

CAMPUS REPORT

DATE: October 23, 2013
TO: Board of Regents
FROM: Donald M. Blackketter, Chancellor, Montana Tech
RE: Campus Report for the November 21 and 22, 2013 Board of Regents' Meeting

STUDENT ACHIEVEMENT

- Several Montana Tech students received awards at the recent (October 3-4) meeting of the Montana section of American Water Resources Association (AWRA) in Bozeman. These include: a) 2nd place for best oral presentation to George Williams (Geochemistry) for his talk: "Natural acid rock drainage in the Judith Mountains, Montana"; b) 1st place for best poster to John Anderson (Geological Engineering) for his project: "Using major ions, radon, and water isotopes to characterize the role of subsurface flow to the upper Boulder River, MT"; c) 2nd place for best poster to A. Capri Gillam (Environmental Engineering) for her project: "Carbon and nutrient cycling in a headwater stream and riparian zone: Tenderfoot Creek Experimental Forest, MT"; and d) 3rd place for best poster to Amber McGivern for her project "Geologic constraints on the geochemistry of acidic and pH-neutral pit lakes in Butte, Montana".
- Computer Science senior Haythem Memmi presented his "Social-PPM: Social-Aware Personal Process Management" poster at the Grace Hopper Conference 2013 in Minneapolis, MN. Haythem completed his research at Texas State University – San Marcos in their summer Research Experience for Undergraduate (REU) Program
- Dr. Courtney Young and PhD student Nick Gow submitted 4 abstracts for consideration of publication and presentation at Hydro 2014 and the 2014 SME Annual Meeting. All were accepted.
- Dr. Steve Parker, Professor of Environmental Chemistry, and recent M.S. student Marissa Darvis had a paper accepted in the journal Biogeochemistry entitled "Dissolved oxygen and dissolved inorganic carbon stable isotope composition and concentration fluxes across several shallow floodplain aquifers and in a diffusion experiment," Stephen R. Parker, Marissa N. Darvis, Simon R. Poulson, Christopher H. Gammons, Jack A. Stanford..
- Geological Engineering Professor Chris Gammons and recent M.S. student Joshua White recently had a paper accepted by the journal Mineralium Deposita entitled: "Paragenesis of cobalt and nickel in the Black Butte shale-hosted copper deposit, Belt Basin, Montana, USA."
- General Engineering Associate Professor Dr. Brian Kukay presented at a conference with student Jenson Sannon: White, Robert H., Brian Kukay, James Wacker, and Jenson Sannon. Options for Evaluating Fire Damaged Components of Historic Covered Bridges. Second National Covered Bridge Conference (June, 2013). Dayton, Ohio (2013).
- General Engineering faculty Dr. Brian Kukay presented at a conference with student Tyler Jahn: Kukay, Brian M., Robert H. White, Charles S. Todd, and Tyler Jahn. Evaluating Fire Damaged Components of Timber Bridges and Structures (May, 2013) A.S.C.E. Structures Congress, Fire Risks and Impacts to Bridges Track. Pittsburgh, Pennsylvania (2013).

FACULTY EFFORTS

- Steve Parker (Chemistry and Geochemistry), Chris Gammons (Geological Engineering) and John Metesh (Montana Bureau of Mines and Geology) have been awarded \$186,615 by the National Science Foundation's Major Research Instrumentation (MRI) program to purchase a Picarro Carbon Stable Isotope Analyzer.
- The Montana Tech Department of Metallurgical and Materials Engineering funded the the Fire Assay short course. Dr. Courtney Young with the help of office assistant Karen Holland and CAMP budget analyst DaNette Rule worked to make sure Montana Tech students and industrial participants alike enjoyed the course.
- Dr. Waleed Al-Rawashdeh, Assistant Professor of Mathematics, published a peer-reviewed paper "Difference of Composition Operators on Hardy spaces ", Journal of Mathematical Inequalities, 7(2013), 427- 444. Dr. Al-Rawashdeh has also two more papers entitled "Composition Operators on Weighted Hardy Spaces" and "Composition operators on Generalized Nevanlinna Class" will appear in the Rocky Mountain Journal of Mathematics and the Missouri Journal of Mathematical Sciences.

