



## Department Head Welcome

Greetings! In case you haven't met me yet, I'm Dr. Priscilla Nelson, the new Mining Engineering Department Head. I began my joyous journey here on January 6, 2014, coming to Mines from my position as Provost and Professor of Civil and Environmental Engineering at the New Jersey Institute of Technology (NJIT). From 1994 to 2005, I was at the U.S. National Science Foundation (NSF) and before that, I was a Professor of Civil Engineering at the University of Texas at Austin from 1983 to 1996. You can view my resume on the Mines website: <http://mining.mines.edu>.

I am very excited about the future for both CSM and the Department. We are making plans to upgrade both the Edgar Mine and EMI, to grow our enrollment and faculty size, and to enhance our industry partnerships. We are successfully delivering our excellent curriculum, in large part with the strong and valued participation of adjunct faculty. With such friends, and the support of our alumni, I know we will continue to excel in education, research, and service. Stay in touch and let us know what you are up to and how we can support you in your continued professional development.

## What's New

International collaborative partnerships are always possibilities for the Colorado School of Mines considering our sterling reputation worldwide. The department has been working with OCP—the largest phosphate mining company in the world and based in Morocco, to provide in-depth training to their employees. Dr. Hugh Miller taught the first short course, a five day introduction to mining, in Morocco this December. In January, adjunct faculty Bill Wilson will be teaching the second short course on industrial mineral production. There will be a total of 10 short courses on mining taught at OCP. Dr. Nelson and Dean Graves will be traveling to Morocco as well in mid-December to discuss potential research and academic collaborations between CSM and the recently established Mohammed VI Polytechnic University.

A new technical university in Lima, Peru, UTEC (Universidad de Ingeniería y Tecnología), has invited CSM to assist with development of a graduate Mining Engineering program that will better support the needs of the mining industry in Peru. Dr. Nelson travelled to Peru in November along with Dr. Linda Figueroa (Professor in Civil and Environmental Engineering) and Dr. Kay Godel-Gengenbach (Director of the CSM Office of International Programs) to meet with university officials as well as key figures in the industry to discuss and plan what could be developed to assist UTEC and the mining industry in Peru with its goals. A second delegation including Dr. Nelson will travel to Peru over the New Year's week to participate in the launch of the new university campus.

The Mining Engineering Department has also participated in meetings and provided technical assistance for a recently established university in Kazakhstan, Nazerbayev University. NU wants to establish a School of Mining which will involve Petroleum Engineering, Mining Engineering, Geology and Geological Engineering, and Mineral Processing and Metallurgy. This effort involves both research and academic collaboration between CSM and NU.

Several faculty searches are currently underway. One is for the Timothy J. Haddon/Alacer Gold Chair which is for a senior tenured professor position in Mining Engineering. This position will also manage research program at the Edgar Experimental Mine. The other search is for a tenure-track Assistant or Associate Professor position in Mining Engineering for one of three positions (the two others will be based in Civil Engineering and Geological Engineering) for the Underground Construction & Tunneling program.



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## Special points of interest

- Meet the new faculty, Dr. Rennie Kaunda and Dr. Elizabeth Holley on page 2.
- The Edgar Experimental Mine to receive \$1 M from Freeport McMoRan...read about all of the happenings at the Edgar, EMI, MSHP, and AXPRO on pages 6 and 7.
- Read about what students past and present have been up to in the past year on pages 4—5.

## Meet the New Faculty

Dr. Rennie Kaunda joined the Mining Engineering Department on July 1, 2014 as Assistant Professor. He came to us from consulting in the mining and civil engineering industries. Dr. Kaunda has a BS in Mining Engineering, an MS in Mining and Geological Engineering (Rock Mechanics focus), and PhD in Slope Stability and Geotechnics.

In early August, Dr. Kaunda travelled to Vicksburg, Mississippi to discuss potential research collaboration with the US Army Corps of Engineers to explore future possibilities with regards to challenges commonly encountered in levee dams. Discussions are ongoing and the possibilities are exciting. During the second week of September, he travelled to Kalamazoo, Michigan to present an invited talk and to discuss research collaboration with Professor Mohamed Sultan with whom he is currently working on an NSF proposal to study mine-induced land subsidence in Colorado.



