

# Claire Elizabeth Kincaid

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## Education

- Colorado School of Mines**, Golden, CO 2019 – 2021
- Masters of Science in Earth Resources Development Engineering
  - Cumulative GPA: 3.65
- Adviser: Dr. Nicole Smith, Assistant Professor of Mining Engineering, Colorado School of Mines*
- Franklin W. Olin College of Engineering**, Needham, MA 2015 – 2019
- Bachelors of Science in Mechanical Engineering
  - Cumulative GPA: 3.67
- Adviser: Dr. John B. Geddes, Professor of Applied Mathematics, Olin College of Engineering*
- University College Dublin**, Dublin, Ireland Jan – May 2018
- Study Abroad in Earth Sciences and Geotechnical Engineering
  - Cumulative GPA: 3.63
- Program Coordinator: Jamie Wells, Study Abroad Officer, School of Science*

## Work Experience

- JDS Mining & Energy**: Mining Engineer; *Vancouver, BC; Likely, BC; Broomfield, CO* Aug 2023 – Present
- Provide short term engineering and operational support to Mt. Polley mine in Likely, BC
  - Provide expertise on equipment technology in a variety of mining applications, including wifi, fleet management, telematics, automation, and battery electric vehicles
  - Write and present whitepapers on new technology applications and sustainability in mining
- Supervisor: Dino Pilotto, VP, JDS Engineering Division*
- Epiroc Rock Drills, AB**: Global Applications Specialist, Electrification and Automation; *Örebro, Sweden* 2021 – 2023
- Consult on performance of Epiroc machines and technologies in global underground applications
  - Train development and sales engineers in principles of underground mining and tunneling
  - Act as customer proxy in development and strategy meetings for future technologies
- Supervisor: Ashleigh Braddock, VP, Sales and Marketing, Epiroc Digital Solutions*
- Valhalla Engineering Group**: Mechanical EIT 2020 – 2021
- Assist mechanical engineering team in designing and analyzing HVAC and plumbing systems
  - Assist various engineering and architecture teams in drafting and administrative tasks
  - Train in project and model management
- Supervisor: Doug Deppey, Director, Mechanical Engineering Group*
- Komatsu America Corp**: Graduate Applications Engineering Intern (Surface Mining) May – Aug 2019
- Consult on equipment needs for various customers, reported on productivity and OPEX
  - Consult on equipment use for customers onsite at various mines in the Southeast United States.
  - Assist test engineers in installing and testing new modifications to equipment prototypes
- Supervisor: J.D. Wientjes, Director, Application Engineering, Surface Mining*
- Resolution Copper Company**: Mining Engineering Intern May – Aug 2018
- Conduct 2018 Joint Analysis Study and investigate tunnel wedging and factor of safety
  - Review and logged Magma data to establish baselines for environmental management
  - Review 2018 Tunnel Boring Machine state of the industry, reported on business opportunities
- Supervisor: Mark Groulx, Mining Engineering Manager*
- TE Connectivity**: Product Engineering Intern May – Aug 2016
- Interface with customers and engineers to solve problems and meet needs of new customers
  - Design and execute experiment for statistical analysis of highspeed manufacturing techniques
  - Assist in total cost savings of \$537,000 and business growth of \$250,000, annually
- Supervisor: Doug Hoffman, Product Engineering Manager*
- A Wired Aesthetic**: Owner, Operator 2012 – 2020
- Mine and Cut gemstones for use in handmade jewelry and art
  - Design and fabricate award winning, handmade jewelry and sculpture for sale and display

## Graduate Research Experience

- Diversity & Inclusion in the Mining Industry** 2019 – 2021
- Built upon undergraduate research project in diversity and inclusion in the mining industry
  - Determined the current state of diversity and inclusion in the mining industry
  - Determined Diversity & Inclusion best practices in the mining industry via program case study
- Supervisor: Dr. Nicole Smith, Assistant Professor of Mining Engineering, Colorado School of Mines*
- SR-Hybrid and Electric Vehicles for Underground Mining** 2020 – 2021
- Reviewed testing data for several prototype SR-Hybrid and Battery Powered LHDs
  - Refined numerical model and created user interface to calculate efficiency, fuel consumption of prototypes
- Supervisor: Dr. Jurgen Brune, Professor of Mining Engineering, Colorado School of Mines*

