanical Engineering; and Associate Director of the University Computer Center, Colorado State University
1976-1977	Associate Professor of Mechanical Engineering and Associate Director of the University Computer Center, Colorado State University
1973-1976	Assistant Professor of Mechanical Engineering and Associate Director of the University Computer Center, Colorado State University
1972-1973	Acting Associate Director of the University Computer Center, Colorado State University
1971-1972	Senior Scientific Programmer, University Computer Center; and Research Associate, Civil Engineering Department, Colorado State University
1970-1971	NATO Post-doctoral Fellow, von Karman Institute for Fluid Dynamics, Rhode-Saint Genese, Belgium
1966-1970	Graduate Research Assistant, Purdue University, West Lafayette, Indiana
1962-1966	Engineer, Aerospace Division, The Boeing Company, Seattle, Washington
1960-1961	Production and Inventory Control Management, Capitol Records Co., Los Angeles, California.

### Areas of Interest

- Engineering and Sustainable Engineering Education
- Technology-based Education
- Formalisms in engineering design and manufacturing
- Automatic generation of system software
- Programming environments
- Computer micro-architecture and micro-programming
- Computer networks and massively distributed (parallel) systems
- Propulsion and Computational Fluid mechanics
- Solar and Wind Energy ☐☐☐☐
- Systems Analysis, Simulation and Modeling

- Embedded computers, sensors, actuators and automatic control
- Autonomic Wireless Sensing Systems

## **Publications**

### **Book**

Siller, Thomas J. and Gearold Johnson, *Just Technology: The Quest for Cultural, Economic, Environmental and Technical Sustainability*, Morgan & Claypool, 2018.

### **Published Papers, Articles and Book Chapters**

Johnson, G. R. and L'Ecuyer, M. R., "Velocity Measurements in a Spinning, Cold-flow Rocket Motor," *AIAA Journal*, Vol. 8, No. 10, October 1970.

Winn, C.B., Johnson, G. R. and Krause, F. R., "The Application of Remote Sensing and Simulation of Streamflow Runoff to the Management of Water Resource Systems," *Proceedings of the Summer Computer Simulation Conference*, San Diego, California, June 1972.

Bell, W., Winn, C. B. and Johnson, G. R., "Minimization of Pollution from Combined Storm Sewer Streams," *Proceedings of the International Symposium on Systems Engineering and Analysis*, Purdue University, Lafayette, Indiana, October 1972.

Bell, W., Johnson, G. R. and Winn, C. B., "Simulation and Control of Flow in Combined Sewers," *Proceedings of the Sixth Annual Simulation Symposium*, Tampa, Florida, March 1973.

Vaitkus, D. R., Edwards, H. W. and Johnson, G. R., "Model for Environmental Transport of Automotive Lead," *Proceedings of the Seventh Annual Conference on Trace Substances in Environmental Health*, Columbia, Missouri, June 1973.

Baldwin, L. V. and Johnson, G. R., "An Estimate of Space-Time Correlations," *Boundary Layer Meteorology*, Vol. 5, No. 3, July 1973.

Duong, N., Johnson, G. R. and Winn, C. B., "An Application of Modern Control in Hydrology," *Proceedings of the International Conference on Systems and Control*, Coimbatore, India, August 30-September 1, 1973.

Johnson, G. R., Thompson, H. D. and Hoffman, J. D., "On the Design of Maximum Thrust Plug Nozzles," *Computers and Fluids, An International Journal*, Vol. 2, No. 1, July 1974.

Duong, N., Winn, C. B. and Johnson, G. R., "Modern Control Concepts in Hydrology," *IEEE Transactions on Systems, Man and Cybernetics*, Vol. SMC-5, No. 1, January 1974.

Winn, C. B., Johnson, G. R. and Corder, T. E., "SIMSHAC - A Simulation Program for Solar Heating and Cooling of Buildings," *Simulation*, Vol. 23, No. 6, December 1974.

Bell, P. W., Johnson, G. R. and Winn, C. B., "Control Logic for Real Time Control of Flow in Combined Sewers," *Proceedings of the Ninth Symposium on Water Pollution in Canada*, University of Western Ontario, February 1974.

Winn, C. B. and Johnson, G. R., "Dynamic Simulation for Performance Analysis of Solar Heated and Cooled Buildings," *Paper No. 74-WA/SOL-8*, ASME Winter Annual Meeting, New York, November 1974.

Johnson, G. R. and Winn, C. B., "Smart Thermostats for Minimizing Energy Consumption," *Proceedings of the Eighth Annual Simulation Symposium*, Tampa, Florida, March 1975.

Johnson, G. R. and Elgabalawi, N., "A Simulation Model for Solar Thermal Electric Power Systems," *Applications of Solar Energy*, edited by Wu, S.T., et al., UAH Press, Alabama, 1975.

Winn, C. B., Craun, R. L. and Johnson, G. R., "Validation of a Computer Aided Design Model for Solar Heating and Cooling of Buildings," *Proceedings of the Summer Computer Simulation Conference*, San Francisco, California, July 1975.

Berner, D. M. and Johnson, G. R., "Digital Computer Simulation of a Drag Racing Vehicle," *Computer Aided Design*, Vol. 8, No. 2, April 1976.

Johnson, G. R. and Mueller, R. A., "The Automated Generation of Cross-System Software for Supporting Micro/Mini Computer Systems," *ACM Sigplan Notices*, Vol. 11, No. 4, April 1976.

Mueller, R. A. and Johnson, G. R., "A Generator for Microprocessor Assemblers and Simulators," *Proceedings of the IEEE*, Vol. 64, No. 6, June 1976. Reprinted in *Microprocessor: Fundamentals and Applications*, edited by W.C. Lin, IEEE Press, 1977.

Johnson, G. R. and Mueller, R. A., "The Automated Generation of Cross-System Software for Microcomputers," *Proceedings of the DISE Workshop on Microprocessors and Education*, Fort Collins, Colorado, August 16-18, 1976.

Johnson, G. R., "A Data Acquisition, Performance Evaluation and Monitoring System for Solar Heated and Cooled Residential Dwellings," *ASME Paper No. 76-WA/SOL-13*, ASME Winter Annual Meeting, New York, November 1976.

Johnson, G. R. and Mueller, R. A., "The Automated Generation of Cross-System Software," *Computer*, Vol. 10, No. 1, January 1977.

Mueller, R. A., George, D. D. and Johnson, G. R., "Generating Uniformly Distributed Random Deviates Using Short Word Length Computers," *Simulation*, Vol. 28, No. 4, April 1977.

Johnson, G. R., "Macro Based High-Level Language Software for Microcomputers." *Proceedings of the Rocky Mountain Symposium on Microcomputers*, Pingree Park, Colorado, August 31-September 2, 1977.

Johnson, G. R., "Use of Cross-System Software in the Classroom." *Proceedings of the IEEE Workshop on Microprocessor Education*, University of Maryland, College Park, Maryland, November 29-30, 1977.

Johnson, G. R., "A Microprocessor Based Solar Controller." *Proceedings of the 1977 IEEE Conference on Decision and Control*, New Orleans, Louisiana, December 7-9, 1977,

invited paper.

Johnson, G. R. and Parsons, A. L., "Microcomputer Pascal Cross-Compiler," *Digest of Papers, Spring COMPCON 78*, San Francisco, California, February 28-March 3, 1978.

Johnson, G. R., "Modeling the Energy Consumption for Space Conditioning for a Community," *Proceedings of the Conference on Climate and Energy*, Asheville, North Carolina, May 8-12, 1978.

Johnson, G. R., "A Portable Discrete Event Simulation Package for Microcomputers," *Proceedings of the 12th Annual Simulation Symposium*, Tampa, Florida, March 8-12, 1979.

Johnson, G. R., "Automatic Generation of Microcomputer Software." Microcomputer Software Infotech State of the Art Report, Vols. 1 & 2, Infotech International Limited, Maidenhead, England, 1979.

Leong, H. H. and Johnson, G. R., "Modeling of Energy Consumption for Space Heating for a Community via GMDH Algorithm," *Proceedings of the IEEE International Conference on Cybernetics and Society*, Denver, Colorado, October 1979.

Johnson, G. R., "Simulation Studies of Solar Cooling Systems," *Proceedings of the Solar Cooling Workshop*, The King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia, April 27-30, 1980.

Leong, H. H., Johnson, G. R. and Bechtel, T. N., "A Concept of a  $(1 - \alpha)$  Performance Confidence Interval," *Proceedings of the IEEE International Conference on Cybernetics and Society*, Cambridge, Massachusetts, October 8-10, 1980.

Johnson, G. R., "An Engineering Economic Analysis for Passive Solar Energy," *Proceedings of the Northeastern Colorado Passive Solar Workshop*, Fort Collins, Colorado, April 19, 1980 and November 22, 1980.

Mueller, R. A. and Johnson, G. R., "Contrasting Translation, Verification and Synthesis in Software and Firmware Engineering," *Proceedings of the 14th Annual Workshop on Microprogramming*, October 1981. Reprinted in Microprogramming and Firmware Engineering, edited by V. Milatinovic, IEEE Computer Society Press, 1989.

Fitzhorn, P. A. and Johnson, G. R., "C: Toward a Concise Syntactic Description," *ACM Sigplan Notices*, Vol. 16, No. 12, December 1981.

Johnson, G. R., "Computer Assisted Engineering at Colorado State University." *Proceedings of the University Programs on Computer Assisted Engineering, Design and Manufacturing*, (UPCAEDM), Provo, Utah, April 1983.

