CURRICULUM VITAE

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LEADERSHIP EXPERIENCE

Missouri University of Science and Technology, Rolla, Missouri
Chancellor **2012-Present**
Primary Responsibilities

- Provide executive leadership for all aspects of the academic, student, administrative and finances of the university.
- Oversee the direction of all planning related to institutional goals; academic programs; research, scholarship and creative works; public service; enrollment and physical plant development.
- Develop and maintain appropriate administrative organization, business, management and policy making infrastructure for efficient and effective use of institutional resources and advancement of the university.
- Provide effective leadership and management of fiscal responsibilities in fundraising, marketing, and public relations and in strategic planning to fully utilize the human and physical resources of the university with specific attention to the recruitment, retention and advancement of quality students, faculty and staff.
- Represent and serve as the university's primary spokesperson with key constituencies including alumni, civic communities, corporate organizations, state and federal legislators and entities, and higher education institutions both locally and globally to advance the mission of the university and gain both financial support and good will.

Select Accomplishments

- Led comprehensive strategic planning effort involving thousands of Missouri S&T stakeholders and more than a year of work and study. "Rising to the Challenge: Missouri S&T's Strategy for Success" sets the university's bold course through 2020 and beyond. Central to behaviors, decisions and investments, this dynamic plan provides a top return on investment to Missouri S&T's key customers (undergraduate students, research-based graduate students, distance and online students, employers, research partners and donors) and has already resulted in tremendous progress, strong public-private partnerships, and enhanced resources.
- Achieved by fall 2016 academic year 2020 targets on 31 of 61 metrics (51 percent) on dashboard used to track progress on state performance funding measures, system-wide accountability measures and strategic plan metrics.
- Established an extensive strategic planning website (strategicplan.mst.edu) and annual summits to keep stakeholders engaged and informed of progress (progress.mst.edu). Every six months progress reports are posted and the strategic plan is reviewed and revised based on accomplishments, constituent feedback and new opportunities or innovations.
- Conducted an in-depth, strategic plan mid-cycle opportunity review in fall 2016 to adjust for a changing landscape and to capture new opportunities mid-way through the plan's implementation.
- Secured university total budget increase of 26 percent from $170,450,041 in FY12 to $215,499,576 in FY17.
- Secured a 27 percent increase in state appropriations based on the strength of the strategic plan and progress toward its goals, two to three times the traditional allocation. Obtained direct line item funding to expand education and research programs in Springfield, Kansas City, and Southern Missouri.
- Focused on creating an environment that fosters innovation. Formed the Innovation Team and developed Miner Tank to help create and promote an innovative campus by empowering the university community with the resources needed to make a difference in the laboratory, in the classroom and in the way we do business.
- Brought intellectual property decisions and policy from the system to the campus level to make it easier to do business with Missouri S&T. Created two-page standard agreement, pre-approved by legal, which allows partners to retain intellectual property and the university to disseminate results. The agreement reduces the overhead rate from previous agreements dramatically and has resulted in increased research funding directly from industry partners. This change also led to the signing of master agreements with Boeing, Honeywell Federal Manufacturing and Technologies, and Phelps County Regional Medical Center, among others. The University of Missouri System also recognized this as best practice and strongly encouraged the other three system campuses to adopt it.

- Instituted new degree requirements for significant experiential learning that apply to all undergraduate students beginning with the fall 2015 catalog. Experiential learning activities are designed to require students to go beyond mastering basic skills and knowledge in the application of that material to problem solving challenges. These activities involve collaboration and reflective learning and allow students to learn in environments that align with their aptitudes.
- Prioritized undergraduate research. With the new graduation requirement for significant experiential learning, undergraduate research is expected to increase. As an example, the Opportunities for Undergraduate Research Experiences program increased 55 percent over baseline.
- Invested in doctoral students significantly as part of a strategy to attract more students and strengthen research with competitive packages, fellowship programs for US citizens and permanent residents, campus visit days and professional development. Achieved 21 percent increase in doctoral students.
- Developed and implemented new degree programs: industrial/organizational psychology MS; explosives engineering PhD; multidisciplinary studies BA; history BS.
- Created and implemented minors: humanitarian engineering and science; biomedical engineering; entrepreneurship.
- Created and implemented STEM (science, technology, engineering and math) elementary education certification at request of the Missouri Department of Elementary and Secondary Education to address severe shortage of STEM certified elementary education teachers. Program is one-of-a-kind and may very well become a national model. All graduates are math certified, science certified or both and are prepared to teach Project Lead the Way (PLTW). Secondary education certifications now also prepare graduates to teach PLTW.
- Grew Missouri PLTW and its transformative learning experiences for K-12 students and teachers to record numbers and brought Missouri into the top four nationally for new and overall programs. Created unique partnership with national PLTW to teach K-12 teachers pre-service. As an economic development strategy, secured line item state funding to expand PLTW within the ten poorest counties in Missouri.
- Expanded athletic, recreational and wellness programs and facilities to sustain a healthy campus community of engaged students. Increased participation in intramural activities and club sports by nearly 20 percent to record numbers. Added men's golf and women's golf to bring total intercollegiate sports teams to 15. Secured a ranking of fifth nationally in NCAA DII in the total number of Academic All-Americans.
- Formed and developed four signature areas from the ground up in advanced manufacturing, advanced materials for sustainable infrastructure, enabling materials for extreme environments, and smart living; secured $2.2 million in strategic initiative funding and hired 11 faculty with nine faculty searches underway. Defining these signature areas has helped enhance industry and government partnerships and has raised the university's visibility.
- Increased National Science Foundation (NSF) grant expenditures per tenured, tenure-track faculty by 41 percent over baseline, and number of invention disclosures per $10 million research and development investment by 52 percent. Reached university record in patent and copyright royalty income and a 77 percent increase over baseline.
- Increased the number of license and option agreements over baseline on average 85 percent per year since implementing the strategic plan.
- Attracted new businesses to the Technology Development Center including Boeing, The Ravens Group, Inc., and Garmin. Established the student business incubator; entrepreneurial internship and cooperative education program; and technical innovators and entrepreneurs society.
- Created new research consortia: Small Modular Nuclear Reactor Research and Education Consortium; Kent D. Peaslee Steel Manufacturing Research Consortium; Particle Gel Conformance Control Industrial Consortium; and Microgrid Industrial Consortium.
- Expanded partnership with Fort Leonard Wood and signed memorandum of agreement to include education, research, economic development and outreach collaborations. Home to the U.S. Army Maneuver Support Center; U.S. Army Engineer School; U.S. Army Chemical, Biological, Radiological and Nuclear School; and U.S. Army Military Police School; the Fort trains all chemical, engineer, military police, transportation soldiers, marines, airmen, sailors and international students from allied nations for the military.
- Instituted agreed upon productivity measures for all academic departments to help track and recognize excellence. These measures help inform resource allocation and recognize top performing departments.
- Transformed the library into a learning commons, with door count increasing by 33 percent, articles delivered to Missouri S&T by 94 percent, and students attending library classes by 200 percent. Optimized Scholars Mine discoverability in Google and Google Scholar and migrated data to a new platform accessed by a global audience.
- Increased 16 percent in total enrollment; 38 percent in the number of minority students; 20 percent in the number of underrepresented minority students; and 21 percent in doctoral enrollment, with strong progress on our 2020 goal of 200-400 additional doctoral students. Achieved all-time record in female enrollment.

- Increased 56 percent in distance and online students, achieving the 2020 goal. Online business analytics and data science graduate certificate ranked second nationally overall; information science and technology programs ranked 14th among public universities; two programs in the computer information technology category ranked fifth among public universities; and 12 engineering programs ranked sixth among public universities nationally.
- Increased retention on average of three percent per year over baseline since implementing the strategic plan. Established Burns & McDonnell Student Success Center in 2012 and Student Veterans Resource Center in 2015, and moved Student Diversity, Outreach and Women's Programs into a newly renovated home in 2016. Increased student success by redesigning high volume courses such as chemistry and calculus. Increased student access and success through the DELTA program, delivering experiential labs to all.
- Established an enrollment contingency fund which is invested in strategic priorities in years when enrollment projections are met.
- Increased ranked faculty by 18 percent, ranked female faculty by 36 percent, and ranked underrepresented minority faculty by 31 percent. Developed incentive program for academic departments that hire faculty from underrepresented groups.
- Rewarded excellence by increasing promotional salary bumps and initiating merit programs based on national awards, unit performance and post-tenure review. Moved average salaries from 16 percent below technological research university peer average in 2012 to less than ten percent below peer average by 2015.
- Moved staff employees into global grading system with focus on professional development, mentoring and rewarding excellence. Made progress on moving average compensation to market and enhanced merit awards even in challenging budget years.
- Increased minority staff by 58 percent and underrepresented minority staff by 57 percent since 2012.
- Achieved a four percent increase in average undergraduate starting salaries and a seven percent increase in average graduate starting salaries, ranking among the top in the nation.
- Completed and initiated capital projects in excess of $140 million with little investment from the state in decades.
- Followed pilot program that invested $1.8 million over two years into instructional laboratories by a recurring commitment that invests $1 million annually into instructional and research laboratories.
- Committed to improving effectiveness and garnering efficiencies through appropriate organization, business, management infrastructure and processes and to reporting annually our accomplishments. For example, redesigned faculty hiring process and adopted a new process flow to align with best practices and help ensure diverse, excellent candidate pools; made budget and resource investment process more open and transparent and engaged stakeholders in decisions; realigned scholarship process with a potential savings of $3 million in general revenue funds; created the division of global and strategic partnerships as an entrepreneurial arm of academic affairs to bring together international and cultural affairs, global learning, new office of corporate relations and center for sustainability.
- Increased transparency, communication and shared governance opportunities with key stakeholders, to engage and empower important voices within our campus community.
- Reintroduced colleges and deans after many years of an extraordinarily flat structure. The creation of the division of global and strategic partnerships and the colleges has greatly reduced the number of direct reports to the provost and executive vice chancellor, which at one time numbered 37.
- Created the Chancellor's Cabinet in 2012 to foster relationships and provide inclusion for divisional ideas and inputs related to strategic decision making. Created the Chancellor's Council in 2015 consisting of faculty, staff, students and administrators as a more formal mechanism for bringing stakeholders together for policy revision, review and discussion.
- Expanded Missouri S&T Board of Trustees and leveraged their expertise by making the best use of our time together in meetings. Initiated executive committee meetings each month to continue momentum year round.
- Increased annual giving on average of 26 percent per year over baseline. Improved renewal rates of alumni donors by an average of four percent per year over baseline. Increased merit-based scholarships by over 37 percent due to the great effort in fundraising for scholarships that help shape, recruit and retain a diverse and excellent student body.
- Grew endowment market value by 15 percent, from $154.1 million in FY12 to $177.8 million in FY15.
- Launched the silent phase of the university's third comprehensive campaign, *Rolla Rising.*
- Secured 2016 Council for the Advancement and Support of Education (CASE) Sustained Excellence Award in Fundraising over a five year period.
- Formed the New Alumni Council to encourage lifelong engagement. Currently implementing a new alumni engagement and loyalty program.

- Implemented a staff sustainability (retention) pilot program integrating key concepts in talent management, inclusion, well-being, and return on investment.
- Drafted and currently vetting a work-life design portfolio to bring together in one place policies and programs that help employees see that their work is valued and that the university is invested in their well-being and holistic development.
- Enhanced professional and leadership development opportunities for undergraduate and graduate students, staff, faculty, alumni and administrators. Initiated the creation of a Center for Advancing Faculty Excellence to support faculty in all stages of their career development.
- Dedicated the Hasselmann Alumni House in 2015 after a decade of planning and stalled fundraising efforts. Stepped in and worked with University Advancement and Alumni Relations to bring the project to fruition by creating a match program and maintenance fund with unrestricted funds. Signed agreement that includes chancellor having priority use of the house, which is the best venue in the region.
- Work with Miner Alumni Association, Missouri S&T Board of Trustees, and numerous academies, industry advisory boards and Corporate Development Council to guide and strengthen the university.
- Serve on the P-20 Education Council, Springfield Area Chamber of Commerce; Board of Trustees, St. Louis Science Center; and Board of Directors, Missouri Energy Initiative.
- Serve a four-year term on the NCAA DII Presidents Council representing Region 3.
- Serve as a General Officer of the University of Missouri System, a land-grant university and Missouri's only public research and doctoral-level institutions. Work with chancellors from the system's four campuses, president, vice presidents, and University of Missouri System Board of Curators.
- Serve on the Council on Public Higher Education in Missouri, which is comprised of Missouri's 13 public universities and their presidents and chancellors.

Boise State University, Boise, Idaho
Associate Vice President for Strategic Research Initiatives **2011-2012**
Division of Research and Economic Development
Primary Responsibilities

- Design, implement and supervise campus-wide strategies critical to role and outreach as a metropolitan research university of distinction.
- Position the university as an integral partner in knowledge transfer and economic development.
- Administer centers, institutes and core facilities in a highly effective and efficient manner.
- Assist in identifying and providing investments and necessary support services to increase research, scholarly and creative activities, and extramural funding.

Select Accomplishments

- Led campus-wide effort to improve the way the university administers its more than 50 research and academic centers, institutes and core facilities. Determine and implement unit and leadership review process and establish guidelines for engagement. Develop a strategic process and investment focus for new entities, including an arts and humanities institute, visualization center, and STEM institute.
- Teamed with academic affairs to integrate creation, application and transfer of knowledge as a critical component in university-wide strategic planning, including university mission, core themes, objectives, and assessment.
- Teamed with academic affairs to create, develop and implement plan and process for program prioritization to advance university accountability, credibility, and potential to reallocate resources, identify opportunities, and enhance programs. Created criteria and process for prioritization of centers, institutes and core facilities.
- Supported development of the Venture College, an undergraduate college that prepares students to help drive economic growth and innovation and which became part of a newly created College of Innovation and Design.
- Supported faculty transitioning from scholarly teaching and action research to education research along the continuum of teaching practice expertise.
- Fostered development of a state-wide strategic plan for research and investment.
- Raised business, community and technology leaders' awareness and participation in The Ron and Linda Yanke Family Research Park, a new Boise State University facility and regional asset.
- Instrumental in cultivation, proposal and ask for the largest charitable gift in the university's history, putting the university over its comprehensive campaign goal. This gift secured $13 million to support new doctoral program and breakthrough technologies research with broad-based economic and societal benefits, and contributed to the university being named a winner of the national Council for the Advancement and Support of Education (CASE) 2011 Educational Fundraising Award.

- Secured one of four live broadcasts in 2012 for Science Friday, which airs weekly as part of NPR's *Talk of the Nation*. Established partnership between Boise State Public Radio, Division of Research and Economic Development, STEM Station, Idaho National Laboratory, and Discovery Center of Idaho, among others.
- Worked closely with regional and state government, business, community, education, and foundation leaders to address critical workforce shortages, strengthen the pipeline, and create innovative pathways. Established partnership for $5 million grant submission with US Department of Labor to address statewide workforce shortage in key software industry sector, and which subsequently moved computer science to downtown Boise to co-locate students with high-tech companies clamoring to hire them as interns and employees.
- Served on planning committee for first annual Idaho STEM Summit, "Idaho COMPETES," a statewide signature event bringing all stakeholders together to shape a top-performing state economy.
- Served on the board of directors for the Boise Valley Economic Partnership and its Competitive Edge Initiative. Represented the president and university in attracting and retaining high technology opportunities and business. Built university and industry research clusters and enhanced regional commercialization of university research.
- Served on the technical advisory council for Idaho NASA Experimental Program to Stimulate Competitive Research (EPSCoR) and advisory board for Highway 12 Ventures.
- Worked with the Idaho Technology Council and its R&D committee to raise the visibility of the university's research enterprise and knowledge transfer opportunities. Served on its workforce development committee.
- Coordinated and facilitated the activities of the Division of Research and Economic Development with other university administrators, including the president, vice presidents, associate vice presidents, deans, associate deans, and unit leaders.

