WELCOME to MCS!

We have some bits and pieces of information to pass on to you. Please feel free to take this with you. You can pass it on or keep it as a memory of your trip. You can stay in touch with us on our department website, www.sdsmt.edu/mcs, through our department Facebook page https://www.facebook.com/groups/sdsmt.math.cs, or directly with our secretary, Reta Davies, reta.davies@sdsmt.edu.

FACULTY AWARDS

It makes us stand proud when our MCS professors are recognized for their work with students and their contributions to the community. Below are the awards through the years for our department: The 2015 awards to MCS were for:

Dr. Antonette Logar – 2015 Recipient of the Virginia Simpson Award: This award is given for recognition of a professor’s involvement with the Rapid City Community. Dr. Logar is now considered to have received the ‘trifecta’ of professor awards, because she was also awarded the President’s Outstanding Professor Award in 1997 and the Ennenga Award in 1996. The only other faculty to receive all 3 honors is Arden Davis, Geology, who retired in May 2015.

Dr. Donna Kliche – 2015 Recipient of the Bernard A. Ennenga Award: This award is given for demonstrated excellence in teaching and-or motivating students. She states that the announcement of the award was a big surprise and she is very pleased to be recognized for her work. Dr. Kliche rejoined the MCS department in the fall of 2014 and is part of a joint appointment with the Atmospheric and Environmental Sciences program.

Here is a listing of other MCS Award Winners for faculty and staff:


OTHER FACULTY NEWS

1. Dr. Ed Corwin – Retirement – He officially retired in May 2014, but continued to teach through the school year for AY14-15. He spent 34 years with our department and saw many changes in the Math & Computing Science fields. Bet he’ll find a few of those old punch cards in the back corner of his desk as he cleans house!

2. Dr. Paul Hinker – New CS Professor for Fall Semester 2015. Dr. Hinker is an SDSMT alumnus that is returning after finishing his PhD at New Mexico Tech and also several years of leading innovation in the private sector. We are so glad he decided to move back to the region & be part of the Mines family!

3. Dr. Travis Kowalski – Promoted to full Professor status in May 2015. He started with MCS in Fall 2004.

OUTSTANDING RECENT GRADUATES - ORG
The ORG is awarded to alumni, within their first 10 years after graduation, to commemorate outstanding contributions for the work in their field and for reaching out to their community. The ORG has been in place for many years but we will list the most recent awards for our Alumni, just over the last 5 years. All pictures can be seen in McLaury 3rd floor case and M210.

2012 Kathleen (Peterson) Barnes (Math 2001)
2011 Toran Kopren (CSC 2000)

STUDENT COMPETITIONS
The department has a long tradition of participating in academic competitions and this tradition remains true even today.

1. ACM PROGRAMMING CONTEST: The ACM Red Team placed 11th in the ICPC Regional Competition (Nov 2014) and then beat teams from MIT, Cornell & Stanford during the North American Invitational competition (April 2015).
   a. The School of Mines has been invited to the World Finals 5 times since the contest started and our winning students got to see different parts of the world. Now the world will be coming to us and we get to show off our school and our community. The ACM World Competition Board is considering Rapid City for the World Finals, tentatively scheduled for 2018. This will mean a great influx of talent and intelligence into our Rapid City area and the surrounding Black Hills, while putting SDSMT in the forefront again.
   b. Dr. Logar & Dr. Corwin received awards for their work with the ACM teams. This award came from ICPC in 2013, and was presented to them at the World Finals in Russia. They were recognized for their contribution and support of ACM. Also, that they have had over 25 years of coaching and were the ONLY pair of coaches to bring 5 teams to the world competition.

2. PUTNAM COMPETITION: Our department had six students compete this year and every one of them scored. This was done in a competition where 42% of students don’t even score at all! The top two students were: Dan Nix (scored 18) and Noah Brubaker (scored 11). A few other students to recognize include: Caitlin Taggart, Matthew Dyke, and Royce Havelka. The Mines team was ranked 136th out of 431 teams. The contest only works to rank the top 150 teams so this puts our MCS SDSMT team in the elite circle that includes teams from MIT, Harvard, and Carnegie Mellon.

