Publication note: No CU Connections on Thanksgiving, Dec. 21 and 28[1]

CU Connections will not publish new issues on Thanksgiving Day (Nov. 23), Dec. 21 and Dec. 28.

Deadline for submissions for the Thursday, Nov. 30, issue is noon Wednesday, Nov. 22.

The final new issue before the winter holiday break will appear Thursday, Dec. 14; deadline for submissions is noon Friday, Dec. 8.

Connections returns after the winter break on Thursday, Jan. 4. Deadline for submissions is noon Wednesday, Dec. 27.

During the holiday breaks, the website will be updated with news should events warrant.

Five questions for Matthew Hallowell[2]
[3]
[4]

In 2008, after Matthew Hallowell received his Ph.D. in civil engineering from Oregon State University, he received multiple hiring offers. He ultimately chose a position with the University of Colorado Boulder's Department of Civil, Environmental and Architectural Engineering (CEAE) "because of the collegiality and reputation of the program, the quality of the students and the work-life balance that can be attained in Boulder." And then there was the matter of the mountains. He's a hiker and mountain biker. (When he gets close to an ocean, he's also a surfer.)

CU has been a good fit for him, and the university has gained from his presence. Hallowell is the Beavers Endowed Associate Professor of Construction Engineering, teaching undergraduate and graduate classes. He has received multiple awards and accolades, including those for research and teaching, and also for his mentorship of students and junior faculty.

Earlier this year, he was named a President's Teaching Scholar[5]. His nominator said this: "Matthew Hallowell has been an outstanding teacher, researcher and role model for our students. Through his research, he has brought modern and innovative tools to the field of construction safety. … As a teacher in the classroom, he is creative and innovative. He is inspirational to his students. … Matt is also an enthusiastic adviser and mentor. … (His) mentorship extends beyond the University of Colorado and beyond his own students, through his work of mentoring junior Civil Engineering faculty from around the country …"

The Teaching Scholar honor and the College of Engineering and Applied Science Outstanding Adviser Award are especially significant to him, "Because they are based, in large part, on nominations and letters from existing and former students. It means a lot to me to know that my teaching is valued and that the students are getting a high-quality learning experience. I attribute much of my success to the support and mentoring from my colleagues in the Department of Civil, Environmental and Architectural Engineering – Gregor Henze and Keith Molenaar in particular."

Along with his forays into the mountains, he enjoys traveling and spending as much time as possible with his wife, Robyn, and son Rowan. He's also getting ready for an addition to the family: His second child is due to arrive in February.

1. How did you choose this career path?

My career path was the result of a series of serendipitous events. As a student, I did not have the long-term goal of becoming a professor.

It wasn't until I met Professor Mike Toole at Bucknell University, who would later become my master's thesis adviser,

that I began to see academia as a possibility for me. Mike's rapport with his students, his intelligence and his passion for teaching and research inspired me. Mike also gave me my first chance to do research. For the first time, I thought: "I might be able to do this … I might love this."

When pursuing my Ph.D., my adviser at Oregon State, John Gambatese, fostered my growth as an academic. John was another model academic who was brilliant, personable and wildly creative. I began to develop my toolkit as a researcher, had my first teaching experience and was given the opportunity to be creative and take risks. By the end of my Ph.D. studies, I knew academia was for me.

2. Much of your research is focused on construction safety. How did you decide on this research topic and what have your studies found?

I became interested in construction safety once I learned that the field was much, much more than simple Occupational Safety and Health Administration compliance. The field involves elements of sociology, psychology, engineering, risk analysis, law, leadership, culture, etc. When I learned that I could apply, integrate and advance science in each of these domains while simultaneously helping to decrease injuries and illnesses in the working population, I was sold. After all, nearly 1,000 Americans lose their lives on construction sites every year – the most of any single-service industry. If we advance science that helps to improve these rates by only 1 percent, we can make important progress.