Dean, College of Engineering **2003-2011**

Primary Responsibilities

- Manage an annual operating budget of $8.4 million from appropriated funds, exclusive of annual contract and grant revenue, indirect return and gifts.
- Supervise curriculum and program development for approximately 2,000 students in six undergraduate and thirteen graduate programs.
- Oversee approximately 200 faculty and staff in seven departments.
- Design, implement and supervise College of Engineering activities to further Boise State University's goal of becoming a metropolitan research university of distinction.
- Foster widespread commitment to process of continuous improvement.
- Make the College of Engineering a great place to work and be.

Select Accomplishments

- Secured 54 percent increase in appropriated budget in addition to significant future commitments outlined in signed memoranda of agreement.
- Increased research expenditures 279 percent, local expenditures 286 percent, Foundation funds 108 percent, and endowed funds 115 percent.
- Secured industry partnerships for academic and research programs involving facilities sharing agreements, laboratory naming opportunities, program and research support. For example, Micron Technology Foundation granted the College $2 million to establish an undergraduate program in materials science and engineering which became the first such accredited program in the state.
- Secured lead donation of $5 million for the doctoral program in electrical and computer engineering. $2 million challenge grant matched one year early.
- Served on university campaign steering committee for first comprehensive campaign of $175 million. Created College of Engineering case statement, organized and implemented college campaign strategy and formed college campaign board. First college to exceed halfway mark toward goal. Attained 143 percent of goal, which exceeded all college/campus units including athletics.
- Fostered center development and interdisciplinary research. Established five research centers/institutes with multiple college, institutional and industry partners with additional research centers in planning stage. Created recharge centers and one stop research shop. For example, the newly opened Nanotechnology Corridor meets increased demand for interdisciplinary research in electronic materials and nano-scaled device fabrication, expands capabilities of the Idaho Microfab Lab and its customer services, and houses environmentally sensitive equipment used in nanotechnology advances. Initiated weekly college-wide research seminar series.
- Increased external research funding by 353 percent and number of proposals submitted by 323 percent.

- Developed, approved and implemented an electrical and computer engineering doctoral program, bachelors program in materials science and engineering, and minors in biomedical engineering and environmental engineering among others. Admitted first class of graduate students into new interdisciplinary masters in materials science and engineering program and interdisciplinary masters in hydrologic science program. Created new department. Established credit and non-credit graduate certificate programs and workshops to address industry, workforce and community needs.
- Initiated plan for new academic programs including doctoral programs in environmental engineering, materials science and engineering, computer science, mechanical engineering and human performance technology; and masters programs in biomedical engineering and construction management.
- Secured additional space on main campus and in new research park. Secured renovation funds from private, state and federal sources. New interdisciplinary Environmental Research Building occupied in 2011.
- Broadened scholarship support, expanding scholars programs and promoting the Campaign for Students featuring a successful mechanical engineering graduate as the focus student in the campaign. Secured $2.1 million in scholarship funding from the National Science Foundation. Secured endowed and directed scholarship funds from private donors, corporations and foundations.
- Made funded internships and research experiences for undergraduates a high priority, reaching over 80 percent.
- Played a crucial role in bringing to fruition the $1 million Engineering Schools of the West Initiative at Boise State University to develop programs to improve retention rates among under-prepared students, increasing the percentage of underrepresented groups. The initiative focused on an integrated curriculum, supplemental instruction and mentoring, and faculty exchange with the Guadalajara campus of Monterrey Tech to aid in outreach to Idaho's Hispanic community which tends to originate from the sister state of Jalisco. It served as a basis for extensive Boise State University engineering and STEM education research and outreach efforts, and for a strong consortium of western schools partnering in sustainability research and education.
- Announced engineering agreement between Fort Lewis College (serving a primarily native American population) and Boise State University to establish a physics and engineering dual-degree five year program.
- Signed Global Engineering Education Exchange Consortium Memorandum of Understanding to enhance engineering education globalization efforts and to afford Boise State University students the opportunity to gain engineering experience outside the United States.
- Championed the College of Engineering selection as the first Residential College at Boise State University. An engineering faculty-in-residence coordinates programming focused on academic success for engineering and computer science hall residents. Secured commitment from the Foundation to support Engineering Residential College Scholars.
- Planned, created and staffed a college-wide academic advising center, to welcome students to the college and connect them with programs focused on their success.
- Fostered multidisciplinary Introduction to Engineering course, renovated facilities, and incorporated service learning to address retention. Offered concurrent enrollment with Treasure Valley Math and Science Center. Cross-listed Engineering for Educators course cited in National Academy of Engineering's 2009 'Engineering in K-12' report.
- Committed to access and success. Increased admission standards, improved program quality, and implemented retention and recruitment programs resulting in record enrollment of over 2,000 with 60 percent growth in undergraduate engineering enrollments in six years and a 36 percent growth in college graduate enrollments. Increased percentage of underrepresented groups, namely women and Hispanics. College routinely attracted one-third of the incoming national merit scholars. Ranked in top 50 by *US News & World Report* for the twelfth year in a row. Earned top honors in regional and national design and engineering competitions in electrical engineering, civil engineering, construction management, mechanical engineering, and materials science and engineering. Boise State University overall sustained a pass rate on the Fundamentals of Engineering examination of nearly 90 percent, comparing quite favorably to 70 percent national average; and repeatedly ranked in the 90th percentile on the Computer Science Major Field Test.
- Committed to outreach. Brought over 10,000 young people to campus each year to explore technical careers. Foster participation in and support, for example, Women in Technical Careers program reaching 300 girls in the Treasure Valley, the JASON Project and its 2,000 middle school participants, Idaho Engineering Science Camp (now e-Camp) for 8-9th graders, newly created Treasure Valley Mathematics and Science Center, Mirando Adelante Workshop for minority high school students, Jets TEAMS Competition, Science Day Competition, Future City Competition, Discover Engineering Day which brought in thousands by its third year, ASME Diversity Grant Workshop, e-Day for underrepresented students and e-Girls Camp for 10-11th grade girls. Created partnership with the Discovery Center of Idaho to share speakers, create and sponsor museum exhibits and

integrate university students into informal science programs. Promoted service-learning opportunities aiding the elderly, disabled, local elementary schools, university theatre programs and gymnastics team, migrant farm workers, Idaho Botanical Gardens, ZooBoise, Bogus Basin Ski Resort, Special Olympics, City of Boise, Deer Flat Wildlife Refuge and Ducks Unlimited among others.

- Hired astronaut/educator Barbara Morgan through joint appointment between the colleges of engineering and education to lead K-12 STEM education efforts in Idaho. Developed STEM Education Research Caucus by cultivating a cross-campus group of researchers and educators to study issues related to K-12 STEM education and established STEM Scholars group. Involved in teacher training, APLU's Science and Mathematics Teacher Imperative, Idaho Science Aerospace Scholars and new STEM Central Station, an interdisciplinary research collaborative, faculty and student resource center, and consortium of more than a dozen STEM education grants and external partners.
- Achieved computer science program accreditation from the Computing Accreditation Commission of ABET, Inc. for the first time.
- Achieved materials science and engineering program accreditation from the Engineering Accreditation Commission of ABET, Inc. for the first time.
- Achieved construction management program re-accreditation from the American Council for Construction Education and electrical, mechanical, materials science and civil engineering re-accreditation from the Engineering Accreditation Commission of ABET, Inc. twice. All visits highly successful.
- Established college-wide awards for faculty, staff and students and initiated a College of Engineering Annual Awards Ceremony, involving faculty, staff, students, advisory councils, community leaders and donors.
- Created college environment where faculty reported highest results campus-wide that their work is most valued.
- Established a Senior Design Showcase highlighting senior design projects and their industry sponsors with poster presentations. Awards created at department level, with college awards determined by College of Engineering Advisory Council.
- Hired 39 tenured/tenure track faculty, thirteen research professors, seven instructors, twelve department chairs, and over 40 staff. Created new titles and job descriptions and introduced the concept of research faculty. Revised hiring practices to secure excellent and diverse faculty, including fifteen women and twelve minorities. Worked effectively with university administration to offer competitive salaries and attractive start-up packages. Women in leadership positions reached 40 percent (dean, associate dean, department chair, research center director), the highest in the nation, up from no representation upon my arrival. College rose to third in the nation in percentage of tenured or tenure-track women on the faculty.
- Implemented an open Annual Planning and Budget process that ties together initiatives and strategic planning and integrates stakeholder input. Implemented same process for one-time and permanent budget reductions three years running.
- Worked to streamline programs and departments and leverage resources where possible to meet increasing student and faculty needs during a time of decreasing appropriated funding. All faculty and staff were retained with full support, and additional faculty and staff positions were secured and filled.
- Worked with Idaho engineering deans, Idaho State Board of Professional Engineers and Land Surveyors, Idaho State Board of Education, Idaho Technology Council and business and community leaders on initiatives to increase the number of engineers and computer scientists graduating in Idaho.
- Involved in forming the Center for Advanced Energy Studies, a partnership between eight research universities and the Idaho National Laboratory, to strengthen energy research and education programs. Center laboratory, office and classroom building completed and occupied in Idaho Falls, Idaho, with college staff in residence.
- Involved in forming the Energy Efficiency Research Institute, a collaboration between key industry, Idaho public universities and the Idaho National Laboratory with Boise State University as lead.
- Instrumental in forming the Idaho Software Employers Alliance, an organization of software industry CEOs in the state's fastest growing high technology sector, to address the critical workforce shortage of computer scientists in the Treasure Valley.
- Involved in the creation of the Idaho Technology Council, which brought the Software Alliance under its purview. Member of the workforce development committee.
- Organized and led year-long 10th anniversary celebration of the College of Engineering; highlighted 20th anniversary for Instructional & Performance Technology and 30th anniversary for Construction Management.
- Supervised a college wide process of continuous improvement that includes assessment, accreditation, performance and development. Developed research and scholarly activity, and teaching and learning guidelines at departmental and college levels through consensus building with key stakeholders by emphasizing and

recognizing diverse contributions. Sponsored series of research and teaching workshops for faculty development. Created and implemented assessment plans for all academic programs. Applied LEAN principles.
- Coordinated and facilitated the activities of the College of Engineering with other university administrators, including the President, Provost, Vice Presidents, Deans and Associate Deans, and Department Chairs.
- Led college through long-term strategic planning, focusing on mission and goals. Held Visioning Conference with academic, business, government and community leaders. Strategic planning accomplished at department and college levels, tying in with the university's "Charting the Course" plan.
- Refocused college advisory council toward external relations and advancement and established department advisory boards for internships, career and curricular issues.

Institute of Electrical and Electronics Engineers (IEEE) Control Systems Society
Past President, President, President-Elect **2002-2004**
Primary Responsibilities
- Chief Elected Officer of the Control Systems Society (CSS), a professional organization with 10,000 members worldwide. The CSS is an organizational unit of the IEEE, the world's largest professional association dedicated to advancing technological innovation and excellence for the benefit of humanity, with more than 420,000 members in more than 160 countries.
- Manage an annual operating budget of $3.1 million with $2.0 million in reserves.
- Supervise all programs and services of the CSS, including publications, conferences, technical, membership, finances, and outreach.
- Represent CSS as its chief administrative officer at all national and international functions.
- Preside over a nine-member Executive Committee and 24-member Board of Governors.

Select Accomplishments
- Oversaw the publication of two journals and one magazine which were commended for citation impact factor among 47 automation and control publications.
- Secured a partnership with the IEEE Educational Activities Board to be the one society out of 37 highlighted for an online tutorial pilot program.
- Initiated campaign and programs to promote the engineering profession by generating collateral materials and success stories for the general public and policy makers as well as prospective control engineers.
- Contributed to two Memoranda of Understanding that promote an affinity between the CSS and the European and Japanese control communities.
- Completed presidential year with $650,000 surplus after beginning year with $180,000 deficit budget.
- Chaired long-range planning committee and reorganized CSS employee and organizational structure.
- Chaired nominating committee and 50th anniversary committee.
- Represented the CSS on the IEEE Technical Activities Board.
- Represented IEEE Technical Activities Board to IEEE Women in Engineering Committee.
- Represented IEEE Technical Activities Board to IEEE Student Activities Committee.

The University of Texas at San Antonio (UTSA), San Antonio, Texas
Associate Dean for Graduate Studies and Research, College of Engineering **2001-2003**
Primary Responsibilities
- Assist in managing an annual operating budget of $4.5 million from general fund and indirect return, exclusive of annual contracts and grant revenue.
- Supervise curriculum and graduate program development for 181 students in four programs.
- Lead College of Engineering graduate studies and research activities.

Select Accomplishments
- Developed research and merit guidelines at departmental and college levels through consensus building with key stakeholders.
- Determined measures of research productivity for individuals and units that were inclusive by emphasizing and recognizing contributions from a diverse group of skilled faculty.
- Integrated college faculty and university research agenda by forming faculty focus groups, determining research capabilities, and encouraging pursuit of external funding. Achieved 85 percent faculty grant participation.
- Led college through two external reviews by the Texas Higher Education Coordinating Board and one external review by the University of Texas System Board of Regents. All reviews were highly successful.

- Founded the Texas Engineering and Technology Consortium along with other Texas college, industry, and government representatives. Secured $5 million industry funding with $5 million state match per year to double the number of engineers and computer scientists.
- Realized 70 percent increase in graduate student credit hours and increased extramural funding by 50 percent.
- Responsible for development, approval, and implementation of three doctoral programs: electrical engineering, biomedical engineering, and environmental science and engineering. Admitted first class of electrical engineering doctoral students in 2002 and first class for each of the other doctoral programs in 2003.
- Coordinated and facilitated the activities of the College of Engineering with other university administrators, including the dean of graduate studies, vice provost for research, engineering dean, and six associate deans for graduate studies and research.
- Organized a series of research and teaching workshops for faculty development. Formulated and implemented a faculty orientation plan.

Associate Dean for Graduate Studies and Research, College of Sciences and College of Engineering 2000-2001
Primary Responsibilities
- Lead College of Engineering graduate studies and research activities.
- Lead College of Sciences graduate studies and research activities.
- Represent interests of colleges in connection with the formation of the new College of Engineering and the restructuring of the College of Sciences from divisions into departments.
- Assist interim dean with non-engineering background on all technical aspects of functions of college.

