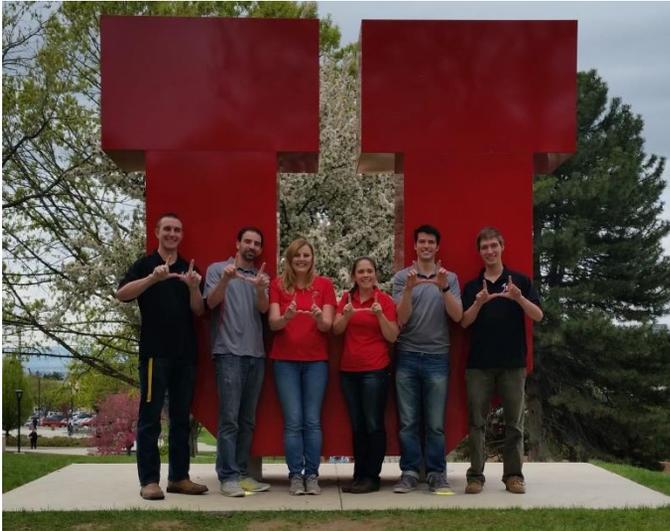


Department of Mining Engineering



Announcements

- Declare your major to reserve your catalog year. See Pam for more info.
- Mine Expo Sept 26-28.
Department classes canceled.
- Register for SME to be eligible for scholarships!
- SME State chapter meeting 3rd Thursday each month.
- Pizza with the Dean Sept. 9th at 11:30 am.

Welcome back to all the returning mining engineering students and incoming students. I hope you all had a wonderful summer break and I can't wait to hear about your summer adventures! My name is Kylie Boyce and I am the SME President for this year. I am from Bakersfield, California and I am entering my fourth year at the University of Utah. I have had two internships working with Newmont Mining Corporation at the Carlin Surface sites while living in Elko, Nevada. In my free time I like to hang out by the lake whether it is camping, hiking or fishing and I love going to Utah sporting events! I am excited to get to know you all! Go Utes!

Student Spotlights



My name is Ashley Brimhall and I'm a Freshman in the mining department. I'm from Spanish Fork, Utah, which is 10 minutes south of Provo. I am super adventurous and love to learn new things about stuff I find interesting. I have always loved the outdoors, and hiking is one of my favorite things to do. I am really excited to be up at the U (it's my dream school, and has been since I was a little kid), and to be a part of the mining engineering department. I chose mining engineering because I always knew I wanted to be an engineer, but I also wanted a career that I could be outside and 'down in the dirt' too. When the slide at Kennecott happened in 2013, my dad was part of the crew who helped clean it up, and he used to tell me about all of the cool things happening at Kennecott, which got me really interested in the inner workings of the mining industry.



My name is Fernando Xavier, I'm 22 years old and I live in São Paulo, Brazil. I came here to the U as part of a one year exchange program, where I'll be studying mostly Mining Engineering courses. I entered the University of São Paulo in 2013, and started as a Chemical Engineering undergrad, but after a year I switched to the Mining and Mineral Processing Engineering major. I'm very excited to be here in Utah and definitely looking forward to learning a lot, not only about mining, but also about the people and a little bit more about the US culture and history. I don't consider myself as an "outdoors" kind of guy, but living here in SLC can definitely change that! Also, I'm a very friendly person, so if you ever want to chat (or even better, chat while drinking one of these amazing local brewed beers), just come say "hi"! Even if it is just to ask about words in Portuguese... making new friends is always a positive thing! Hope I get to know most of you throughout this year!

Additional Info/Announcements

- **Jeff C. Johnson is one of our many new professors to the department. Read about his career in the following pages!**
- **New to the department? Mentors are available to help guide you through the process! Contact Kyle Spaulding at kylespaulding7@gmail.com for more info.**
- **Tough Engineering classes? Some classes offer additional help sessions or lectures in the Marriott library through -out the day/evening. Ask your professor or teaching assistant (TA) for additional info!**
- **Have a suggestion for the Mining Engineering Department? See your SAC officers and get your voice heard!**

Professor Spotlight: Jeff Johnson

Jeff Johnson is one of the three new faculty members that were hired at the beginning of this school year. Jeff began his career as a student in the Department of Mining Engineering at the University of Utah. Jeff was born in Liberal, Kansas where his father worked as a geologist who was nearly killed by a tornado as he logged core in a trailer that was located nearby the drill rigs. His family moved after that and Jeff lived in eight states by the time he was eight years old at which time the family finally settled down in Salt Lake.