- Dr. Waleed Al-Rawashdeh, Assistant Professor of Mathematics, is presenting a paper at the AMS Western Fall Sectional Meeting that will be held at the University of California Riverside, November 2-3, 2013.
- The Society of Women Engineers sponsored the annual "Save the Tata's" Fun Run/Walk/Bike this weekend. There were over 40 participants of all ages for the event, which is held annually in October to raise awareness for breast cancer. This year, the majority of the proceeds will stay local, as they are being donated to the Montana Breast & Cervical Health Program Local Treatment Fund, which provides breast and cervical cancer screening for low income women in our six-county area. Mary North-Abbott, a professor in the Petroleum Engineering Department, is the faculty advisor for the SWE campus organization.
- Two Society of Women Engineers student officers, Mandy Brewer (President) and Melanie Brewer (Secretary) will travel to Baltimore later this month to attend the SWE 2013 Conference. This is the first time Montana Tech will be represented at the national conference.
- Conrad Smith, a junior Petroleum Engineering student and standout hockey defenseman, was among those selected from over a thousand players to represent the American Collegiate Hockey Association Division II on the Select team that will travel to Europe to compete with teams from Austria, Germany, Slovenia, Croatia and Hungary over Christmas break.
- Leo Heath, Department Head for Petroleum Engineering, and Mary North-Abbott, Petroleum Engineering faculty, traveled to New Orleans for the Society of Petroleum Engineers Annual Technical Conference & Exhibition last week. They, along with Doug Abbott, Provost & Vice Chancellor of Academic Affairs, and Joe McClafferty and Peggy McCoy from the Foundation, hosted an alumni gathering while in NOLA.
- Montana Tech's Health Care Informatics Department is participating in a \$300,000 rural HIT Workforce Development Grant awarded to the Montana Area Health Education Centers (AHEC). The AHEC will be serving as the lead agency in this 3-year program and will partner with rural hospitals to support training and education for their workers. This educational program will provide tuition support to health care workers in their efforts to master the meaningful use of new health information technologies, such as the Electronic Health Record. In addition to Montana Tech, the four participating campuses in this program also include Great Falls College, Flathead Valley Community College, and Missoula College. As the only university in the consortia, Montana Tech will offer both a certificate in Health Information Technology as well as baccalaureate and graduate-level education in health care informatics to rural health care workers.
- Dr. Suzan Gazioglu of the Department of Mathematical Sciences taught a day-long, hands-on, Statistics refresher course for the professional and management staff at Hecla Greens Creek Mining Company in Juneau, Alaska (June 2013).
- General Engineering faculty Dr. Brian Kukay published the following papers: Pierce, Phil, and Brian Kukay. *ASCE Timber Bridge Committee's National Timber Bridge Survey* (ID 123). 2nd International Conference, Timber Bridges (Sept-Oct, 2013). Las Vegas, Nevada (2013) and White, Robert H., Brian Kukay, and James Wacker. *Options for NDE Assessment of Heat and Fire Damaged Wood*. 18th International Nondestructive Testing and Evaluation of Wood Symposium (Sept, 2013). Madison, Wisconsin (2013).

MONTANA BUREAU OF MINES AND GEOLOGY ACTIVITY

- Between August 1, and September 30, 2013, MBMG sold 1,139 items through its publication and sales office. More than 21,900 items were downloaded from the MBMG publications catalog website.
- MBMG scientist, Dan Blythe, who works in the Ground Water Assessment Program, presented an update to the Livingston Natural Resources and Conservation Service Field Office staff and led a landowner site tour in July 2013. The presentation and tour focused on baseline water-quality sampling in response to landowner concerns about potential hydrofracturing activity in the Shields River Valley.
- Mike Stickney, Director of the Earthquake Studies Office at MBMG, presented a talk to the Montana Geological Society in Billings, Montana, on September 25. The presentation included insights into the 2005 Dillon earthquake and its aftershocks, and a discussion of historic earthquakes and seismic hazards.
- On July 23, John LaFave (Ground Water Assessment Program Leader) led a field tour at Giant Springs State Park in Great Falls, Montana, for Montana Fish Wildlife and Parks and AmeriCorps staff. The presentation and tour focused on the hydrogeology of the Madison Limestone and Giant Springs.