For the Fall 2014 semester, Dr. Kaunda guest lectured in MNGN 470 "Mine Safety and Health Management" and MNGN 598 "Heat Mining." In Spring 2015, he will be teaching a new graduate course he developed "Applied Computation Neural Networks in Mining and Earth Systems Engineering," co-teaching a new graduate course, "Mining Equipment: Maintenance, Automation, and Economics" with Dr. Andrew Schissler and Dr. Jürgen Brune as well as co-teaching "Rock Slope Engineering" with Dr. Ugur Özbay. He is also developing a new course to be offered in Fall 2015 titled "Mine Water and Environment," that will provide an overview of water and environmental aspects in the mining industry.



Dr. Elizabeth Holley joined the Mining Engineering Department on August 15, 2014 as Assistant Professor. She came to us most recently from the Geology and Geological Engineering department, where she was a teaching faculty member and oversaw the Professional Master in Mineral Exploration degree program. Dr. Holley holds a BA in Geology, an MS in Geochemistry, and a PhD in Geology. She has led projects in the minerals industry in North America, South America, and Australia and was part of the team that discovered the White Gold deposit, Yukon.

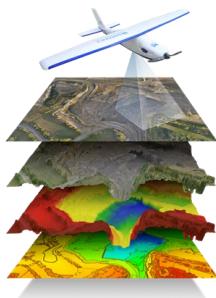
Dr. Holley has two active research projects focused on exploration vectors and genetic models for Carlin-type deposits in Nevada. She also has an ongoing project focused on characterization of the fluids that form epithermal deposits. Dr. Holley and Dr. Alexis Stichter (Geology) are building a model heap leach to examine sulfide oxidation at Cripple Creek. Dr. Holley is also currently collaborating with Dr. Carl Mitcham (LAIS) on an analysis of public policy and public participation at the proposed Pebble mine in Alaska.

In Fall 2014, Dr. Holley co-taught MNGN 428/429 Senior Design as well as Graduate Seminar, MNGN 625. She also directed a graduate Independent Study course. For the Spring 2015 semester, Dr. Holley will be teaching a new graduate course she developed "Mining Geology of the Western U.S." as well as continuing her assistance with the Senior Design courses.

The Center of Excellence in Underground Construction was established with participation from the Mining Engineering department. This university-wide center was established in Fall of 2012. In October of 2013, Civil and Environmental Engineering Professor, Mike Mooney, was appointed as the Grewcock University Endowed Chair in Underground Construction & Tunneling and Director of the Center. The UC&T center is an interdisciplinary effort across civil, geological, and mining engineering, and includes mechanical and electrical engineering, geophysics, and computer science. The mission of the center is to educate engineers to join the UC&T industry and to advance knowledge that benefits industry through research. The Mining Engineering department faculty that have been directly involved with the UC&T Center and Program include Dr. Priscilla Nelson, Dr. Jürgen Brune, Brian Asbury (EMI), and Dr. Ray



Henn (Adjunct Faculty). To learn more about the center, please visit their website: <http://uct.mines.edu/>



**Two New Research Associates**, David White and Larry Clark, have joined the Mining Engineering Department. David started in May 2014, while Larry started in August 2014. They are both developing research related to Unmanned Aircraft Systems and developing their operational capacity within confined spaces, such as mines.

**For more information** on all of the recent and current research by department faculty and associates, please visit our website at: <http://mining.mines.edu/Mining-Research> and view the PowerPoint slides for each of our faculty summarizing their recent, current, and future research projects and proposals.

# Program and Faculty Updates (cont.)

## Timothy J. Haddon/Alacer Gold Endowed Chair

On Dec. 9, 2013, CSM announced that Alacer Gold Corporation had established an endowed faculty chair in mining engineering in honor of Timothy J. Haddon. The Timothy J. Haddon/Alacer Gold Chair in Mining Engineering is the first named faculty position in the Department of Mining Engineering. A search to fill the position is now underway, and we expect to announce new chairs in the future!

## Sandvik International Mining School

Since 2008, the CSM Mining Engineering department has partnered with Sandvik and six other international mining universities for a program called the Sandvik International Mining School. This was designed as a two-year postgraduate education program for Sandvik employees holding a BS degree in a technical discipline, specially focusing on International Mining Methods and Applications. The students had to complete five study modules, taught at the various collaborating universities. CSM taught the Open Pit Mining module, a two-week short course. Sandvik has decided to end the program, therefore Fall 2014 was the last short course program for Sandvik offered here at CSM.

