



Health and Safety Minute

Cold temperatures outside mean an increase in the potential for cold stress increases.

To prevent frostbite be sure to:

- Check the temperature and limit your time outdoors if it's very cold, wet or windy
- Wear several layers of clothing
- Cover your ears, hands, and face whenever possible

Section Chair Report

I trust all of our membership has started the new year on productive and solid footing. I would also like to thank everyone who attended our last meeting and hope you all found it informative and useful. I am pleased to announce our next meeting on February 21st, 2019 at the Wright Room (above the Appaloosa Grill) on the 16th street mall in Downtown Denver. Our speaker, Dr. Brad Ross, is a Henry Krumb lecturer from the University of Arizona and Director of the Geotechnical Center of Excellence. The topic of discussion will be lessons learned from the Bingham Canyon landslide. Please note this will be an evening meeting starting at 5:30PM with a bar sponsor and "heavy" appetizers served buffet style.

Want to help make our events even better? We are looking for volunteers for our programs committee. Become part of a great team and expand your network while volunteering a small portion of your time.

As Chair of our SME Chapter, I am here to serve our members. If you have any criticisms or feedback, please do not hesitate to reach out. You can email me at rschwering@hardrock-consulting.com. Thank you again for allowing me to serve in this role. Enjoy the winter weather, and I hope to see you at our next meeting!

Richard A. Schwering

February Colorado SME Chapter Meeting

Please join us for the Colorado SME Section on Thursday, February 21, 2019

Lessons From the Bingham Canyon Landslide

Brad Ross, PhD, PE
 Director, Geotechnical Center of Excellence University of Arizona

Wright Room 535 16th Street at Welton, Suite #240, Downtown Denver above Appaloosa Grill

Abstract

After experiencing the largest mining landslide in in history, Rio Tinto Kennecott's Bingham Canyon Mine was left with thousands of feet of scarps that towered over 600 feet, no access for large equipment into the mine because the main haulroad was destroyed and limited ore because debris had covered more than half of what had previously been exposed. To recover from these issues many innovations were utilized or developed with the help of employees, vendors and contractors to return the mine to full production.

Students: Please RSVP and send lunch menu requests to sdoyle@mines.edu. \$15 meeting cost can be paid at the door via check or cash.

COLORADO SECTION NEWS – FEBRUARY 2019

Undergraduate and Graduate Scholarship Applicants

The SME Colorado Section is accepting applications from undergraduate and graduate students for the 2019-2020 academic year. Students who currently work in or intend to enter the mining, metallurgy, and exploration industries are encouraged to apply. Applications are due Friday, March 15.

Applicant requirements include:

- Mining, metallurgy, and exploration industry focused degree program (e.g. mining engineering, civil/environmental engineering, metallurgy, economic geology, geology, geochemistry, hydrogeology).
- Good communication skills demonstrated through the application process.
- Professional or Student membership with SME (www.smenet.org) – Student Chapter and Colorado Section membership is encouraged but not required.
- Online application submission including a copy of the current unofficial academic transcript.
- Undergraduate Students:
 - Junior or Senior status for the 2019-2020 academic year.
 - Minimum undergraduate cumulative grade point average (GPA) of 2.75.
- Graduate Students:
 - Admitted to MS, ME, or PhD graduate degree program for the 2019-2020 academic year.
 - Minimum graduate cumulative GPA of 3.0 for current graduate students.
 - Minimum undergraduate GPA of 2.75 for incoming graduate students.

Finalists will be contacted by a member of the scholarship committee to schedule an in-person interview in April 2019. Scholarship award recipients will be notified by June 2019. Fall and Spring disbursements of the scholarship award to recipients will occur upon receipt of a proof of enrollment document provided by the recipient to the scholarship committee in Fall 2019 and Spring 2020, respectively. If you have any questions, please contact Heather Lammers, Vice Chair of the SME Colorado Section at hlammers@golder.com

Deadline for Submission: Friday, March 15, 2019.

Please use the appropriate link below to apply for either the undergraduate or graduate scholarship.

[Undergraduate](#)

[Graduate](#)

STEM Winter Camp at the New Discovery Center at Dinosaur Ridge

Friends of Dinosaur Ridge have opened a new attraction on the west side of Dinosaur Ridge in Lakewood, Colorado. It is a Discovery Center which shows natural science aspects of the area and has educational material for children (of all ages). The Colorado Mining Exhibit Foundation helped sponsor this family friendly venue with displays on economic geology of the Front Range. During the December 2019 winter break, the Exhibit Foundation helped sponsor a STEM camp for 4th / 6th graders at the Center. The project included new microscopes for the children to expand “seeing” into science.

Dinosaur Ridge hosts more than 180,000 visitors all year long. The Exhibit Foundation has also added a new “Women In Science” display in the building.

