

## CAMPUS REPORT

**DATE:** January 28, 2015  
**TO:** Board of Regents  
**FROM:** Donald M. Blackketter, Chancellor, Montana Tech  
**RE:** Campus Report for the March 2016 Board of Regents' Meeting

- U.S. News and World Report ranked Montana Tech on its list of 2016 Best Online Graduate Engineering Programs. Montana Tech tied for the No. 49 spot. For the 2016 Best Online Graduate Engineering Programs rankings, schools were ranked using five categories: student engagement, faculty credentials, student services and technology, peer reputation, and admissions selectivity.

### STUDENT ACHIEVEMENT

- Alicia Kastelitz, a General Engineering student, submitted a poster which was accepted for participation in the Council for Undergraduate Research's (CUR) 20th Annual Posters on the Hill on April 19-20, 2016. Of the 300 highly competitive applications submitted, only 60 posters were accepted to be presented on Capitol Hill. The title of Alicia's poster is: "Survey of Native Proppants (SNaP)"
- The Montana Tech hockey team is currently 13-6 (W-L) on the season and ranked #7 (of 45 teams) in the West Region. They recently split with Boise State and beat Brigham Young twice last weekend.
- Dunk Abbott, a defenseman for the Oredigger hockey team, was selected to represent the American Collegiate Hockey Association Division II as a member of the National Select team that traveled to Europe over the semester break. He and 21 other skaters were chosen from approximately 4500 skaters from 190 teams in ACHA Division II. They spent about two weeks playing five games in Norway, Germany and the Czech Republic. They beat the European University Select team twice and played three pro teams from Norway and the Czech Republic, beating one of the Norwegian teams.

### FACULTY EFFORTS

- Dr. Dan Trudnowski, head of the Electrical Engineering Department at Montana Tech, and Dr. John Pierre of the University of Wyoming have been awarded the patent "Electric Power Grid Monitoring Methods and Apparatus" for a novel approach to monitor the stability of electric power grids in real-time. The approach utilizes time-synchronized measurements from throughout the grid along with new signal processing algorithms to predict the stability properties of the grid. Maintaining grid stability is critical to preventing cascading blackouts. A prototype of the monitoring system has been installed and is being tested in the operation and control center at the Bonneville Power Administration in Oregon.
- Theresa Stack, CSP, CPE has a paper accepted at the Applied Human Factors and Ergonomics Conference. The article "Firing of a cannon: Psychophysical evaluation of ergonomic hazards" will also be published in their peer reviewed yearly journal. Dr. Dan Authenreith is a co-author on the paper.
- Dr. Dan Autenrieth published the article "The Associations Between Occupational Health and Safety Management System Programming Level and Prior Injury and Illness Rates in the U.S. Dairy Industry" in **Safety Science**. The article describes a new approach to evaluating occupational health and safety management system outcomes in an industry with notoriously high rates of workplace injuries. Future work will involve looking at similar associations in other industries and in assessing management and worker attitudes toward adopting these systems.
- Due to the pioneering nature of his research on training for and competing in mixed martial arts (MMA), John Amtmann has been invited to collaborate on research with Bianca Miarka, Ph.D. of the Federal University De Pelotas, in Pelotas, Brazil. So far one study, titled Comparisons of Time-motion Analysis of Mixed Martial Arts Rounds by Weight Divisions has been completed and published in the December issue (Vol. 15, No. 3, pp. 1189-1201) of the International Journal of Performance Analysis in Sport. More research is planned for the future and will include focusing on the metabolic demands of females competing in the sport and on the effort:pause ratios of training for and competing in mixed martial arts.
- Additionally, Amtmann collaborated with the late Jake Kukay on a research master's thesis project conducted at Community Counseling and Correctional Services, Inc. The project was titled Fitness Changes of Inmates in an Eight Week Fitness Coaching Program at a Regional Youth Detention Facility and was published in the January (Volume 22, Number 1, pp. 75-83) issue of the Journal of

Correctional Health Care. The author's note at the end of the article read "This article is dedicated to Jake Kukay who left us on August 7, 2015, at the tender age of 32. He lived, he loved, he laughed, and he will be missed."