Fitzhorn, P. A., Johnson, G. R. and Lenders, P. M., "A Strategy for Undergraduate Educational CAE Facilities," *Proceedings of the Second National Conference on University Programs in Computer Aided Engineering, Design and Manufacturing*, Lehigh University, Bethlehem, Pennsylvania, August 8-9, 1984.

Lenders, P. M., Johnson, G. R. and Fitzhorn, P. A., "The Local Area Network for the College of Engineering (LANCE) at Colorado State University," *Proceedings of the Ninth*

*Annual Conference on Local Area Networks*, Minneapolis, Minnesota, October 8-10, 1984.

Richardson, R. C. and Johnson, G. R., "Intelligent Computer Aided Instruction in Statics," *Proceedings of the ASEE Southwestern Region*, Arizona State University, Tempe, Arizona, October 29-30, 1984. Reprinted in Computer-Aided Processes in Instruction and Research, edited by Bleakley, G. C. and C. R. Haden, Academic Press, Inc., New York, 1985.

Girrens, S. P., Richardson, R. C., Johnson, G. R. and Smith, F. W., "DYMES -- A Dynamic Mesh Generator for the Evans and Sutherland PS300," *Proceedings of the CAD/CAM, Robotics and Automation Institute and Conference*, University of Arizona, Tucson, Arizona, February 1985.

Kirkpatrick, A. T., Fitzhorn, P. A. and Johnson, G. R., "The Use of High Performance Graphics Machines in an Undergraduate CAD Course," *Proceedings of the ASEE Annual Conference*, Atlanta, Georgia, June 16-20, 1985. Reprinted in *Engineering Education*, Vol. 77, No. 4, pp. 234-237, January 1987.

Dye, J. W. Jr., Johnson, G. R. and Mueller, R. A., "A Computer Interface for Academic Advising" *Proceedings of the University Programs in Computer Aided Engineering, Design and Manufacturing*, Purdue University, West Lafayette, Indiana, pp. 64-69, July 8-10, 1985.

Troxell, W. O. and Johnson, G. R., "M.E. Senior Design: The Culmination of Undergraduate Computing Experiences," *Proceedings of the 1986 ASME Conference on Computing Engineering*, pp. 55-59, July 1986.

Johnson, G. R., "Copyright Protection Appeal, Compiler Demonstration Highlight Micro-20," *Computer*, Vol. 21, No. 3, pp. 144-145, March 1988.

Johnson, G. R., "Computing Education: An Engineer's Perspective," *Proceedings of the Second Biennial Meeting on Education and Application of Computer Technology*, Community of Mediterranean Universities, Vallerta, Malta, pp. 21-31, October 17-21, 1988, invited keynote address.

Nickerson, B.A., Kock, S.K., Fitzhorn, P.A. and Johnson, G.R., "Automated Digital Skull-Face Superposition in Human Identification." *Proceedings of Biostereometrics '88*, November 14-17, 1988, Basel, Switzerland.

Johnson, G. R., "Computer Assisted Engineering: The New Paradigm for Engineering Education and Practice," *Colorado Engineering*, Vol. 7, No. 2, December 1988.

Johnson, G. R., "The Landmark Microcode Legal Decision," *ACM Sigmicro Newsletter*, Vol. 20, No. 2, pp. 4-12, June 1989.

Fitzhorn, P. A. and Johnson, G. R., "Freshman Programming and Engineering Design: Comedy or Tragedy," *Proceedings of the University Programs on Computer Aided Engineering, Design and Manufacturing*, (UPCAEDM), University of Wyoming, Laramie, WY, July 23-26, 1989.

Johnson, G. R., "Integration of Video and Workstation Technology in Education." *Proceedings of the Third Biennial Meeting on Education and Application of Computer Technology*, Community of Mediterranean Universities. Sant Feliu de Guixoles, Spain,

September 10-14, 1990, closing address. Reprinted in *Education in Computing/Computers in Education*, Vol. 2, No. 3, November 1990.

Beaty, S. J., Whitley, D. and Johnson G. R., "Motivation and Framework for Using Genetic Algorithms for Microcode Compaction," *Proceedings of the 23rd Annual Workshop and Symposium on Microprogramming and Microarchitecture*, Orlando, Florida, November 27-29, 1990. Reprinted in *ACM SIGmicro Newsletter*, Vol. 22, No. 1, pp. 20-27, January 1991.

Johnson, G. R., "WYE! -- A 3-D Engineering Design Graphics Environment for Distributed Heterogeneous Workstations," *Proceedings of the 1991 Design Productivity Institute and International Conference*, Honolulu, Hawaii, February 3-9, 1991, invited paper.

Johnson, G. R. and Douglas, S. C., "The Center for Computer Assisted Engineering: New Directions," *Edu Magazine*, Issue No. 55, Digital Equipment Corporation, Marlboro, Massachusetts, pp. 38-41, Spring 1991.

Johnson, G. R. and Fitzhorn, P. A., "Computing Literacy?," *Proceedings of the University Programs on Computer Aided Engineering, Design and Manufacturing*, (UPCAEDM), Brigham Young University, Provo, Utah, May 16-18, 1991, invited paper.

Johnson, G. R., "The Future of Computer Centers in a Decentralized World," 22nd Annual Seminar on Academic Computing, Snowmass Village, Colorado, August 4-7, 1991, (available on audio cassette), invited paper.

Johnson, G. R., "Synthesis of Correct Microcode," Introduction to Microprogramming, edited by V. Milatinovic, Prentice-Hall, New York, 1992.

Johnson, G. R., "Delivery of Distance Learning to the Desktop," *Proceedings of the Third International AAUA Conference -- Higher Education Reform in Europe and America*, Innsbruck, Austria, September 14-21, 1992, invited paper.

Johnson, G. R., "Satellite-based Advanced Engineering Education," *Australasian Association for Engineering Education Newsletter*, Vol. 5, No. 2, Sydney, Australia, June 1993.

Johnson, G. R., "Translation, Verification and Synthesis: A Comparison," Concise Encyclopedia in Software Engineering, edited by Madan G. Singh, Pergamon Press, Oxford, U.K., 1993.

Johnson, G. R., "On-demand Instructional Delivery to the Global Workplace," *Proceedings of the DELTA Projects Conference (DeCoMe09)*, Brussels, Belgium, June 14-15, 1993, invited keynote address.

Johnson, G. R., "Communication is More than I/O," *Proceedings of the First International Conference on Massively Parallel Computing Systems: the Challenge of General-Purpose and Special-Purpose Computing*, Euromicro, IEEE Press, Isle of Ischia, Italy, May 2-6, 1994, pp 2-5, invited keynote address.

Fitzhorn, P. A. and Johnson, G. R., "Is there Convergence in First Year Engineering Courses?," *Proceedings of the 1994 Annual ASEE Conference*, Edmonton, Alberta, Canada, pp 813-819, June 24-27, 1994.

Johnson, G. R., "Distance Education: Sharing Premier Engineering Courses Globally via Telecommunications," *Proceedings of the 3rd World Congress on Engineering Education*, Cairo, Egypt, Nov. 14-18, 1994, invited paper.

Kulacki, F. A., Vlachos, E. and Johnson, G. R., "Chapter Two: Engineering Curriculum: The Contextual Basis for Reform in the Information Age," *The Influence of Technology on Engineering Education*, edited by John Bourne, A. Brodersen and M. Dawant, pp. 17-35, CRC Press, Inc., New York, 1995.

Beaty, S. J. and Johnson, G. R., "The Effect of the Addition of Scalar D-caches to the Cray-4 Vector Processor," *Proceedings of the IEEE First International Conference on Algorithms and Architectures for Parallel Computing*, Brisbane, Queensland, Australia, April 19-22, 1995.

Baldwin, L. V. and Johnson, G. R., "The National Technological University: Sharing Premier Educational Resources via Telecommunications," *European Journal of Engineering Education*, Vol. 20, No. 2, pp 161-172, April 1995.

Johnson, G. R., "Telecommunications Enhancements to Global Post-secondary Distance Education," *Proceedings of the Nara International Symposium on Emerging Multimedia Community through ATM Networking*, Nara, Japan, May 24-26, 1995, invited paper.

Johnson, G. R., "First Experiences Delivering Continuing Engineering Education via Telecommunications to Pacific Rim Countries," *Proceedings of the UNESCO International Congress of Engineering Deans and Industry Leaders*, Melbourne, Victoria, Australia, pp 189-192, July 3-6, 1995.

Johnson, G. R., "Multimedia at the National Technological University," *Proceedings of COMDEX/Asia '95*, (available on CD-ROM), Singapore, October 26-28, 1995, invited paper.

Johnson, G. R., "National Technological University Graduate Program," *Proceedings of the 1996 Institute of Transportation Engineers Conference on "Moving Forward in a Scaled Back World"*, Dana Point, California, March 3-6, 1996, invited paper.

Beaty, S. J. and Johnson, G. R., "A New Day -- A New Way: A Challenge to the MPP Community," *Proceedings of the Second International Conference on Massively Parallel Computing Systems*, Euromicro, IEEE Press, Isle of Ischia, Italy, pp 176-180, May 6-9, 1996, invited keynote address.

Johnson, G. R., "Global Sharing of Premier Educational Resources," *Proceedings of the UNESCO International Congress of Engineering Educators and Industry Leaders*, Paris, France, July 2-6, 1996.