Jeff went to Brighton High where as a senior he was visited by Prof. McCarter who informed the science class about continuing their education with mining engineering at Utah. Jeff started college after graduating from high school in the fall of 1976. At that time the cost of tuition \$300 per quarter and in his second year he obtained a Browning scholarship. The first mining class that Jeff took was surveying taught by Prof. McCarter who also worked at Kennecott's Bingham pit. Jeff later took Rock Mechanics from Prof. Pariseau where it became his favorite subject. Jeff graduated with his B.S. in 1981 but it was a terrible year for the mining industry. There were few jobs but there were many jobs in defense.

President Ronald Reagan was spending money on missiles that were made by the Hercules company located on the west side of the valley. Hercules is a famous company that manufactured dynamite for a long time for the mining industry. The major ingredient in dynamite is nitroglycerine and it is also a major component in a solid rocket motor. Jeff was employed as a manufacturing engineer where he designed some minor manufacturing tools, such as a rack for hanging clamping tools, but after a year he was dissatisfied with the work and returned to Utah to pursue a graduate degree.

Jeff has always been interested in physics and after talking with Prof. McCarter, who was now the Chairman, suggested mixing the Master of Instrumentation courses, offered by the Physics Department, along with mining and other classes to obtain a M.S. while being supported by a Browning scholarship. Prof. Pariseau became his advisor and he began his graduated studies. Jeff's M.S. thesis was on pillar design using the finite element computer program 'Utah2' developed by Prof. Pariseau. At this time, main frame computers were used. Runs or "jobs" were input from a "deck" of punched paper cards and the computer printouts were picked up by hand. Jeff's M.S. studies included going to the Black Hills of South Dakota where extensometers were installed to measure underground rock movement in America's deepest underground gold mine.

Jeff also worked at Terra Tek (it used to be located in Research Park) on the testing of oil shale rock specimens but again the economy tanked causing lay-offs allowing Jeff to finish the writing of his M.S. thesis and look for a new job. Through contacts with Prof. Pariseau, Jeff obtained a job with the U.S. Bureau of Mines at the Spokane Research

Laboratory located in Spokane, Washington. Jeff spent the next 30 years of his career with the federal government.

During his career, the Bureau of Mines was closed after 85 years of existence and many of the Bureau's laboratories were closed including those in Salt Lake but luckily two labs were saved; Pittsburg and Spokane that were transferred into the National Institute for Occupational Safety and Health (NIOSH). A wonderful benefit when working for the federal government is to continue your education.

Jeff was able to pursue his Ph.D. working on a research project concerning cautious blasting. Cautious blasting is the theory of controlling the amount of damage to rock from blasting. In most of the excavation full damage is required and full explosive loads are used but near the contour of the excavation a light load is preferred that just breaks the rock you want but does not damage the remaining structure. Working with Prof. Hustrulid, who was a faculty member at Utah in the early 1970's and then again at the turn-of-the-century, developed a set of equations that describe how far the compressive stress in a blast wave damages rock. Jeff completed his Ph.D. in 2010.

In 2012 a friend of his, Prof. Tom Camm from Montana Tech, asked him if he would be willing to come to Butte, Montana and teach for a year because of a faculty member who had just quit by taking a high paying job in industry. The federal government has a program in which you can temporarily exchange jobs, such as teaching, with the states. The temporary job went through and Jeff taught Rock Mechanics and Introduction to Mining among other classes for the 2012 – 2013 school year. The work was tough in learning how to teach, make-up and deliver lectures, write-up homework and exams, but the job was very rewarding.

Jeff returned to Spokane and finished his last three years of federal service. When Jeff was about to retire Prof. McCarter, along with Profs. Pariseau, Calizaya, and Nelson, encouraged him to apply for a faculty position at Utah. Jeff applied and was thrilled to be hired by the Mining Department and looks forward to working with all of you in the future.

As for outside interests, activities, and hobbies: Jeff grew up snow skiing in Salt Lake. Jeff was a U.S. National Ski Patroller for a few years at the Mt. Spokane ski resort. Jeff has been playing or trying to play guitar for many years now and although he is not very good at it he has a lot of fun.