Select Accomplishments
- Coordinated College of Sciences and College of Engineering graduate studies activities, including graduate program administration, existing graduate program review, and graduate student recruitment and retention.
- Coordinated formation of two separate colleges and ten departments with respect to graduate studies and research activities. Facilitated inter-college collaborations, research center, and graduate program development.
- Led the effort to establish the first joint doctoral program in biomedical engineering between two different institutions, UTSA and the University of Texas Health Science Center at San Antonio (UTHSCSA). Supervised all aspects of program development including administrative structure, curriculum, industry involvement, and community outreach.
- Spearheaded partnership with UTHSCSA in ten areas of collaboration. Worked with top-level administrators at both institutions to obtain internal financial support for the program ($7.7 million).
- Assisted with efforts to obtain direct special line item funding for the San Antonio Life Sciences Institute, approved by the Texas Legislature in 2001. Funded at $6.5 million to promote education, research and economic development in biomedicine and biotechnology.
- Coordinated and facilitated the activities of the College of Engineering and the College of Sciences with other university administrators, including the dean of graduate studies, vice provost for research, engineering dean, sciences dean, six associate deans for graduate studies and research, ten masters and five doctoral program advisors.
- Hired staff and formed management structure for new College of Engineering. Supervised staff in College of Sciences.
- Contributed to the hiring of two new deans and the formation of new college and departmental organizational structures.

Associate Dean for Graduate Studies and Research, College of Sciences and Engineering 2000
Primary Responsibilities
- Lead College of Sciences and Engineering graduate studies and research activities.
- Redefine the Associate Dean position after a three-year vacancy during an interim dean administration.

Select Accomplishments
- Developed new graduate program feasibility studies and proposals (instrumental in developing and facilitating five new doctoral and two masters degree programs).
- Oversaw and administered graduate and research budgets and grants.
- Promoted and facilitated collaborative efforts and multidisciplinary research and centers.
- Identified and focused opportunities for new inter-disciplinary, inter-college, inter-institutional graduate programs and research collaborations.
- Involved in strategic planning and community bioengineering and biotechnology initiatives.

- Coordinated and facilitated the activities of the College of Sciences and Engineering with other university administrators, including the dean of graduate studies, vice provost for research, dean of college of sciences and engineering, four associate deans for graduate studies and research, ten masters and five doctoral program advisors.
- Launched the Bioengineering Forum seminar series in partnership with UTHSCSA and the San Antonio Greater Area Chamber of Commerce. This monthly series features speakers from the US and abroad and is widely attended by the San Antonio educational, research and development, and industrial communities.
- Served on the Chamber's Blue Ribbon Committee for Bioengineering which comprises city leaders, representatives from the various military bases in San Antonio, and business leaders from a broad cross-section of local industry, including Fortune 500 companies.
- Represented the university as delegate to the Southwest Research Consortium, which combines resources of its ten member institutions to serve an array of constituencies: business, industry, education, government, and the military. Represented university in formation of San Antonio Technology Accelerator Initiative, a targeted economic development initiative committed to growing the regional technology economy.

ABET 2000 Coordinator **1998-1999**

Primary Responsibilities

- Initiate preparation for accrediting UTSA's three engineering programs under Accreditation Board for Engineering and Technology (ABET, Inc.) Criteria 2000.

Select Accomplishments

- Developed ABET assessment plan, self-assessment strategies, data collection, and analysis methodologies under Criteria 2000.
- Coordinated educational objectives, criteria, and curriculum development for three engineering programs.
- Educated faculty, students, administration, and other constituents on Criteria 2000.
- Met regularly with the Engineering Executive Committee administrative team.
- Coordinated and facilitated ABET 2000 activities with other administrators, including the Director of the Division of Engineering, the Engineering Program Chairs, and the accreditation agency.
- Authored and disseminated *"Engineering Assessment Process and Plan,"* October 1999.

University Graduate Recruitment Coordinator **1996-1998**

Primary Responsibilities

- Develop university-wide infrastructure and planning for systematic recruitment and retention of graduate students.

Select Accomplishments

- Interacted with 31 university graduate programs and four colleges on recruitment and retention.
- Authored strategic initiative and secured funding for university-wide recruitment and retention activities.
- Formed and represented the Office of Graduate Studies within the Office of the Provost.
- Coordinated and facilitated graduate recruitment and retention activities with other university administrators, including the Dean of Graduate Studies and Associate Vice President for Research and four college Associate Deans for Graduate Studies and Research.
- Authored and disseminated *"Proposed University Strategic Initiative: Graduate Recruitment and Retention,"* University Graduate Education and Research Strategic Planning Group, Spring 1997; *"Final Report: Graduate Recruitment and Enrollment Activities, 1996/1997,"* July 1997; and *"Graduate Recruitment and Enrollment Activities Update,"* October 1997.
- Established, coordinated, and led UTSA Graduate Program Days and Graduate Fairs.

Center for Advanced Propulsion Studies Associate Director **1993-1997**

Primary Responsibilities

- Research in propulsion system modeling and control.
- Establish collaborations with propulsion industry representatives, government agencies, and engineers.
- Develop center engineering education activities.

Select Accomplishments

- Created, developed, and enhanced the interdisciplinary research Center for Advanced Propulsion Studies in the UTSA College of Sciences and Engineering. Formed a dynamic teaming arrangement with one industrial research laboratory, six aircraft gas turbine engine manufacturers, and two government laboratories.

- Secured space and obtained center funding for 16 faculty participants, twelve students, three professional staff.
- Created computer classroom for interactive teaching and "hands-on" classroom experiences.
- Represented the Center to funding and government agencies.
- Led task on modeling, analysis, design, and interaction of propulsion components using advanced methods of control and simulation of fluid flows. Supervised four faculty, five students, and two staff.

Electrical Engineering Graduate Advisor of Record **1993-1996**

Primary Responsibilities

- Advise and advocate for electrical engineering graduate students (approximately 65-80 each year).
- Handle admissions, status, program and regulation development, publicity, and support.
- Represent graduate program to college, university, and community.

Select Accomplishments

- Authored *"Self-study of the Master of Science in Electrical Engineering,"* December 1995.
- Led program through successful external review.
- Established policies and procedures for graduate faculty and for graduate students that remain the standard.
- Graduated 44 students during my tenure.
- Developed curriculum for electrical engineering doctoral program and drafted proposal.
- Designed, authored, and disseminated recruitment materials such as brochures, posters and inserts.
- Coordinated and led recruitment activities. Realized a steady increase in thesis option graduates.

ACADEMIC TRAINING

Department of Electrical Engineering, University of Notre Dame, Notre Dame, Indiana

1985-1990 Area of Concentration: Systems and Control
Minor: Computers and Mathematics
Doctor of Philosophy 1991
Dissertation: *Feedback Effects on Poles and Zeros: A Global Approach Using Generalized Systems*
Master of Science in Electrical Engineering 1987
Thesis: *Subzeros in Linear Multivariable Systems*

Department of Electrical and Computer Engineering, Valparaiso University, Valparaiso, Indiana

1980-1984 Areas of Concentration: Computers and Communications
Minor: Christ College Associate (Valparaiso's honors college)
Bachelor of Science in Electrical Engineering 1984

RESEARCH AND TEACHING EXPERIENCE

Department of Electrical and Computer Engineering, Missouri University of Science and Technology, Rolla, Missouri

2012-Present **Professor**

Department of Electrical and Computer Engineering, Boise State University, Boise, Idaho

2003-2012 **Professor**
Research, teaching, and service in the areas of systems and control. Curriculum and program development on both undergraduate and graduate levels. Senior member of the graduate faculty.

Biomedical Engineering, University of Texas Health Science Center at San Antonio and The University of Texas at San Antonio Joint Graduate Program, San Antonio, Texas

2003-2006 **Graduate Faculty**
Research, teaching, and student advising in graduate biomedical engineering programs.

Department of Electrical Engineering, The University of Texas at San Antonio, San Antonio, Texas

1991-2006 **Graduate Faculty**

Research, teaching and student advising in graduate electrical engineering programs.

2002-2003 **Professor**
Research, teaching, and service in the areas of systems and control. Curriculum and program development on both undergraduate and graduate levels.

1996-2002 **Associate Professor**

1991-1996 **Assistant Professor**

Department of Electrical and Computer Engineering, Rice University, Houston, Texas

Jan. -Aug. 1991 **Adjunct Assistant Professor**
Active controls group research, weekly seminars.

Department of Electrical Engineering, University of Notre Dame, Notre Dame, Indiana

1989-1990 **Research Fellow**
American Association of University Women Selected Professions Fellow, Zonta International Amelia Earhart Fellow, Arthur J. Schmitt Dissertation-Year Fellow.

Jan.-May 1989 **Research Assistant**
Acquired, set-up, and established an advanced laboratory for digital signal processing. Designed and implemented laboratory experiments.

1985-1988 **Teaching Assistant**
Administrator and Instructor for Electrical Engineering Laboratory (EE 340L), Co-instructor and TA for Networks & Systems I (EE 344), TA for Networks & Systems II (EE 354) and Systems Programming (EE 381).

1988 Summer **National Science Foundation Workshop Consultant**
Led workshop on PC-controlled instrumentation for undergraduate laboratories.

1987 Summer **Instructor**
Instructor for Advanced Programming (EE 351).

1986 Summer **Research Assistant**
Coding and theoretical development for subzeros.

Department of Electrical and Computer Engineering, Valparaiso University, Valparaiso, Indiana

1984-1985 **Instructor**
Instructor for Electricity and Magnetism (GE 95) and Principles of Electrical Engineering (ECE 96). Administrator and Instructor for Laboratory I (ECE 81). Full-time faculty involved in Electrical and Computer Engineering department, College of Engineering, and university activities.

PROFESSIONAL EXPERIENCE

Chimera Research, Del Rio, Texas

June 1993-Aug. 1994 **Senior Research Associate**
Participation in research contracts relating to flight and propulsion control and improvements in engineering, mathematics, and science education.

McDonnell Douglas Astronautics Company, Equipment Design and Test Group, Huntington Beach, California

1984 Summer **Engineering Intern**
Defined requirements and developed coding for Mast-Mounted Sight.

1983 Summer **Engineering Intern**
Developed new automatic testing station which resulted in final proposal.

1982 Summer **Engineering Intern**
Designed and implemented testing procedures for intercommunication satellite thick-film substrates.

EDITOR

1. Advances in Statistical Control, Algebraic Systems Theory, and Dynamic Systems Characteristics. Chang-Hee Won, Cheryl B. Schrader, and Anthony N. Michel, eds., New York: Birkhauser Boston, Inc., 2008.

SELECTED PUBLICATIONS (highlight indicates invited paper)

99. Janet Callahan, Cheryl B. Schrader, Amy Moll, Tammi Vacha-Haase, and Tim Andersen, *"Establishing Doctoral Programs: Lessons Learned and Best Practices"* Proceedings ASEE Annual Conference and Exposition, June 2017 (under review).

98. Janet Callahan, Mary E. Besterfield-Sacre, Jenna Carpenter, Kim LaScola Needy, and Cheryl B. Schrader, *"Listening and Negotiating,"* Proceedings ASEE Annual Conference and Exposition, June 2016.

97. Seung Youn (Yonnie) Chyung, Carol Sevier, Janet Callahan and Cheryl B. Schrader, *"What Value Does Service Learning Have on Introductory Engineering Students' Motivation and ABET Program Outcomes?"* Journal of STEM Education, Vol. 13, No. 4, 2012.

96. Cheryl B. Schrader, Janelle Brown, Lynn Lubamersky, Leslie Madsen-Brooks, Patricia Pyke, and Heidi Reeder, *"Off the Record: Untold Stories of Women, Science and Engineering,"* Proceedings ASEE Annual Conference and Exposition, June 2012.

95. Heidi Reeder, Patricia A. Pyke, Lynn Lubamersky, Seung Youn Chyung and Cheryl B. Schrader, *"Perceptions about Women in Science and Engineering History,"* Proceedings ASEE Annual Conference and Exposition, June 2012.

94. Cheryl B. Schrader, Yonnie Chyung, Will Hughes, Ko Sasaki, Teresa Cole and John Chiasson, *"How Can We Help Faculty Balance Between Teaching and Scholarly Activities?"* Proceedings ASEE Annual Conference and Exposition, AC 2011-324, June 2011 (Best Paper Award – First Place, New Engineering Educators Division).

93. Janet Callahan, Judith Garzolini, Gary Hunt, Joe Guarino, Doug Bullock, Susan Shadle and Cheryl B. Schrader, *"The Idaho Science Talent Expansion Program: Improving Freshman Retention for STEM Majors,"* Proceedings ASEE Annual Conference and Exposition, AC 2011-2500, June 2011.

92. Carol Sevier, Seung Youn Chyung, Cheryl Schrader and Janet Callahan, *"Effects of Service Learning Implemented in an Introductory Engineering Course on Student Attitudes and Abilities in the Context of ABET Outcomes,"* Proceedings ASEE Annual Conference and Exposition, AC 2010-297, June 2010.

91. Louis Nadelson, Anne Hay, Pat Pyke, Janet Callahan and Cheryl Schrader, *"Teaching Inquiry-Based STEM in the Elementary Grades Using Manipulatives: A SySTEMic Solution Report,"* Proceedings ASEE Annual Conference and Exposition, AC 2010-1218, June 2010.

90. Cheryl B. Schrader and Michael K. Sain, *"Linear Operators and Matrices,"* in Fundamentals of Circuits and Filters. Wai-Kai Chen, ed., CRC Press, pp. 1-1 to 1-20, 2009.

89. Michael K. Sain and Cheryl B. Schrader, *"Bilinear Operators and Matrices,"* in Fundamentals of Circuits and Filters. Wai-Kai Chen, ed., CRC Press, pp. 2-1 to 2-19, 2009.

88. Seung Youn Chyung, Janet Callahan, Doug Bullock, Kendra Bridges, Joanna Guild and Cheryl Schrader, *"Improving Students' Learning in Precalculus with e-Learning Activities and Through Analyses of Student Learning Styles and Motivational Characteristics,"* Proceedings ASEE Annual Conference and Exposition, AC 2009-1873, June 2009.

87. Louis Nadelson, Janet Callahan, Pat Pyke, Anne Hay and Cheryl Schrader, *"A SySTEMic Solution: Elementary Teacher Preparation in STEM Expertise and Engineering Awareness,"* Proceedings ASEE Annual Conference and Exposition, AC 2009-939, June 2009.

86. Doug Bullock, Janet Callahan, Yuguang Ban, Alison Ahlgren and Cheryl Schrader, *"The Implementation of an Online Mathematics Placement Exam and its Effects on Student Success in Precalculus and Calculus,"* Proceedings ASEE Annual Conference and Exposition, AC 2009-1783, June 2009.

85. Sondra Miller, Pat Pyke, Amy Moll, Melissa Wintrow, Cheryl Schrader and Janet Callahan, *"Successes of an Engineering Residential College Program Within an Emerging Residential Culture,"* Proceedings ASEE Annual Conference and Exposition, AC 2009-1113, June 2009.

84. Cheryl B. Schrader and Bostwick F. Wyman, *"Modules of Zeros for Linear Multivariable Systems,"* in Advances in Statistical Control, Algebraic Systems Theory, and Dynamic Systems Characteristics. Chang-Hee Won, Cheryl B. Schrader, and Anthony N. Michel, eds., New York: Birkhauser Boston, Inc., pp. 145-158, 2008.