Johnson, G. R., "A Perspective on University-Based Vocational and Distance Education in the United States," *Proceedings of the 4th International Workshop of Korean National Open University and Korean National Commission for UNESCO: "Asia-Pacific Workshop on Vocational Education and Distance Education--1996"*, Seoul, Korea, pp 41-108 (English language version pp 41-56, Korean language version pp 57-75, overheads pp. 76-108), October 8-10, 1996, invited keynote address.

Johnson, G. R., "Mastering Your Career to the Second Degree," *Careers and the Engineer*, Vol. 10, No. 1, pp 22-23, Cambridge, Massachusetts, April 1998.



Johnson, G. R., "Creating Virtual Universities," *Proceedings of the Global Congress on Engineering Education*, Cracow, Poland, September 6-11, 1998, pp 23-26, invited keynote address. An expanded version of this paper appears in the *Global Journal of Engineering Education*, Vol. 3, No. 2, pp. 75-83, 1999.

Johnson, G. R., "Issues to Consider When a Creating a Virtual University." *International Journal of Engineering Education*, Vol. 15, No. 1, pp. 8-13, 1999.

Johnson, G. R., "Facilities and Quality of the Environment," Special Issue on Quality Issues in Engineering Education, *Global Journal of Engineering Education*, Vol. 3, No. 1, pp 41-45, 1999, guest co-editor of this Special Issue with Dr. Hans Peter Jensen.

Lakhder, D. M. and Johnson, G. R., "UNESCO Initiatives in the Field of Engineering Education." *Proceedings of the 1999 Annual ASEE Conference* (available on CD-ROM), Charlotte, NC, June 20-23, 1999.

Johnson, G. R., "NTU: une programmation personnalisée sur ordinateur," *CNED Canal Education* (in French), No. 17, pp 10-11, 1999.

Johnson, G. R., "Are We the Last Generation for Whom an Academic Career will be Meaningful?," *Proceedings of the Third UICEE Annual Conference on Engineering Education*, The University of Tasmania, Hobart, Australia, pp. 67-69, February 9-12, 2000. Paper voted the conference outstanding paper award. An expanded version of this paper appears in the *Global Journal of Engineering Education*, Vol. 5, No. 1, pp. 43-47, 2001.

Johnson, G. R., "Global Alliances in Higher Education with the Support of Telecommunications," *Proceedings of the International Conference on Information, Values and Democracy*, Rome, Italy, September 6-8, 2000, invited paper.

Baldwin, L.V. and Johnson, G. R., "NTU: The Working Professional's University," *International Journal of Engineering Education*, Vol. 17, No. 2, pp 108-118, 2001.

Johnson, G. R., "New Tools for Synchronous and Asynchronous Web Delivery," *Proceedings of the Fourth UICEE Annual Conference on Engineering Education*, Bangkok, Thailand, pp. 438-441, February 7-10, 2001.

Johnson, G. R., "Elements to be Considered When Creating a Virtual University." *Proceedings of the Encuentro Internacional sobre Educación Superior Virtual y a Distancia* (in Spanish), Monterrey, Mexico, March 14-16, 2001, invited paper.

Siller, T. J., Jones, R. C. and Johnson, G. R., "Continuing Education for Engineering Educators in Developing Countries via Electronic Communications," *Proceedings of the 8<sup>th</sup> World Congress on Continuing Engineering Education* (available on CD-ROM), Toronto, Canada, May 14-16, pp. 538-543, 2001.

Atkinson, P. H. and Johnson, G. R., "A Mentoring Paradigm for the Millennium: Internet Courses Designed for Student Success," *Proceedings of the 8<sup>th</sup> World Congress on Continuing Engineering Education* (also available on CD-ROM), Toronto, Canada, May 14-16, pp. 82-87, 2001.

Johnson, G. R., Jensen, H. P., Jones, R. C. and Lih, M. M., "Accomplishments of the International Committee on Engineering Education under the Auspices of UNESCO," *Proceedings of the SEFI Annual Conference 2001* (available on CD-ROM), Copenhagen, Denmark, September 12-14, 2001.

Johnson, G. R., "Reflections on a Computing Career and Thoughts on the Future," *Proceedings of the Fourth International Conference on Massively Parallel Computing Systems*, Euromicro, (available on CD-ROM), Isle of Ischia, Italy, May 9-12, 2002, invited keynote address.

Siller, T. J. and Johnson, G. R., "E-Technologies for Improving Engineering Education at a Distance," *Proceedings of the E-Technologies in Engineering Education: Learning Outcomes Providing Future Possibilities Conference*, United Engineering Foundation, Davos, Switzerland, pp. 185-191, August 11-16, 2002, [www.coe.gatech.edu/etee/proceedings.php](http://www.coe.gatech.edu/etee/proceedings.php).

Jones, R. C., Oberst, B. S., Siller, T. J. and Johnson, G. R., "International Exposure for Engineering Students using Distance Learning Techniques," *Proceedings of the E-Technologies in Engineering Education: Learning Outcomes Providing Future Possibilities Conference*, United Engineering Foundation, Davos, Switzerland, August 11-16, 2002, [www.coe.gatech.edu/etee/proceedings.php](http://www.coe.gatech.edu/etee/proceedings.php).

Oberst, B. S., Johnson, G. R., and Shihaby, H., "Report on the 6<sup>th</sup> World Congress on Engineering Education E-Conference," *Ideas*, Number 10, Committee on Education and Training, World Federation of Engineering Organizations, pp. 30-35, December 2003.

Siller, T. J. and Johnson, G. R., "Constituent Influences on Engineering Curricula," *Proceedings of the 2004 ASEE Annual Conference* (available on CD-ROM), Salt Lake City, Utah, June 20-23, 2004.

Beaty, S. J., Georgiev, I. and Johnson, G. R., "Computer-Aided Innovation with the Semantic Web," *Proceedings of the 1<sup>st</sup> IFIP TC-5 Working Conference on Computer Aided Innovation*, Daimler-Chrysler Research & Technology: Digital Engineering Competence Center, Ulm, Germany, November 14-15, 2005.

Siller, T. J., Pruden, A., and Johnson, G.R., "A Baccalaureate in International Engineering," *Proceedings of the 7<sup>th</sup> World Congress on Engineering Education*, World Federation of Engineering Organizations, Budapest, Hungary, March 4-8, 2006.

Johnson, G. R., Lakhder, D. and Siller, T. J., "Designing a B.S. Degree Program in Engineering for Globally Sustainable Development," *Proceedings of the 2006 ASEE Annual Conference* (available on CD-ROM), June 18-21, 2006, Chicago, IL, invited paper.

Siller, T. J., Johnson, G. R. and A. Pruden, "Offering an International Degree Program as a Dual Degree with Liberal Arts," *Proceedings of the 2006 ASEE Annual Conference* (available on CD-ROM), June 18-21, 2006, Chicago, IL, invited paper.

Johnson, G.R., McKee, P. and P. Ragouzis, "The Sublime and Depictions of Violence in some Contemporary Artworks," *International Journal of Education and the Arts*, Vol. 10, No. 21, July 29, 2009 ([www.ijea.org/v10n21](http://www.ijea.org/v10n21)).

Siller, T. J. and G. R. Johnson, "Management Structure Designed to Facilitate Changing Engineering Curricula," *International Journal of Engineering Education*, Vol. 25, No. 6, Part II, pp 12-18, 2009.

Siller, T. J. and G. R. Johnson, "Specialization: A Detriment to Problem Conception," *Bulletin of Science, Technology and Society*, Vol. 30, No. 3, pp 214-221, 2010.

Johnson, G. R. and T. J. Siller, "A 21<sup>st</sup> Century Engineering Education Program," Proceedings of the 2010 ASEE Annual Conference (available on CD-ROM), June 20-23, 2010, Louisville, KY.

Siller, T. J. and G. R. Johnson, "Engineering on the Boundaries," Proceedings of the World Engineers Convention – WEC 2011, September 4-9, 2011, Geneva, Switzerland.

Siller, T. J. and G. R. Johnson, "Multiple Perspectives: Key to a New Introductory Engineering Course," Proceedings of the 4<sup>th</sup> Annual Conference on the First Year Engineering Experience, University of Pittsburgh, Pittsburgh, PA, August 9-10, 2012.

Johnson, G. R., McKee, P. and P. Ragouzis, "Susanne Langer's Place in Philosophy," to appear in the *Journal of Aesthetic Education* in 2016.

Siller, T. J., Johnson, G. R. and W. O. Troxell, "What do Sustaining Life and Sustainable Engineering have in Common?," Proceedings of the Seventh International Conference on Engineering Education for Sustainable Development, University of British Columbia, Vancouver, British Columbia, Canada, June 9-12, 2015. Reprinted in New Developments in Engineering Education for Sustainable Development, World Sustainability Series, edited by Filho, Walter Leal and Nesbit, Susan, Springer-Verlag, 2016.

Cook, A., Siller, T. J. and G. R. Johnson, "Creating International Experience for First Year Engineers through the EWB Australia Challenge Project," *Proceedings of the ASEE Annual Conference*, New Orleans, LA, June 24-27, 2016.

Siller, T. J., Johnson, G. R. and Korte, R., "Is there a role for Interprofessional Education (IPE) in the future of Engineering Education for Sustainable Engineering?," *Proceedings of the Eighth International Conference on Engineering Education for Sustainable Development*, Bruges, Belgium, September 4-7, 2016. Awarded the 2016 *Leo Jansen Prize* for the Outstanding Paper.

Johnson, G. R., "Water: A Natural Entrée into Sustainability Education," *Proceedings of the Eighth International Conference on Engineering Education for Sustainable Development*, Bruges, Belgium, September 4-7, 2016.