## USGS-Afghan Project

Beginning in Fall 2012, Dr. Hugh Miller began a project to help support ongoing efforts by the U.S. Geological Survey (USGS) to facilitate greater internal capacity of the Afghan government and universities as it pertains to mineral exploration and resource development. This effort is part of the USGS's ongoing program to construct a mineral inventory of Afghanistan and to advance specific deposits for possible foreign investment to encourage infrastructure development, job creation, and economic stability. Dr. Hugh Miller has been providing detailed hands-on training courses to the Afghani participants in Turkey. The last training took place in September 2014.

*The Undergraduate Program* continues to expand in both the number of students enrolled as well as the course offerings. One of the changes in the past year has been in the Explosives Engineering program. Dr. Vilem Petr has returned as advisor for the program as well as returned to teaching the explosives courses. There are currently three undergraduate explosives courses—MNGN 222, 333, and 444. MNGN 222 will be offered Summer 2015.

A exciting upcoming change for students in the undergraduate program will be the definition of five different tracks that a student can choose to follow, allowing him or her to build skills in areas of interest within their Mining Engineering degree program. The five tracks are Underground Construction and Tunneling, Explosives, Mine Valuation and Financing, Geotechnical and Rock Mechanics, and Mineral Processing.

*The Graduate Program* is also undergoing some changes. We're developing

three new specializations: Mine Safety & Health, Geothermal, and Explosives. There are also new courses being developed and offered each semester by many of the faculty. Some of the new offerings in the past year included Heat Mining, Grouting in Underground Construction, Mine Risk Management, and Mine Safety and Health Management.

The Mining Engineering Department has also added an important course at the graduate level called Mine Equipment Maintenance, Economics, and Automation. The course is to be taught for the first time Spring Semester 2015 by three department faculty—Dr. Jürgen Brune, Dr. Rennie Kaunda, and Dr. Andrew Schissler (Adjunct). The course is planned to fill a gap that has prevailed in mining to give Mining Engineers experienced-based knowledge in equipment. Many Mining Engineers go into mine maintenance as a career. Strong interest in the course has been demonstrated by the brisk registration thus far.

*Dr. Charlie Li, Visiting Scholar* in the Mining Engineering Department, spent four months of his sabbatical leave with us this past fall semester. Dr. Li is a Professor from the Norwegian University of Science and Technology (NTNU) in Trondheim. His expertise is in the field of rock mechanics related to civil and mining engineering. He is well known for his recent invention, the "D-Bolt" rock bolt, which has been accepted as a workable support unit by many rock burst prone metal mines in North America and Australia.

While here, Dr. Li worked closely with Dr. Ugur Özbay on rock burst mechanisms as they occur in deep mines and underground construction. He has also collaborated with Dr. Masami Nakagawa on a geothermal project on rock mass characterization and determination of potential test locations at the Edgar Mine. Dr. Li also presented several lectures and seminars on the subjects of in situ stress measurements, practice of rock support in high stress rock masses, rock engineering in Norway, and development trends in rock support. We look forward to continuing the collaborative research efforts with Dr. Li and NTNU in the future in the areas of dynamic rock failures in underground mines and construction.

*The Office of Special Programs and Continuing Education (SPACE)* announced the formulation of the KGHM Executive Academy. Mining Engineering department faculty, **Drs. Hugh Miller, Kadri Dagdelen, and Stephen Enders**, were key in the development of this special program. In August 2014, SPACE hosted nearly 40 international executives for a week-long executive training session specific to mining operations and innovative practices. This was the first of two executive training sessions delivered by Mines. The group represents Polish, Canadian, US, and Chilean mining operations for KGHM. Instructing the international cohort will be nine mining industry professionals. Mines faculty members, Dr. M. Stephen Enders, Dr. Hugh Miller, Dr. Kadri Dagdelen, Dr. Pat Taylor, and John Stermole are among the instructors.



# Student Updates

## By The Numbers 2014—2015

Total # of enrolled Juniors and Seniors in Mining: 125

Total # of graduate students: 52

PhD: 24

MS: 28

Total # of students that graduated in May 2014: 20

Total # of students graduating in December 2014: 24

Total # of anticipated graduating in May 2015: 44

Total # of scholarships awarded in Fall 2014: 45

## On The Right Track

During the summer of 2014, at least 36 mining engineering students participated in internships. Internships included companies such as USGS, Barnard Construction, Bridger Coal Company, Imerys, Signal Peak Energy, Kiewit, Westmoreland Coal, Coeur Mining, SRK Consulting, Hecla Mining, Peabody Energy, AngloGold Ashanti, Newmont, Stillwater Mining, Barrick, Freeport McMoRan, ASARCO, BHP Billiton New Mexico, Solvay Chemicals, Mintec, Inc., RCF and more. These internships took our students to a wide range of states including Texas, Kansas, Wyoming, Montana, New York, New Mexico, Arizona, and more. Some even landed internships abroad!