83. Jason Polendo, Chunjiang Qian, and Cheryl B. Schrader, *"Homogeneous Domination and the Decentralized Control Problem for Nonlinear System Stabilization,"* in Advances in Statistical Control, Algebraic Systems Theory, and Dynamic Systems Characteristics. Chang-Hee Won, Cheryl B. Schrader, and Anthony N. Michel, eds., New York: Birkhauser Boston, Inc., pp. 257-280, 2008.

82. Lisa McClain, Cheryl Schrader and Janet Callahan, *"Improving Campus Climate for Faculty from Underrepresented Groups,"* Proceedings ASEE Annual Conference and Exposition, June 2008 (Best Paper Award Nomination).

81. Janet Callahan, Seung Youn Chyung, Joanna Guild, William Clement, Joe Guarino, Doug Bullock and Cheryl Schrader, *"Enhancing Precalculus Curricula with e-Learning: Implementation and Assessment,"* Proceedings ASEE Annual Conference and Exposition, June 2008.

80. John Gardner, Pat Pyke, Cheryl Schrader, Janet Callahan and Amy Moll, *"The Party's Over: Sustaining Support Programs When the Funding is Done,"* Proceedings ASEE Annual Conference and Exposition, June 2008.

79. Janet Hampikian, Joe Guarino, Seung Youn Chyung, John Gardner, Amy Moll, Pat Pyke and Cheryl B. Schrader, *"Benefits of a Tutorial Mathematics Program for Engineering Students Enrolled in PreCalculus: A Template for Assessment,"* Proceedings ASEE Annual Conference and Exposition, June 2007.

78. Patricia A. Pyke, John Gardner, Marcia Belchier, Janet Hampikian, Amy Moll and Cheryl B. Schrader, *"An Innovative Method to Realistically Track Engineering Student Retention and Academic Progress,"* Proceedings ASEE Annual Conference and Exposition, June 2007.

77. John Gardner, Patricia A. Pyke, Marcia Belchier, and Cheryl B. Schrader, *"Testing our Assumptions: Mathematics Preparation and its Role in Engineering Student Success,"* Proceedings ASEE Annual Conference and Exposition, June 2007.

76. Cheryl B. Schrader, et al., *"Mentoring for Science, Technology, Engineering and Mathematics Workforce Development and Lifelong Productivity: Success across the K through Grey Continuum,"* Position Paper submitted to Office of Science and Technology Policy and National Science and Technology Council, September 2006, http://coen.boisestate.edu/research/specialprojects/

75. Cheryl B. Schrader, Janet Hampikian, and Amy Moll, *"What Women Want: Female-Friendly Recruitment,"* Proceedings ASEE Annual Conference and Exposition, June 2006.

74. Melinda Seevers, Patricia A. Pyke, William B. Knowlton, Cheryl B. Schrader and John F. Gardner, *"Improving Engineering Undergraduate Retention Via Research and Internships,"* Proceedings ASEE Annual Conference and Exposition, June 2006.

73. Janet M. Hampikian, John F. Gardner, Amy J. Moll, Patricia A. Pyke, and Cheryl B. Schrader, *"Retention in Engineering: Integrated Pre-Freshman Engineering and Pre-Calculus Mathematics,"* Proceedings ASEE Annual Conference and Exposition, June 2006.

72. Patricia A. Pyke, Leandra Aburusa-Lete, Janet M. Hampikian, Michael Luque, Cheryl B. Schrader, Michelle C. Taylor, and Christa Budinoff, *"Where the Girls Are: Applying an Integrated Marketing Approach to Attract Girls Into Engineering Programs,"* Proceedings ASEE Annual Conference and Exposition, June 2006.

71. Jason Polendo and Cheryl B. Schrader, *"Output Stabilization of Nonlinear Feedforward Systems Using Arbitrarily Bounded Control"* Proceedings 2005 American Control Conference, pp. 4727-4729, June 2005.

70. F. Carroll Dougherty and Cheryl B. Schrader, *"Professional Development Panel for Women Faculty: Pathways and Checkpoints,"* Proceedings ASEE Annual Conference and Exposition, June 2005.

69. Cheryl B. Schrader, *"Algebraic Topics in Control,"* in Electrical Engineering Handbook. Wai-Kai Chen, ed., New York: Academic Press, 2004.

68. Cheryl B. Schrader, *"Research Under Control - or - Making the Elephant Dance,"* in Modes of Inquiry: Voices of Scholars Across the Fields of Study. Marian L. Martinello, Gillian E. Cook, and Linda T. Woodson, eds., Carrollton, Texas: Alliance Press Custom Books, pp. 39-44, 1998: Revised editions, 1999 and 2004.

67. Cheryl B. Schrader, *"Preserving the Promise of our Past Presidents: Precedence, Progression, and Persistence,"* IEEE Control Systems Magazine, Vol. 24, No. 6, pp. 37-55, December 2004.

66. Cheryl B. Schrader and Mark W. Spong, *"The IEEE Conference on Decision and Control: Tracing CDC History,"* IEEE Control Systems Magazine, Vol. 24, No. 6, pp. 56-66, December 2004.

65. Eunjeong Lee, Juyi Park, Kenneth A. Loparo, Cheryl B. Schrader, and Pyung-Hun Chang, *"Bang-Bang Impact Control Using Hybrid Impedance/Time Delay Control,"* IEEE/ASME Transactions on Mechatronics, Vol. 8, No. 2, pp. 272-277, June 2003.

64. Cheryl B. Schrader, *"How Does Your Garden Grow?"* IEEE Control Systems Magazine, Vol. 23, No. 6, pp. 10-11, December 2003.

63. Cheryl B. Schrader, *"Corps of Discovery,"* IEEE Control Systems Magazine, Vol. 23, No. 5, pp. 8-9, October 2003.

62. Eunjeong Lee, Juyi Park, Cheryl B. Schrader, and Pyung-Hun Chang, *"Impact When Robots Act Wisely,"* Proceedings 2003 IEEE International Conference on Robotics and Automation, Vol. 3, pp. 3692-3697, September 2003.

61. Cheryl B. Schrader, *"Happy Trails,"* IEEE Control Systems Magazine, Vol. 23, No. 4, pp. 8-9, August 2003.

60. Cheryl B. Schrader, *"Collaborative Learning in our Global One-Room Schoolhouse,"* IEEE Control Systems Magazine, Vol. 23, No. 3, pp. 8-9, June 2003.

59. Juyi Park and Cheryl B. Schrader, *"Can an Input Shaper with Two Impulses Suppress Nonlinear Residual Vibrations?"* Proceedings 2003 American Control Conference, Vol. 4, pp. 3172-3177, June 2003.

58. Eunjeong Lee, Juyi Park, Cheryl B. Schrader, and Pyung-Hun Chang, *"Hybrid Impedance/Time-Delay Control from Free Space to Constrained Motion,"* Proceedings 2003 American Control Conference, Vol. 3, pp. 2132-2137, June 2003.

57. Chunjiang Qian, Cheryl B. Schrader, and Wei Lin, *"Global Regulation of a Class of Uncertain Nonlinear Systems Using Output Feedback,"* Proceedings 2003 American Control Conference, Vol. 2, pp. 1542-1547, June 2003.

56. Cheryl B. Schrader, *"Where's the Beef?"* IEEE Control Systems Magazine, Vol. 23, No. 2, pp. 8-9, April 2003.

55. Cheryl B. Schrader, *"What is Our Sense of Place?"* IEEE Control Systems Magazine, Vol. 23, No. 1, pp. 7-8, February 2003.

54. Cheryl B. Schrader and John Flores, *"Extending WebCT for Courses in Mathematics and Engineering,"* Proceedings Tenth Annual Distance Education Conference, January 2003.

53. Cheryl B. Schrader, *"Introducing the New CSS President,"* IEEE Control Systems Magazine, Vol. 22, No. 5, pp. 92-94, October 2002.

52. Cheryl B. Schrader and Dawnlee Roberson, *"Using Rank Order Filters to Decompose the Electromyogram,"* Proceedings Fifteenth International Symposium on the Mathematical Theory of Networks and Systems, August 2002.

51. Cheryl B. Schrader, *"Volunteers: Round Up! Support Your CSS,"* IEEE Control Systems Magazine, Vol. 22, No. 2, April 2002.

50. Rebecca Martinez, Vivian V. Troche, and Cheryl B. Schrader, *"Designing a Successful Engineer,"* Proceedings American Society for Engineering Education Gulf Southwest 2001 Annual Conference, March 2001 (Best Paper Award).

49. Cheryl B. Schrader and Michael K. Sain, *"Linear Operators and Matrices,"* in Mathematics for Circuits and Filters. Wai-Kai Chen, ed., CRC Press, pp. 3-22, 2000.

48. Michael K. Sain and Cheryl B. Schrader, *"Bilinear Operators and Matrices,"* in Mathematics for Circuits and Filters. Wai-Kai Chen, ed., CRC Press, pp. 23-41, 2000.

47. Cheryl B. Schrader and Jack J. Harris, *"Non-Gaussian Noise Reduction in System Identification,"* Proceedings 2000 American Control Conference, pp. 2706-2710, June 2000.

46. Cheryl B. Schrader, *"Women in Control,"* IEEE Control Systems Magazine, Vol. 19, No. 5, pp. 71-73, October 1999.

45. D. J. Roberson, R. E. Barr, C. B. Schrader, and R. J. Thornhill, *"Experimental Correlation of the Electroneurogram, the Surface Electromyogram, and the Generated Muscle Force,"* Proceedings 3rd International Workshop on Biosignal Interpretation, pp. 166-169, June 1999.

44. Cheryl B. Schrader and Jason E. Polendo, *"Engineering: Ethics, Ethos, and More(s),"* SWE Magazine, Vol. 45, May/June 1999.

43. Jack J. Harris and Cheryl B. Schrader, *"Application of Nonarithmetic Filtering Techniques for Improved System Identification,"* Proceedings 37th IEEE Conference on Decision and Control, pp. 217-218, December 1998.

42. Cheryl B. Schrader and Frank E. Fisher, *"Optimized Telerobot with Real-Time Kinesthetic Feedback,"* Proceedings 17th Southern Biomedical Engineering Conference, February 1998.

41. Cheryl B. Schrader and Jason E. Polendo, *"Exploring Ethics in Engineering,"* Proceedings Society of Women Engineers 1998 National Convention, DVR02, June 1998.

40. Cheryl B. Schrader, F. Carroll Dougherty and Jana J. Dudding, *"Engineering in the South Texas Culture: A Case Study,"* Proceedings Society of Women Engineers 1998 National Convention, DVR03, June 1998.

39. Cheryl B. Schrader, *"Was it Something I Said?"* Proceedings American Society for Engineering Education Gulf Southwest 1997 Annual Conference, pp. 452-457, March 1997.

38. Cheryl B. Schrader and Janis L. Reynolds, *"Engineering a Panel Discussion,"* Proceedings American Society for Engineering Education Gulf Southwest 1997 Annual Conference, pp. 470-475, March 1997.

37. Amir Karimi, Alberto Arroyo, and Cheryl B. Schrader, *"Student Demographics in the New Master of Science Degree Programs at UTSA,"* Proceedings American Society for Engineering Education Gulf Southwest 1997 Annual Conference, pp. 546-551, March 1997.

36. Janis L. Reynolds, Amy Carothers, and Cheryl B. Schrader, *"Women in Engineering: Origins and Opportunities,"* Proceedings American Society for Engineering Education Gulf Southwest 1997 Annual Conference, pp. 458-463, March 1997.

35. Lola Boyce and Cheryl B. Schrader, *"Research in Advanced Aeronautical Propulsion Systems,"* Poster Session NASA Space Grant/EPSCoR Conference, May 1996.

34. Cheryl B. Schrader and Lola Boyce, *"Center for Advanced Propulsion Studies: A Model for Industry/University/Government Participation,"* Proceedings American Society for Engineering Education Gulf Southwest 1996 Annual Conference, pp. 52-57, March 1996.

33. Cheryl B. Schrader and Michael K. Sain, *"Linear Operators and Matrices,"* in The Circuits and Filters Handbook. Wai-Kai Chen, ed., CRC Press, pp. 3-22, 1995; 2nd edition, 2002.

32. Michael K. Sain and Cheryl B. Schrader, *"Bilinear Operators and Matrices,"* in The Circuits and Filters Handbook. Wai-Kai Chen, ed., CRC Press, pp. 23-41, 1995; 2nd edition, 2002.

31. Cheryl B. Schrader, Bostwick F. Wyman, and Steven J. Giust, *"Controllability, Zeros, and Filtrations for Singular Systems,"* Proceedings 34th IEEE Conference on Decision and Control, pp. 2354-2355, December 1995.

30. Cheryl B. Schrader, *"Dynamic Systems and Controls Research in the Center for Advanced Propulsion Studies,"* Proceedings National Science Foundation Dynamic Systems and Controls Workshop for Advancement and Retention of Underrepresented and Minority Engineering Educators, September 1995.

29. Cheryl B. Schrader, *"Dynamical Structures on Pencils, Poles, and Fundamental Subspaces,"* Linear Algebra and Its Applications: Special Issue on Systems and Control, Vol. 205/206, pp. 1061-1079, 1994.

28. Cheryl B. Schrader and Michael K. Sain, *"Zero Principles for Implicit Feedback Systems,"* Circuits, Systems, and Signal Processing: Special Issue on Implicit and Robust Systems, Vol. 13, No. 2-3, pp. 273-293, 1994.

27. Cheryl B. Schrader and Michael K. Sain, *"On the Relationship Between Extended Zeros and Wedderburn-Forney Spaces,"* in Systems and Networks: Mathematical Theory and Applications II. U. Helmke, R. Mennicken, and J. Saurer, eds., Berlin: Akademie Verlag, pp. 471-476, 1994.

26. William A. Waugaman and Cheryl B. Schrader, *"Optimal Current Model from Surface Electrodes,"* Proceedings 33rd IEEE Conference on Decision and Control, pp. 4112-4113, December 1994.

25. Cheryl B. Schrader and Dawnlee J. Roberson, *"Muscle Control Using Proportional Detection of Electromyographic Signals,"* Proceedings 33rd IEEE Conference on Decision and Control, pp. 2932-2933, December 1994.

24. William A. Waugaman and Cheryl B. Schrader, *"A Two Dimensional Electrode Current Density Model for Subthreshold Electrical Stimulation,"* Proceedings 1994 IEEE International Conference on Systems, Man and Cybernetics, pp. 2294-2299, October 1994.

23. Cheryl B. Schrader and Michael K. Sain, *"Generalized System Poles and Zeros: The Generic and Global Connection,"* Proceedings 32nd IEEE Conference on Decision and Control, pp. 2866-2871, December 1993.

22. Dawnlee J. Roberson, Cheryl B. Schrader, and Harold G. Longbotham, *"Adaptive Robust Detection of Below Lesion, Noninvasive Electromyographic Signals for Muscle Control,"* Proceedings 32nd IEEE Conference on Decision and Control, pp. 2525-2526, December 1993.

21. Steven J. Giust, Cheryl B. Schrader, Marek K. Rakowski, and Bostwick F. Wyman, *"Controllability Indices and Wedderburn-Forney Spaces,"* Proceedings 32nd IEEE Conference on Decision and Control, pp. 2862-2863, December 1993.

