

## G. Gustave (Gus) Greivel

### EDUCATION

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#### **Colorado School of Mines, Golden, CO**

M.Sc., Mathematical and Computer Sciences (Operations Research), 1994.

Completed thesis titled *A Geometric Programming Algorithm for the Economic Design of X-Bar Control Charts*.

#### **Colorado School of Mines, Golden, CO**

B.Sc., Mathematical and Computer Sciences, Minors in Public Affairs and Economics, 1992

- Received “Outstanding Graduating Senior” Award for Mathematical and Computer Sciences.
- Participated in the McBride Honors Program in Public Affairs for Engineers.
- Interned as a Teaching Assistant in the NSF Young Scholars Program in the Department of Mathematical & Computer Sciences.
- Served as an Undergraduate Teaching Assistant in the Mathematical & Computer Sciences Computer Lab for Calculus III.

### ACADEMIC EXPERIENCE

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**1996 – 01, 02 – Present      Colorado School of Mines (CSM)      Golden, CO**

#### **Teaching Professor, Department of Applied Mathematics and Statistics**

- Taught more than a dozen courses in Applied Mathematics and Statistics as well as the interdisciplinary McBride Honors Program in Public Affairs for Engineers.
- Active faculty participant with the CSM Minority Engineering Program (MEP), taking part in many summer outreach programs, since (1994 – present).
- Provide academic advising for both entering freshman and departmental majors (2002 – present).
- Coordinate several multi-section course offerings in the undergraduate Mathematics curriculum (2002 – present).
- Regularly participate as a panelist for student recruitment events with the CSM Admissions Office (2004 – present).
- Active leader on a variety of faculty and administrative committees/councils since (2005 – present).
- Responsible for the undergraduate programs and course scheduling within the department since (2005 – 2013).
- Responsible for recruitment, leadership, evaluation and mentorship of instructional faculty in the department since (2005 – 2013).
- Responsible for developing and managing the course schedule for the department – this involves scheduling approximately 100 sections of Mathematics and Statistics courses in conjunction with all other academic units on campus (2005 – 2013).
- Responsible for the assessment, oversight and coordination of adjunct faculty in the department – this involves some 20-30 adjuncts and lecturers, teaching 50-60 sections in Mathematics and Statistics (2005 – 2013).
- Active in a variety of initiatives and committees to better integrate instructional faculty into the campus community since (2006 – present).
- Active leader in the department in revising both the Undergraduate Mathematics Curriculum and the Undergraduate Computer Science Curriculum to better meet the academic needs and professional objectives of our students (2006 – present).
- Active leader on campus curriculum committee – involved in major revisions of the institutional core curriculum (2006 – 2013).
- Responsible for evaluation of transfer credit in Applied Mathematics and Statistics since (2007 – present).

- Responsible for collaboration and articulation between area 2-year schools and the Colorado School of Mines since (2007 – 2013).

**2007 – 2008                      University of Colorado                      Boulder, CO**  
**Adjunct Instructor, Leeds School of Business**

- Taught large lecture sections (approximately 150-250 students) of BCOR1020 – Business Statistics.

**1999 – 2000                      University of Colorado at Denver                      Denver, CO**  
**Instructor, Department of Mathematics**

- Taught MATH1401 – Calculus I and MATH2411 – Calculus III.

**1996                                      Metropolitan State College                                      Denver, CO**  
**Adjunct Instructor, Department of Computational and Management Sciences**

- Taught CMS332 – Quantitative Decision Methods (Quantitative Tools for Operations Management).

**1995 – 1996                      Foothills Academy                                      Wheat Ridge, CO**  
**Lead Math and Science Teacher**

- Developed the curriculum in Mathematics and Science for a small high school focused on experiential learning.
- Lead student groups on weeklong outings in the wilderness of Colorado and Utah as part of the school's outdoor education program.
- Performed daily and academic year scheduling tasks.
- Lead a team of students in the University of Denver's "World Affairs Challenge" competition.

**1994 – 1995                      Colorado School of Mines                                      Golden, CO**  
**Adjunct Instructor, Department of Mathematical and Computer Sciences**

- Taught MAGN132 – Calculus II.

