

CAMPUS REPORT

DATE: October 18, 2018
TO: Board of Regents
FROM: Donald M. Blacketter, Chancellor, Montana Tech
RE: Campus Report for the November 15-16, 2018 Board of Regents Meeting

STUDENT ACHIEVEMENT

- MS Student Marc “Freddy” Sime had a paper accepted in Journal of Dispersion Science and Technology. The paper was entitled “Studies on the Nature of Salicyl Hydroxamate Adsorption at the Surface of Deodmium Oxide.”
- Graduate student, Robert Rader, gave a talk on his research investigating stream-sediment pore-water chemistry in Silver Bow Creek at the Montana Water Conference, West Yellowstone, October 18.

FACULTY EFFORTS

- Professor Todd Hoffman gave an invited presentation “Bakken EOR Model for a Pilot Injection Project,” at the Bakken Conference and Expo in Watford City, ND, July 16-18 2018.
- September 11, 2018, Geological Engineering Department’s Dr. Larry Smith’s work done at DTU, Denmark, was presented by Co-author, Dr. Reza Sohbati at the 2018 UK Luminescence and Electronic Spin Resonance Conference in Sheffield, England. Dr. Brahmananda Pramanik of Mechanical Engineering authored a refereed journal article (High strain rate compressive deformation behavior of an additively manufactured stainless steel), accepted by Additive Manufacturing Journal. (Authors: B. McWilliams (US-ARL, MD), B. Pramanik, A. Kudzal, J. Taggart-Scarff).
- Dr. Robert Pal, Associate Professor, Biological Science delivered an oral presentation (Restoration of mining impacted landscapes after traditional reclamation), and was co-author in another talk (Robinson S. B., Colman B. P., Pal R. W.: Documenting the legacy of smelter aerosols on soil physicochemical and plant community characteristics in a degraded watershed) at the Annual Meeting of the Ecological Society of America in New Orleans, August 5-10, 2018.
- Todd Hoffman and Andrew Fakhry presented a paper (SPE Number 2902921) titled "The Effect of Mineral Composition on Shale Oil Recovery" at the SPE Unconventional Resources Technology Conference (URTeC) in Houston, TX 23-25 July 2018.
- September 19, 2018, Larry Smith presented a talk on glacial Lake Missoula to the Butte Kiwanis Club.
- Four faculty from the Petroleum Department (Dave Reichhardt, Susan Schrader, Todd Hoffman and Lee Richards) met with Greg Leveille, ConocoPhillips VP of Technology, and four other executives to discuss future collaboration between the two institutions on August 2-3, 2018.
- Dr. Robert Pal, Associate Professor, Biological Science delivered an oral presentation (entitled: Natural Ecosystems Impacted by Exotic Weed Invasion on a Transcontinental Scale), at the International Association for Vegetation Science 61st Annual Symposium in Bozeman, July 22-27, 2018. He was also one of the field trip organizers and leaders of the Symposium.

- Dr. Courtney Young, Dr. H.H. Huang, and Dr. Avimanyu Das submitted 4 abstracts for consideration as presentations to the SME Annual Meeting to be held at the End of February in Denver in 2019. All 5 abstracts were accepted. The papers will be presented by respective students: Gary Wilson (MS), Stephanie Trant (MS), Simon Timbillah (PhD) and Prince Sarfo (PhD).
- Vice Chancellor for Research, Bev Hartline, travelled to Nigeria in early December to present three invited talks at two universities: the Federal University of Technology—Akure (FUTA) in Ondo State and the Michael and Cecilia Ibru University in Delta State. The talks were on “Great Ideas Need Money: Writing Winning Proposals to Pursue your Dreams,” “Advancing Women and Minorities in Science and Engineering,” and “Award Winning Proposals for Competitive Grants.”
- Chris Gammons (Professor, Geological Engineering) and grad students Francis Grondin, Alex Brown, Ethan Coppage, and Ian Kallio presented separate papers dealing with the mineralogy and geochemistry of mineral deposits at the Montana Bureau of Mines and Geology’s Annual Mining and Minerals Symposium, October 11-12.
- Dr. Courtney Young and Dr. Avimanyu Das were co-authors on the paper that Marc Sime had accepted in Journal of Dispersion Science and Technology.
- Dr. Robert Pal, Associate Professor, Biological Science received a small grant from Butte Silver Bow. The funds are for providing technical support for the Butte Reclamation Evaluation System (BRES). The project receives an award of \$12,000. Dr. Brahmananda Pramanik of Mechanical Engineering was a primary-author in an oral presentation (Influence of Build-angle on Charpy Impact Fracture of Laser Powder Bed 3D-printed Stainless Steel and Aluminum Cast Alloy), delivered at TMS Annual Meeting & Exhibition, Phoenix, AZ (Authors: B. Pramanik, K. Kuelper, MD. Salahuddin, B. Madigan).
- Dr. Brahmananda Pramanik of Mechanical Engineering was a primary-author in an oral presentation (Influence of Build-angle on Charpy Impact Fracture of Laser Powder Bed 3D-printed Stainless Steel and Aluminum Cast Alloy), delivered at TMS Annual Meeting & Exhibition, Phoenix, AZ (Authors: B. Pramanik, K. Kuelper, MD. Salahuddin, B. Madigan).