20. Dawnlee Roberson, Harold Longbotham, and Cheryl Schrader, *"Robust Detection of Non-Invasive, Below-Lesion, Electromyographic Signals,"* Proceedings 30th Annual Rocky Mountain Bioengineering Symposium, pp. 169-176, April 1993 (Best Paper Award).

19. Michael K. Sain and Cheryl B. Schrader, *"Feedback, Zeros, and Blocking Dynamics,"* in Recent Advances in Mathematical Theory of Systems, Control, Networks and Signal Processing I. H. Kimura and S. Kodama, eds., Tokyo: Mita Press, pp. 227-232, 1992.

18. Cheryl B. Schrader, *"System Poles and Extended Zeros: An Implicit Framework,"* Proceedings International Symposium on Implicit and Nonlinear Systems, pp. 236-243, December 1992.

17. Cheryl B. Schrader, *"Generalized Systems: Pencils, Modules, and Pole Spaces,"* Proceedings 31st IEEE Conference on Decision and Control, pp. 983-984, December 1992.

16. Cheryl B. Schrader and Michael K. Sain, *"Module Theoretic Results for Feedback System Matrices,"* in Progress in System and Control Theory. G. Conte, A. Perdon, and B. Wyman, eds., New York: Birkhauser Boston, Inc., pp. 652-659, 1991.

15. Cheryl B. Schrader and Michael K. Sain, *"Pole Zero Conservation Results for Nonminimal Systems,"* Proceedings 30th IEEE Conference on Decision and Control, pp. 378-383, December 1991.

14. Cheryl B. Schrader and Michael K. Sain, *"Extended Zeros, Poles, and Anticausal Systems,"* Proceedings 3rd International Conference on Advances in Communication and Control Systems, pp. 363-383, October 1991.

13. Cheryl B. Schrader and Michael K. Sain, *"Extended Notions of Zeros in Implicit Feedback Systems,"* Proceedings 2nd International Symposium on Implicit and Robust Systems, pp. 177-180, July 1991.

12. Michael K. Sain and Cheryl B. Schrader, *"Making Space for More Zeros,"* Proceedings 29th IEEE Conference on Decision and Control, pp. 1-12, December 1990.

11. Michael K. Sain and Cheryl B. Schrader, *"Blocking Zeros and Dynamic Feedback,"* Proceedings 28th Allerton Conference on Communication, Control, and Computing, pp. 517-526, October 1990.

10. Michael K. Sain and Cheryl B. Schrader, *"The Role of Zeros in the Performance of Multi-input, Multi-output Feedback Systems,"* IEEE Transactions on Education: Special Issue on Teaching Automatic Control, Vol. 33, No. 3, pp. 244-257, August 1990.

9. Michael K. Sain, Cheryl B. Schrader, and Bostwick F. Wyman, *"Poles, Zeros, and Feedback: A Module Point of View,"* Proceedings 33rd Midwest Symposium on Circuits and Systems, pp. 60-63, August 1990.

8. Michael K. Sain, Cheryl B. Schrader, and Bostwick F. Wyman, *"A Theorem on the Effects of Compensator Poles on Feedback System Zeros,"* Proceedings 1990 IEEE International Symposium on Circuits and Systems, pp. 1385-1388, May 1990.

7. Cheryl B. Schrader, *"The Effects of Compensator Poles on Feedback System Zeros,"* Proceedings 1990 University of Notre Dame Mini-Symposium, pp. 25-26, February 1990 (Best Paper Award).

6. Cheryl B. Schrader and Michael K. Sain, "*Research on System Zeros: A Survey*," International Journal of Control, Vol. 50, No. 4, pp. 1407-1433, October 1989.

5. Cheryl B. Schrader and Michael K. Sain, "*Subzeros in Feedback Transmission,*" Proceedings 1989 American Control Conference, pp. 799-804, June 1989 (Best Presentation Award).

4. Cheryl B. Schrader and Michael K. Sain, "*Subzeros of Linear Multivariable Systems,*" Proceedings 1989 American Control Conference, pp. 280-285, June 1989.

3. Cheryl B. Schrader and Michael K. Sain, "*Zero Synthesis in Linear Multivariable Subsystems,*" Proceedings 1989 IEEE International Symposium on Circuits and Systems, pp. 541-544, May 1989.

2. Cheryl B. Schrader and Michael K. Sain, "*Research on System Zeros: A Survey,*" Proceedings 27th IEEE Conference on Decision and Control, pp. 890-901, December 1988.

1. Cheryl B. Schrader and Michael K. Sain, "*Invariant Subzeros are Not Invariant,*" Proceedings 26th Allerton Conference on Communication, Control, and Computing, pp. 189-190, September 1988.

PRESENTATIONS (highlight indicates invited lecture)

131. "*Leadership and Entrepreneurship,*" Entrepreneurial Educator Summit, Columbia, Missouri, February 2, 2017.

130. "*Cracking the Code: Women in Innovation,*" St. Louis Business Journal Women's Leadership Conference, St. Louis, Missouri, January 27, 2017.

129. "*Challenges for Women Leaders: Success Strategies from the Field,*" ASEE Annual Conference and Exposition, New Orleans, Louisiana, June 26-29, 2016.

128. "*Listening and Negotiation,*" ASEE Annual Conference and Exposition, New Orleans, Louisiana, June 26-29, 2016.

127. "*What's Next?*" Panel Discussion Hosted by The Atlantic, St. Louis, Missouri, June 8, 2016.

126. "*Forging a Bright Future Through Partnerships,*" University of Western Cape/University of Missouri System Partnership 30th Anniversary Symposium, Cape Town, South Africa, May 24-28, 2016.

125. "*Architects of Tomorrow,*" Leadership Phelps County, Rolla, Missouri, May 8, 2016.

124. "*Global Problem, Global Solution,*" Missouri Sustainability Conference, St. Louis, Missouri, April 13, 2016.

123. "*Preparing the Leaders of Tomorrow,*" New Leaders Meeting, The Boeing Company, St. Louis, Missouri, January 27, 2016.

122. "*Board Relations,*" American Council on Education (ACE) Institute for New Presidents, New Orleans, Louisiana, December 3, 2015.

121. "*Find Your Path to Success,*" 16th Annual Expanding Your Horizons Conference, Rolla, Missouri, November 19, 2015.

120. "*University Responsiveness to Industry Workforce Needs: The Role of Institutional Economic Development and Community Engagement,*" Panel Discussion at 2015 APLU Annual Meeting, Indianapolis, Indiana, November 11, 2015.

119. "*Economic Engagement in Higher Education,*" Panel Discussion with The Wall Street Journal, Indianapolis, Indiana, November 11, 2015.

118. *"Show Me Value: Find Your Path to Success,"* Show Me Value Tour, Houston, Missouri, November 6, 2015.

117. *"Best Practice Highlight: Expanding Participation in Coding and Computer Science,"* Panel Discussion at 2015 Southern Governors Association Annual Meeting, St. Louis, Missouri, October 16, 2015.

116. *"Challenges Facing Higher Education,"* U.S. Federal Reserve Central Banking Series, St. Louis, Missouri, September 25, 2015.

115. *"A Growing Partnership,"* The Doe Run Executive Team, Vibernum, Missouri, July 1, 2015.

114. *"Finding your Leadership Path,"* University of Missouri System Women's Leadership Conference, Columbia, Missouri, June 23, 2015.

113. *"Show Me Value: Find Your Path to Success,"* Show Me Value Tour, Waynesville, Missouri, May 22, 2015.

112. *"Benefits of Pausing and Reflecting,"* Leadership Phelps County, Rolla, Missouri, May 6, 2015.

111. *"Missouri S&T's Footprint in Jefferson City,"* The Jefferson City Rotary, Jefferson City, Missouri, April 13, 2015.

110. *"The State of Science Education,"* Panel Discussion on St. Louis Public Television Station KECT, St. Louis, Missouri, April 2, 2015.

109. *"Show Me Value: Find Your Path to Success,"* Show Me Value Tour, Steelville, Missouri, April 2, 2015.

108. *"Missouri S&T's Footprint in St. Louis,"* The St. Louis Rotary, St. Louis, Missouri, February 5, 2015.

107. *"Meeting Missouri's STEM Needs,"* Freshman Legislative Tour, Columbia, Missouri, December 18, 2014.

106. *"Preparing Today's Students for Tomorrow's Opportunities,"* Project Lead The Way Annual Summit Keynote, November 3, 2014.

105. *"Missouri S&T's Strategy for Success,"* Sandia National Labs, Albuquerque, New Mexico, October 9, 2014.

104. *"A Look at Research and Enrollment,"* KTTR Morning Mayors Radio Program, Rolla, Missouri, September 17, 2014.

103. *"Standing on Her Own Two Feet,"* Stand Up! Stand Out!, Rolla, Missouri, September 6, 2014.

102. *"Bridging the Gap Between Education and Industry,"* Missouri Biotechnology Association Annual Conference, Lake of the Ozarks, Missouri, September 3, 2014.

101. *"From Geothermal to Solar: S&T is Building Sustainability,"* Missouri Energy Initiative, Rolla, Missouri, June 11, 2014.

100. *"The Importance of STEM Education in St. Louis,"* Panel Discussion with the St. Louis Business Journal, St. Louis, Missouri, May 16, 2014.

99. *"Planning for the Future,"* Miner Retirees Association Luncheon Keynote, Rolla, Missouri, April 14, 2014.

98. *"Finding the Balance in Missions of State Research Universities,"* University of Missouri System Academic Leadership Conference, Columbia, Missouri, February 28, 2014.

97. *"Economic Impact and Beyond,"* Meramec Regional Planning Commission, St. James, Missouri, February 13, 2014.

96. *"The Power of Belief,"* Zonta International, Jefferson City, Missouri, January 21, 2014.

95. *"Missouri S&T: A Rich History of Innovations in Mining,"* 2013 Innovations in Mining Engineering Conference, St. Louis, Missouri, September 9, 2013.

94. *"The Future of Engineering Education: A Roundtable Discussion,"* Missouri Society of Professional Engineers Annual Meeting, Branson, Missouri, June 19, 2013.

93. *"Women in Control: At the Table Where Decisions are Made,"* 2013 American Control Conference Special Session on the History of Women in Control, Washington, DC, June 18, 2013.

92. "*Pathways to Prosperity (Not Just a Pipeline),"* Regional Business Council on Higher Education, St. Louis, Missouri, April 4, 2013.

91. "*Pathways, Not Pipelines,"* Missouri Coordinating Board for Higher Education Retreat, Jefferson City, Missouri, September 5, 2012.

90. "*Research, Respect and Review: The Partnership behind Human Subjects Research,"* Boise State University Campus Read Series, Boise, Idaho, November 15, 2011.

89. "*Welcome Address,"* 4th International Symposium on Resilient Control Systems, Boise, Idaho, August 9-11, 2011.

88. *"How Can We Help Faculty Balance Between Teaching and Scholarly Activities?"* ASEE Annual Conference and Exposition, Vancouver, British Columbia, June 26-29, 2011 (Best Paper Award – First Place, New Engineering Educators Division).

87. *"What Engineering Deans Should Know: Helpful Suggestions from Colleagues,"* Engineering Deans Institute New Deans Forum, Palm Springs, California, April 10-13, 2011.

86. *"What Engineering Deans Should Know: Helpful Suggestions from Colleagues,"* Engineering Deans Institute New Deans Orientation, St. Petersburg, Florida, April 11-14, 2010.

85. *"Nuts and Bolts of Diversity: Successful Strategies to Multiply Women Engineers,"* 2010 University of Nebraska-Lincoln Research Fair, Lincoln, Nebraska, April 5-6, 2010.

84. *"Recruiting a Diverse Faculty,"* Idaho NSF EPSCoR Annual Meeting Keynote, Moscow, Idaho, September 1, 2009.

83. *"Launching STEM Education Collaborations: The Sky is No Limit,"* NASA STS-128 Pre-Launch Education Forum, Cape Canaveral, Florida, August 24, 2009.

82. *"Life after Tenure: Leadership Roles in Academia,"* ASEE Annual Conference and Exposition, Austin, Texas, June 14-17, 2009.

81. *"Women Engineers in Advanced Academic Positions,"* ASEE Annual Conference and Exposition, Austin, Texas, June 14-17, 2009.

80. *"In Partnership for Community Benefit,"* ASCE Southern Idaho Section Annual Meeting Keynote, Boise, Idaho, April 22, 2009.

79. *"Rigas Award Acceptance Speech,"* Frontiers in Education Conference, Saratoga Springs, New York, October 24, 2008.

78. *"When Relationships are Working Well,"* New Chair Orientation, Boise, Idaho, August 5, 2008.

77. *"Being an Effective Leader,"* National Association of Women Business Owners Boise Chapter Annual Leadership Meeting, Garden City, Idaho, July 8, 2008.

76. *"Improving Campus Climate for Faculty from Underrepresented Groups,"* ASEE Annual Conference and Exposition, Pittsburgh, Pennsylvania, June 22-25, 2008 (Best Paper Award Nomination).

75. *"Women Engineering Professionals in Academe, Government & Industry: Women Engineering Faculty,"* Women Engineers in Advanced Academic Positions: Effecting Change in Higher Education, Newark, New Jersey, January 7-9, 2008.

74. *"Celebrating Women in Business and Leadership,"* A St. Luke's Women's Fitness Celebration Signature Event, Boise, Idaho, September 18, 2007.

73. *"When Relationships are Working Well,"* New Chair Orientation, Boise, Idaho, August 1, 2007.

72. *"Engineering Opportunity in Idaho,"* Idaho Business Council, Boise, Idaho, May 23, 2007.

71. *"Bridging the Computer Science Workforce Gap,"* Treasure Valley Computer Science Roundtable, Boise, Idaho, May 16, 2007.

70. *"Partnerships in Innovation: Ventures on the Nano-Scale,"* Highway 12 Ventures Board and Partners Annual Meeting, Boise, Idaho, April 12, 2007.

69. *"I'm Feelin' Lucky!"* Chaffee Society Keynote Address, Boise, Idaho, June 8, 2006.

68. *"Current Issues in Leadership,"* Leadership Class, Boise, Idaho, April 18, 2006.

67. *"Mentoring for Science, Technology, Engineering and Mathematics Workforce Development and Lifelong Productivity: Success across the K through Grey Continuum,"* NSF Human Resources Division Joint Annual Meeting, Washington, DC, March 16-18, 2006.

66. *"Nurturing Your Natural Engineer,"* INVENT Idaho, Boise, Idaho, March 11, 2006.

65. *"Women in Science,"* Idaho Public Television Dialogue, February 2, 2006 (encore, September 3, 2006).

64. *"Mentoring is Key,"* 44th IEEE Conference on Decision and Control and European Control Conference 2005, December 12-15, 2005.

63. *"Exemplary Leadership in Science and Technology Through Mentoring,"* 2005 Presidential Awards for Excellence in Science, Mathematics and Engineering Mentoring Awards Ceremony and Symposium, Washington, DC, November 16-17, 2005.

62. *"Women University Deans Leadership Panel,"* Society of Women Engineers National Conference, November 3-5, 2005.

61. *"Preparing for the Future: Envisioning the Engineer of Tomorrow Today,"* American Council of Engineering Companies of Idaho Annual Conference, Sun Valley, Idaho, August 12-14, 2005.