For more information, contact:

Guy Johnson, Exhibit Coordinator

(303-969-0365) or GPJ222@aol.com



Colorado School of Mines Student Chapter meeting schedule for 2019:

- January 31st: Dave Loring- Freeport McMoRan
- February 14th: Elections
- March 14th: Hugh Miller- SME National
- April 11th: “Diaz Family”
- April 25th: Joe Driscoll- ERM

General Meetings beginning at 5:30 pm in the Colorado School of Mines Brown Building Room125

Minerals Education Coalition Reports Productive Year in 2018

The SME Colorado Section Minerals Education Coalition is an active group of volunteers focused on public outreach about minerals and mining. **Thank you to these MEC volunteers** who represented the mining and minerals profession at the following events during the past year:

- Colorado Science & Engineering Fair: Dick Beach, Paul Chamberlin, Alan Cram, and Jessica Spriet, for help judging projects and presenting awards on behalf of the Colorado Section;
- Boy Scouts *Mining In Society* merit badge workshops: Dick Beach, Bruce Yoshioka, and SME Student Chapter members Carson Eltz, Marie Hetherington, Christine Peterson, Indira Gregorio, Dakota Locklear, Alex Murray, and Muthu Vinayak Thyagarajan, for counselling scouts earning the merit badge;
- Boy Scout Day at Dinosaur Ridge: Dick Beach, for staffing the MEC booth;
- Denver Gem & Mineral Show: Dick Beach, Cathy Begej, Alan Cram, Karen Jass, and SME Student Chapter members Marie Hetherington, Indira Gregorio, and Dakota Locklear, for staffing the booth and talking with 'rockhounds' about the vital role of minerals in our lives;
- Girl Scout Day at Dinosaur Ridge: Karen Jass and Scott Hogan, for staffing the MEC booth;
- Denver Museum of Nature & Science Earth Science Week: Alan Cram, for staffing the booth and hosting a fabulous phosphate fossil hunt;
- Adams County Career Expo: Karen Jass, Alan Cram, Bobbi Martinez-Hernandez, and student chapter members Marie Hetherington and Sarah Doyle, for talking with middle school students about careers in the minerals business;
- Colorado Association of Science Teachers Colorado Science Conference: Dick Beach and Alan Cram, for presenting a session about minerals in our food and staffing our booth.

At these events, we have discussed the important role of mining and mineral resources, handed out literature and mineral materials, discussed career opportunities, counseled Boy Scouts earning the "*Mining In Society*" merit badge, judged and recognized science projects, and advocated for minerals and mining.

In addition, MEC members participated in local science fairs as judges, attended local school career fairs, and talked to many school classes about rocks and minerals and their uses, Colorado mining history, and panning for gold.

Finally, MEC gave financial aid from the Colorado Section to support the work of the Colorado Mining Exhibit Foundation, the Colorado Mining Association Education Foundation's ***All About Mining*** course for teachers, and students with meritorious projects at the Colorado Science & Engineering Fair.

We meet on the first Friday of most months to discuss and plan ways to advocate for mining and minerals. If you would like to be a partner in these efforts, come join us; contact Dick Beach, dickbeach@alumni.mines.edu, for more information. Thanks to Judy Colgan and Chelsey Wilson of the Rocky Mountain Coal Mining Institute for hosting most of our meetings. And thanks to all the others who worked 'behind the scenes' to help educate the public about mining and minerals.

COLORADO SECTION NEWS – FEBRUARY 2019



The next EMCD meeting will be on **Thursday, February 14th, 2019 at 6:00 p.m.** (2nd Thursday of each month September through April with a tour in May).

We will have the pleasure of a presentation by **Nicole M. Smith** who will speak on **Addressing mercury use in artisanal and small-scale mineral processing systems in Latin America.**

Mercury use in artisanal and small-scale mineral processing systems is a growing concern for governments, regulators, development practitioners, and communities themselves. This talk explores different approaches taken by the Colorado School of Mines to understand and address mercury use in artisanal and small-scale mining (ASM) in Latin American countries. It shows that technology alone is not the silver bullet to addressing mercury use, and there are other factors to consider when introducing new technologies to ASM communities, including communities' own challenges and priorities, forms of social organization, and the supply chain dynamics. The implications of this research are critical for informing ASM policies and regulations both in Latin America and beyond.

Dr. Nicole Smith is an assistant professor in the Mining Engineering Department at the Colorado School of Mines. She is a cultural anthropologist with research interests in artisanal and small-scale mining; mining, sustainability, and social responsibility; and rural livelihoods and mining developments. Prior to her position in the Mining Engineering Department, she was a post-doctoral scholar in the Humanitarian Engineering Program at Mines, and she has also held a position as a research fellow at the Centre for Social Responsibility in Mining at the Sustainable Minerals Institute at the University of Queensland. Dr. Smith holds a PhD in Anthropology and a certificate in Development Studies from the University of Colorado at Boulder, a master's degree in anthropology from Colorado State University, and a bachelor's degree in anthropology from the University of Minnesota.

Bring a friend so that he or she can also enjoy great company and the presentation. The meeting dinner will be \$35.00 per person. Student attendee dinners are \$5 per person. However, we are accepting sponsorship for students if anyone would like to contribute.

The Executive Committee will meet at 5:30 PM.