**BUSINESS EXPERIENCE**

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**2001 – 2002                      Quality Education Data                                      Denver, CO**  
**Manager of Marketing Research Analysis**

- Managed a small analysis team responsible for the fulfillment of more than \$1,000,000 in annual custom research in the education market.
- Managed and developed client relationships, including several with Fortune 500 companies.
- Provided consultation and research across a wide variety of industries targeting the education market.
- Presented research findings to customers.
- Developed and helped sell database marketing research product line.
- Provided sales support for marketing research products.

**INSTRUCTION AT CSM**

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**Departmental – Applied Mathematics and Statistics**

- MATH100 – Introductory Topics for Calculus
- MATH111 – Calculus I
- MATH112 – Calculus II
- MATH113 – Calculus II (Short Form)
- MATH122 – Calculus II Honors
- MATH213 – Calculus III
- MATH223 – Calculus III Honors (AP AB Students)
- MATH224 – Calculus III Honors (AP BC Students)
- MATH300 – Foundations of Advanced Mathematics

- MACS370 – Mathematical and Computer Sciences Field Session
- MATH323 – Probability and Statistics
- MATH424 – Introduction to Applied Statistics (Linear Models)
- MACS461/462 – Senior Seminar
- MATH482 – Statistics Practicum
- MATH498/598 – Special Topics: Statistical Process Control and Design of Experiments
- MATH499 – Independent Study: History of Mathematics
- MATH530 – Statistical Methods I
- HNRS201 – Comparative Political and Economic Systems
- CSM101 – Freshman Success Seminar

## **UNIVERSITY SERVICE AND LEADERSHIP AT CSM**

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### **Departmental – Applied Mathematics and Statistics**

- Assistant Department Head (2011 – 2013).
- Director of Undergraduate Programs (2008 – 2013).
- Development of new undergraduate curricula (2006 – present).
- Adjuncts & Graduate Teaching Fellows: vetting, staffing, budgeting & mentoring (2005 – 2013).
- Primary advisor in MCS, including signature authority on institutional forms and organization of Group Advising sessions for majors (2005 – 2013).
- Transfer credit evaluation (2005 – present).
- Course scheduling (2005 – 2013).
- Undergraduate Committee (2005 – present).
- AMS Teaching Associate Professor Search Committee (2012, committee chair, 3 positions).
- AMS Department Head Search Committee (2011 – 2012).
- Oversight of CCU Mathematics Instruction Agreement through SPACE (2006 – 2011).
- Assisted in the implementation and assessment of the new Calculus curriculum in the mid-1990s (1996 – 1997).

### **Campus Service**

- Interim Director of the Center for Innovative teaching and Learning (2015)
- Campus-Wide Promotion Committee for Teaching Faculty (2012 – present).
- Faculty Awards Committee (2012 – present)
- Teaching Faculty Working Committee (2009 – present).
- Readmissions Committee (1999 – 2001, 2002 – 2007, 2009 – present).
- Faculty Senate (2009 – 2012); Executive Committee (2011-2012).
- Undergraduate Council (1999 – 2001, 2006 – 2013); Chair (2011-2012).
- Undergraduate Curriculum Committee (2006 – 2007, 2008 – 2012).
- Budget Committee (2010 – 2012).
- Applied Mathematics and Statistics Representative to the ABET Committee (2012 – present).
- Assist in coordinating scheduling and common exams across campus (2005 – 2013).
- Establishment and maintenance of articulation agreements between CSM and both Front Range Community College and Red Rocks Community College (2004 – 2013).
- Establishment and maintenance of articulation agreements between CSM and both Community College of Aurora and Community College of Denver (2010 – 2013).
- Regular panelist/participant for Admissions Office activities (2002 – present).
- Development of and participation in Minority Engineering Program courses and programs (1994 – present).
- Articulation Coordinator – creating and maintaining articulation agreements between the Colorado School of Mines and various two-year schools within the state (2010 – 2011).

- Represent CSM at the Colorado Commission on Higher Education (CCHE) and the Department of Higher Education (DHE) in a variety of capacities (2005 – 2011).
- Tutorial and Executive Committees of the Guy T. McBride Program in Public Affairs for Engineers (2004 – 2009).
- Chaired Senate Ad-Hoc Committee on Teaching and Research Faculty (2006 – 2007).
- Mathematical & Computer Sciences Representative to the ABET Committee (2006 – present).
- Faculty Advisor and Coach for the national champion CSM Cycling Club (2006 – present).