60. *"Professional Development Panel for Women Faculty: Pathways and Checkpoints,"* ASEE Annual Conference and Exposition, Portland, Oregon, June 21-23, 2005.

59. *"Engineering and the Community,"* IEEE Boise Section Engineering Week Banquet, Boise, Idaho, February 24, 2005.

58. *"Pathways to Success in Industry and Government,"* 43rd IEEE Conference on Decision and Control, Paradise Island, The Bahamas, December 14-17, 2004.

57. *"College of Engineering at Boise State: Connecting with the Community,"* Contributions Managers Meeting, Boise, Idaho, November 19, 2004.

56. *"Nanotechnology at Idaho's Universities,"* Boise Metro Chamber of Commerce Annual Nano/Bio Technology Forum, Boise, Idaho, August 12, 2004.

55. *"Engineering Education in Idaho,"* Idaho Society of Professional Engineers 2004 Annual Meeting, Meridian, Idaho, February 6, 2004.

54. *"Winning that Academic Job,"* 2004 American Control Conference Special Session, Boston, Massachusetts, June 30-July 2, 2004.

53. *"The Faculty Candidate Interview,"* 2004 American Control Conference Women in Control Panel, Boston, Massachusetts, June 30-July 2, 2004.

52. *"Let the Love of Learning Rule Humanity,"* Phi Kappa Phi Keynote Address, Boise, Idaho, April 12, 2004.

51. *"New Horizons for Engineering in the Treasure Valley,"* NPR News 91 New Horizons in Education, Boise, Idaho, January 16, 2004.

50. *"Collaborations in Control,"* The Society of Instrument and Control Engineers Annual Conference Featured Speaker, Fukui, Japan, August 4-6, 2003.

49. *"Mission of Learning, Discovery and Engagement,"* University of Toledo Invited Lecture, Toledo, Ohio, March 27, 2003.

48. *"Using Rank Order Filters to Decompose the Electromyogram,"* Fifteenth International Symposium on the Mathematical Theory of Networks and Systems, Notre Dame, Indiana, August 12-16, 2002.

47. *"UTHSCSA-UTSA Graduate Program in Biomedical Engineering,"* San Antonio Civic Leaders, San Antonio, Texas, May 22, 2002.

46. *"Signals and Systems"* 2nd Annual Welcoming Engineering Seminar, San Antonio, Texas, September 29, 2001.

45. *"Joint Graduate Program in Biomedical Engineering: A Partnership,"* The Greater San Antonio Chamber of Commerce Bioengineering Blue Ribbon Panel Briefing, San Antonio, Texas, May 3, 2001.

44. *"System Identification in the Presence of Impulsive Noise: Theory and Applications,"* University of Nevada, Las Vegas Invited Lecture, Las Vegas, Nevada, April 3, 2001.

43. *"A Doctoral Program: Biomedical Engineering,"* San Antonio Medical Foundation Board of Trustees, San Antonio, Texas, March 5, 2001.

42. *"Recognizing the Logic in Real Problems,"* 1st Annual Welcoming Engineering Seminar, San Antonio, Texas, September 23, 2000.

41. *"Non-Gaussian Noise Reduction in System Identification,"* 2000 American Control Conference, Chicago, Illinois, June 28-30, 2000.

40. *"Engineering UTSA: Focusing on our Future,"* The Society of American Military Engineers Post Meeting, San Antonio, Texas, April 11, 2000.

39. *"Why Ethics? Why Now? The Moral Dimensions of Teaching and Leadership in the New Millennium" Panel*, Ethics Forum, San Antonio, Texas, October 8, 1999.

38. *"Application of Nonarithmetic Filtering Techniques for Improved System Identification,"* 37th IEEE Conference on Decision and Control, Tampa, Florida, December 16-18, 1998.

37. *"Dynamics of Cooperative Research,"* Valparaiso University Invited Lecture, Valparaiso, Indiana, December 4, 1998.

36. *"ABET Accreditation Review: Past, Present, and Future,"* Division of Engineering Faculty Retreat, San Antonio, Texas, October 2, 1998.

35. *"Engineering in the South Texas Culture: A Case Study,"* Society of Women Engineers 1998 National Convention, Houston, Texas, June 16-20, 1998.

34. *"On Our Own Terms,"* Society of Women Engineers 1998 National Convention Panel Discussion, Houston, Texas, June 16-20, 1998.

33. *"Optimized Telerobot with Real-Time Kinesthetic Feedback,"* 17th Southern Biomedical Engineering Conference, San Antonio, Texas, February 6-8, 1998.

32. *"Tips for Success,"* 1997 Advanced Research Program/Advanced Technology Program Briefing, San Antonio, Texas, April 24, 1997.

31. *"Was it Something I Said?"* American Society for Engineering Education Gulf Southwest 1997 Annual Conference, Houston, Texas, March 23-25, 1997.

30. *"Research Under Control - or - Making the Elephant Dance,"* Office of Naval Research Scholars Program, San Antonio, Texas, October 1, 1996.

29. *"Managing Research and Service Commitments in an Academic Career,"* UTSA New Faculty Orientation, San Antonio, Texas, August 1996, August 1997.

28. *"Controllability, Observability, and Wedderburn-Forney Filtrations,"* International Symposium on the Mathematical Theory of Networks and Systems, St. Louis, Missouri, June 24-28, 1996.

27. *"Systems and Control Research: The Center for Advanced Propulsion Studies,"* Office of Naval Research Summer Bridge Program Lecture Series, San Antonio, Texas, June 20, 1996.

26. *"Transient Simulation Analysis of Gas Turbine Engines,"* NASA IRA Visit, San Antonio, Texas, May 1-2, 1996.

25. *"Developing Next Generation Model-Based Control Strategies,"* NASA IRA Visit, San Antonio, Texas, May 1-2, 1996.

24. *"A Control Reconfiguration Algorithm for the Pitch Axis of the F-16,"* NASA IRA Visit, San Antonio, Texas, May 1-2, 1996.

23. *"Research in the 90s: A Cooperative Venture,"* University of Notre Dame Luce Lecture Series, Notre Dame, Indiana, April 25, 1996.

22. *"Center for Advanced Propulsion Studies: A Model for Industry/University/Government Participation,"* American Society for Engineering Education Gulf Southwest 1996 Annual Conference, San Antonio, Texas, March 27-29, 1996.

21. *"Research in Advanced Aeronautical Propulsion Systems,"* Texas Systems Day, Houston, Texas, October 14, 1995.

20. *"Dynamic Systems and Controls Research in the Center for Advanced Propulsion Studies,"* National Science Foundation Dynamic Systems and Controls Workshop for Advancement and Retention of Underrepresented and Minority Engineering Educators, Arlington, Virginia, September, 20-22, 1995.

19. *"Optimal Current Model from Surface Electrodes,"* 33rd IEEE Conference on Decision and Control, Lake Buena Vista, Florida, December 14-16, 1994.

18. *"Muscle Control Using Proportional Detection of Electromyographic Signals,"* 33rd IEEE Conference on Decision and Control, Lake Buena Vista, Florida, December 14-16, 1994.

17. *"A Two Dimensional Electrode Current Density Model for Subthreshold Electrical Stimulation,"* 1994 IEEE International Conference on Systems, Man and Cybernetics, San Antonio, Texas, October 2-5, 1994.

16. *"Generalized System Pole and Zeros: The Generic and Global Connection,"* 32nd IEEE Conference on Decision and Control, San Antonio, Texas, December 15-17, 1993.

15. *"Implicit Pole and Zero Connections,"* Texas Systems Day, Fort Worth, Texas, November 20, 1993.

14. *"On the Relationship Between Extended Zeros and Wedderburn-Forney Spaces,"* International Symposium on the Mathematical Theory of Networks and Systems, Regensburg, Germany, August 2-6, 1993.

13. *"Generalized Systems: Pencils, Modules, and Pole Spaces,"* 31st IEEE Conference on Decision and Control, Tucson, Arizona, December 16-18, 1992.

12. *"System Poles and Extended Zeros: An Implicit Framework,"* International Symposium on Implicit and Nonlinear Systems, Fort Worth, Texas, December 14-15, 1992.

11. *"Who am I: Why am I Here?"* College of Sciences and Engineering Advisory Council, San Antonio, Texas, December 9, 1992.

10. *"Pole Zero Conservation Results for Nonminimal Systems,"* 30th IEEE Conference on Decision and Control, Brighton, England, December 17-19, 1991.

9. *"Module Theoretic Results for Feedback System Matrices,"* Universita di Genová - The Ohio State University Joint Conference on New Trends in Systems Theory, Genoa, Italy, July 9-11, 1990.

8. *"The Effects of Compensator Poles on Feedback System Zeros,"* 1990 University of Notre Dame Mini-Symposium, Notre Dame, Indiana, February 10, 1990 (Best Paper Award).

7. *"The Right-Half Plane'll Get You If You Don't Watch Out,"* 1989 Zonta District VI Fall Conference, Milwaukee, Wisconsin, October 13-15, 1989.

6. *"Subzeros in Feedback Transmission,"* 1989 American Control Conference, Pittsburgh, Pennsylvania, June 21-23, 1989 (Best Presentation Award).

5. *"Subzeros of Linear Multivariable Systems,"* 1989 American Control Conference, Pittsburgh, Pennsylvania, June 21-23, 1989.

4. *"Research on System Zeros: A Survey,"* 27th IEEE Conference on Decision and Control, Austin, Texas, December 7-9, 1988.

3. *"Invariant Subzeros are Not Invariant,"* 26th Allerton Conference on Communications, Control, and Computing, Monticello, Illinois, September 28-30, 1988.

2. *"Subzeros of Linear Multivariable Systems,"* The Sixth Annual Ohio State University Control Workshop, Columbus, Ohio, April 16, 1988.

1. *"Advancing Engineers by Degrees,"* Society of Women Engineers Career Seminar Day, Notre Dame, Indiana, February 14, 1987.

CREATIVE ACTIVITIES

Courses Taught:
Applied Engineering Analysis (EE 2323)
Network Theory II, Network Analysis, Signals and Systems, Signals and Systems I (EE 3423)
Analysis and Design of Control Systems (EE 3413)
Discrete-time and Computer-controlled Systems (EE 4443)
Independent Study (EE 4913, EE 4911)
Honors Thesis (HON 4993)
Linear Control Theory, Linear Systems and Control (EE 5143)
Discrete-time Control Theory and Design (EE 5443)
Multivariable Control Systems (EE 5243)
Adaptive Filters and Control (EE 5243)
Nonlinear Control Theory (EE 5243)
Adaptive Control (EE 5243)
Graduate Seminar (EE 5991)
Comprehensive Examination (EE 6961)
Independent Study (EE 6953)
Masters Thesis (EE 6983)

Course and Curriculum Development:
Approval of ENGR 102 *The Ethical Dimensions of Technology* as a BSU Area I Core class and ENGR 101 *Engineering for Humanity* and ENGR 100 *Energy for Society* as Area III Core classes
ENGR 120 *Introduction to Engineering* course development, integrating all engineering majors, elementary education majors, hands-on modules, service learning, and concurrent enrollment; 2004-2012
Web-Based Course Identified as College of Engineering Model; 2002
Five Graduate and Two Undergraduate Courses Introduced into the UTSA Curriculum; 1991-2003
Seven Courses Restructured in Content; 1991-2003
Development and Integration of *Signals and Systems I* (EE 3423) and *Signals and Systems II* (EE 3523) into Engineering Curriculum; 1997-2003
Development and Integration of *Applied Engineering Analysis I* (EE 2323 and EGR 2323) and *Applied Engineering Analysis II* (EGR 3323) into Engineering Curriculum; 1998-2003
Reorganization of *Network I* (EE 2423) and *Network II* (EE 3423) Sequence; 1992-1997
Electrical Engineering Ph.D. Proposal Preparation (UTSA); 1992-2002
Biomedical Engineering Ph.D. Proposal Preparation (UTSA/UTHSCSA); 2000-2003
Environmental Science and Engineering Ph.D. Proposal Preparation (UTSA); 2001-2003
Construction Management Masters Proposal Preparation (BSU); 2007-2010
Human Performance Technology Ph.D. Proposal Preparation (BSU); 2006-2011
Materials Science and Engineering Ph.D. Proposal Preparation (BSU); 2006-2011
Biomedical Engineering M.S. Proposal Preparation (BSU); 2006-2010
Electrical and Computer Engineering Ph.D. Proposal Preparation (BSU); 2003-2005
Materials Science and Engineering B.S. Proposal Preparation (BSU); 2003-2004
Working Group, development of engineering management and entrepreneurship options at BSU; 2003-2012
ABET Accreditation Visit Preparation; April 1992, October 1995, April 1998, October 2001, April 2004, October 2004, April 2006, October 2006, March 2010, April 2010, October 2010
Working Group, EGR 1203 *Science, Technology and Society* introduced as a UTSA Core Curriculum course; 1992-1993
Working Group, development of an upper-division, two-course Core Curriculum sequence on history of technology; 1992-1994 (adopted as a required sequence for UTSA engineering students)
Organizer, Learning Assistance Center Engineering Tutoring Program; Spring, Fall 1993
Organizer, Engineering Honor Society (now Tau Beta Pi) Tutoring Program; 2000-2003
Electrical Engineering Coordinator, Control and Robotics Laboratory; 1992-2003
Director, Coding, Communications and Control Research Laboratory; 1994-2003

Course Coordinator, EE 2323, EE 3413, EE 3513, EE 2423, EE 3423, EE 4443

Professional Development:

