

CAMPUS REPORT

DATE: February 8, 2013
TO: Board of Regents
FROM: Donald M. Blackketter, Chancellor, Montana Tech
RE: Campus Report for the March 7 and 8, 2013 Board of Regents' Meeting

STUDENT ACHIEVEMENT

- Nine Montana Tech Math and Statistics students went to San Diego to attend the Joint Annual American Mathematical Society and Mathematics Association of America Meetings on January 8-12, 2013. Jauna Anderson, JoAnne McAllister, Jordan Hugs, Katy Steiner, Robert Hark, Joe Raymond, DJ Moritz, Jake Johnson, and Nick Baker attended, as did Mathematical Sciences faculty Richard J. Rossi and Suzan Gazioglu. Robert Hark presented a poster in the AMS Undergraduate Poster Competition.
- Four Montana Tech Math and Statistics majors participated in the 2012 William Lowell Putnam Competition, an advanced math national annual exam for undergraduates. Students participating were Robert Hark, Joe Raymond, DJ Moritz, and Jake Johnson. The results will be published in March.
- Three student computer programming teams from Montana Tech competed in Salt Lake against 46 teams in the 2012 Rocky Mountain Regional Contest, a qualifier for the World Finals of the Association for Computing Machinery (ACM) International Collegiate Programming Contest. Montana Tech competitors were Matt Morris, Zach Wormgoor, Justin Emge, Reid Alford, Nick Broden, Tony Morasco, Haythem Memmi, Casey Flynn, and Steve Wilson.
- The FIRST Tech Challenge Robotics Competition was held on Saturday December 15th at Montana Tech in the HPER. The tournament included 12 teams from across Montana competing for the right to qualify for the state championship to be held in Bozeman in February. Dr. Michele Van Dyne from the Computer Science Department helped organize the event with assistance from Oracle employees in Bozeman. Over two dozen student and faculty volunteers ran the event.
- Jordan Hugs, a junior majoring in mathematics, received the American Indian scholarship from the Montana Council of Teachers of Mathematics. The scholarship is designed to help support American Indian students pursuing certification in mathematics education.

FACULTY EFFORTS

- Michele Van Dyne, Computer Science Department faculty, received NSF funding to attend a "Performamatics" workshop at the University of Massachusetts-Lowell, teaching computational constructs with the use of music. The workshop was geared for attendance in interdisciplinary pairs. Nathan Fortier, a recent Montana Tech Software Engineering graduate, musician, and current MSU graduate student, attended with Dr. Van Dyne.
- Dr. Chris Gammons (Geological Engineering) gave invited talks at the University of Montana (Jan. 28) and at Montana State University (Jan. 30) as part of the Institute on Ecosystems "Rough Cut" seminar series.
- Dr. Gammons and undergraduate student Allie Brown just published a paper in the journal Applied Geochemistry, entitled "Using stable isotopes (S, O) of sulfate to track contamination of the Madison karst aquifer, Montana, from coal mine drainage". This paper is an outgrowth of Allie's Undergraduate Research.
- David Hobbs (Professor of Chemistry), Jeff Braun (Assistant Professor of Computer Science), and Damian Valles (HPC Application Scientist) attended the annual Supercomputing Conference (SC12), which was held November 11-15 in Salt Lake City. They participated in the SC12 technical conference activities with special sessions focused on integrating and teaching computer science, computational science, engineering, high performance computing, networking, and data storage.
- Dr. Suzan Gazioglu of the Mathematical Sciences co-authored a peer-reviewed article with Drs Celik and Pesen from the University of Siirt in Turkey. The article "*Development of a scale measuring teacher candidates' attitudes toward research*" appeared in the *Journal of Educational Sciences Research*, Dec 2012, 2(2), 105-121.
- Safety Health and Industrial Hygiene (SHIH) faculty Roger Jensen, Merle Benedict, Sally Bardsley, and Marlin Maynard attended the ASSE Conference in Denver in June, 2012.