In May 2014, we bid farewell to twenty graduating students. Chelsea Pomeroy and Trenton Seidel have continued on with our graduate program, pursuing a Masters Degree in Mining Engineering. Tyler Curtis is now pursuing a Masters in Mineral Economics with the Division of Economics and Business at CSM. The remainder are now pursuing careers across the country and the world with companies such as Freeport McMoRan, Solvay Chemicals, AshantiGold CC&V, and Barrick Gold.

## And the Award Goes to...

- ◆ Mining Engineering PhD student, Kamran Jahan Bakhsh, along with Travis Brown, graduate student in Hydrology, received first place as the winning team in the 2014 Geothermal Case Study Challenge, sponsored by the Energy Department's Office of Energy Efficiency and Renewable Energy.
- ◆ At the February 27—28 Conference on Earth & Energy Research, Mining Engineering graduate student Yu Koizumi was the 2014 research competition winner.
- ◆ At the 2014 Annual SME Conference in Salt Lake City, Utah, two CSM teams competed in the SME/NSSGA Senior Design Team competed and placed 2nd and 4th.
- ◆ The CSM Women's Mining team won the title of "World Champions" during the 35th Annual International Intercollegiate Mining Games which were held on the CSM campus in March 2013. In April 2014, the CSM Mining Team traveled to Rolla, Missouri to compete in the 36th Annual Intercollegiate Mining Games. The Co-Ed team placed 2nd in the Jack Leg competition. For the 37th Annual Mining Games, the team will travel to the West Australian School of Mines (WASM) in Kalgoorlie, Australia to compete.
- ◆ Three UC&T students were honored as recipients of the 2014 Underground Construction Association of the Society for Mining, Metallurgy & Exploration Executive Committee Scholarship. Erin Keogh (Civil), Lisa Mori (Mining) and Kevin Hart (Civil) were each awarded \$5,000 scholarships at the North American Tunneling conference in Los Angeles in June 2014.



- ◆ In May 2014, the Mine Rescue Team competed at the Colorado Regional Mine Rescue Contest in Denver, CO. The Composite Team placed 3rd in First Aid. Of special note is that the CSM team placed ahead of 4 Professional Mine Rescue Teams! In August 2014, the Mine Rescue Team competed at the National Mine Rescue Contest in Lexington, TN. The Composite Team placed 3rd in Novice Field and this time they placed ahead of 7 Professional Mine Rescue Teams! Senior and Treasurer for the Mine Rescue, Wylie Keller, received the Ron Goldade Scholarship for his academic excellence as well as devotion to the Mine Rescue Team. The donor presented him with the award at the Mine Safety & Health Conference in Reno, NV on October 28, 2014.

*The CSM Mine Rescue Team*



*The 2013 World Champion Women's Mining Team*



## More on Student Organizations—Updates

- ◆ The CSM Student Chapter of Society for Mining, Metallurgy & Exploration (SME) continues with a healthy membership of both graduate and undergraduate students. Senior Melissa Anderson became the new President for AY 14-15. They have participated in and hosted a wide variety of events this past semester— From the annual M-Climb to welcome new students to the school to hosting a booth at the Celebration of Mines, one of their major recruiting efforts of the semester. In September, they hosted their annual beginning of the year BBQ to welcome and socialize with both new and continuing students. At their monthly meetings, they brought in a number of interesting speakers including Mr. Ron Hughes, who spoke about the major ground failure in the Wyoming trona mine; Barbara Filas, who shared some of her experiences in Africa and the industry; Neal Stanton who presented on raise boring; Alum Ann McCall spoke about her experience as a young professional in the industry; and lastly, David Brokering, shared his expertise as the senior ventilation engineer at the Freeport McMoRan Henderson Mine in Empire, CO.
- ◆ The UCA (Underground Construction Association) of SME Student Chapter was established in Fall of 2014. Laura Porras-Muñoz (MS student, Mining Engineering) and Lisa Mori (PhD-candidate, Mining Engineering) are co-presidents. This is the only UCA student chapter in the United States.
- ◆ The ISEE (International Society of Explosives Engineers) Student Chapter was restarted this past Fall. Jordan Oxborrow (Junior, Mining Engineering) is the president of the re-energized group which meets monthly.