Attendee, *Change Management*, Rolla, Missouri; June 2016
American Council on Education (ACE) Annual Meeting; 2012-Present
Association of Public and Land-grant Universities (APLU) Annual and Summer Meetings; 2012-Present
Great Lakes Valley Conference (GLVC) Council of Presidents Meetings; 2012-Present
National College Athletic Association (NCAA) National Convention; 2012-Present
ACE Institute for New Presidents; July 2012; December 2012; March 2013
Harvard Seminar for New Presidents; July 2012
Creativity in Unexpected Places, Boise, Idaho; November 2011
Mobile Learning Symposium, Boise, Idaho; September 2011
Instilling the Entrepreneurial/Innovation Mindset in Students, Vancouver, BC; June 2011
Principles of Quantitative Research Design for Engineering Education Researchers, Vancouver, BC; June 2011
Academic Program Prioritization: Integrating Academic and Financial Planning Webinar, Boise, Idaho; May 2011
Idaho Regional Optical Network and Video Conferencing Seminars, Boise, Idaho; May 2011
Living Kingian Ideals Leadership Workshop, Boise, Idaho; January 2011
ENGAGE Research-based Strategies to Retain Undergraduates in Engineering Webinars,
Part 3 – Improving Spatial Visualization, Boise, Idaho; January 2011
Part 1 – Improving Faculty/Student Interaction, Boise, Idaho; November 2010
Micron Faculty Symposium, Boise, Idaho; August 2010
Bridging the Educational Gap for Hispanic Students in Idaho, Boise, Idaho; July 2010
Prioritizing Academic Programs and Services Webinar, Boise, Idaho; January 2010
Leading Through the Downturn Webinar, Boise, Idaho; September 2009
APLU Science, Math Teacher Imperative Workshop, Boulder, Colorado; May 2009
Difficult Decisions; Playbook for Protecting the University Core in an Era of Reduced Resources Webinar, Boise, Idaho; September 2009
Recruiting a Diverse Faculty Webinar, Boise, Idaho; July 2009
Benchmarks for Family Friendly Policies Webinar, Boise, Idaho; November 2008
Engineering Deans Council Public Policy Colloquium, Washington DC; February 2008; 2009; 2011
Women Engineers in Advanced Academic Positions: Effecting Change in Higher Education, Newark, New Jersey; January 2008
Volunteer Congress, Boise, Idaho; December 2007
Development for Deans, Jacksonville, Florida; February 2007
Enrollment Management Workshop, Tamarack, Idaho; August 2007
Volunteer Congress II, Boise, Idaho; December 2006
Communications Workshop, Boise, Idaho; September 2006
Case Study Workshop, Benz, Whaley and Flessner, Boise, Idaho; August 2006
Leadership Conference for Women, Garden City, Idaho; June 2006
Laboratory and Environmental Safety Workshop, Boise, Idaho; January 2006
In Their Own Words Workshop, Boise, Idaho; August 2005
WAC Academic Alliance Leadership Summit, San Jose, California; June 2004, June 2005
Engineering Deans Institute, New Orleans, Louisiana, April 2004; Phoenix, Arizona, April 2005; San Francisco, California, March 2006; La Jolla, California, March/April 2008; St. Petersburg, Florida, April 2010; Palm Springs, California, April 2011
Creative Economy Workshop, Garden City, Idaho; December 2004
Women in Engineering Leadership Institute, Storrs, Connecticut; May 2004
New Deans Forum, New Orleans, Louisiana; April 2004
Managing Performance Training Workshops, Boise, Idaho; February 2004
Recognizing and Rewarding Employees Training Workshops, Boise, Idaho; February 2004
Boise Chamber Strategic Planning Workshop, Boise, Idaho; September 2003
Executive Women International 2003 Leadership Conference, San Antonio, Texas; May 2003
2003 IEEE Society/Council Presidents Workshop, Nashville, Tennessee; February 2003
College Strategic Planning and Visioning Retreat, San Antonio, Texas; January 2003
WebCT Master Faculty Workshop, San Antonio, Texas; July 2002

2002 IEEE Society/Council Presidents Workshop, Tempe, Arizona; February 2002
American Association of University Women Former Fellows Day, Austin, Texas; June 2001
2001 IEEE Conference Workshop, Piscataway, New Jersey; April 2001
Ethics Workshops and Forum, San Antonio, Texas; October 1999
IEEE Educational Activities Board Engineering Criteria 2000 Program Evaluator Workshop for Programs Accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology, Inc., Destin, Florida; March 1999
Teaching-for-Learning Institute Summer Workshops, Teaching and Learning Center; May 1998
Designing Productive and Involving Team-Learning Tasks
Developing and Assessing Learning Objectives
Teaching Abstract Concepts to Diverse Learners
Using Classroom Assessment Techniques to Improve Student Learning
Faculty Development Retreat; April/May 1998
Graduate and Professional School Enrollment Management Corporation "How to Recruit Graduate Students: Techniques, Secrets, & Strategies" Seminar, New Orleans, Louisiana; March 1997
Moving from Conflict to Collaboration, San Diego, California; January 1997
Enhancing the Scholarly Work of Faculty through Departmental Leadership, San Diego, California; January 1997
Teaching as Community Property: Getting Started with Peer Collaboration and Review of Teaching, San Diego, California; January 1997
NSF Dynamic Systems and Controls Workshop for Advancement and Retention of Underrepresented and Minority Engineering Educators, Arlington, Virginia; September 1995
Building Alliances Through Networking, Applied Materials, Austin, Texas; November 1994
Sexual Harassment, Applied Materials, Austin, Texas; November 1994
UTSA - Pan American Engineering Cooperative Initiative, San Antonio, Texas; Spring 1994
Women in Engineering Program Fall Workshops, The University of Texas at Austin, Austin, Texas; September 1993
Ethics Workshops for Engineering Faculty, Texas State Board of Registration for Professional Engineers, San Antonio, Texas; August 1993
Campus Briefing, Texas Higher Education Coordinating Board Advanced Research and Technology Programs, UTHSCSA, San Antonio, Texas; May 1993
Grant Development Seminars, UTSA, San Antonio, Texas; Fall 1991, Spring 1992, Fall 1992 (monthly)
Student Professional Awareness Conference, UTSA, San Antonio, Texas; April 1992
Annual Faculty Seminar on Teaching Effectiveness, UTSA, San Antonio, Texas; November 1991
New Faculty Orientations, UTSA, San Antonio, Texas; September 1991

Executive Coaching, 2016-Present
Host and Facilitator, Four-part NSF Proposal Development Workshop Series, Spring 2011
Host and Facilitator, NASA Day, September 2011
Organizer, *Faculty Perspectives on Teaching and Scholarly Activities Balance*; January 2011
Organizer, *Introduction to LEAN*; August 2010
Organizer, *Student Wellness Workshop;* January 2010
Organizer, *Millenials Go to College Workshop*; August 2008
Organizer, *Working with the Media Workshop*; January 2006
Organizer, *Goal Setting, Management and Evaluation Workshop*; January 2005
Co-organizer, *The Bioengineering Forum* (joint seminar series with the University of Texas Health Science Center at San Antonio); 2000-2003
Organizer, *Coding, Communications, and Control Seminar Series*; 1994-2003
Co-organizer, *Research Areas NSF is Planning to Emphasize in Coming Years*, UTSA, San Antonio, Texas; Summer 1994
Organizer, *Dynamical Systems and Control Seminar Series*; 1993-1994
Co-organizer, *Signals and Systems Seminar Series*; Spring 1993
Organizer, *Women in the 'Hard' Sciences Panel Discussion*, Women's History Week; March 2002
Coordinator and College of Sciences and Engineering Panelist, *Faculty Orientation*, UTSA, San Antonio, Texas; August 1995, August 1996, August 1997, August 1998
Organizer, *Engineering Panel Discussion,* Sponsored by the UTSA Society of Women Engineers; November 1996
Organizer, *Planning for ABET's Criteria 2000 ASEE Workshop,* San Antonio, Texas; March 1996

Organizer, Sylvia Stern & Associates Workshop *"Working Together: Men and Women in the Workplace,"* Sponsored in part by the UTSA Society of Women Engineers, the Division of Engineering, and the Office of the Provost; July 1995

UTSA Team Leader and Participant, *National Businesswomen's Leadership Association "Powerful Communication Skills for Women" Workshop*, San Antonio, Texas; April 1997

GRANTS AWARDED (total external funding awarded in excess of eleven million dollars)

National Science Foundation Scholarships in Science, Technology, Engineering and Mathematics Program, *"Idaho Scholarships for Transfer Students,"* 2011-2016 (with J. Callahan (PI), A. Jain, A. Moll, D. Bullock).

National Science Foundation Academic Research Infrastructure Program: Recovery and Reinvestment (ARI-RS); ***"****Research Infrastructure Upgrade – Micron Engineering Center,"* 2010-2014, (with M. Rudin (PI), Darryl Butt, James Maguire, Thad Welch).

National Science Foundation Innovation through Institutional Integration Program, *"STEM Central STATION (Strategic Transformation Aligning Teaching, Immersion, Outreach and kNowledge),"* 2010-2015, (with S. Andrews (PI), S. McGuire, L. Nadelson, K. Viskupic).

National Science Foundation Scholarships in Science, Technology, Engineering and Mathematics Program, *"Idaho Engineering Scholarship Program – Expanded Opportunities,"* 2008-2013 (with J. Callahan (PI), A. Jain, A. Moll, J. Guarino).

National Science Foundation Scholarships in Science, Technology, Engineering and Mathematics Program, *"Idaho Engineering Scholarships Program (Idaho ESP),"* 2006-2011 (with A. Moll (PI), A. Jain, J. Gardner, S. Loo).

National Science Foundation Computer Science, Engineering and Mathematics Scholarships Program, *"Scholarships for Computer Science and Engineering Education in Idaho,"* 2004-2008 (with A. Moll (PI), A. Jain, M. Khanal, S. Loo).

William and Flora Hewlett Foundation, *"Engineering Schools of the West Initiative at Boise State,"* 2003-2008 (with J. Gardner (PI) and A. Moll).

Texas Higher Education Coordinating Board Advanced Technology Program Subcontract, *"An Automated System to Prepare and Process Cross-Sectional Specimens from Three-Dimensional Objects,"* 2002-2003.

Teaching and Learning Center WebCT Master Faculty Grant Program, *"Teaching Abstract Linear Systems and Control Concepts Using WebCT,"* 2002.

Texas Technology Workforce Development Grant and the Office of the Governor, *"Launching the Texas Engineering Pipeline: Deploying The Infinity Project Statewide,"* 2002-2003. Consortium of 15 universities: Southern Methodist University, University of Texas at El Paso, University of Texas at Tyler, Lamar University, Texas Women's University, University of Texas at Arlington, Tarleton State University, St. Mary's University, University of Texas at Austin, Texas A&M University, Prairie View A&M University, Rice University, University of Texas at Dallas, University of Texas at San Antonio, Baylor University.

The University of Texas at San Antonio Office of International Programs Travel Grant, December 2000.

The University of Texas at San Antonio Faculty Development Leave Grant Program, Fall 1999.

Texas Higher Education Coordinating Board Advanced Technology Program, *"Biofeedback and Natural Control: An Innovative Methodology,"* 1996-1999 (with W. Wade).

National Aeronautics and Space Administration Equipment Grants, *"Coding, Communication, and Control Research Laboratory,"* 1997.

Armstrong Laboratory Brooks Air Force Base, *"Robotic Arm System Research Equipment,"* 1996.

Tateishi Science and Technology Foundation Research Travel Grant, December 1996.

National Aeronautics and Space Administration Institutional Research Awards for Minority Universities, *"Research in Advanced Aeronautical Propulsion Systems,"* 1994-1999 (with L. Boyce (PI) and F.C. Dougherty); Renewal Proposal NASA Institutional Research Awards for Minority Universities, *"Research in Advanced Aeronautical Propulsion Systems,"* 1995-1999 (with L. Boyce (PI)).

IEEE Systems, Man and Cybernetics Society 1994 IEEE International Conference on Systems, Man and Cybernetics Equipment Award, 1995.

Applied Human Factors, Inc., *"Advanced Engineering Development of a Cordless Communication Device,"* 1994-1995 (with J. Schmalzel (PI) and P. Patel).

National Science Foundation Research Planning Grant, *"A Unified Approach to Zeros in Robotics and Aircraft,"* 1993-1994.

National Science Foundation International Symposium on the Mathematical Theory of Networks and Systems Travel Grant, August 1993.

The University of Texas at San Antonio, Division of Engineering Equipment Grant, April 1993.

The University of Texas at San Antonio Faculty Research Award, *"Electromyographic Signals and Control: An Implicit System Approach,"* 1992-1993.

National Science Foundation 30th IEEE Conference on Decision and Control Travel Grant, December 1991.

PROFESSIONAL ACTIVITIES

Professional and Honor Societies:
Institute of Electrical and Electronics Engineers (IEEE)
- IEEE Control Systems Society
- IEEE Education Society
- IEEE Circuits and Systems Society
- IEEE Industrial Electronics Society
- IEEE Engineering, Medicine and Biology Society
- IEEE Women in Engineering

American Society for Engineering Education (ASEE)
- ASEE Biomedical Engineering Division
- ASEE College-Industry Partnership Division
- ASEE Entrepreneurship & Engineering Innovation Division
- ASEE K-12 & Pre-College Division
- ASEE Women in Engineering Division
- ASEE Minorities in Engineering Division

Society of Women Engineers (SWE)
Tau Beta Pi (Engineering Honor Society)
Eta Kappa Nu (Electrical and Computer Engineering Honor Society)
Alpha Lambda Delta (National Honor Society for First Year Students)

Reviewer:
IEEE Transactions on Automatic Control
Automatica
International Journal of Control

Journal of Linear Algebra and Its Applications
SIAM Journal on Control and Optimization
Journal of Mathematical and Computer Modeling
Systems & Control Letters
Proceedings of the IEEE
Encyclopedia of Electrical and Electronics Engineering
IEEE Conference on Decision and Control
American Control Conference
ASEE Annual Conference
Joint Conference on New Trends in Systems Theory
National Science Foundation Proposals and Programs
National Institutes of Health Proposals
Veterans Administration Proposals
NASA EPSCoR Proposals, Scholarships and Fellowships

Leadership and Activities:

Operating Committee
- Advances in Statistical Control, System Theory and Engineering Education, Notre Dame, Indiana, 2007
- 35th IEEE Conference on Decision and Control, Kobe, Japan, 1993-1997
- 34th IEEE Conference on Decision and Control, New Orleans, Louisiana, 1993-1996
- ASEE Gulf Southwest 1996 Annual Conference, San Antonio, Texas, 1995-1996
- 1994 IEEE International Conference on Systems, Man and Cybernetics, San Antonio, Texas, 1992-1995
- 32nd IEEE Conference on Decision and Control, San Antonio, Texas, 1991-1994

Program Committee
- 9th IEEE International Conference on Methods and Models in Automation and Robotics, Miedzyzkroje, Poland, 2003
- 40th IEEE Conference on Decision and Control, Orlando, Florida, 2001
- Program Chair, 39th IEEE Conference on Decision and Control, Sydney, Australia, 1998-2001
- 38th IEEE Conference on Decision and Control, Phoenix, Arizona, 1999
- Program Vice Chair, 37th IEEE Conference on Decision and Control, Tampa, Florida, 1995-1999
- IEEE Control Systems Society Conference Editorial Board, 1994-1996

Advisory Committee
- 4th International Symposium on Resilient Control Systems, Boise, Idaho, 2011
- Joint Conference on Decision and Control and European Control Conference, Seville, Spain, 2005
- 2003 IEEE Conference on Control Applications, Istanbul, Turkey, 2003
- 42nd IEEE Conference on Decision and Control, Maui, Hawaii, 2003

ASEE
- National Advisory Board, Engineering Deans for Gender Equity Project, 2017-Present
- Engineering Deans Council Public Policy Committee, 2007-2011
- Engineering Deans Council Idaho State Coordinator, Public Policy Colloquium, 2010-2011
- Engineering Deans Council Awards Committee, 2004-2009
- Engineering Deans Council Executive Board Awards Program Review Committee, 2007-2008
- Engineering Research Council, 2003-2012

ABET, Inc.
- Commissioner, Engineering Accreditation Commission (EAC), 2011-2016
- IEEE Delegate to EAC, 2011-2016
- EAC Continuous Improvement Committee 2014-2016
- EAC Materials Committee, 2011-2014
- EAC New Team Chair Information and Mentor Subcommittee, 2011-2014
- Team Chair, ABET Accreditation Visits, 2011-Present
- Alternate, Engineering Accreditation Commission, 2009-2011

Tau Beta Pi
- Chair, Executive Council of Tau Beta Pi Outstanding Advisor Selection Committee, 2011
- Member, Executive Council of Tau Beta Pi Outstanding Advisor Selection Committee, 2007-2010