Lin, J., Johnson, G. R., Parzybok, T. W. and Laro, K. L., *A Semi-automatic CoCoRaHS Rain Gauge Prototype*, 41<sup>st</sup> Annual National Weather Association Conference, Norfolk, VA, Sept 10-15, 2016.

Siller, T. J., Johnson, G. R. and Korte, R., *Broadening Engineering Ontology: Moving Beyond Problem Solving*, *Philosophy and Engineering: Reimagining Technology and Social Progress*, editors: Madhavan, G., Pirtle, Z. and Tomblin, D., Springer, 2021.

Siller, T. J. and Johnson, G. R., “*Why Engineers must be more than Problem Solvers,*” Eighth Forum on Philosophy, Engineering & Technology, fPET, University of Maryland, College Park, Maryland, May 30-June 1, 2018.

As winner of the **2016 Leo Jansen Prize** for outstanding paper at the Eighth International Conference on Engineering Education for Sustainable Development, Bruges, Belgium, September 2016, we presented the opening plenary address: Siller, T. J. and Gearold R. Johnson, “*Engineers Can’t Know/Do It All – or Do it Alone: What is a Holistic Engineer,*” Ninth International Conference on Engineering Education for Sustainable Development, Rowan University, Glassboro, New Jersey, June 3-6, 2018.

Johnson, G. R. and Siller, T. J., “Engineering Education for a Zero-Growth Economy,” *Proceedings of the Tenth International Conference on Engineering Education for Sustainable Development, EESD2020*, University College Cork, Cork, Ireland, June 7-10, 2020.

Siller, T. J., Johnson, G. R. and Siller, R., “We Want a Sustainable Society not Sustainable Development,” *Proceedings of the 127<sup>th</sup> Annual ASEE Conference*, Montreal, Quebec, Canada, June 20-24, 2020.

### **Unpublished Papers**

Baldwin, L. V. and Johnson, G. R., “The Estimation of Turbulent Diffusivities from Anemometer Measurements, Part I: The Fluid Particle,” 1972.

Johnson, G. R. and Baldwin, L. V., “The Estimation of Turbulent Diffusivities from Anemometer Measurements, Part II: The Heavy Particle,” 1973.

### **Published Abstracts and Presentations**

Johnson, G. R. and Thompson, H. D., “Design of Maximum Thrust Plug Nozzles with Variable Inlet Geometry,” presented at the Symposium on Applications of Computers to Fluid Dynamic Analysis and Design, Farmingdale, New York, January 1973.

Johnson, G. R., Marschner, B. W. and Krause, F. R., “Conceptual Feasibility Studies on the Retrieval of Regional Stream Discharge Information from Multi-spectral Earth Observation,” presented at the American Society of Civil Engineers National Meeting on Water Resources Engineering, Washington, D.C., January 29-February 2, 1973.

Munsell, B. W. and Johnson, G. R., “Simulation of Disc Information Retrieving and Storage as Achieved by the SCOPE Operating System,” presented at the Symposium on the Simulation of Computer Systems, National Bureau of Standards, Gaithersburg, MD, June 19—20, 1973.

Johnson, G. R. and Clema, J. K., “Optimal Control Theory and Interactive Computing,” presented at the Fourth Conference on Computers in the Undergraduate Curricula, Claremont, CA, June 18-20, 1973.

Johnson, G. R. and Baldwin, L. V., “An Algorithm for the Estimation of Particulate and Gaseous Diffusion in a Turbulent Flow,” presented at the Summer Computer Simulation Conference, Montreal, Quebec, Canada, July 1973.

Desai, Y. D., Johnson, G. R. and Winn, C. B., "An Application of a Streamflow Simulation Model for Mountainous Watershed Management," presented at the Summer Computer Simulation Conference, Montreal, Quebec, Canada, July 1973.

Rolfe, G. L., Tranter, W. W. and Johnson, G. R., "Models for Transport and Distribution of Lead in the Environment," presented at the First Annual NSF Trace Contaminants Conference, Oak Ridge, Tennessee, August 1973.

Johnson, G. R. and Winn, C. B., "On the Simulation of Solar Heated and Cooled Buildings," presented at the International Solar Energy Society Annual Meeting, Fort Collins, Colorado, August 1974.

Winn, C. B., Johnson, G. R. and Moore, J. B., "Optimal Utilization of Solar Energy in the Heating and Cooling of Buildings," presented at the International Solar Energy Society Annual Meeting, Fort Collins, Colorado, August 1974.

Anderson, L. B., Winn, C. B. and Johnson, G. R., "Solar Heating and Cooling of the Santa Clara Community Center," presented at the International Solar Energy Society Annual Meeting, Los Angeles, California, August 1975.

Johnson, G. R. and Elgabalawi, N., "A Simulation Model for the Dynamic Performance Analysis of Solar Thermal Electric Power Systems," presented at the International Solar Energy Society Annual Meeting, Los Angeles, California, August 1975.

Johnson, G. R. and Winn, C. B., "Performance Comparison between a Computer Performance Analysis Model and the Solar Heated and Cooled Laboratory," presented at the International Solar Energy Society Meeting, Los Angeles, California, August 1975.

Eisenberg, B. A., Johnson, G. R., McCormick, S. F. and Pryor, D. V., "A Microprocessor-based Control System for Solar Heated/Cooled Residential Dwellings," presented at the Joint Automatic Controls Conference, JACC, San Francisco, California, June 1977.

Parkinson, B. W., Winn, C. B. and Johnson, G. R., "Solar Control Strategy Evaluation Using SIMSHAC - A Simulation Program for Solar Heating and Cooling of Buildings," presented at the Workshop on the Control of Solar Energy Systems for Heating and Cooling, U.S. Department of Energy, Hyannis, Massachusetts, May 1978.

Johnson, G. R., "Pascal Compilers for Microcomputers," presented at the Software Engineering Conference of the British Computer Society, Queen Mary College, London, England, June 1979, invited presentation.

Johnson, G. R., "Algorithmic Control," presented at the Joint Automatic Controls Conference, JACC, San Francisco, California, October 1980, invited presentation.

Richardson, R. D. and Johnson, G. R., "Intelligent Statics Tutor," presented at the ASEE 1985 Annual Conference, Atlanta, Georgia, June 16-20, 1985.

Johnson, G. R., "Bi-directional I/O in CSP," presented at the Fourth Annual Occam Users Group Meeting, Manchester Polytechnic, Manchester, England, March 1986.

Johnson, G. R., "Resource Allocation for Undergraduate Computing," presented at the National Congress on Engineering Education, ABET, Washington D.C., November 1986, invited presentation.

Fitzhorn, P. A., Johnson, G. R. and Kirkpatrick, A. T., "A Computing Experience for Engineering Freshmen," presented at the 1988 ASEE Rocky Mountain Section Meeting, Fort Collins, Colorado, April 8-9, 1988.

Johnson, G. R., "The Software Crisis: Education and Training," presented to the Joint Air Force Contractors' CEO Conference, Albuquerque, New Mexico, April 1988, invited presentation.

Johnson, G. R. "Software Engineering Process -- Is the Vision Clear?," presented at the National Total Quality Management Symposium (TQM-II), Baltimore, Maryland, November 12-16, 1990, invited presentation.

Johnson, G. R., "Improving Faculty Productivity," presented at the 1991 ASEE Annual Conference, New Orleans, Louisiana, June 16-18, 1991, invited presentation.

Fitzhorn, P. A. and Johnson, G. R., "A Freshman Educational Model for the 90's Computing Environment," presented at the 1992 ASEE Annual Conference, Toledo, Ohio, June 20-24, 1992.

Johnson, G. R., "A National Mechanism for Sharing Premier Graduate Science and Engineering Education," presented at the WATTEc '95 Twenty-second Annual Conference, Knoxville, Tennessee, January 21-23, 1995, invited presentation.

Johnson, G. R., "Expanding the Reach of Intelligent Transport Systems Education/Training," presented at the Third Annual ITS World Congress, October 14-18, 1996, Orlando, Florida, invited presentation.

Baldwin, L. V. and Johnson, G. R., "The Emergence of Distance Learning as a Viable Alternative for Corporate Training," presented at MIT's Center for Advanced Educational Services and Industrial Liaison Program, (available on videotape from MIT CAES), Cambridge, Massachusetts, November 18-19, 1996, invited presentation.

Johnson, G. R., "On-Line Learning: Continuing the Case for Asynchronous Learning Networks (ALNs)," presented at the 1997 ASEE Annual Conference, Milwaukee, WI, June 15-18, 1997, invited presentation.

Johnson, G. R., "Issues to Consider When Creating Distance Learning Programs," presented at the 1998 Rocky Mountain Conference of the Consortium for Computing in Small Colleges, Central Wyoming College, Riverton, WY, October 16-17, 1998, invited keynote address.

Johnson, G. R., "Real World Advice on Distance Education Partnerships from an Experienced Educational Reformer," presented at the Department of Education's Fund for the Improvement of Post-secondary Education (FIPSE) Workshop, Learning Anytime Anywhere Partnerships (LAAP), Denver, CO, March 3, 1999, invited presentation.

Johnson, G. R., “National Technological University’s Distance Management Programs,” presented at the 1999 Annual Academy of Management Conference, Chicago, IL, August 6-11, 1999, invited presentation.

Johnson, G. R., Troxell, W. O. and Siller, T. J., “An International Network for Technology-based Engineering Education,” presented at the 2000 ASEE Annual Conference, St. Louis, MO, June 18-21, 2000.