## Undergraduate Research Experience

- Diversity & Inclusion in the Mining Industry** 2018 – 2019
- Survey recent academic and corporate literature on diversity & inclusion
  - Survey of current state of diversity & inclusion in the mining industry
- Supervisor: Dr. Debbie Chachra, Professor of Engineering, Olin College*
- The Foundry: Case Study of a New Academic Makerspace** 2018 – 2019
- Survey and interview students and faculty involved in the founding of a new makerspace
  - Discuss and analyze conflicting conceptualizations and desired outcomes for the space
  - Analyze strengths and failures of organization and offer potential solutions based on best practice
- Supervisor: Sarah Hendren, Associate Professor, Fine Arts, Design, and Humanities, Olin College*
- Structural Geology and Fault Mapping** Jan – May 2018
- Analyzed pictorial dataset of lignite mine near Mavropigi, Greece
  - Generated maps and cross sections to create a three-dimensional picture of underlying faults
- Supervisor: Dr. Tom Manzcocchi, Associate Professor of Earth Sciences, University College Dublin*
- Systems Engineering, Communication, and Education** 2016 – 2017
- Analyzed multiple case study using ethnographic methods –collaboratively develop coding scheme to identify boundary objects and their effects on communication and decision making
  - Extracted engineering education principles to be applied to the classroom
- Supervisor: Dr. Alexandra Strong, Assistant Professor of Systems Design and Engineering, Olin College*
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## Teaching Experience

- Colorado School of Mines: Corporate Social Responsibility Teaching Assistant** Jan – May 2020
- Evaluate student writing and attendance
- Supervisor: Dr. Nicole Smith, Assistant Professor of Mining Engineering*
- Olin College of Engineering: Machine Shop Assistant** 2018 – 2019
- Assist in the cleaning and maintenance of the Olin Machine Shop
  - Train students in safe use of the Large Project Building and the Olin Blacksmith's Forge
- Supervisor: Dr. Daniela Faas, Director of Fabrication, Professor of Mechanical Engineering*
- Olin College of Engineering: Quantitative Engineering Analysis Teaching Assistant** Sep – Dec 2017
- Assist in the application and analysis of advanced mathematical principles to common engineering systems involving circuitry, robotics, computer science, and mechanical design.
  - Assist in curriculum development & iterative improvement of overall course structure
- Supervisor: Dr. Paul Ruvolo, Assistant Professor of Computer Science*
- Olin College of Engineering: Multivariable Calculus Teaching Assistant** Sep – Dec 2016
- Supplement class lectures by planning and administering 'mini lectures'
  - Discuss student and class progress, understanding, and problems with instructors to assist in understanding of teaching effectiveness and areas of importance
- Supervisor: Dr. Aaron Hoffman, Associate Professor of Mathematics*
- Olin College of Engineering: Linear Algebra Teaching Assistant** Jan – May 2016
- Discuss student and class progress, understanding, and problems with instructors to assist in understanding of teaching effectiveness and areas of importance
- Supervisor: Dr. Aaron Hoffman, Associate Professor of Mathematics*
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## Service

- SME Young Leaders Committee: Member, Class of 2020; Member, Membership Committee** 2020 – Present
- Represent interests of Young Leaders in greater SME events and Mining & Exploration Chapter
  - Assist on the membership committee in vetting and selecting new members of the YLC
- SME Student Chapter, Colorado School of Mines: Graduate Student Member** 2019 – 2021
- Assist in various club activities including mineral shows, golf tournaments, and formal events
- SME Student Chapter, Colorado School of Mines: Minerals Education Coalition Chair** 2019 – 2021
- Organize volunteers for a variety of earth science focused outreach & educational events
  - Organize the annual Boy Scout Merit Badge event at Colorado School of Mines
  - Liaise with the Colorado Section of the MEC for support and alignment
- WIM Student Chapter, Colorado School of Mines: Graduate Student Representative; Denver Chapter Liaison** 2020 – 2021
- Assist in organizing various club activities including resume reviews, roundtables, etc.
  - Liaise with the Denver chapter of WIM for support alignment
- Graduate Student Government, Colorado School of Mines: Mining Department Representative** 2020 – 2021
- Represent mining department graduate students to the Graduate Student Government
  - Report important information on events, policy changes, funding, etc. to the mining department
  - Represent graduate students to the mining department faculty and staff meetings
- Mining Department Seminar Committee: Volunteer Organizer** 2019 – 2020
- Organize and host speakers for mining department weekly seminar
- Mining Department DI&A Committee: Graduate Student Representative** 2019 – 2021
- Advise and assist in organizing DI&A policies and programming for the mining department