## Departmental Research—Updates

### New Research Grants Awarded to Faculty

#### Research by the Numbers

Total \$ of Research Grant Expenditures in FY 2014: ~\$11,000,000

Total # of new Research Grants awarded in 2014: 11

Total \$ of Research Grants awarded in 2014: \$1,433,922

Total # of Research Projects currently underway: 17

Project Title	PI/Co-PIs	Sponsor	Project Start Date
Explosion Hazard Risk Analysis in Longwall Gobs through CFD Modeling	Dr. Jürgen Brune/ Dr. Gregory Bogin & Dr. John Grubb	CDC NIOSH	9/01/2014
New Exploration Model for Sediment-Hosted Gold Deposits, Nevada	Dr. Elizabeth Holley	Newmont USA	8/01/2014
Developing Blast Shield for Avalauncher Used by CDOT During Avalanche Control	Dr. Vilem Petr	Colorado Department of Transportation (CDOT)	9/10/2014
Enhanced Safety and Health Training for Western Mine Workers	Dr. Janet Torma-Krajewski/ Dr. Hugh Miller	NIOSH	9/01/2014
Advanced Mine Rescue Skills Training using Multiple Training Modalities	Dr. Janet Torma-Krajewski/ Robert Ferriter	MSHA	9/30/2014
Sustainable Energy Development Exchange in Indigenous Communities	Dr. Masami Nakagawa	US Department of State	9/30/2014
Tech Transfer Collaboration—Edgar Mine	Dr. Masami Nakagawa/ Dr. Priscilla Nelson & Dr. Wei Zhou	NREL	1/01/2015

### Ongoing Faculty Research Projects

Project Title	PI/Co-PIs	Sponsor	Dates of Project
Development of a New Rock Dust Sampling Instrument	Dr. Jürgen Brune/ Dr. Gregory Bogin & Dr. Masami Nakagawa	Alpha Foundation	11/01/2013—1/31/2016
Colorado State Capitol Geothermal Program	Dr. Masami Nakagawa	State of Colorado	8/31/2012—
Numerical Modeling Methodologies for Assessing Burst Potential in Coal Mines	Dr. Ugur Ozbay	Alpha Foundation	11/01/2013—10/31/2015

# Departmental Centers—Updates

## Edgar Experimental Mine News & Announcements

On September 19, the Edgar Experimental Mine held its first Open House event. Alumni, University administration and staff, community members and partners were invited to attend this historical event. A shuttle bus transported visitors from several parking lots in Idaho Springs. The students of MNGN 309 as well as student employees at the Edgar, provided information and guidance throughout the self-guided tours. Food from Smokin' Yard's was provided to the visitors and department faculty and staff were there to greet and chat with visitors. There also was a school-wide student design contest, which ran prior to the event, challenging students to design a logo for the Edgar. Two winning logo designs were chosen—one by Amos Gwa (Junior, Computer Science) and the other by Sam Lolon (PhD candidate, Mining Engineering). The event was considered a great success with over 500 visitors attending the Open House. If you missed it, please look for another one in the coming year to celebrate the 150th year of the Edgar Mine.

On November 18, four industry members representing the Edgar Mine Research Development Committee participated in a day of meetings, presentations, and a mine tour with the goal of expansion of utilization of the mine in research opportunities.

Freeport-McMoRan has generously gifted \$1 Million to support the expansion and upgrade of facilities at the Edgar Mine. Mine Manager, Matt Schreiner is currently working with the campus architect to draw up plans for the use of this generous

donation. A search for architects and engineers will be completed by the end of January 2015, with the expectation of the construction phase beginning Summer 2015.

Ongoing research projects include a NREL/Geothermal project directed by Dr. Nakagawa as well as an Alpha Foundation sponsored project directed by Dr. Brune. Several outside corporate sponsored projects are ongoing as well.

This past year, the CSM Foundation produced a video tour of the mine which can be found at the following link: [https://www.youtube.com/watch?v=eZ\\_MIR9PO94](https://www.youtube.com/watch?v=eZ_MIR9PO94).