Lih, M. M. and Johnson, G. R., “International Decade for Engineering Advancement (IDEA),” presented at the 2000 ASEE Annual Conference, St. Louis, MO, June 18-21, 2000.

Pudlowski, Z. J. and Johnson, G. R., “The UNESCO International Centre for Engineering Education (UICEE),” presented at the 2000 ASEE Annual Conference, St. Louis, MO, June 18-21, 2000.

Johnson, G. R., “The National Technological University,” presented at Wanderstudent 2000, October 20-21, 2000, Leuven, Belgium, invited presentation.

Johnson, G. R., “New Methods for Delivering Education and Degree Programs,” presented at the American Water Resources Association and Universities Council on Water Resources Summer Specialty Conference, Snowbird, Utah, June 27-30, 2001, invited presentation.

Johnson, G. R., “Experiences with Information and Communications Technologies in Engineering Education at a Distance,” presented at the First Joint ASEE/SEFI International Colloquium, Technical University of Berlin, Berlin, Germany, October 1-4, 2002, invited presentation.

Jones, R.C., Johnson, G.R., Oberst, B.S., and Shihaby, H., “WFEO/ASEE e-Conference Summaries,” presented at the 6<sup>th</sup> World Congress on Engineering Education, WFEO/ASEE International Colloquium, Nashville, TN, June 20-22, 2003, invited presentation.

Marcek, D. and Johnson, G. R., “Update from the Task Force on Science, Technology and Innovation of the UN Millennium Project,” presented at the 2005 ASEE Annual Conference, June 12-15, 2005, Portland, OR.

Siller, T. J. and Johnson, G. R., “Constituent Groups for Engineering Education,” presented at the 2005 Dane and Mary Louise Miller Symposium and the Center for Advanced Scholarship in Engineering Education (CASEE) Annual Meeting, National Academy of Engineering, October 18-19, 2005, Indianapolis, IN, invited presentation.

Johnson, G. R., “Taking Undergraduate Engineering Students to China: A Hunan University – Colorado State University Collaborative Faculty-led Immersion Course,” presented at the 17<sup>th</sup> Colloquium on International Engineering Education, University of Rhode Island, Providence, RI, November 6-8, 2014, invited presentation.

## **Reports**

Johnson, G. R. and L'Ecuyer, M. R., *Velocity and Pressure Measurements in a Spinning Cold-flow Rocket Motor*, Report No. TM68-6, Jet Propulsion Center, Purdue University, West Lafayette, Indiana, August 1968, (based upon M.S. Thesis of same title).

Johnson, G. R., Thompson, H. D. and Hoffman, J.D., *Design of Maximum Thrust Plug Nozzles with Variable Inlet Geometry, Vol. I, Theoretical Development and Results*, AFAPL-TR-70-75, Vol. I, Air Force Aero Propulsion Laboratory, Wright-Patterson Air Force Base, Ohio, October 1970, (based upon Ph.D. Dissertation of same title).

Johnson, G. R., *Supersonic Gas Solid Particle Flow in an Axisymmetric Nozzle by the Method of Characteristics*, TN-78, von Karman Institute for Fluid Dynamics, Rhode-Saint Genese, Belgium, August 1971.

Johnson, G. R., Thompson, H. D. and Hoffman, J. D., *Design of Maximum Thrust Plug Nozzles with Variable Inlet Geometry, Vol. II. Computer Program Manual*, AFAPL-TR-70-75, Volume II, Air Force Aero Propulsion Laboratory, Wright-Patterson Air Force Base, Ohio, December 1971.

Winn, C. B., Johnson, G.R., Ruff, J. G. and Rasmussen, J. L., *SNOPSET, Final Report*, NASA NAS8-21049, ME72-2, Department of Mechanical Engineering, Colorado State University, Fort Collins, Colorado, June 1972.

Frey, W. H. and Johnson, G. R., *Computational Methods in Fluid Mechanics*, CN-84, von Karman Institute for Fluid Dynamics, Rhode-Saint Genese, Belgium, September 1972.

Duong, N., Johnson, G. R. and Winn, C. B., *Modern Control Concepts in Hydrology*, NASA Contractor Report CR129020, February 1974.

Mueller, R. A. and Johnson, G. R., *SIM/GEN 5.3 User's Manual*, University Computer Center Report UCC-76-1, Colorado State University, Fort Collins, Colorado, July 1976.

Mueller, R. A. and Johnson, G. R., *ASM/GEN 5.1 User's Manual*, University Computer Center Report UCC-76-2, Colorado State University, Fort Collins, Colorado, July 1976.

Mueller, R. A. and Johnson, G. R., *The Automated Generation of Microcomputer Software*, University Computer Center Report UCC-76-3, Colorado State University, Fort Collins, Colorado, September 1976.

Johnson, G. R. and Berry, M. C., *A Low Cost Microprocessor Based Data Acquisition System*, University Computer Center Report UCC-76-4, Colorado State University, Fort Collins, Colorado, November 1976.

Tan, R. and Cichelli, R., *ASM/GEN and SIM/GEN: A Tutorial*, edited by G. R. Johnson, University Computer Center Report UCC-77-1, Colorado State University, Fort Collins, Colorado, July 1976.

Reiter, E. R., Johnson, G. R., et al., *The Effects of Atmospheric Variability on Energy Utilization and Conservation*, Technical Report COO-1340-47, Department of Atmospheric Science, Colorado State University, Fort Collins, Colorado, November 1976.

Winn, C. B. and Johnson, G. R., *Solar Energy Analysis Programs for Programmable Handheld Calculators*, SEEC-TR-98, Fort Collins, Colorado, March 1977.

Winn, C. B. and Johnson, G. R., *Solar System Annual Performance and Life Cycle Cost Programs for Programmable Handheld Calculators*, SEEC-TR-90, Fort Collins, Colorado,



August 1977.

Reiter, E. R., Johnson, G. R., et al., *The Effects of Atmospheric Variability on Energy Utilization and Conservation*, Department of Atmospheric Science, Environmental Research Paper No. 14, Colorado State University, Fort Collins, Colorado, February 1978.

Johnson, G. R., *Information Processing for Optimization of Energy Utilization in Structures*, University Computer Center Report UCC-78-1, Colorado State University, Fort Collins, Colorado, May 1978.

Reiter, E. R., Johnson, G. R., et al., *The Effects of Atmospheric Variability on Energy Utilization and Conservation*, Department of Atmospheric Science, Environmental Research Paper No. 18, Colorado State University, Fort Collins, Colorado, March 1979.

Johnson, G. R. and Parsons, A. L., *Code Generation by Macro Expansion in a Pascal Cross-Compiler for Microcomputers*, University Computer Center Report No. UCC-79-1, Colorado State University, Fort Collins, Colorado, June 1979.

Johnson, G. R., *FORTTRAN Program Preparation and Staging System*, University Computer Center Report No. UCC-79-2, Colorado State University, Fort Collins, Colorado, September 1979.

Reiter, E. R., Johnson, G. R., et al., *The Effects of Atmospheric Variability on Energy Utilization and Conservation*, Department of Atmospheric Science, Environmental Research Paper No. 24, Colorado State University, Fort Collins, Colorado, April 1980.

Johnson, G. R., *PL/EG - A Structured Programming Language for EG101 Students*, Center for Computer Assisted Engineering Report No. TM80-1, Colorado State University, Fort Collins, Colorado, September 1980.

Johnson, G. R. and Moravan, M. J., *Program Preparation and Staging System*, University Computer Center Report No. UCC-81-1, Colorado State University, Fort Collins, Colorado, February 1981.

Johnson, G. R., Kincaid, J. M., Kittinger, B. E. and Meakins, R. K., *SEUL: A Program Preparation and Staging System for Introductory Programming Instruction*, University Computer Center Report No. UCC-81-2, Colorado State University, Fort Collins, Colorado, March 1981.

Reiter, E. R., Johnson, G. R. et al., *The Effect of Atmospheric Variability on Energy Utilization and Conservation*, Department of Atmospheric Science, Environmental Research Paper No. 31, Colorado State University, Fort Collins, Colorado, April 1981.

Johnson, G. R., Herron, G. J. and Fitzhorn, P. A., *Design and Implementation of a Computer Generated Missile Imaging Simulator*, Center for Computer Assisted Engineering Report, Colorado State University, September 1984.

Johnson, G. R., *Center for Computer Assisted Engineering Annual Report*, Colorado State University, Fort Collins, Colorado, December 1986.

Johnson, G. R., *Center for Computer Assisted Engineering Annual Report*, Colorado State University, Fort Collins, Colorado, December 1987.

Johnson, G. R., *Center for Computer Assisted Engineering Annual Report*, Colorado State University, Fort Collins, Colorado, December 1988.

Labadie, J. W. and Johnson, G. R., *Final Research Report—Knowledge-based Optimization via Symbolic Dynamic Programming*, Center for Computer Assisted Engineering, Colorado State University, Fort Collins, Colorado, July 1990.

Johnson, G. R., *Self-study: The National Technological University*, for the Commission on Institutions of Higher Education, North Central Association of Colleges and Schools, Chicago, IL, March 1997.

Lakhder, D. M. and Johnson, G. R., *Establishment of the Arab Satellite University of Science and Technology (ASUST)*, UNESCO, Paris, France, 1997.

Beaty, S. J. and Johnson, G. R. (editors), *Proceedings from the Third Conference on Massively-Parallel Computing Systems, MPCs '98*, (on CD-ROM), Published by the National Technological University Press, ISBN: 0-9669530-0-2, Fort Collins, CO, 1998.

