

CAMPUS REPORT

DATE: February 5, 2020
TO: Board of Regents
FROM: Les P. Cook, Chancellor, Montana Technological University
RE: Campus Report for March 2020 Board of Regents Meeting

STUDENT ACHIEVEMENT

- Taymee Brandon (MS in Environmental Engineering) has published a paper in *Science of the Total Environment* (impact factor: 5.59) entitled "Poised potential is not an effective strategy to enhance bio-electrochemical denitrification under cyclic substrate limitations." The paper is co-authored by Ashton Cummings (senior in Environmental Engineering). The senior author is Dr. Daqian Jiang assistant professor in Environmental Engineering.
- Twenty-four Montana Tech undergraduates had 22 abstracts accepted for oral or poster presentation at the National Conference on Undergraduate Research (NCUR) being held in Bozeman on March 26-28, 2020. They and their projects were mentored by ten faculty in nine departments in three Montana Tech colleges.

FACULTY EFFORTS

- Chris Danielson had a publication that came out the week of January 20, 2020 that is called Chris Danielson, "Cliff Finch and the Limits of Racial Integration," *Journal of Mississippi History*, Spring/Summer 2019.
- Dr. Roger Jensen, Professor, Safety, Health and Industrial Hygiene Department, had a 480-page book published by Wiley Press entitled: *Risk-reduction Methods for Occupational Safety and Health, Second Edition*. Assistant Professor Lorri Birkenbuel was coauthor of two chapters.
- Dr. Peter Lucon, Assistant Professor in Mechanical Engineering, was one of multiple inventors on an awarded U.S. Patent Number 10,456,760 (6th while employed at Montana Technological University). The patent applies to the application in the technical field of control systems. The patent describes a system and method for controlling a mixing system at a peak energy efficiency point, maximum response point or reduced sound generation point based on displacement, velocity, acceleration or jerk operating conditions.
- Dr. Chris Gammons (Dept. of Geological Engineering) and Dr. Gary Icopini (Montana Bureau of Mines and Geology) published a paper in the journal *Mine Water and the Environment* entitled: "Improvements to the Water Quality of the Acidic Berkeley Pit Lake...". This paper is Open Access and can be downloaded from the web.
- Mr. Matt Egloff and Dr. Courtney Young presented the results of research at the Montana Bureau of Mines and Geology Symposium. The presentation and paper pending publication in the proceedings were, "The Processing and Recycling of Garnet Tailings for Recovery and Mass Reduction Purposes, and Applications in Concrete," by Avimanyu Das, Brandon Hill, Peter Rossiter, Gary Wyss, Courtney Young, and Matt Egloff.
- Mr. Matt Egloff presented "Modeling and Reducing Electromagnetic Fields from Transmission and Distribution Lines" at the annual Joint Engineers conference in Helena, MT on November 7, 2019.
- Dr. Courtney Young of Metallurgical & Materials Engineering has been invited to give five 2-hour lectures at Wuhan University of Science and Technology, Wuhan, China. He will be hosted by Dr. Guojun Ma who spent all of 2015 as a visiting faculty at Montana

Tech and recently helped negotiate an International Agreement with Montana Tech. His lectures will be part of an international course on Metallurgical Secondary Resource Comprehensive Utilization and will include research that they did together on Slags. Dr. Young will also cover research he did with various students over the years on Tailings, Spent Potliner (SPL), and Acid Rock Drainage (ARD), namely the Berkeley Pitlake.

- Dr. John W. Ray of Liberal Studies has had two peer-reviewed papers accepted for presentation at international conferences. The first peer-reviewed paper will be presented this spring at the 12th International Conference on Climate Change: Impact and Responses in Venice, Italy. The paper is titled, "Climate Change and Human Migration as a Threat to International Peace: A Realist Perspective". Dr. Ray will also be presenting a peer-reviewed paper this summer entitled "On Hegel as the Most Adequate Social Contract Theorist" in Athens, Greece, for the Fifteenth International Conference on Interdisciplinary Social Sciences.
- The Staff Senate held its first fundraiser for the Pam Hogart Memorial Staff Senate Scholarship and raised over \$2500.00. This scholarship is designed to help Staff members with the cost associated with taking courses at Montana Tech to continue their higher education or professional development.
- Alysia Cox and Brian St. Clair, assistant professors in the Chemistry & Geochemistry Department, are co-investigators on a NASA EPSCOR grant to Montana State titled 'Tectonic influences on high temperature biosphere habitability' with Angela Des Jardins, Dan Colman and Eric Boyd. The award amount is \$748,938 and Tech's subaward is \$279,824.

