

CE NEWS

July 2017



The link from MSU Civil Engineering to our alumni and friends



MONTANA STATE UNIVERSITY

College of ENGINEERING

Partnerships for Student Success

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Katey Plymesser
PhD, PE Water
Resource Engineering



Kevin Hammonds, PhD,
Engineering Sciences



Bret Martin, PE
Civil Engineering

Welcome and Farewell

We continue to welcome new faculty to the Department, with Professors **Katey Plymesser** and **Kevin Hammonds** joining us this past year, and Professor **Bret Martin** coming on board this fall.

Dr. Katey Plymesser (Kathryn), PE (water resource engineering) joined us last fall. She was previously on the faculty at Montana State University – Billings. Prior to receiving her PhD from Montana State University in 2014, she worked for several years as a consultant in Bozeman, Northern Virginia, and her home state of Ohio. Katey's research focus is in ecohydraulics and fish passage engineering. In her free time, she enjoys knitting, weaving, spinning her own yarn, and lots of reading.

Dr. Kevin Hammonds, whose broad research interests are related to better understanding the material properties of snow and ice in all of its forms and phases, joined the department this past spring. He earned his Ph.D. in Materials Science at the Thayer School of Engineering at Dartmouth College. He has a master's and undergraduate degree in Atmospheric Science from the University of Utah and an additional undergraduate degree in Natural Resource Management from Colorado State University. While at Dartmouth he served as Manager for the Dartmouth Ice Research Laboratory. He is a former Avalanche Forecaster, National Park Ranger, and Wildland Firefighter. He is also the recipient of a National Valor Award, given on behalf of the Department of the Interior.

Bret Martin, P.E. will be joining us this fall, with a focus on construction engineering. After graduating from our civil engineering program over 20 years ago, he was commissioned in the United States Army, achieving the rank of Lt. Colonel in the Engineer Regiment. He was involved in a variety of activities while in the Army, including serving as a construction

project engineer/manager, program manager, master planner, Professor of Military Science, and Senior Army Advisor to the Montana National Guard. While in service, he earned a masters degree in engineering management from the University of Missouri Science and Technology, and a masters degree in civil engineering – geotechnical – from the University of Washington. Beyond engineering, he enjoys woodworking, trail running, hunting, camping and raising animals.

As is often the case, the arrival of new faculty is coincident with some goodbyes. In this case, long time faculty members **Al Cunningham** and **Joe Fedock** retired, although both continue to be active within the Department. Professor **Bob Mokwa**, after a year as interim provost, successfully applied to be MSU's permanent provost and vice president for student affairs (the number two position at MSU). Similarly, Professor **Dan Miller** successfully applied to be Department Head of Mechanical and Industrial Engineering here at MSU. Professor **Jaime Foster** was called back to Oregon by family and professional matters. Congratulations and best wishes to all.

Accolades & Applause

The quality of the Civil Engineering Department's students, faculty and staff is outstanding, as continues to be recognized both within and beyond the MSU campus. Individuals receiving specific recognition since our last newsletter include:

At the national level:

- **Flynn Murray**, CE Student, National Science Foundation Research Fellowship
- **Tyler Parker**, CE Student, AGC National Allhands Essay Winner
- **Jace Holman**, CET Student, Simpson Strong-Tie National Scholarship

MSU Engineering on Display

If you would like to have your work displayed in the CE halls at MSU as motivation and encouragement to our students, we'd love to collectively show our pride in you and the profession! In the corridors of Cobleigh Hall we are starting a gallery of rotating photos of projects our alumni have done. If interested, please send either a 11x17 photograph, or a 11x17 electronic file to the department. Be sure to include a brief description of the project, your name, firm, and year of your graduation. For more information please call 406-994-2111 or email cedept@ce.montana.edu.

Photo submissions are a great way to showcase our talented alumni.

Our first submissions have been from Dennis Nottingham (CE, '62) of PND Engineers, based in Seattle, WA.



Tudor Road Bridge
PND, Anchorage, AL

Our second submissions have been from TD&H Engineering, based in Great Falls, MT.



MSU Yellowstone Hall
TD&H Engineering, Bozeman, MT



Dear alumni and friends:

It continues to be an honor and pleasure to serve as head of the Civil Engineering Department at Montana State University. As I enter my sixth year in this capacity, I continue to be amazed by the talent and commitment of our students, staff and faculty, and by the accomplishments and generosity of our alumni and supporters.

After several years of relatively stable enrollment, our student population across the department's various programs increased this year by approximately 10 percent to 700 students. Simultaneously, the university at-large continues to grow, increasing in size by over 20 percent since 2010, with a record high enrollment this past fall of almost 16,500 students. While accommodating this growth has been challenging, it is gratifying to see an increased interest in and commitment to engineering across the country. Our strategy has been to encourage this interest by maintaining open enrollment across all of our programs and dealing with any attendant growth related issues, rather than stifling it by restricting program capacity. Certainly demand in the marketplace for our graduates has supported this strategy, with effectively all of our students finding excellent jobs - for which we are grateful to industry. At the other end of this process, we are also becoming more actively engaged in outreach across the K-12 spectrum, to promote early awareness of and interest in civil engineering and construction.