### **Video-Publications**

Johnson, G. R., *Beginning Pascal*, Ten 30 minute, color videotapes and a 174 page self-study guide published by Colorado State University, Engineering Renewal and Growth Program, Fort Collins, Colorado, 1980.

Johnson, G. R., *Intermediate Pascal*, Eight 30 minute, color videotapes and a 149 page self-study guide published by Colorado State University, Engineering Renewal and Growth Program, Fort Collins, Colorado, 1980.

Johnson, G. R., *Advanced Pascal*, Six 30 minute, color videotapes and a 94 page self-study guide published by Colorado State University, Engineering Renewal and Growth Program, Fort Collins, Colorado, 1980.

### **Book Review**

Johnson, G. R., "PASCAL: An Introduction to Methodical Programming," *Software News*, Vol. 1, No. 6, p. 30, October 5, 1981.

## **Professional Activities**

### **Professional Societies**

American Association of Engineering Societies (AAES) representative to the World Federation of Engineering Organizations (WFEO), member of the Standing Committee on Education and Training (CET).

Association for Computing Machinery (ACM), member (Sigmicro, Sigplan). Elected chair of Sigmicro, terms of office July 1983–June 1985; July 1985–June 1987.

IEEE, Life Member (also IEEE Computer Society). Founder and Faculty Advisor of the Colorado State University Student Chapter of the IEEE Computer Society, 1981–1994.

ASME, member, Faculty Advisor of the Colorado State University Student Chapter, 1975-1978. Winner of Bendix Award, Outstanding ASME Student Chapter, 1976, 1977, 1978.

American Society of Engineering Education (ASEE), member. International Division, elected Newsletter Editor, term of office May 2006–June 2008, elected Vice-Chair/Chair Elect, terms of office (Vice-Chair) May 2007–June 2009, (Chair) May 2009–June 2011.

Euromicro, member. U.S. elected representative on Euromicro Board of Directors, two year terms, 1996–2018.

Société Européenne pour la Formation des Ingénieurs (SEFI), European Society for Engineering Education, member.

Affiliated Scholar (with T. J. Siller), Center for the Advancement of Scholarship on Engineering Education (CASEE), National Academy of Engineering.

Mathematical Association of America (MAA), member.

Faculty member in the Osher Life-long Learning Institute at Colorado State University.

## **Journals**

Assistant Editor, *International Journal of Computer and Software Engineering*, published by Ablex Publishing Corporation, Norwood, NJ.

Editorial Board, *Journal of Design and Manufacturing*, published by Chapman and Hall (U.K.). In 1996, this Journal was absorbed into the *IIE Transactions: Focused Issues on Manufacturing and Design* (continue on editorial board).

Editorial Advisory Board, *Global Journal of Engineering Education*, published by the UNESCO International Centre for Engineering Education, Clayton, Melbourne VIC 3168, Australia.

Editorial Board, *Journal of Computational Methods in Science and Engineering*, Cambridge International Sciences Publishing Ltd., Cambridge, UK

Editorial Advisory Board, *World Transactions on Engineering and Technology Education*, published by the UNESCO International Centre for Engineering Education, Clayton, Melbourne VIC 3168, Australia.

Co-editor, *Computing: Archives for Scientific Computing*, Springer-Verlag, Vienna, Austria, term 1997-2000.

Editorial Board, Computer Science Monographs, Springer-Verlag, Vienna, Austria, term 1997-2000.

Reviewer for *Simulation*, *Microprocessors*, *Solar Energy*, *IEEE Transactions on Computers*, *IEEE Micro*, *ASME Journal of Mechanical Design*, *Software Practice & Experience*, Prentice-Hall, Inc., Brooks/Cole Publishing Co., Addison-Wesley, McGraw-Hill, Cambridge University Press, and Benjamin-Cummings.

## **Boards and Committees**

National Technological University Foundation, Vice-President, member of four-person

Board of Trustees. (1999-2010).

Village Earth, Chairman of the eleven-person Board of Directors, 2003–2007.  
([www.villageearth.org](http://www.villageearth.org))

International Collaborative for Engineering Education and Innovation (ICEEI), member of seven-person international group.

UNESCO International Committee on Engineering Education (UICEE), terms 1996–2000, (Paris, France), member of nine-person international committee, reporting directly to the Director-General of UNESCO. The UICEE superseded the Steering Committee on Technical Human Resources Development but was discharged by UNESCO in 2000.

UNESCO Steering Committee on Technical Human Resources Development, terms 1992-1996, (Paris, France), member of twelve-person international committee.

International Liaison Group for Engineering Education (ILG-EE), member.

Advisory Board member of the IEEE Technical Committee on Microprogramming and Microarchitecture.

Selection Committee member, Newly Independent States (NIS), IREX, International Research & Exchanges Board, Washington, D.C.

Reviewer, the Italian Space Agency (ASI).

Advisor, Japan Productivity Center for Socio-Economic Development's Research Center for Technology and Innovation Management, Tokyo, Japan.

### **Conference Organization and Committees**

Organizer of First (1977) and Second (1978) Rocky Mountain Symposia on Microcomputers, Colorado State University, Pingree Park, Colorado.

Vice Chairman, ACM/IEEE 11<sup>th</sup> Annual Workshop on Microprogramming, Micro-11, Asilomar, Pacific Grove, California, 1978.

Vice Chairman, ACM/IEEE 12<sup>th</sup> Annual Workshop on Microprogramming, Micro-12, Hershey, Pennsylvania, 1979.

Vice Chairman, ACM/IEEE 19<sup>th</sup> Annual Workshop on Microprogramming, Micro-19, New York, New York, 1986.

Vice Chairman, ACM/IEEE 21<sup>st</sup> Annual Workshop on Microprogramming, Micro-21, San Diego, California, 1988.

General Chairman, ACM/IEEE 13<sup>th</sup> Annual Workshop on Microprogramming, Micro-13, Colorado Springs, Colorado, 1980.

General Chairman and Program Chairman, ACM/IEEE 20<sup>th</sup> Annual Workshop on Microprogramming, Micro-20, Colorado Springs, Colorado, 1987.

General Chairman and Program Chairman, ACM/IEEE 22<sup>nd</sup> Annual Workshop on Microprogramming and Microarchitecture, Micro-22, Dublin, Ireland, 1989.

Technical Program Committees, ACM/IEEE International Symposia on Microarchitecture, (also known as the Annual Workshop on Microprogramming and/or Microarchitecture), 1978 through 1995.

Steering Committees, ACM/IEEE International Symposia on Microarchitecture, (also known as the Annual Workshop on Microprogramming and/or Microarchitecture), 1986 through 1999.

Technical Program Committee, ACM Siggraph '86, 1986.

Technical Program Committee, First International Workshop on Formal Methods in Engineering Design, Colorado Springs, Colorado, 1990.

Scientific and Steering Committees, Euromicro International Conference on Massively Parallel Computing Systems: the Challenge of General-Purpose and Special-Purpose Computing, Isle of Ischia, Italy, May 2-6, 1994.

Technical Program Committee, IEEE First International Conference on Algorithms and Architectures for Parallel Computing, Brisbane, Queensland, Australia, April 19-22, 1995.

Steering, Program and Organizing Committees, 1995 UNESCO International Congress of Engineering Deans and Industry Leaders, Melbourne, Victoria, Australia, July 3-6, 1995.

Program Committee, Euromicro Workshop on Parallel and Distributed Processing, Braga, Portugal, January 24-26, 1996.

Scientific and Steering Committees, Euromicro Second International Conference on Massively Parallel Computing, Isle of Ischia, Italy, May 6-9, 1996.

Steering, Program and Organizing Committees, 1996 UNESCO International Congress of Engineering Educators and Industry Leaders, Paris, France, July 2-6, 1996.

Program Committee, 3rd East-West Congress on Engineering Education, Gdynia, Poland, September 16-20, 1996.

Program Committee, 1st Asia-Pacific Forum on Engineering and Technology Education, Monash University, Clayton, Melbourne, Australia, July 6-9, 1997.

International Advisory Committee, International Conference on Engineering Education: An Asian Perspective, Indian Institute of Technology, Madras, Chennai, India, January 12-14, 1998.

Program Committee, 1<sup>st</sup> Pan-African Forum on Engineering and Technology Education, Jomo Kenyatta University of Agriculture and Technology, Nairobi, Kenya, January 18-21, 1998. Conference canceled due to political instability.

Program Committee, 1<sup>st</sup> Latin American and Caribbean Forum on Engineering and Technology Education, Puebla, Mexico, January 25-28, 1998.

Organizing and Scientific Committee, International Symposium on Energy and Environmental Management and Technology, ICREEMT, Long Beach, California, January 29-31, 1998.

Co-chair, Euromicro Third International Conference on Massively Parallel Computing, Colorado Springs, Colorado, April 6-9, 1998.

Program Committee, Euromicro Workshop on Software Process and Product Improvement, 24<sup>th</sup> Euromicro Conference, Västerås, Sweden, August 25-27, 1998.

Steering Committee and Program Committee, Global Congress on Engineering Education, Cracow, Poland, September 6-11, 1998.

Steering Committee, 100<sup>th</sup> Anniversary Jubilee Conference on Engineering Education, Fachhochschule Mannheim, Mannheim, Germany, September 17-19, 1998.

Steering Committee, Second Asia-Pacific Forum on Engineering and Technology Education, The University of Sydney, Sydney, NSW, Australia, July 4-7, 1999.

Program Committee, Euromicro Workshop on Software Process and Product Improvement, 25<sup>th</sup> Euromicro Conference, Milan, Italy, September 8-10, 1999.