IEEE
- ABET/IEEE Program Evaluator, 2001-Present
- Member, IEEE James H. Mulligan, Jr. Education Medal Committee, 2011-2014

Member-at-Large, IEEE Committee on Engineering Accreditation Activities (CEAA), 2006-2011
Chair, IEEE CEAA Nominating Committee, 2010-2011
IEEE Director, American Automatic Control Council, 2002-2003
Member, IEEE Technical Activities Board (TAB), 2003
TAB Liaison, IEEE Women in Engineering, 2004
TAB Liaison, IEEE Student Activities Committee, 2003
Member, IEEE Division X Director Nominating Committee, 2004
Member, IEEE Technical Activities Board Nominations and Awards Committee, 2004-2007
Chair, Student Paper Contest, 1992 Region V IEEE Conference, April 1992
Assistant Editor, IEEE Circuits and Systems Society Newsletter, 1990-1992

IEEE Control Systems Society

Advisor, Women in Control, 1999-Present
Past President, 2004
President, 2003
President-Elect, 2002
Vice President, 2000 and 2001 (elected for two consecutive terms)
Board of Governors, 1996-2004 (elected for three consecutive three year terms)
Board of Governors, 1994-1995 (appointed)
Chair of the Nominating Committee, 2004
Chair of the Board of Governors, 2003
Chair of Long Range Planning Committee, 2002
Chair of Conference Activities Board, 2000-2001
Chair of Women in Control, 1997-1999
Chair of Student Activities, 1996-1998
Nominating Committee, 2005
IEEE Control Systems Magazine Best Paper Award Committee, 2004
Member Activities Board, 1996-1999
Society Representative, IEEE Women in Engineering Forum, San Antonio, Texas, February 1997
Panelist, Student Paper Award, 32nd IEEE Conference on Decision and Control, December 1993
Vice Chair, Working Group on Linear Multivariable Systems, 1990-1992

Plenary and Special Sessions Organizer

39th IEEE Conference on Decision and Control, Sydney, Australia, December 2000

Invited Session Organizer

ASEE Gulf Southwest 1997 Annual Conference, Houston, Texas, March 1997
SWE 1998 National Convention & Student Conference, Houston, Texas, June 1998

Session Chair

43rd IEEE Conference on Decision and Control, Paradise Island, The Bahamas, December 2004
Creative Economy Workshop, Boise, Idaho, December 2004
42nd IEEE Conference on Decision and Control, Maui, Hawaii, December 2003
2003 American Control Conference, Denver, Colorado, June 2003
39th IEEE Conference on Decision and Control, Sydney, Australia, December 2000
38th IEEE Conference on Decision and Control, Phoenix, Arizona, December 1999
37th IEEE Conference on Decision and Control, Tampa, Florida, December 1998
1997 American Control Conference, Albuquerque, New Mexico, June 1997
ASEE Gulf Southwest 1997 Annual Conference, Houston, Texas, March 1997
35th IEEE Conference on Decision and Control, Kobe, Japan, December 1996
13th World Congress of International Federation of Automatic Control, San Francisco, California, June/July 1996
ASEE Gulf Southwest 1996 Annual Conference, San Antonio, Texas, March 1996
34th IEEE Conference on Decision and Control, New Orleans, Louisiana, December 1995
1995 American Control Conference, Seattle, Washington, June 1995
33rd IEEE Conference on Decision and Control, Lake Buena Vista, Florida, December 1994
1994 IEEE International Conference on Systems, Man and Cybernetics, San Antonio, Texas, October 1994

Region 3 Representative, NCAA DII Presidents Council, 2017-Present
Member, Board of Trustees, St. Louis Science Center, 2013-Present
Member, P-20 Education Council, Springfield Area Chamber of Commerce, 2013-Present
Member, Council on Public Higher Education in Missouri, 2012-Present

General Officer, University of Missouri System, 2012-Present
Member, Missouri S&T Board of Trustees, 2012-Present
Member, Board of Directors, Missouri Energy Initiative, 2012-Present
Member, Idaho Technology Council Workforce Development Committee, 2009-2012
Member, Boise Metro Chamber of Commerce Emerging Technologies Committee, 2004-2007
Member, The Greater San Antonio Chamber of Commerce Bioengineering Blue Ribbon Panel, 2000-2003
Mentor, Invent Your Career! Team, Mid-career Review Mentoring Program, University of Washington, 2007-2011
Advisory Board, University of Nebraska-Lincoln ADVANCE Program, 2009-2013
Advisory Board, Pacific Northwest Louis Stokes Alliance for Minority Participation, 2009-2012
Advisory Board, The Idaho Science Talent Expansion Program, 2009-2011
Technical Advisory Committee, Idaho NASA EPSCoR, 2007-2012
Department Review Team, University of Nebraska-Lincoln, March 2008
Member, Boise Metro Chamber of Commerce Emerging Technologies Committee, 2004-2007
National Science Foundation Committee of Visitors, June 2005
Proposal Review Panelist, National Science Foundation, May 1993, February 1996, September 2000, May 2009
Invited Panelist, Shared Leadership Program, Boise, Idaho, November 2004
Invited Panelist, KICKSTART The Northwest's Premier Entrepreneur Event, April 2005
Invited Panelist, ASEE Annual Conference and Exposition, New Orleans, Louisiana, June 2016; Austin, Texas, June 2009; Portland, Oregon, June 2005
Invited Panelist, WEPAN National Conference, Austin, Texas, June 2009
Invited Panelist, Women's Leadership Conference, Boise, Idaho, March 2009
Invited Panelist, Society of Women Engineers 2005 National Convention, Anaheim, California, November 2005
Invited Panelist, Women in Control as Leaders, Challenges, Opportunities and Rewards: from the Perspective of Deans and Chairs, The First NSF Workshop for Women in Control, December 2003
Invited Panelist, Society of Women Engineers 1998 National Convention, Houston, Texas, June 1998
Invited Panelist, Workshop Leader, Volunteer, Expanding Your Horizons in Science and Mathematics, 1991-2003
Invited Panelist, New Deans Orientation, Engineering Deans Institute, St. Petersburg, Florida, April 2010; Palm Springs, California, April 2011
Advisory Committee, Cajal Neuroscience Research Center, San Antonio, Texas, 1997-2003
UTSA Delegate, The Greater San Antonio Chamber of Commerce Bioengineering Blue Ribbon Panel, 2000-2003
UTSA Delegate, Southwest Research Consortium, 2000-2001
Engineering Organizer and Team Leader, San Antonio Ethics Challenge, October 1999
Workshop Leader and Volunteer, Girls in Engineering, Mathematics, and Science (GEMS), 1995
Master of Ceremonies, The JASON Project, February 2004, January 2005

University Service:
Member, Electrical Engineering Program Committee, 1991-2003
Electrical Engineering Merit Policies Committee, 2002
Electrical Engineering Graduate Studies Committee, 1991-2003
Electrical Engineering Faculty Search Committee, 1991-1993, 1995-2000
Division Graduate Studies Committee, 1993-1996
Division Academic Policy and Curriculum Committee, 1995-1996
Division Advisory Council, 1993-1994
Division Library Committee, 1992-1993
Engineering Executive Committee, 1998-1999
Chemistry Faculty Search Committee, 2002
Life Sciences Faculty Search Committee, 1993-1994, 1999-2000
Civil Engineering Faculty Search Committee, 1994-1995
Physics Faculty Search Committee, 1993
Engineering Executive Committee, 2000-2003
Sciences Executive Committee, 2000-2002
College of Sciences and Engineering Graduate Studies Division Representative, 1993-1996
College of Sciences and Engineering ad hoc Equipment Committee, 1992-1993
Vice President for Business Affairs Research Faculty Advisory Board, 1997-2003
President's Advisory Group on University Communications, 1996-1999
Architect Selection Advisory Committee, Engineering/Biotechnology III Building, 2000-2001
UTSA Who's Who Among Students in American Universities and Colleges Selection Committee, 2000

University Library Technology Development Strategic Planning Group, 1994-1995
University Honors Program Faculty Advisory Committee, 1995-1998
University Task Force on Tenure-Track Faculty Merit Review, 1995-1997
Five University and College Strategic Initiative Planning Committees, 1996-1997
University Faculty Development Committee, 1996-1999
University Teaching and Learning Center Advisory Board, 1997-1999
University Faculty Grievance Review Panel, 1998-1999
University Committee on Prospective McKinsey & Co., Inc. Placement Candidates, 1992
University Search Committee for Director of International Studies, 1992-1993
College of Engineering Founding Dean Search Committee, 2000-2001
Committee on the Advancement of Women, 2001-2003
Ad Hoc Committee on Faculty Leave Policy, 2003
Ad Hoc Committee to Review Graduate Studies and Research Development, 2002
Academic Information Technology Advisory Committee, 2003-2010
Presidents Cabinet, 2003-2007
Deans Council, 2003-2011
Charting the Course, University Strategic Planning Council, 2005-2006
Community College Accreditation Team, 2006
Comprehensive Campaign Steering Committee, 2006-2007
Academic Space Planning LEAN Team, 2009-2010
Chancellor's Committee on Diversity and Inclusion, 2012-Present
Chancellor's Advisory Committee on African American Recruitment and Retention, 2012-Present
General Officers of the University of Missouri System, 2012-Present
University of Missouri-Columbia Chancellor Search Committee, 2013-2014

Co-Chair, College of Arts & Sciences Dean Search Committee, 2005-2006

Chair, Chancellor's Cabinet, 2012-Present
Chancellor's Council, 2015-Present
General Faculty, 2012-Present
University of Missouri System Chief Diversity Officer Search Committee, 2015-2016
Council on Centers, Institutes and Core Facilities, 2011-2012
University Naming Committee, 2010-2011
Vice President for Institutional Advancement Search, 2004-2005
College of Engineering Executive Committee, 2003-2011
College of Engineering Public Relations Officer and Media Specialist Search, 2004
College of Engineering Associate Dean for Academic Affairs Search, 2004
College of Engineering Research Committee, 2001-2003
College of Engineering Space Utilization Committee, 2001-2003

Thesis Advisor (graduated ten masters students), 1991-2004

Dissertation Advisor (graduated two doctoral students), 2002-2006

Thesis and Dissertation Committee Member (fifteen thesis, six dissertation), 1993-2006

Honors Thesis Advisor (graduated the first engineering honors student), 2000-2001

Mentor, UTSA Mentor Program, 1991-2003

Mentor, Boise State University Shared Leadership Mentor Program, 2007-2009

Electrical Engineering and Mechanical Engineering Senior Design Project Advisor, 1994, 1995, 1996, 1997, 1998, 1999, 2001, 2005, 2006

Technical Consultant, Society of Automotive Engineers Robotic Walking Machine Decathlon, 1992-1994

Founder, Coding, Communication and Control Research Laboratory, 1994-2003

Faculty Advisor (charter), Society of Women Engineers UTSA Student Chapter, 1995-1998; Faculty Mentor, 1998-2003

Faculty Advisor (charter), UTSA Engineering Honor Society, 1998-2001

Faculty Advisor (charter), Tau Beta Pi Texas Mu Chapter, 2002-2003

Faculty Advisor, CIA Intern Program, 2000

Research Mentor, Alliance for Minority Participation Program, 1994-1998

Research Mentor, LSAMP Summer Bridge Program, 2002, 2003

Research Mentor, ONR Scholars Program, 1996, 2000-2001

Research Mentor, NASA Scholars Program, 1996-2003

Research Mentor, McNair Scholars Program, 1996-1997, 1999, 2000

Research Mentor, 2nd Annual MAES Student Design Competition on Designing an Environmentally Friendly Automobile, 2000 [won first place nationally]
SACS Divisional Representative, Learner-Centered Self-Study, 1998-2000
NWCCU Regional Self-Study Review, 2008-2010
Coordinator, Organizer, and Participant, UTSA Graduate Program Day, 1996, 1997
Representative and Office of Graduate Studies Liaison, GradFair 97, October 1997

HONORS AND AWARDS

NCAA Division II Presidents Council	2017-Present
National Advisory Board, ASEE Engineering Deans for Gender Equity Project	2017-Present
Fellow of the IEEE	2014
P-20 Education Council, Springfield Area Chamber of Commerce	2013-Present
Board of Trustees, St. Louis Science Center	2013-Present
Board of Directors, Missouri Energy Initiative	2012-Present
Alumni Achievement Award, Valparaiso University	2011
Best Paper Award, ASEE Annual Conference and Exposition	2011
30 in 30, Boise State University Construction Management Most Influential People	2011
Board of Directors, Boise Valley Economic Partnership	2011-2012
Top 150 Most Influential People, Valparaiso University	2009
Advisory Board, TechHelp	2008-2011
IEEE Education Society Hewlett-Packard/Harriett B. Rigas Award	2008
Best Paper Award Nomination, ASEE Annual Conference and Exposition	2008
Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring	2005
IEEE Control Systems Society Distinguished Member Award	2005
Women Making History in Idaho Award	2005
Advisory Board, Highway 12 Ventures: A Village Ventures Fund	2005-2012
Board of Directors, Discovery Center of Idaho	2004-2012
After Graduation: Women in Control Taking a Leadership Role (NSF workshop dedicated in my honor)	2003
President, IEEE Control Systems Society	2003
Exemplary Online Course Award, WebCT	2003
Universities and Health-Related Institutions Senior Fellow, Texas Higher Education Coordinating Board	2003
IEEE Director, American Automatic Control Council	2002, 2003
2002 Engineering Excellence Award, Steven Myers & Associates	2002
President-Elect, IEEE Control Systems Society	2002
UTSA Ambassadors Amber Dinner Honoree	2001
Best Paper Award, ASEE Gulf Southwest Annual Conference	2001
Vice President, IEEE Control Systems Society	2000, 2001
Southwest Research Consortium	2000-2001
University Marshal	2000
Who's Who Among America's Teachers	2000
Awardee and Hall of Fame Member, San Antonio Business Journal "40 Under 40 Rising Stars"	1997-1999
Promoted to Senior Member of the IEEE	1997
Three Term Elected Member, IEEE Control Systems Society Board of Governors	1996-2004
Invited Speaker, Luce Lecture Series, University of Notre Dame	1996
Best Paper Award, 30th Annual Rocky Mountain Bioengineering Symposium	1993
Faculty Research Award, The University of Texas at San Antonio	1992-1993
Faculty Member of the Day, College of Sciences and Engineering Advisory Council	1992
Best Paper Award 1990 Mini-Symposium, University of Notre Dame	1990
Arthur J. Schmitt Dissertation-Year Fellowship, University of Notre Dame	1990
Borg-Warner Grant, Society of Automotive Engineers	1988-1990
Selected Professions Fellowship, American Association of University Women	1989-1990
Amelia Earhart Fellowship, Zonta International	1989-1990
Best Presentation Award, 1989 American Control Conference	1989
Tuition Scholarship, University of Notre Dame	1985-1990
Graduated as Christ College Associate, Valparaiso University Honors College	1984

Graduated with High Distinction and Senior Honors, Valparaiso University	1984
Senior Scholarship, Gamma Phi Sorority	1983-1984
Presidential Scholarship, Valparaiso University	1980-1984
Dean’s List, Valparaiso University	1980-1984
Scholarship for Academics and Leadership, Aid Association for Lutherans	1980-1981