### **External Service**

- MAA Rocky Mountain Section Nominating Committee (2014 – present).
- Member of Special Interest Group of the Mathematical Association of America (SIGMAA) on Statistics Education (2013 – present).
- CSM Representative to the CCHE GE25 Council (2010 – 2011).
- CCHE Faculty-to-Faculty Conferences (2005, 2008 – 2011).
- CSM representative in ongoing discussions about the implementation of SB08-212: The Preschool to Postsecondary Education Alignment Act (CPA4K) (2008 – 2011).
- AMS/MAA Joint Meetings Workshop for Department Chairs/Leaders (2011).
- Chair of three GT-Pathways Mathematics Course Review Committees at the Colorado Commission on Higher Education (CCHE) (2004 – 2005, 2010).
- AMS Committee on Education National Meeting (2009).
- Co-Author of revisions of the Colorado Statewide Engineering Articulation Agreement at the Colorado Department of Higher Education (2008).

### **Instructional Leadership**

- Coordination and implementation of new studio delivery model for MATH323 – Probability and Statistics for Engineers (2013 – present)
- Co-authored two papers in The Proceedings of the 2013 Workshop on the Impact of Pen and Touch Technology on Education
- Invited to participate in the HP Catalyst Summit on STEM Education in Sao Paulo, Brazil in April of 2013.
- Maintained and updated common course syllabi for all of the courses in the Calculus sequence (2005 – 2013).
- Assisted in the interviewing, hiring and evaluating of adjunct faculty in Applied Mathematics and Statistics (2005 – 2013).
- Mentor newer instructional faculty and conduct new faculty orientation sessions (2005 – 2012).
- Conduct classroom observations and provide feedback to newer instructional faculty (2006 – 2013).
- Develop instructional budgets to staff Applied Mathematics and Statistics course offerings (2008 – 2013).

### **Advising**

- Serve as principal undergraduate advisor for the department of Applied Mathematics and Statistics.
- Organize group-advising sessions each term for Applied Mathematics and Statistics undergraduates.
- Serve as an advising “mentor” for faculty in the department of Applied Mathematics and Statistics.
- Serve as the first year academic advisor to the advanced placement cohort of entering freshmen.

### **Development and Innovation**

- Implementing a studio-based delivery model for the Probability and Statistics for Engineers course at CSM. This model trades off one hour of lecture for a two-hour studio focused on active learning activities, often based and sometimes extending topics the lecture (in progress).
- Developing of interdisciplinary instructional resources for the Calculus curriculum (in progress).

- Developed an interdisciplinary first year experience in Calculus III and Physics I for entering advanced placed students, utilizing new instructional tablet technology under development at CSM (2012).
- Established the AMS Learning Center to provide expanded tutorial services in Mathematics at CSM (2012).
- Piloted a large lecture format for our Calculus III course, supplemented with classroom technology (2011-2012).
- Updated MATH100 – Introductory Topics for Calculus (the MEP Challenge Mathematics course), expanding the course experience to include an interactive group-learning component (2010).
- Lead the development of Mathematica Laboratory Projects for the Calculus sequence as the Co-PI on a Curriculum Reform Mini Grant (2009).
- Developed a senior level course in Applied Linear Models for the Statistics Emphasis in our undergraduate program (2008).
- Participated on the Core Curriculum Committee, including involvement in the proposal of key revisions to the institutional core (2006-2007, 2008-2009).
- Delivered and coordinated of mathematics instruction to WAHA students (from Libya) at CSM as part of an initiative of the International Institute for Education facilitated through SPACE (2008 – 2010).
- Developed the new Mathematics Field Session, MATH300 – Foundations of Advanced Mathematics (2006-2008).
- Lead the revision of the undergraduate curricula in Mathematical and Computer Sciences between (2006-2008).
- Worked extensively with several subcommittees of the McBride Honors Program Tutorial Committee establishing program vision, mission, and definitions as well as considering curriculum changes within the program (2004-2007).
- Piloted revisions to the Calculus II curriculum (2003).
- Established the Mathematics Learning Resource Center (MLRC) and wrote a successful Technology Fee grant to initially equip the MLRC laboratory (2000).
- Designed and taught a senior/graduate level special topics course in Statistical Quality Control and Design of Experiments (1999).
- Developed an instructors' resource packet, including a collection of laboratory exercises for MATH323 – Probability & Statistics for Engineers (1998).
- Developed MATH100 – Introductory Topics for Calculus for the MEP Challenge Program (1997).
- Involved in the revisions to the Calculus curriculum in the mid-1990s in collaboration with the Curriculum Reform Steering Committee (1996-1997).

