

Casey Gilliams

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Education

Ph.D., Metallurgical & Materials Engineering *Colorado School of Mines, Golden, CO* Present
Thesis - Optimization of Processing, Microstructure, and Performance of Q&P Steels
B.S., Materials Science Engineering, Minor in Packaging Sciences *University of Florida, Gainesville, FL* May 2017
cum laude

Research & Work Experience

Graduate Student Researcher, ASPPRC, Colorado School of Mines *Golden, CO* August 2017 – Present
Teaching Assistant-ships: **MTGN 202**-Engineered Materials (Fall 2017), **Physical Metallurgy Lab** (Spring 2018, Fall 2018, Fall 2019, Fall 2020, Spring 2021, Fall 2021), **MTGN 549**-Current Developments In Ferrous Alloys (Spring 2019), **MTGN 348**-Microstructural Development (Spring 2020), **MTGN 466**-Materials Design: Synthesis, Characterization And Selection (Spring 2021)
Undergraduate Researcher, University of Florida, Fuchs Lab *Gainesville, FL* August 2016 – May 2017
• Failure analysis of turbine components. Ronald E. McNair Post-Baccalaureate Achievement Program (May 2016-May 2017)
SwRI UTSR Gas Turbine Industrial Fellowship Program, Siemens Energy *Charlotte, NC* May 2015 – July 2016,
Undergraduate Researcher, University of Florida, Reier Lab *Gainesville, FL* August 2013 – May 2016
• Learned technical skills applicable to spinal cord, neuroscience, and biomedical research. Responsible for training and mentoring incoming undergraduate students. UF-HHMI Science for Life Intramural Undergraduate Research Award (April 2014- April 2015), Ronald E. McNair Post-Baccalaureate Achievement Program (May 2015 - May 2016)

Leadership Experience & Involvement

Graduate Experience Mentor (GEM) Fall 2021
• Mentored a new graduate student by acting as a knowledgeable resource for navigating life at Mines
The Minerals, Metals, & Materials Society (TMS)
2021 Student Led Symposium (May 2020 – March 2021)- Co-organized the student led symposium: “*Design and Manufacturing Approaches for the Next Generation of Sustainable Materials*”
Steels Committee Member (February 2020 – Present), **Sheet and Forming Committee Member** (October 2019 – Present)
ASM International
Student Board of Trustees (July 2020 – July 2021)- Designed a new student competition, the Student Speaking Symposium (S³). Modified DomesDay to allow for both an online and in-person format. Worked with the ASM Emerging Professionals Committee to host virtual professional development workshops for students. Spoke on a panel at 2021 ASM Leadership Days
Failure Analysis Society Student Board Member (October 2019 – October 2020)
Colorado School of Mines Materials Advantage January 2019 – Present
• Attended Congressional Visit Day (April 2019). Advocated to Congress for STEM education; 2019-2020 Executive Committee
Mines Maker Society, Graduate Student Representative August 2018 – May 2020
• Graduate student engagement and outreach. Acted as a voice for the graduate student community
Bike & Build, Southern United States May 2017 – July 2017
• Cycled over 4,000 miles from Florida to California, raising money and awareness for affordable housing. Our team raised over \$174,000 for affordable housing causes. Acted as a mentor to future riders
Southern Scholarship Foundation, House President/Vice President May 2016; August 2014 – May 2015
• Assisted the House Manager in enforcing house and foundation rules; Responsible for managing 16 girls and creating a clean cooperative living environment

Publications, Presentations, & Conferences

TMS 2020: “*Influence of Prior Processing on the Response to Quenching & Partitioning*” February 2020
UF Undergraduate Research Symposium: “*Metallic Foams for Industrial Gas Turbine (IGT) Applications*” March 2017
UF Undergraduate Research Symposium: “*Use of Secondary Cell Death to Quantify Phrenic Motoneuron Loss Following a Cervical Spinal Cord Injury*” March 2016
UF McNair Summer Symposium: “*Use of Secondary Cell Death to Quantify Phrenic Motoneuron Loss Following a Cervical Spinal Cord Injury*” August 2015
UF HHMI CASE: “*Phrenic Motoneuron Loss Following Cervical Spinal Cord Injury*” January 2015

Skills

Metallurgical & Technical: Metallography, Material characterization (LOM, FESEM, ESEM, XRD, EBSD), Heat treatment, Mechanical testing, Hardness testing, data and error analysis **Computer:** Proficient in Microsoft Excel, PowerPoint, and Word; Experience in Python, LaTeX, MATLAB, DigitizeIt, TableCuve2D