CAMPUS HAPPENINGS

- Montana Tech brought Dame Jocelyn Bell Burnell from Oxford University for her first visit to Montana, where she presented talks on campus and at MSU Bozeman. Dr. Bell Burnell discovered radio pulsars as a graduate student at Cambridge University. Though passed over for the 1974 Nobel Prize in physics, which was awarded to her advisor, she has just won the 2018 \$3-million “Special Breakthrough Prize in Fundamental Physics,” to be received in California in early November, and she plans to donate the money to fund women, underrepresented minority, and refugee students interested in studying physics.
- The Institute for Educational Opportunities is pleased to announce that Theresa Rader, Director of the Student Support Services Program at Montana Tech, was inducted as ASPIRE’s Regional President on October 2, 2018 at the ASPIRE annual conference in Missoula, MT. Rader, a Butte native and long-time MT Tech employee will be charged to represent the needs of 143 federally funded programs serving 42,000 low-income first-generation students from the mountain west states of Montana, Wyoming, Utah, South Dakota, North Dakota and Colorado on the national board of the Council for Opportunity in Education. Theresa works effectively with her students at Montana Tech, helping them enter, persist, and graduate with a Bachelor’s degree. Commendably, she is just as effective at protecting and expanding all students’

opportunities within the national legislative and policy arena. Montana Tech is honored to have a fighter of her caliber to put forward in this leadership role.

- Trisha Southergill gave two presentations and the National Council of University Research Administrators (NCURA) Region VI/VII annual meeting October 7-10 titled “How Am I ever Going to Do that? Problem Solving” with Sandra Logue from University of Colorado Anschutz Medical Campus and “Pre-Award Budgeting Basics” with Beth Kingsley from Denver Health.

MONTANA BUREAU OF MINES AND GEOLOGY ACTIVITY

- MBMG staff-members Abdo, Thale, McKillips, Rose, Sutherland, Gotkowitz, Stickney, Yakovlev, Gotkowitz, Warren, Icopini attended the MBMG Brown Bag Seminar - **Introduction to ArcGIS Pro**, presented by MBMG GIS Specialist Yiwen Li., in Butte, MT on Oct. 9, 2018.
- MBMG Scientists Berg, Duiame, Metesh, Stickney, Thale, Icopini, Korzeb, Elliot, Scarberry, Mosolf, attended the MBMG Mining and Mineral Symposium held in Butte, Montana, from October 10-13, 2018.
- MBMG Director Dr. J. Metesh and Scientist P. Thale presented **Mineral Potential of Montana** at the MBMG Mining and Mineral Symposium, Butte, MT. October 11, 2018.
- MBMG Scientist Dr. Gary Icopini presented **History and Recent Changes in the Geochemistry of the Berkeley Pit Lake** at the Chemistry & Geochemistry Department Seminar, Montana Tech, Oct. 3, and at the 2018 Mining and Mineral Symposium in Butte, Oct. 11, 2018.
- MBMG Scientist Dr. K. Scarberry presented **Overview of Mesozoic Magmatism in Montana** at the 2018 Mining and Mineral Symposium, Butte, Montana, October 12, 2018.
- MBMG Scientist Dr. J. Mosolf presented **Late Cretaceous Crustal Shortening and Coeval Magmatism within the Bannack Volcanic Field Southwest Montana** at the 2018 Mining and Mineral Symposium, Butte, MT October 12, 2018.
- MBMG Director of Earthquake Studies Mike Stickney was interviewed for: “Sheridan Fights Ongoing Water Woes,” in The Montana Standard, September 24, 2018.
https://mtstandard.com/news/local/sheridan-well-woes-caused-by-lincoln-earthquake/article_332f1b72-851b-576c-bdf6-3a9be511022f.html
- MBMG Geologist C. Elliott was interviewed for: “Meeting About Plan to Raise tailings Dam goes Smoothly,” in The Montana Standard, October 5, 2018.
https://mtstandard.com/news/local/meeting-about-plan-to-raise-tailings-dam-goes-smoothly/article_5533ff5e-1707-5304-a614-b8d1b96cb2dc.html
- MBMG Research Division Chief Dr. M. Gotkowitz presented **Use of Borehole Geophysics to Assess Fracture Connectivity and Hydraulic Gradients** at the Montana Tech Public Lecture Series, Butte, MT., Sept. 13, 2018.