3. MATH MODELING COMPETITION – This is an annual competition that involves thousands of teams from around the world and they are only given a weekend to solve a complex problem. The team is required to research the topic, develop a mathematical model, use a computer to simulate the model and finish with a technical report. The team opted to tackle a math model for the logistics involved in eradicating the Ebola virus. Modeling the spread of a disease has been a classic math problem for
many years, but modeling the logistics of eradication is a complicated problem. Designing a distribution network for the vaccine and strategies for vaccinations were additional challenges. Our SDSMT team used sophisticated modeling techniques learned in their upper level Math classes and enjoyed the applications of advanced mathematics in this competition. This is a great illustration of how mathematics can actually save lives.

4. **BUTTERFIELD CUP** – This is the 2nd year for the award that was created by local entrepreneurs to recognize the best mobile app business plan, product and investment pitch. The cup comes with a trophy, a prized seat at a start-up boot camp and a fancy dinner (with SDSMT President Heather Wilson along with local venture capitalists). The winners this year is the bow-tied team that designed the CrowdControl App, designed to ease the experience of friends going out in groups. The culmination of a semester’s worth of work, local entrepreneurs guided the teams toward a finished app, helping to finesse their business plans and pitches. The entrepreneurs were Brian Butterfield & Pat Honeycutt of Pixel Pines, Mines entrepreneur-in-residence Darren Haar, Ed Mandy of 7400 Circuits, Mines Alumnus & Serial Entrepreneur Mike Boucher, and Professor Jeff Wehrung of Black Hills State University Business Department. Other teams worked on apps for monitoring landscape changes for the US Geological Survey, calculating restaurant wait times, helping new Rapid City residents learn about community events, a hiking app, a journaling app to keep track of what users read and an integrated home system app that works with voice commands.

Curriculum Updates

The department is always very active in curriculum development to adjust our courses to fit the changing needs of our programs and our students. The IAB (Industrial Advisory Boards) help us keep current with the private sector for their needs. We currently have alumni and private company members on both the CS and Math boards.

We recently launched CSC 170, Programming for Engineers and Scientists. This class was built to more closely align with the Mechatronics course required for Computer Engineers, Electrical Engineers and Mechanical Engineers. Our first pilot was Spring 2015, launched under Dr. Logar and Dr. McGough. The course is designed to incorporate pairs programming & uses a pcDuino (a small device with sensors & lights that students control via computer programming).

We continue to work at keeping students interested in STEM and we know that mathematics is a fundamental building block for all SDSMT majors. This year we will launch a new orientation program to assist students getting ready for their first mathematics course. The online materials are built around the MyMathTest system, produced by Pearson Publishing. Students will have access to diagnostic tests and review materials in order to be better prepared for class. We believe the early investment by students will result in an increase of overall student success.

Outstanding Student Awards

The department continues with the tradition of our spring graduate reception where we honor our outstanding graduating students. The event is held the Friday before spring commencement every year, and all graduates, with their families, are invited to attend the reception. This year, awards went to:

**Outstanding Seniors**
- Rachel Krohn (CSC & ME)
- Daniel Nix (CSC & PHYS)

**Outstanding Graduate Students**
- Ian Carlson (CSR)
- Tetsuya Idota (CSR)

**MCS Department Student Leadership Hall of Fame**
- Charles ‘Hunter’ Feltman (CSC & EE)
- Jessica Gillaspie (Math)
- Daniel Nix (CSC & PHYS)
NOSTALGIA: A WALK DOWN MEMORY LANE FOR THE McLAURY BUILDING

Originally planned to have a clock tower (below left), the new Engineering building was completed in 1921 and then named in honor of Professor Howard Lincoln McLaury in 1952. Math has been in the building since the doors opened.

Professor McLaury (below left) is ready to coat M Hill in 1915. He was recognized as the first Head of the Mathematics Department, even though the department didn’t exist yet! The autobus outside McLaury (below right) was 1920s or 30s.