MONTANA BUREAU OF MINES AND GEOLOGY ACTIVITY

MBMG guest lectures and other educational outreach efforts:

- Geologist M. Stickney presented "Two main shocks and a swarm" at the Montana Tech Public Lecture Series, January 9th, Butte, MT.
- Hydrogeologist E. Meredith presented "Characterizing water resources around oil and gas development" at the Montana Tech Public Lecture Series, January 30, Butte, MT.

MBMG committee and public meeting participation:

- Hydrogeologist Andy Bobst presented information from the Upper Jefferson Groundwater Investigation to the Jefferson Watershed Council, January 27 in Waterloo, MT.
- Hydrogeologist James Rose met with the Big Sky Water and Sewer Department to discuss Upper Gallatin River Corridor Groundwater Investigation, January 21, Big Sky, MT.

Publications by MBMB scientists including those published by the MBMG:

- Gammons, C. H. and G.A. Icopini, 2019. Improvements to the Water Quality of the Acidic Berkeley Pit Lake due to Copper Recovery and Sludge Disposal, Mine Water and the Environment <https://doi.org/10.1007/s10230-019-00648-8>
- MBMG 708, parts E, F, G: Bergantino, R.N., 2019, Structure contour lines of the Lewistown area, MBMG Open-File Report 708, 1 sheet, scale 1:250,000.
- MBMG 710, part D: Bergantino, R.N., 2019, Structure contour lines of the Cut Bank area, MBMG Open-File Report 710, 1 sheet, scale 1:250,000.
- MBMG 711, parts C, G, H: Bergantino, R.N., 2019, Structure contour lines of the Roundup area, MBMG Open-File Report 711, 1 sheet, scale 1:250,000.
- MBMG 714, parts C, E: Bergantino, R.N., 2019, Structure contour lines of the Shelby area, MBMG Open-File Report 714, 1 sheet, scale 1:250,000.
- MBMG 717, parts A, D, H: Bergantino, R.N., 2019, Structure contour lines of the Hardin area, MBMG Open-File Report 717, 1 sheet, scale 1:250,000.

- MBMG 718, parts C, D, G: Bergantino, R.N., 2019, Structure contour lines of the Havre area, MBMG Open-File Report 718, 1 sheet, scale 1:250,000.
- MBMG 722, parts A, D, F, G: Bergantino, R.N., 2019, Structure contour lines of the Ekalaka area, MBMG Open-File Report 722, 1 sheet, scale 1:250,000.
- MBMG 723, parts A, B, D, E, G, H: Bergantino, R.N., 2019, Structure contour lines of the Billings area, MBMG Open-File Report 723, 1 sheet, scale 1:250,000.
- MBMG 724, parts A, B, C: Bergantino, R.N., 2019, Structure contour lines of the Choteau area, MBMG Open-File Report 724, 1 sheet, scale 1:250,000.
- MBMG 725, parts A, B: Bergantino, R.N., 2019, Structure contour lines of the Great Falls area, MBMG Open-File Report 725, 1 sheet, scale 1:250,000.

CAMPUS HAPPENINGS

- Montana Tech's Athletic Director, Matt Stepan, announced the hiring of their new head coach, Kyle Samson, on January 21. A press conference was held on Wednesday, January 22, where Samson was introduced.
- Montana Tech hosted its Spring 2020 Career Fair on January 28, 2020. From 8 am-2:30 pm in the HPER with over 60 employers.
- Montana Tech hosted the spring wellness fair called "For the Health of It" on January 27, 2020 in the Copper Lounge from 10 pm-1:30 pm.
- The Center for Center for Advanced Mineral, Metallurgical and Materials Processing (CAMP) at Montana Tech hosted the following advisory board members at their annual Advisory Board Meeting January 24, 2020: Chair, Dr. Douglas Wells, New Mexico Institute of Mining and Technology; Dr. Larry Cercone, Clock Spring|NRI; Mr. Nick Hazen, Hazen Research, Inc.; Ms. Julie Jaksha, Headwaters RCD/BLDC; Dr. John Metesh, MBMG; and Dr. David Salem, South Dakota School of Mines & Technology.
- On January 16, 2020, the Montana Tech Staff Senate raised \$2500.00 at its first fundraiser for the Pam Hogart Memorial Staff Senate Scholarship named to honor Pam Hogart, Montana Tech Alumni and long-time Montana Tech Business Office employee who passed away unexpectedly in May 2019. Pam was dedicated to the institution and was passionate about serving those around her. The Pam Hogart Memorial Scholarship is designated to help Staff members with the cost associated with taking courses at Montana Tech to continue their higher education or professional development. Two \$500.00 scholarships (\$250.00 per semester) will be awarded for the FY 2021 academic year.