Please RSVP by Tuesday, February 12th by 8 P.M. To sign up we would like everyone to follow the link below and complete the sign-up form. If you have trouble with the form or would prefer not to use the form, feel free to RSVP by responding to this email or contacting:

Erik Stepperud ([720](tel:7203313222)) [331-3222](tel:331-3222) stepperude@hazenresearch.com or Solly Zitron ([720](tel:7208409203)) [840-9203](tel:840-9203)
zzitron@comcast.net

<http://www.emcdonline.com/contact-us/events-sign-up-form>

As usual the meeting will be at:

Holiday Inn Lakewood

7390 West Hampden

Lakewood, CO 8227

SE corner Wadsworth and Hampden (highway 285)

SME Colorado Section Membership Renewal Reminder

If you have not done so already, please take this opportunity to sign-up for or renew your SME Colorado Section membership for the 2018-2019 year.

How to join or renew:

Online: Credit card payments can be made online by visiting our website and selecting the 2018-2018 SME Colorado Section Dues link under the Our Events heading.

<http://community.smenet.org/colorado/events/>

Mail: Check payments of \$25 payable to *SME Colorado Section* mailed to Tem Tumurbat – SME Colorado Section Treasurer, 1400 16th St Suite 200, Denver, CO 80202-1471.

Why you should renew:

The section dues that we collect are vital to our ability to continue our programs. Our Section's focus is on advocating for our profession and industry here in our region. Some of the things that your Colorado Section dues help us to provide are scholarships for college students, majoring in mining disciplines; support for the Colorado State Science & Engineering Fair; provide teaching materials and perform outreach to Colorado science teachers through their State association, sponsorship for K-12 teachers participating in the *All About Mining – A Total Concept of the Mining Industry* course, and help support the Colorado Mining Museum and the National Mining Hall of Fame. So, by supporting the SME Colorado Section, you are directly supporting and advocating for your profession.

Upcoming Meetings

Section meetings are typically planned for the third Thursday of the month. Tentative dates and locations for 2019 meetings are:

February 21, 2019 – Evening meeting at the Wright Room in Downtown Denver

March 21, 2019 – Evening meeting at the American Mountaineering Center in Golden

April 18, 2019 – Lunch at 240 Union in Lakewood

May 16, 2019 – Awards Dinner TBD
Downtown Denver

Monthly Meeting RSVP

Costs may vary, but they are typically as follows:

Lunch Cost: \$35 per person. Students welcome at \$15 per person with reservation.

Dinner Cost: \$50 per person. Students welcome at \$20 per person with reservation

RSVP and online payments can be made through Colorado SME Eventbrite page. Links to the Eventbrite page can be found on the section page:

<http://community.smenet.org/colorado/events/>

Credit card payments can be made online using the Eventbrite page. If you plan to pay by check or cash, email Sarah Doyle to RSVP. Check or cash payment due at the meeting.

Contact Sarah Doyle at sdoyle@mymail.mines.edu, with any questions regarding the meetings.



Interested in getting involved with your local SME Colorado Section?

We are currently looking to expand our Programs Committee and need volunteers to:

- **Assist with the Annual Golf Tournament**
 - Event planning
 - Coordinating with Fossil Trace Golf Club
 - Reaching out to potential tournament sponsors and players
 - Fundraising with the CSM SME Student Chapter (e.g. mulligan and merch raffles)
 - Awards

- **Assist with monthly Section programming**
 - Tour / site visit planning
 - Reaching out to potential meeting sponsors
 - Event planning for the annual Gala awards banquet



Please consider helping us out!

If you are interested, email a board member or catch us at a meeting and we will be in touch!



We want to hear from the Colorado SME Members!

The Colorado SME chapter wants to connect with our members. Find us on social media!

[SME Facebook](#)

MEC on Twitter

MECEducation [@MECEducation](#)

[SME LinkedIn](#)



SME COLORADO SECTION

Chair: Richard Schwering
Email: rschwering@hardrock-consulting.com

Vice Chair: Heather Lammers
Email: hammers@golder.com

Treasurer: Tem Tumurbat
Email: ttumurbat@rcflp.com

Secretary: Melissa Chalona
Email: mchalona@enganalytics.com

Program Chair: Sarah Doyle
Email: sdoyle@mymail.mines.edu

Publicity Director: Kelly Donahue
Email: kdonahue@brwncald.com

Directors-at-Large: Ta Li
Email: Ta.Li@tetrattech.com

Directors-at-Large: Laura Fletcher
Email: lfletcher@harrisonwestern.com

Past Chair: David Bieber Email:
David.Bieber@martinmarietta.com

Visit the SME Colorado Section web site: <http://community.smenet.org/colorado/home>

This Newsletter is emailed to current and active members of the SME Colorado Section. To view or modify your subscriptions, go to: <http://community.smenet.org/colorado/sectiondirectory/profile/mysubscriptionsprofile>. You will be prompted to log in if you have not already done so, using your SME national login credentials.

You may also update your information with SME at: <http://www.smenet.org>