## **PUBLICATIONS/PROFESSIONAL PRESENTATIONS**

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- **G. Greivel.** “Active Learning Strategies to Improve Student Attitudes and Outcomes in Statistics: The Studio Model at the Colorado School of Mines”, 2014 MAA Rocky Mountain Sectional Meeting, Laramie, WY.
- **G. Greivel.** “Active Learning Strategies to Improve Student Attitudes and Outcomes in Statistics: The Studio Model at the Colorado School of Mines”, 2014 MAA MathFest, Portland, OR.
- F. V. Kowalski , **G. Greivel**, Todd Ruskell, Tracy Q. Gardner, S. E. Kowalski, Thomas J. Colling, J.V. Gutierrez Cuba, Enrique Palou. “Using *InkSurvey* with Pen-Enabled Mobile Devices for Real-Time Formative Assessment I. Applications in Diverse Educational Environments.” Proceedings of the 2013 Workshop on the Impact of Pen and Touch Technology on Education (2013).
- F. V. Kowalski , **G. Greivel**, Todd Ruskell, Tracy Q. Gardner, S. E. Kowalski, Thomas J. Colling, J.V. Gutierrez Cuba, Enrique Palou. “Using *InkSurvey* with Pen-Enabled Mobile Devices for Real-Time Formative Assessment II. Indications of Effectiveness in Diverse Educational Environments.” Proceedings of the 2013 Workshop on the Impact of Pen and Touch Technology on Education (2013).

## **GRANTS/FUNDING**

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- PI, National Science Foundation Grant DUE-1439754, “Collaborative Research: An Engineering University Partnering with a Teacher Preparation University to Produce Highly Qualified Secondary STEM Teachers,” \$92,163 (2014-2016).
- Jenni Fellowship in support of the development of interdisciplinary instructional resources for the Calculus curriculum, 1/9<sup>th</sup> salary supplement (2012-13).
- Tech Fee Grant to expand the WiFi capacity of two large lecture halls on campus in support of new instructional tablet technology under development at CSM, \$6,814 (2012).
- Trefney Institute for Innovation in Education grant for the development of curriculum and implementation of new instructional tablet technology under development at CSM, \$20,000 (2012).
- Curriculum Reform Minigrant for the development of Mathematica Labs for the Introductory Calculus Sequence, \$5,000 (2009).
- Curriculum Reform Minigrant for Technology Resources for Mathematics Learning, \$4,487 (2000).
- Tech Fee Grant for the Creation of the Mathematics Learning Resource Center, \$52,564 (2000).
- Curriculum Reform Minigrant for the development of Minitab Labs for Probability & Statistics for Engineers \$5,000 (1998).

## **AWARDS AND HONORS RECEIVED**

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- 2012 Alfred E. Jenni Faculty Fellowship for Institution-Wide Contributions to Teaching Effectiveness and Educational Scholarship at the Colorado School of Mines
- 2012 “Outstanding Faculty” – Order of Omega
- 2010 “Outstanding CSM Faculty Member in Mathematical & Computer Sciences” – Graduate Students and CSM Alumni Association
- 2010 “Outstanding Faculty Member” – Minority Engineering Program
- 2008 “Outstanding CSM Faculty Member in Mathematical & Computer Sciences” – Senior Class and CSM Alumni Association
- 2007-2008 “Outstanding Faculty” – Order of Omega
- 2007 “Outstanding CSM Faculty Member in Mathematical & Computer Sciences” – Senior Class and CSM Alumni Association
- 2004 “Distinguished Alumna and Honored Guest”, Keynote Speaker – McBride Honors Program
- 2000 “Outstanding CSM Faculty Member in Mathematical & Computer Sciences” – Senior Class and CSM Alumni Association
- 1999 “Outstanding Faculty” – Order of Omega
- 1997 “Mentor of the Year” – CSM101 program
- 1996-1997 “Outstanding Faculty” – Society of Hispanic Professionals & Engineers
- 1994-1995 “Outstanding Faculty” – Society of Hispanic Professionals & Engineers