- Dr. Hilary Smith Risser has been invited to attend and present at the 13th International Congress on Mathematical Education at the University of Hamburg in July of 2016.
- Dr. Pat Munday, Professor of Science & Technology Studies with the Technical Communication Department, has been invited to deliver a short course at Sun Yat-sen University in Guangzhou, China, May-June 2016, on science writing for English-language journals. Dr. Munday will also deliver a series of university-wide lectures at both the Guangzhou and Zhuhai campuses.
- Dr. Munday delivered a community lecture, "The Chinese New Year and Spring Festival", at the Butte-Silver Bow Public Library on Saturday, 16 January. As President of Butte's Mai Wah Society, Dr. Munday is "Dragon Master" for Butte's 2016 Chinese New Year parade. This year's parade will feature a new parade dragon given to Montana Tech and Butte-Silver Bow by Sun Yat-sen University in Guangzhou, China.
- Dr. Courtney Young, Metallurgical & Materials Engineering Department Head, has been awarded the 2016 AIME Mineral Industry Education Award from the Society for Mining, Metallurgy & Exploration (SME) of American Institute of Mining, Metallurgical, and Petroleum Engineers (AIME). According to the award committee, Dr. Young was given the award "for his outstanding leadership and distinguished accomplishments in mineral engineering research and education." The award recognizes distinguished contributions to the advancement of mineral industry education. Dr. Young will receive the award at the SME 2016 Annual Conference & Expo dinner in Phoenix, Arizona Wednesday, February 24, 2016.

#### **HIGHLANDS COLLEGE INNOVATION**

- Highlands College instructor, Dr. Elyse Lovell presented her research Sexual Assault on College Campuses: Teaching and Learning Assessment Opportunities within Introduction to Psychology at the Annual Conference of the National Institute on the Teaching of Psychology (NITOP) in Florida.
- Highlands College Big Sky Pathways hosted a professional development opportunity for Adult Basic Education (ABE) professionals.

#### **MONTANA BUREAU OF MINES AND GEOLOGY ACTIVITY**

- Montana Bureau of Mines and Geology Geologist, Dr. Jesse Mosolf, was elected President of the Tobacco Root Geological Society. The society's membership includes professional geologists and other interested people who gather to discuss and discern western Montana's complex geologic history.
- The Intermountain Journal of Sciences accepted a paper by recent Montana Tech Graduate Student Marten Lorenzo and Montana Tech Professor William Drury on, Effects of a beaver pond on metals concentrations and loads. Funding support for Lorenzo's research was provided by grants to the Montana Bureau of Mines and Geology to study impacts from the Anaconda Smelter.
- Dr. Jesse Mosolf presented a talk, Building the Andes at 35 degrees S: Late Cretaceous-Cenozoic volcanism and transpressive shortening to the fall meeting of the American Geophysical Union in San Francisco, California, on December 18, 2015.
- On December 23, 2015, the MBMG released its seamless 1:100,000 scale geologic database. MBMG geologist, Susan Vuke, spent more than two years compiling the database from 80, 30' x 60' geologic maps authored by MBMG geologists during the last 25 years. The 1:100,000 scale geologic database is a unique effort within the United States and offers map images as well as the geologic data for download. Instructions on how to access the database are on the MBMG website at <http://www.mbmgs.mtech.edu/gis/gis-ArcGISservices.asp>.
- Ginette Abdo, Program leader for the Ground Water Investigations Program, presented a discussion of Canals and Groundwater to the Montana Legislature's Water Policy Interim Committee during their January 12, 2016 meeting in Helena.
- The Montana Bureau of Mines and Geology released Report of Investigation 23: Compilation of reported sapphire occurrences in Montana, by Dr. Richard Berg; Open File Report 669: Proceedings of the 2015 Mining and Mineral Symposium, by Director and State Geologist Dr. John Metesh and MBMG Economic Geologist Stanley Korzeb; Open File Report 670: *Synoptic groundwater sampling on the Ashland Ranger District* by Dr. Elizabeth Meredith, and Clarence Schwartz; and the Montana Bureau of Mines and Geology Screensaver/slideshow compiled by MBMG Publications Editor, Susan Barth, and available at: <http://www.mbmgs.mtech.edu/about/highlights.asp#screensaver>.