*The 2014 Edgar Mine Open House*



*The Winning Logo Designs by students, Amos Gwa and Sam Lolon*

## Earth Mechanics Institute (EMI) News & Announcements



*The 2014 Earth Mechanics Institute Open House*

On April 25, the Earth Mechanics Institute (EMI) hosted its first Open House event. To kick-off the event, there was a campus-wide logo contest for students to design a logo for EMI. There were many great entries, but ultimately two were chosen and unveiled at the Open House. The winning designs were done by Kyle Gilbert (December 2014 graduate, Mining Engineering) and Leo Weiman (Senior, Mining Engineering). The Open House coincided with Alumni Weekend, making this event well attended by over 250 guests which included many alumni as well as University staff and faculty from many departments campus-wide. Snacks and beverages were offered to visitors while software simulations, research posters, and many faculty and students were available to greet and chat with visitors. The Open House was a huge success and if you missed it, please look for another one in the coming year.

On November 19, a committee made up of 8 members representing industry participated in the inaugural meeting of the EMI Research Development Committee. This day consisted of meetings and presentations hosted at the EMI and spear-headed by EMI Manager, Brian Asbury. The purpose of the Development Committee is to provide recommendations for planning and improvements for EMI and the growth of its research program. Following the success of this first meeting, the committee will meet twice a year, once in the Fall and once in the Spring.

EMI continues to be a one-of-a-kind facility, performing testing for

industry and a unique space for research performed by students, faculty, and staff advancing science and engineering knowledge. During the past year EMI research has helped to support 3 graduate students, 8 undergraduate students and an exchange student. EMI has also been actively involved in supporting research projects from other groups within the Mining Engineering department as well as from Physics, Mechanical Engineering and Metallurgical Engineering.

Brian Asbury continues to assist with classes by teaching rock mechanics labs, giving lectures and tours for numerous classes including: Introductory Mining, Tunneling, Underground Design and Construction, and Mine Plant Design. He recently escorted 15 UC&T students to Seattle for site visits to the Northgate Link and SR99 tunnels which are currently under construction.

Other outreach activities performed by EMI in the past year include demonstrations of ground support installation, shotcrete and micro-tunneling equipment (in support of CSM short courses) as well as hosting multiple tours to primary and secondary school students and teachers as well as professional organizations.



*The Winning Logo Designs by students, Kyle Gilbert and Leo Weiman*



## Department Centers—Updates (continued)

### AXPRO Team News & Announcements

The Advanced Explosives Processing Research Group (AXPRO) has had a busy year conducting research projects with Colorado Department of Transportation (CDOT) on avalanche control, Los Alamos National Laboratory and private industry members on different explosive properties, as well as conducting high fidelity detonation physics experiments of explosives for the oil & gas industry.

AXPRO has also offered training classes approved by the Colorado Department of Public Safety for Colorado explosives-end users through Practical Explosives Training School

(PETS) which includes a special program for CDOT workers for avalanche control, practical hand-charges training, and UXO and secondary blasting methods for emergency response for falling rocks and boulders on the roads.

AXPRO is also working with Vision Research Company, who is manufacturing high speed cameras, to share new technology development on high-speed imaging for explosives engineering.

For more information on AXPRO activities and research, visit their website at: <http://axpro.mines.edu/>

### Mine Safety & Health Program—Update



The Mine Safety and Health Program at CSM has been offering safety and health training to mining industry professionals since 1999. In the past year, approximately 1,100 individuals were trained and about 100 courses were conducted. Many of the courses support MSHA training requirements as defined under 30 CFR Part 48 (new miner for surface and underground mines and the annual refresher). These courses are highly rated by attendees, particularly for the highly qualified instructors and the emphasis placed on hazard recognition and accident prevention.

Other courses offered include mine rescue and underground search and rescue training, utilizing several different training methods including computer simulations as well as field and underground mine exercises. The main focus of these courses is to facilitate the development of advanced skill-sets and expertise that are necessary when responding to mine emergencies involving conditions that are dynamic and life threatening. These courses are also highly rated by attendees because of the knowledgeable instructors, ability to train in an actual mine while in smoke, and having the opportunity to learn new rescue skills. In June 2014, members of the U.S. Army's elite 911th

Technical Rescue Engineer Company trained in the Underground Search and Rescue course. The Army has participated in this program since 2002.