Steering Committee and Program Committee, Second Global Congress on Engineering Education, Wismar, Federal Republic of Germany, July 2-7, 2000.

Program Committee, Euromicro Workshop on Software Process and Product Improvement, 26<sup>th</sup> Euromicro Conference, Maastricht, The Netherlands, September 8-10, 2000.

Program Committee, Euromicro Workshop on Software Process and Product Improvement, 27<sup>th</sup> Euromicro Conference, Warsaw, Poland, September 4-6, 2001.

Co-chair, The First Electronic Conference on Engineering Education, held in conjunction with the SEFI 2001 Annual Conference, Copenhagen, Denmark, September 12-14, 2001.

Scientific and Steering Committees, Euromicro Fourth International Conference on Massively Parallel Computing, Isle of Ischia, Italy, April 9-12, 2002.

Program Committee, Euromicro Workshop on Software Process and Product Improvement, 28<sup>th</sup> Euromicro Conference, Dortmund, Germany, September 5-7, 2002.

Steering Committee, Frontiers in Computing Conference, ACM, Isle of Ischia, Italy, April 14-16, 2004.

Program Committee, ASEE/Tsinghua University International Colloquium, Beijing, China, September 7-10, 2004.

Steering Committee and Program Committee, Frontiers in Computing Conference, ACM, Isle of Ischia, Italy, May 4-6, 2005.

International Advisory Board, 7<sup>th</sup> World Congress on Engineering Education, Budapest, Hungary, March 4-8, 2006.

Steering Committee and Program Committee, Frontiers in Computing Conference, ACM, Isle of Ischia, Italy, May 3-5, 2006.

Steering Committee, Frontiers in Computing Conference, ACM, Isle of Ischia, Italy, May

7-9, 2007.

Steering Committee, Frontiers in Computing Conference, ACM, Isle of Ischia, Italy, May 2-4, 2008.

Steering Committee and General Co-chair, Frontiers in Computing Conference, ACM, Isle of Ischia, Italy, May 18 - 20, 2009.

Steering Committee and Program Committee, Frontiers in Computing Conference, ACM, Isle of Ischia, Italy, May 3-5, 2011, [www.computingfrontiers.org](http://www.computingfrontiers.org).

### **Honors and Awards**

Listed in Who's Who in Engineering, Who's Who in the West, Who's Who in Technology Today, Who's Who in the World, Who's Who in Distance Education, International Who's Who in Engineering, Who's Who Directory of Computer Graphics, American Men and Women in Science, Directory of Legal Experts and Consultants, and Who's Who in the Computer Industry.

The World Innovation Foundation ([www.thewif.org.uk](http://www.thewif.org.uk)), Fellow.

New York Academy of Sciences, member.

Honorary Companion of the Examination Technique Academy, U.K., at any one time there are only 100 honorary companions throughout the world (<http://www.examta.ac.uk/hotlinks.htm>).

Awarded the UNESCO International Centre for Engineering Education's Silver Badge of Honour "for distinguished contributions to engineering education," September 11, 1998.

Awarded Outstanding Teacher Awards, Mechanical Engineering, 1976; Engineering Science, 1980, 1982, 1985, 1992; College of Engineering (Engineering Dean's Council Cash Awards), 1983, 1987, and 1994; First College Award for Innovation in Teaching, 1991 (Engineering Dean's Council Cash Award), Colorado State University.

Outstanding Engineering Undergraduate Advisor Awards, College of Engineering, Colorado State University, 1991 and 1992.

Commencement speaker for the College of Engineering, Colorado State University, Fort Collins, CO, December 17, 2005.

### **Research Grants**

#### **Grants at Colorado State University (Principal or Co-principal Investigator):**

1973-1974, \$40,000, NASA: "Remote Sensing Applications in Hydrology."

1975-1976, \$12,000, Colorado Energy Research Institute: "Energy Conservation Through Passive Design."

1975-1976, \$22,000, NASA: "Gust Turbulence Modeling."

1975-1978, \$129,000, NSF: "Software Systems and Applications for Microcomputers."

1978-1979, \$6,000, Annual Simulation Symposium Grant: "A Simulation Package for Microcomputers."

1978-1980, \$87,000, Control Data Corporation: "A Student FORTRAN System."  
 1979-1981, \$4,000, BSRG: "A Variable Force Exercise System."  
 1981-1982, \$10,000, Hewlett-Packard Corporation: "Software for the HP64000."  
 1982-1983, \$30,000, Control Data Corporation: "Computer Assisted Engineering."  
 1984, \$20,000, BDM Company: "Missile Imaging System."  
 1986-1988, \$120,000, Evans and Sutherland Corporation: "Retargetable Microcode Compiler."  
 1988, \$50,000, IBM: "First Year Engineering Design."  
 1988, \$50,000, IBM: "Heterogeneous Networks."  
 1988-89, \$81,000, U.S. West: "Knowledge-based Optimization via Symbolic Dynamic Programming."  
 1990, \$94,500, Air Pollution Control Division, Colorado Department of Health: "Computer-based Mobile Emissions Mapping."  
 1991-1993, \$143,000, NSF: "Freshman Computing and Design: A Unified Approach."

**Grants for development of the CSU Center for Computer Assisted Engineering:**

1981, \$250,000; Rockwell International Corporation, Pittsburgh, PA  
 1982, \$250,000; Martin Marietta Corporation, Baltimore, MD  
 1982, \$90,000; Eastman Kodak, Rochester, NY  
 1982, \$120,000; Evans & Sutherland, Salt Lake City, UT  
 1982, \$400,000; Digital Equipment Corporation, Maynard, MA  
 1982, \$50,000; Storage Technology Corporation, Louisville, CO  
 1983, \$250,000; Peter Kiewit Sons', Inc., Omaha, NE  
 1984, \$60,000; Evans and Sutherland, Salt Lake City, UT  
 1984, \$250,000; Rockwell International Corporation, Pittsburgh, PA  
 1984, \$75,000; Storage Technology Corporation, Louisville, CO  
 1985, \$30,000; Amoco Foundation, Chicago, IL  
 1986, \$430,000; Hewlett Packard, Fort Collins, CO  
 1987, \$210,000; Hewlett Packard, Fort Collins, CO  
 1987, \$60,000; Gates Corporation, Denver, CO  
 1987, \$100,000; Evans & Sutherland, Salt Lake City, UT  
 1988, \$100,000; Amoco Foundation, Chicago, IL  
 1988, \$270,000; Hewlett Packard, Fort Collins, CO  
 1988, \$1,000,000; Digital Equipment Corporation, Maynard, MA  
 1989, \$250,000; NCR, Dayton, OH  
 1990, \$12,500; Amoco Foundation, Chicago, IL  
 1991, \$12,500; Amoco Foundation, Chicago, IL

**Grants at NTU (Principal or Co-Principal Investigator):**

1995, \$26,000; NSF: "1995 Discover Engineering! Teleconference."  
 1996, \$10,000; NSF: "1996 Discover Engineering! Teleconference."  
 1996, \$6,000; GE Foundation: "NTU World Wide Web."  
 1997, \$10,000; NSF: "1997 Discover Engineering! Teleconference."  
 1997, \$100,000; NSF: "An NSF Innovation Channel to Enhance the Faculty Forum."  
 1998, \$10,000; NSF: "1998 Discover Engineering! Teleconference"  
 1999, \$10,000; NSF: "1999 Discover Engineering! Teleconference"  
 2000, \$10,000; NSF: "2000 Discover Engineering! Teleconference"

**Grants at NTU Foundation (Principal or Co-Principal Investigator):**

2004, \$2,500, IACET: "Standards and Guidelines for Learning"



## **Associate Investigator**

On grants in solar energy, community energy modeling, and lead in the environment, support for these grants was in excess of \$3 million.

## **Course Experience**

### **Graduate Courses Taught**

*Optimal Control I and II* - a one-year sequence in optimal control theory. Course material includes algebraic extremum problems, calculus of variations, linear regulator theory, bounded control problems, neighboring optimal strategy and numerical solution procedures.

*Algorithmic Control* - a one-semester course in the theory and application of embedded micro-controllers and microprocessors for controlling industrial processes.

*Analysis of Deterministic Systems* - a one-semester course in modern time and frequency domain methods for analyzing deterministic physical systems.

*Design of Polymorphic Programming Languages* - a one-semester course in the design of modern programming languages to support engineering computing systems.

*Distributed Operating Systems* - a one-semester course on design and implementation of heterogeneous network based operating systems.

*Object Oriented Systems* - a one-semester course on the goals, paradigms and design alternatives in object oriented systems.

### **Undergraduate Courses Taught**

*Automatic Control Systems* - a one-semester course in modern digital control theory, discrete systems using backward shift operator, frequency domain solutions, state space and transfer function formulations, controllable and observable systems, sampled data systems, with applications to electrical, mechanical, fluidic and hydraulic control problems.

*Engineering Principles I and II* - a one-year sequence in engineering problem solving and design using computers and computer graphics. Developed an advanced version for students with previous computing experience. One of the first Scheme based courses for engineering students in the U.S.

*Engineering Modeling, Analysis and Instrumentation* - a one-semester course in modeling and analysis of engineering design problems using analytic and numerical solution techniques. Course is integrated with a laboratory.

*Compressible Fluid Mechanics* - a one-semester course in the dynamics and thermodynamics of compressible fluid mechanics. Topics covered consist of the development of the governing equations, flow with area change, flow with friction (Fano), flow with heat addition (Rayleigh), and normal and oblique shock waves.