- On July 26 Tom Michalek, a Montana Bureau of Mines and Geology hydrogeologist working for the Ground Water Investigations Program, received a letter from District Judge Holly B. Brown thanking him and the MBMG for help during the District Court's 2013 'Water Walk'. The District Court holds the event to help the general public better understand the impacts of water use including irrigation.
- On August 6 MBMG released Open-File Report MBMG 640, *Spring and Stream Water Quality, Powder River Basin, Montana* by John Wheaton, Elizabeth Meredith, and James Rose.
- On August 8 Nick Tucci, MBMG hydrogeologist, met with authors from Popular Science interested in doing an article on the Berkeley Pit. Nick informed them about the pit and local hydrogeology.
- On August 19 MBMG released Open-File Report MBMG 642, *Geologic map of the Clarkston Valley* by MBMG scientists Susan Vuke and Michael Stickney.
- MBMG Hydrogeologists offered lectures and installed monitoring wells as part of Montana Tech's Hydrogeology Field Camp Course directed by Dr. Glenn Shaw of the Geological Engineering Department. The camp took place August 19-22 at the Grant-Kohrs Ranch in Deer Lodge, Montana. Field Camp students assisted with the drilling, core logging, well completion, and well development. The resulting infrastructure will provide data for a graduate student thesis, data for one of Dr. Shaw's research grants, and support long-term groundwater level and quality monitoring at the at the Grant-Kohrs Ranch.
- On August 23, MBMG released Open-File Report MBMG 637, *Hydrogeologic investigation of the Beaverhead River study area, Beaverhead County, Montana* co-authored by MBMG scientists Ginette Abdo, Julie Butler, Todd Myse, John Wheaton, Dean Snyder, Dr. John Metesh, and Montana Tech Geological Engineering Professor, Dr. Glenn Shaw.
- John LaFave (Ground Water Assessment Program Leader) was invited to participate as a technical advisor to the Upper Missouri River Basin Advisory Committee during its September 5-6 meeting in Three Forks, Montana.
- On September 9, 2013, MBMG released Open-File Report MBMG 638, *Hydrogeologic investigation of the Beaverhead River study area, Beaverhead County, Montana, groundwater modeling report* by Julie Butler and Ginette Abdo.
- At the September 10 meeting of the Water Policy Interim Committee Dr. John Metesh (MBMG Director), John LaFave (Ground Water Assessment Program Leader), John Wheaton (Ground Water Investigations Program Leader), and hydrogeologists Ginette Abdo and Tom Michalek used sand-tank models to illustrate groundwater flow principles to Water Policy Interim Committee members, staff, and meeting attendees at the State Capitol building.
- On September 12 MBMG released Open-File Report MBMG 643, *Hydrogeologic Investigations of the Scratchgravel Hills study area, Lewis and Clark County, Montana, Groundwater Modeling Report* by Julie Butler, Andrew Bobst, and Kirk Waren.
- Dr. John Metesh (Montana Bureau of Mines and Geology Director and State Geologist) attended the American Association of State Geologist's September 15-19 fall liaison meeting in Washington DC. The state geologists met with agencies within the Departments of Energy, Agriculture, and Interior on topics and projects of interest to the states.
- Kevin Chandler and Jon Reiten, MBMG Hydrogeologists, attended the 58th annual Midwest Groundwater Conference in Bismarck, North Dakota on September 24. Kevin presented a talk about current groundwater modeling efforts focused on the Fox Hills Aquifer that underlies most of eastern Montana. Jon spoke about the Lower Yellowstone Buried Channel aquifer near Sidney, Montana and its potential as a major water resource.
- Dr. Jesse Mosolf, Montana Bureau of Mines and Geology geologist, successfully defended his Ph.D. dissertation focused on the Geology of Central Chile's long-lived volcanic arc. Dr. Mosolf becomes the fifth Ph.D. on the Montana Bureau of Mines and Geology research staff.