## Presentations & Publications

<b>"Where to Draw the Line: Scoping Your Green Mining Project"</b>	Feb 2023
• 1 <sup>st</sup> Author, Conference Presentation, SME National Conference 2023	
<b>"Safety Isn't Only Cell Deep: Updating the Safety Mindset After 10 Years of BEVs Underground"</b>	Feb 2023
• 1 <sup>st</sup> Author, Conference Presentation, SME National Conference 2023	
<b>"Diversity and Inclusion in Mining: An Analysis of Indicators in Sustainability Reports"</b>	Aug 2021
• 1 <sup>st</sup> Author, Master's Thesis	
<b>"Sustainable Development: Ideas from the next generation of leaders"</b>	Apr 2021
• 1 <sup>st</sup> Author, Published in April 2021 issue of SME's Mining Engineering Magazine	
<b>"Diversity and Inclusion in Mining: Indicators in Public Sustainability Reporting"</b>	Feb 2021
• 1 <sup>st</sup> Author, Conference Presentation, SME National Conference 2021	
<b>"Women in Mining: Advancing Gender Diversity in Earth Resources"</b>	Nov 2020
• 1 <sup>st</sup> Author, Conference Presentation, SWE National Conference 2020	
<b>"My First Five Years in Industry/Academia"</b>	Feb 2020
• 1 <sup>st</sup> Author, Conference Presentation, YLC, SME National Conference 2020	
<b>"Mining for Talent: Diversity and Inclusion in Mining Today"</b>	Feb 2020
• 1 <sup>st</sup> Author, Conference Presentation, SME National Conference 2020	
<b>"Increasing Workforce Diversity: A Short Course for Industry Professionals"</b>	Feb 2019
• 1 <sup>st</sup> Author, Conference Presentation, SME National Conference 2019	
<b>"Increasing Workforce Diversity: Panel"</b>	Dec 2018
• 2018 IMR Short Course Panel Member	
<b>"Perspectives on Diversity in Mining"</b>	Nov 2018
• 1 <sup>st</sup> Author, Published on LinkedIn in advance of 2018 IMR short course	
<b>"Sending Out the Invitations: Developing Diversity in Mining"</b>	Feb 2018
• 1 <sup>st</sup> Author, Published in February 2018 issue of SME's Mining Engineering Magazine	
<b>"Preparing Students for Engineering Design Work Environment: A Study of Practicing Engineers"</b>	Feb 2017
• 2 <sup>nd</sup> Author, Presented at American Society of Engineering Education annual conference June 2017	

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## Awards

<b>WAAIME Scholarship:</b> WAAIME (a Division of SME)	Aug 2020
<b>SWE Presidential Scholarship:</b> Society of Women Engineers	Aug 2020
<b>WIM Scholarship:</b> Women in Mining (a Division of SME)	Aug 2020
<b>SRK Graduate Scholarship:</b> SRK Consulting	Aug 2019
<b>Resource Capital Fund Graduate Fellowship:</b> Resource Capital Fund, Colorado School of Mines	May 2019
<b>Grand Challenge Scholar:</b> NAE GCSP Program, Olin College of Engineering	May 2019
<b>UCD Exchange:</b> University College Dublin, Olin College of Engineering	Oct 2017
<b>Olin Merit Scholarship:</b> Olin College of Engineering	May 2015

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## Certifications

<b>Vulcan Essentials and Block Modeling:</b> Maptek Online University; Denver, CO.	Aug 2020
<b>MSHA Underground:</b> Refreshed February 2021; Colorado School of Mines	May 2018

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## Professional Affiliations

<b>Colorado School of Mines Alumni Association</b>	May 2021 – Present
<b>Canadian Institute of Mining</b>	Feb 2021 – Present
<b>Society of Women Engineers</b>	Sep 2015 – Present
<b>Society for Mining, Metallurgy, and Exploration</b>	Sep 2017 – Present
<b>Women in Mining</b>	Sep 2018 – Present

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## Professional Skills

<b>CAD/CAM:</b> AutoCAD, Civil 3D, Revit, SOLIDWORKS, PDM, ONSHAPE, PTC Creo, FEA/FEM
<b>Mining &amp; Scheduling Software:</b> Minesight 3D, Vulcan, SimMine, Shotplus, Drill Manager, PCBC, AmpL
<b>Programming:</b> Excel Solver, VBA, MATLAB, Mathematica, LaTeX, Python, R, MiniTab, Arduino C, COMSOL
<b>Welding and Machining:</b> MIG, TIG, Oxy/Ace, Manual and CNC Plasma Cutting, Mill, and Lathe, Casting, Forging
<b>Woodworking:</b> Table/Chop Saws, Rotary/Belt Sanders, Planer, Routers, CNC Shopbot, Wood Lathe
<b>Digital Analysis:</b> Instron, Fischer Box, Sample Preparation, Flat Lap, FTIR, Pycnometer
<b>Microscopy:</b> Metallographic Microscope, Petrological Microscope, SEM, EDS
<b>Field Evaluation:</b> GPR, Geotechnical Inspection, Drill Program Design, Geological Field Investigation & Mapping
<b>Language:</b> Intermediate-Advanced Japanese, Professional Swedish, Fluent English
<b>Technical Communication:</b> Presentation, Reporting, Value Analysis, ROI Analysis, Technical Writing
<b>Interpersonal:</b> Interdisciplinary and Intercultural Communication, Indirect Management, Collaborative Teaming