The third component focuses on courses for trainers, safety and health professionals, and managers wanting to improve the safety culture of their organizations.

During the past year, instructors gave presentations at the Training Resources Applied to Mining (TRAM) Conference held in Beckley, West Virginia as well as the Mine Safety and Health Conference in Reno, Nevada. In the upcoming year, the program will be exploring the feasibility of offering online courses and webinars, and developing a new course for mining companies interested in transitioning from a predominantly compliance based program to a safety management system such as the National Mining Association CORESafety SMS.

While the program's predominant emphasis is on providing training for the mining industry, it will soon be expanding the training program to include courses for the oil and gas industry (Safeland training) and tunneling (tunnel rescue). For more information about the training program visit our website at: <http://mshp.mines.edu>



# Announcements

## Upcoming Events

- ♦ The 2015 Annual SME Conference will be held in downtown Denver at the Hyatt Regency, Feb. 15—18th. For more information visit: [www.smeannualconference.com](http://www.smeannualconference.com)
- ♦ At SME, the Mining Engineering Department will host an **CSM Alumni Reception on February 17th from 6—8 pm at The Denver Press Club**
- ♦ If you know an upcoming event that you would like announced on our website, please email the details to the Mining Engineering Department's Program Assistant, Melanie Barnhart at [barnhart@mines.edu](mailto:barnhart@mines.edu).

- ♦ The Colorado Mining Association Education Foundation's online K through 12 teacher's course, "**All About Mining**," was launched November 19, 2014. Visit the website: [www.allaboutmining.org](http://www.allaboutmining.org)
- ♦ **Dr. Masami Nakagawa** was elected to the 2015—2016 Geothermal Resources Council (GRC) Board of Directors. Dr. Nakagawa was also a recipient of a Fulbright Award over the summer.
- ♦ **Dr. Priscilla Nelson** will make presentations on Mining Engineering Research and Education—come listen and meet her! Both are in Denver.
  - ♦ On Monday, January 19, she will speak at the Denver Mining Club luncheon.
  - ♦ On Tuesday, February 17, she will present at the SME Annual Conference & Expo and Colorado Mining Association 117th National Western Mining Conference.
- ♦ On February 24, 2015, Global Opportunities for Technical Professionals—Focus on Mining and Sustainability, will be hosted at CSM and is a program involving 23 outstanding technical students from Brazil sponsored by the Brazilian Confederation of Industry and up to 15 U.S. high school students. They will be participating in this day of panel discussion, small group interaction, an Edgar Mine tour, a reflection session, and initial planning for outreach to share the experience with 2,000 students in Brazil via social media.

## Notable Faculty Awards in 2014

- ♦ **Dr. Steve Enders** received the Ben F. Dickerson, III Award (Dickerson Award) at the 2014 Annual SME Conference in Salt Lake City. The Dickerson Award is presented to an individual who displays the honesty, integrity and sense of professionalism which Ben so highly regarded, as well as contributions to the mining industry.
- ♦ During the summer of 2014, **Dr. Masami Nakagawa** was selected as a Fulbright Energy Specialist. His first assignment was to teach a month-long geothermal energy module in the MS program for the Catholic University of Bolivia in La Paz, Bolivia.
- ♦ **William Wilson** received the Melville F. Coolbaugh Award from the CSM Alumni Association for his outstanding contribution toward improving the image and enhancing the reputation of the Colorado School of Mines.

## Short Course Programs 2014—2015

The Office of Special Programs and Continuing Education (SPACE) at CSM hosted some of the following short course programs taught by Mining Engineering department faculty:

- ♦ February 10—13, 2014, **Microtunneling** short course where mining engineering students participated.
- ♦ September 3—5, 2014, Dr. Ray Henn introduced a new short course, **Shotcrete**, which was a unique course not currently being taught anywhere in North America. Many of the experts in the field of shotcrete in North America were teaching at the short course.
- ♦ September 15—17, 2014, **Tunneling** short course—Dr. Priscilla Nelson presented a lecture and there was participation from mining engineering students.
- ♦ September 30—October 3, 2014, Dr. Vilem Petr taught the short course, **High Speed Imaging for Explosives Engineering**, providing academic instruction to a targeted audience of professionals in the field of explosives engineering.

If there is a special topic that you would be interested in seeing offered as a short course—please email us your ideas at: [csmmine@mines.edu](mailto:csmmine@mines.edu)

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