- The SHIH Department hosted an alumni gathering at the Rock Bottom in downtown Denver, with around 30 alumni attending.
- Bill Spath, who has taught SCUBA classes at Montana Tech for years, attended two conferences this semester in conjunction with his SCUBA instruction at Montana Tech. The conferences included the 72nd Annual Diving & Hyperbaric Oxygen Therapy Conference Sponsored by Divers Alert Network (DAN) in Bonaire in October, 2012; and the DAN Instructor Qualification Course in Las Vegas in November, 2012 to become an instructor for various DAN courses.
- John Amtmann, Kyle Loch, Chip Todd and Bill Spath conducted a study titled "Heart Rate Effects of Longboard Skateboarding". Amtmann, Todd, and Spath partnered with Cody Harris of the Whitewater Rescue Institute to conduct a study titled "Effects of Standard Labor-Wear on Swimming and Treading Water," both to be published by the *Intermountain Journal of Sciences*.
- Dr. Courtney Young presented two research papers to Michigan Tech's Materials Science and Engineering Department, entitled "Manufacturing Lunar Soil Simulant from a Waste Product" and "Impregnated Activated Carbon for Replacing Resin Adsorption in Gold Thiosulphate Extraction." Both presentations were well attended.
- Amy Kuenzi and Richard Douglass co-authored a paper entitled "Transmission ecology of Sin Nombre hantavirus in naturally infected North American deer mice populations in outdoor enclosures" published in PLoS ONE.

MONTANA BUREAU OF MINES AND GEOLOGY ACTIVITY

- MBMG's Director of Earthquake Studies, Mike Stickney, participated in the Montana Department of Military Affairs Disaster and Emergency Services Division's Pre-Disaster Mitigation Plan update meeting in Helena, Montana, on December 19, 2013.
- Dr. Elizabeth Meredith and Shawn Kuzara, hydrogeologists in the MBMG's Billings, Montana office published a Methods Note: *Identification and quantification of base flow using carbon isotopes*, in GROUND WATER Vol. 50, No. 6, November-December 2012 (pages 959-965). GROUND WATER is a refereed journal of the Scientists and Engineers Division of the National Ground Water Association.
- In November and December 2012 students from the BYU geophysics department, UM Western, and Anaconda High School toured MBMG's Earthquake Studies Office to learn about Montana Seismicity.
- MBMG Director John Metesh and Research Division Chief Thomas Patton, along with program leaders for the Ground Water Assessment and Investigations programs, participated in the MUS agency's 'Rotunda Day' on January 11, 2013.
- Camela Carstarphen, MBMG Ground Water Assessment Program hydrogeologist, presented a talk on January 24 to the Boulder River Watershed Board in McLeod, Montana. The talk was titled *Groundwater mapping in Park and Sweet Grass Counties*.
- The MBMG entered into a Memorandum of Understanding with a consortium of agencies including the U.S. Geological Survey, Yellowstone National Park, University of Utah, University of Wyoming, UNAVCO, Wyoming State Geological Survey, and Idaho Geological Survey to revise the organization of the Yellowstone Volcano Observatory. The December 2012 memorandum provides for the shared use of data and facilities, participation in decision-making processes, and understanding that monitoring requires personnel and infrastructure investments among the parties.
- MBMG scientists Mike Stickney, Director of MBMG's Earthquake Studies Office, and Catherine McDonald, Principal Investigator for the STATEMAP program are in their second 3-year term as president and vice-president respectively of the Tobacco Root Geologic Society.
- Mike Stickney, Director of MBMG's Earthquake Studies Office became a member of a newly formed team organized by Governor Steve Bullock's Office of Community Service to plan for and conduct a 'Montana Shake Out' earthquake drill in October 2013.
- In December 2012 Dr. John Metesh, MBMG Director and State Geologist named Dr. Kaleb Scarberry, MBMG geologist, to be the new curator for the Montana Tech Mineral Museum, replacing Dr. Richard Berg who retired in 2012.
- In January 2013, MBMG released Open-File map 627, *Geology of the Butte mining district*, Montana by Robert Houston and John Dilles.
- On January 30, 2013, Mike Stickney, Director of MBMG's Earthquake Studies Office, was invited to speak about seismic hazards to an audience consisting of the Warm Springs Ponds operators and potentially affected emergency responders at a 'tabletop' exercise on emergency action planning for high hazard dams.