- MBMG Director of Earthquake Studies Mike Stickney presented **Recent Rumbblings 2018** to the Helena Rotary Club in Helena, MT, October 15, 2018.
- Mineral Museum Assistant J. Foley staffed the MBMG Display Mineral Case, and Economic Geologist S. Korzeb attended, the Denver Mineral Show, Denver, CO, Sept. 13-16, 2018.
- MBMG Geologist C. Elliott led a Water Quality Station Field Trip for the Clark Fork Water Education Program for East Middle School 7th Grade, Silver Bow Creek, MT, Oct. 4, 2018.
- MBMG Hydrogeologist, Dr. E. Meredith, participated in the MUS Roadshow, presenting **Monitoring Water Around Energy** at Great Falls College; Pondera Senior Center in Conrad; Shelby High School; MSU-Northern, Havre; Aaniih Nakoda College, Harlem; Great Northern Hotel, Malta; and in Lewistown, Montana, Oct. 3 - 5, 2018.
- MBMG Director Dr. J. Metesh presented **Where Does the Water Come From?** at the 18th Annual Montana Water Law Conference, Oct 12, in Helena, MT.
- MBMG Geologist Cathy McDonald and S. Underwood edited and published **Southwest Montana geology from the Helena Salient to the drainages connecting Yellowstone Park**, Tobacco Root Geological Society Northwest Geology 47, 88 p.
- MBMG Research Division Chief Dr. M. Gotkowitz, M. Mathews, and M. Ginder-Vogel published **Effect of geochemical conditions on radium mobility in discrete intervals within the Midwestern Cambrian-Ordovician aquifer system**, Applied Geochemistry, 97, 2018, 238-246.
- MBMG Hydrogeologist E. Meredith hosted the Coalbed Methane Technical Advisory Committee annual meeting at the MBMG Billings Office, Aug 28, 2018.
- MBMG Hydrogeologists Dr. E. Meredith and S. Kuzara presented **Isotopic Identification of AMD - Groundwater Interactions** while attending the 2018 National Association of Abandoned Mine Lands Program conference, Sept. 10 – 14, Williamsburg VA.
- MBMG Program Manager J. LaFave presented **Groundwater Conditions in Montana** at the Annual Fall Water School for Water & Wastewater Operators and Managers.
- MBMG scientists J. LaFave, A. English, M. Gotkowitz, M. Miller and M. Richter attended the Yellowstone Groundwater Control Area Technical Oversight Committee Annual Meeting in West Yellowstone, MT, Oct 11, 2018.
- MBMG Ground Water Assessment Program Manager J. LaFave presented **Ground water Conditions in the Upper Yellowstone Watershed** at the Upper Yellowstone River Workshop, West Creek Ranch, Emigrant, MT, Sept. 5, 2018.
- MBMG Chemist A. Huft and Chief Chemist J. Timmer provided an instructional tour of MBMG laboratory facilities to the Montana Tech Hydrogeology Field Camp, Aug. 13, 2018.

- MBMG Hydrogeologist C. Carstarphen presented **Montana's Precipitation Isotope Network** at the Montana Section of the American Water Resources Association (MT AWRA) Meeting in W. Yellowstone, MT, Oct. 18, 2018.
- MBMG Hydrogeologist A. English led a field trip to Yellowstone Nat'l. Park and participated in a **West Yellowstone Groundwater Panel Discussion** at the MT AWRA Meeting, Oct. 17, 2018.
- MBMG Data Systems Manager L. Buckley presented **Surface Water Assessment and Monitoring Program (SWAMP) and the MBMG Data Center** at the MT AWRA Meeting in W. Yellowstone, MT, Oct. 18, 2018.
- MBMG Hydrogeologist K. Waren presented **A Groundwater Model for the Meadow Village Alluvial Aquifer, Big Sky, Gallatin County, Montana** at the MT AWRA Meeting in W. Yellowstone, MT, Oct. 19, 2018.
- MBMG Hydrogeologist A. Bobst presented **Using groundwater models to explore how beaver-mimicry stream restoration affects dynamic seasonal water storage** at the MT AWRA Meeting, W. Yellowstone, MT, Oct. 19, 2018.
- MBMG Program Manager J. LaFave presented **State-Wide Groundwater Monitoring Network - Assessing Drought Impacts and Ground Truthing Big Data** at the MT AWRA Meeting in W. Yellowstone, MT, Oct. 19, 2018.
- MBMG Scientists S. Kuzara, S. Bierbach, J. LaFave, C. Carstarphen, A. Bobst, A. English, and M. Berzel attended MT AWRA Meeting, W. Yellowstone, MT, Oct. 17 - 19, 2018.
- MBMG Geologist, Stan Korzeb attended the Society of Economic Geology Conference held in Keystone, Colorado, September 21-24, 2018.
- MBMG Geologist, Stan Korzeb won two first place awards: Best Education Exhibit in the Education Division and the Friends of Mineralogy Education Award at the Denver Gem & Mineral Show, Denver, Colorado, September 10-16, 2018.