Even in these politically charged times, few would dispute the need for more well qualified engineers to address the infrastructure challenges facing our nation. Despite the ever increasing complexity of many of these challenges, our goal in this regard remains simple: to best prepare our students to help society meet these challenges with their strong critical thinking skills, firm grasp of fundamental engineering principles, familiarity with contemporary "tools-of-the-trade," and appreciation of the societal context in which they work. That being said, the state-of-the-practice is ever evolving, and I invite you to contact me with your thoughts and ideas on the

Greetings from the head of the Civil Engineering Department

critical knowledge and skills students need in today's environment. If you are in or around Bozeman, stop by the department to visit, or drop me an email (jerrys@montana.edu).

Best wishes,

Jerry Stephens, PhD, PE Professor and
Department Head

Accolades & Applause (cont'd)

At the university level:

- **Renee Hecox**, Academic Coordinator, Excellence in Advising Award
- **Dan Miller**, Professor, Ross Award for Excellence in Teaching and Scholarship
- **Anne Camper**, Professor, President's Commission on the Status of University Women Award

At the college level:

- **Yasmin Chaudhry**, CE Student, Montana Society of Engineers, Gold Medal Award
- **Matt Campbell**, CE Student, Montana Society of Engineers, Gold Medal Award
- **Al Cunningham**, Professor, Excellence in Research Award



The CE Department continues to have close relationships with the Center for Biofilm Engineering and the Western Transportation Institute at MSU. These research centers were founded by Civil Engineering Department faculty members Bill Characklis and Joe Armijo, respectively, and continue to be major research entities in the COE and MSU.



Within the past few years, the Center for Biofilm Engineering celebrated its 25th anniversary, and it continues to be internationally recognized for its interdisciplinary applied research on beneficial uses of biofilms.



The Western Transportation Institute, founded over 20 years ago, is recognized around the world for its rural transportation research, notably in safety, road ecology, public transportation, and application of advanced technologies.

Research Spotlight

The CE Department continues to conduct extensive research across a broad spectrum of civil engineering specialties, including transportation, geotechnical, fluids, water resources, environmental, structural and engineering mechanics. A research highlight in the upcoming year is WETPOL 2017, the 7th International Symposium for Wetland Pollutant Dynamics and Control (*WETPOL*), which will be held August 21 – 25 in Big Sky, MT (<http://wetpol.org/>).



CE Professor Otto Stein is the conference chairperson. Dr. Stein has been researching wetlands as an alternate wastewater treatment technology for well over a decade. Focusing initially on fundamental microbial processes, his work has progressed to the installation of pilot full scale projects at various locations in Montana. Constructed wetland systems can offer lower costs, and environmental and aesthetic benefits relative to traditional systems.



Student Spotlight

Sometimes noteworthy regional student competitions get overshadowed by high profile events, such as the ASCE concrete canoe and steel bridge contests, and the ASC regional estimating competition. So, shifting the spotlight to one such event this year, the Pacific Northwest ASCE regional student conference (attended by up to 21 schools from across the Pacific Northwest region) includes a paper competition in which students showcase their critical thinking and communications skills by answering a thought provoking question on the practice of the profession. MSU has placed in this competition six of the last 12 years, with three of these being first place finishes. These student competitors were **Mark Bovington**, **Ryan Whitney**, **Lisa Woerlein**, and **Emily Stoick**. And in a related thread, did we mention that student **Tyler Parker** won the national AGC Allhand's student paper competition this year, competing against 32 other schools (oh yeah, we did mention it).

Announcements

The next **Construction Recognition Dinner** is scheduled for Tuesday, February 13, 2018. This biennial event is always a great opportunity to celebrate the construction industry and recognize its leaders from across our alumni and the state of Montana. For more information, please contact Penny Knoll, CET Program Coordinator, pennyk@montana.edu.



COE Dean Gunnink, Tim Barnard,
MSU Pres. Cruzado, Mary Barnard



Rendition of Asbjornson Hall

Visit Us Online

The Department has a webpage and is on Facebook, come see us at www.coe.montana.edu/ce



Changes in CE and Across Campus

Mov'in, Show'in, Shak'in, Build'in and Break'in (the mold that is)

- Suffering for years with an identity crisis, the EPS Building now proudly bears the name **Barnard Hall**. **Tim and Mary Barnard and Barnard Construction Company**, one of the largest heavy civil contracting firms in the nation, have been very strong supporters of the Civil Engineering Department for decades.
- Ground was broken for **Asbjornson Hall**, our new engineering building, made possible by a major donation from **Norm Asbjornson**, mechanical engineering graduate of 1960. Asbjornson Hall is expected to open January 2019. Plans and construction webcam can be found on the MSU website.
- The CE Department has started a dual degree program with Gazi University in Ankara, Turkey. Students in the program study at their "home" institution during their freshman and junior years, and then are abroad for their sophomore and senior years. The program currently has 35 students participating from Gazi University.
- The Civil Engineering Peer Advising program is up and running, with upperclassman helping their fellow students navigate their engineering curriculums.
- The engineering mechanics help center targeting our sophomore mechanics classes has surpassed 2,000 student visits per semester.