*Introduction to Microprocessors* - a one-semester course in microprocessor organization. Topics covered include CPU organization, I/O handling, bus structures, interrupts, and software development.

*Computer System Design* - a one-semester course in the organization and design of digital computers. Topics include computer components, computer design, instruction sets, memory organization and input/output devices. The course includes a laboratory where the students build and check out a microcomputer.

*Software Tools* - a one-semester course covering software development of common software products such as file utilities, filters, editors, macro processors, pre and post processors. Students construct a software environment using Pascal, Scheme, C, C++, or Smalltalk.

*Computer Networks* - a one-semester course on computer networks and distributed system design. Course covers the seven-layer OSI standard for specifying network interaction. Examples include ARPANet, DECNET, Ethernet, X.25, and the Cambridge Ring structures. Both network hardware and software are emphasized.

*Computer Aided Design* - a one-semester course on 3D computer aided design for all engineering areas. Examples are taken from mechanical, electrical, chemical, civil and computing engineering. The course includes a lab using the equipment in the Center for Computer Assisted Engineering.

*Engineering Grand Challenges* – a one-semester course for open-option first-year engineering students presenting the National Academy of Engineering’s Engineering Grand Challenges for the 21<sup>st</sup> Century

## Graduate Students

### Doctor of Philosophy, Colorado State University

Mansour Nazer (1978) Thesis Title: *Thermal Performance of a Building and Two Flat Plate Collector Systems*. Currently Vice President, Planning and Business Development, Saudi

Arabia Mining Company. Previously Secretary-General, King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia.

Robert A. Mueller (1981) Thesis Title: *Automated Microcode Synthesis*. Currently Founder and President, B-Net, Inc., Seattle, Washington. Previously, Associate Professor, Computer Science, Colorado State University.

Nabil Elgabalawi (1982) Thesis Title: *Cost and Performance Evaluation of Terrestrial Solar Thermal Power Systems*. Retired, previously, Program Manager, Raytheon, Los Angeles, California.

Patrick M. Lenders (1985) Thesis Title: *Modeling Distributed Systems with Logic Programming Languages*. Retired, previously, Associate Professor and Chair, Computer Science, University of New England, Armidale, New South Wales, Australia.

Patrick A. Fitzhorn (1985) Thesis Title: *Syntactic Solid Modeling*. Retired, previously, Associate Professor and Associate Chair, Mechanical Engineering, Colorado State University, Fort Collins, Colorado; named NSF Presidential Young Investigator, 1988.

Heryee H. Leong (1986) Thesis Title: *Exploratory System Identification via Group Method of Data Handling (GMDH) Algorithm*. Retired, previously Senior Scientist, Libbey-

Owens-Ford Co., Shelbyville, Indiana.

Ray C. Richardson (1986) Thesis Title: *Intelligent Computer Aided Instruction in Statics*. Retired, previously Associate Professor, Mechanical Engineering, U.S. Air Force Academy, Colorado Springs, Colorado

Wade O. Troxell (1987) Thesis Title: *Systematics for Automatic Plan Generation in Robotic Assembly*. 1987/1988 NATO Post-doctoral Fellow, University of Edinburgh, Edinburgh, Scotland. Currently Associate Professor, Mechanical Engineering, College of Engineering, Colorado State University, Fort Collins, Colorado.

Steven J. Beaty (1991) Thesis Title: *A Study of Instruction Scheduling using Genetic Algorithms*. Currently Professor, Mathematics and Computer Science, Metropolitan State College, Denver, Colorado.

Richard T. Turley (1991) Thesis Title: *Essential Competencies of Exceptional Professional Software Engineers*. Retired, previously instructor, College of Business, Colorado State University, Fort Collins, Colorado.

Anne M. Sjostrom (1992) Thesis Title: *Communication in a Persistent Computing Environment*. 1992/1993 NATO Post-doctoral Fellow, Vrije Universiteit Brussel, Brussels, Belgium. Retired, previously Projects Coordinator, Cooperative Research Centre for Greenhouse Gas Technologies, Canberra, Australia.

#### **Ph.D. External Examiner**

Ronald R. Malyan (1990) Kingston Polytechnic, U.K., Thesis Title: *Machine Learning for Hand Printed Character Perception*. Currently Reader, Kingston University, U.K.

#### **Master of Science -- thesis students, Colorado State University**

Paula L. Beaty (M.S. Mechanical Engineering)  
Daniel M. Berner (M.S. Mechanical Engineering)  
Christine C. Burns (M.S. Mechanical Engineering)  
Blaine A. Eisenberg (M.S. Computer Science)  
Nabil Elgabalawi (M.S. Mechanical Engineering)  
Christopher O. Fedde (M.S. Mechanical Engineering)  
Patrick A. Fitzhorn (M.S. Computer Science)  
Philip N. Garner (M.S. Mechanical Engineering)  
Karim Kaddich (M.S. Mechanical Engineering)  
James M. Kincaid III (M.S. Computer Science)  
Jieqi Lin (M.S. Mechanical Engineering)  
Robert K. Meakins (M.S. Mechanical Engineering)  
Loretta A. Morroni (M.S. Civil Engineering)  
Robert A. Mueller (M.S. Mechanical Engineering)  
Angela L. Parsons (M.S. Computer Science)  
Daniel V. Pryor (M.S. Mechanical Engineering)  
William W. Raymann (M.S. Computer Science)  
Stephen L. Schwartz (M.S. Computer Science)  
Tom Sze-Tsan Sheng (M.S. Mechanical Engineering)  
Anne M. Sjostrom (M.S. Mechanical Engineering)

Daniel H. Small (M.S. Mechanical Engineering)  
Eva M. Thigpen (M.S. Mechanical Engineering)  
Wade O. Troxell (M.S. Mechanical Engineering)  
Lu Wang (M.S. Mechanical Engineering)  
Michael Whitchurch (M.S. Mechanical Engineering)  
Christine H. Whitley (M.S. Mechanical Engineering)

**Master of Science -- non-thesis students, Colorado State University**

Scott C. Douglas (M.S. Mechanical Engineering)  
Durl E. Jones (M.S. Mechanical Engineering)

**Master of Science -- thesis students, National Technological University**

Lisa D. Amini (M.S. Computer Engineering)

**Master of Science -- non-thesis students, National Technological University**

Jean M. Aschenbrenner (M.S. Computer Science)  
Jan R. Badovinatz (M.S. Software Engineering)  
Bradley S. Bickford (M.S. Computer Science)  
James H. Bigelow (M.S. Computer Science)  
William M. Busse (M.S. Computer Science)  
Carl C. Davis, Jr. (M.S. Computer Science)  
Wallace Davis (M.S. Computer Science)  
Jacqueline R. Dean (M.S. Computer Science)  
William J. Degnan, III (M.S. Mechanical Engineering)  
Beth M. P. Delaney (M.S. Computer Science)  
Thomas Dickenson (M.S. Special Majors)  
Deborah T. Doll (M.S. Computer Science)  
Dale M. Drummond (M.S. Computer Science)  
Susan G. Elkington (M.S. Computer Science)  
Kevin J. Gay (M.S. Computer Science)  
David P. Gendron (M.S. Computer Science)  
Terry R. Gibson (M.S. Computer Science)  
Alfred R. Greene (M.S. Computer Science)  
Michael Greiner (M.S. Computer Science)  
Keith Haugen (M.S. Computer Science)  
Prakash N. Iyer (M.S. Computer Science)  
Vijay Karani (M.S. Computer Science)  
Craig R. Kaufman (M.S. Computer Science)  
John Kopplin (M.S. Computer Science)  
Donald P. Kramer (M.S. Computer Science)  
Rebecca K. Lefebvre (M.S. Computer Science)  
Timothy S. Leight (M.S. Computer Science)  
Stacey Li (M.S. Computer Science)  
James M. Littwin (M.S. Computer Science)  
Eduardo O. Marquis (M.S. Computer Science)  
Brian C. Mayer (M.S. Computer Science)  
Bruno P. Melli (M.S. Computer Science)  
George L. Mundy (M.S. Semiconductor Engineering)  
Dean Nelson (M.S. Computer Science)  
Martin G. Nielsen (M.S. Computer Science)  
Anastasia L. Oshelski (M.S. Computer Engineering)

Roopa Pathak (M.S. Computer Science)  
Vicki D. Paul (M.S. Computer Engineering)  
Ramon E. Pereda (M.S. Special Majors)  
Denise M. Raffel-Melli (M.S. Computer Science)  
Jeffrey A. Romatoski (M.S. Computer Science)  
Henry A. Schauer (M.S. Computer Science)  
Catherine Scott (M.S. Computer Science)  
Piyush J. Shah (M.S. Computer Science)  
Francis X. Sheehy (M.S. Computer Science)  
Timothy G. Sheppard (M.S. Computer Science)  
David Smith (M.S. Computer Science)  
Mark A. Stambaugh (M.S. Computer Science)  
Randy H. Stayskal (M.S. Computer Science)  
Taweechai Suksithpornchai (M.S. Telecommunications Management)  
Robert J. Torres (M.S. Computer Science)  
Mark T. Wick (M.S. Computer Science)  
Jeffrey R. Zahn (M.S. Computer Science)  
Lyle L. Zumbach (M.S. Special Majors)

**M.Sc. External Examiner**

Fabio Bastian (1994) University of New England, Armidale, NSW, Australia. Thesis Title: *Media Synchronization on Distributed Multimedia Systems*.

Santhosh Srinivasan (1996) University of New England, Armidale, NSW, Australia. Thesis Title: *A CPU Resource Computation Mechanism for an Audio Application*.