The research in our lab has recently focused on hazard recognition. In the last few years we discovered that people are only able to recognize and address half of the hazards that they will face on the job in a given work period. This is true even for very high-risk work. The safety profession has long assumed that people can see danger and simply need a forum in which to discuss, document and mitigate hazards. However, the act of recognizing hazards is far more complex than originally thought.

We have found that some hazards, like fall hazards, are comparatively easy for people to identify and mitigate. These types of hazards are recognized by the part of the brain that processes emotion like fear and activate the "fight or flight" response when encountered. I think of the example of being at the top of a 20-story building with no fall protection. The average person needs no training to see the hazard, and, in fact, develops a physiological response to an exposure to the fall hazard. Other hazards, like pressure and chemicals, are comparatively more difficult for people to recognize, are processed by accessing long-term memory and do not generate a physiological or emotional response.

I find this research area fascinating because a greater understanding of the science of hazard recognition allows us to better design training programs, resources and safety activities that enable safer work environments.

3. One program you developed that enables safer work environments is called precursor analysis. What is precursor analysis and how does it help reduce project hazards?

Precursor analysis is a very new procedure that involves identifying the presence of known precursors of serious incidents and fatalities through a brief, but targeted, discussion with a work crew. Through a series of experiments and field observations, we found 16 very strong predictors that range from unusual levels of schedule pressure to a poor plan for change. When precursor analysis is used effectively, a manager can briefly engage with a crew, identify the presence or absence of specific warning signs of an event through the structured discussion and take action before an event occurs.

I am very passionate about this area because it is both scientifically supported in journal publications and is being adopted at a very high rate by the industry.

4. You recently were honored as a President's Teaching Scholar and have earned accolades for your work with students, both in the classroom and as a mentor. What is your teaching mission and why are you passionate about passing on your knowledge?

My mission as a teacher is to inspire students to learn, provide meaningful context, communicate objectives early, facilitate the acquisition of knowledge through clear explanation and multiple modes of delivery, provide opportunities

to practice with feedback and motivate students to continue learning. Because I teach both engineering and management concepts, I use a wide variety of teaching modes. For engineering principles, I tend to use physical modules that help to make complex topics more accessible. For management topics, I tend to use simulation activities of real-world cases. I think it is very important to remember that there are many different ways that students learn and that it is my responsibility to incorporate different methods of teaching to address these different learning styles.

5. Do you have a favorite item or artifact that you keep in your office, and if so, what is it and what is the story behind it?

My office is full of small trinkets from throughout the world. One of the great things about being a professor is that I get to work with students from so many different cultures. Often, students will bring me a trinket from their home and I add them to my collection. I have lots of very interesting items that range from fabric to a fishing lure. They make for great conversation pieces and serve as excellent mementos from years past.

Benson: 10-year performance indicators show strength of CU[6]
[7]

“Efficiency,” “reputation” and “culture” are common keywords that University of Colorado President Bruce Benson uses when speaking to the CU community. At the Faculty Senate’s Nov. 30 meeting at Denver’s Warwick Hotel, he offered numbers to illustrate growth in those areas over the past decade.

With the 10th anniversary of his CU presidency just months away, Benson presented several key performance indicators that compare today to the 2007-08 fiscal year. Among them:
Enrollment: 65,375 (with another 7,000 taking courses for credit), up from 54,174 Degrees awarded annually: 15,693, up from 12,939 Online enrollments: 54,911, up from 30,587 in 2010 (most recent data available) Research funding: $1.03 billion, up from $660 million Annual fundraising: $386.3 million, up from $135 million Endowment: $1.2 billion, up from $640 million Annual budget: $4.1 billion, up from $2.2 billion Bond rating: Aa1, up from Aa3
That growth has come, Benson noted, at a time when state funding of $194 million is down from a decade ago, when it was $227 million; the low point came in 2011-12, with $144 million.

“We just play the cards we’re dealt and keep moving,” Benson said. “I think people understand how underfunded we are.”

While state funding remains a challenge, state lawmakers over the past decade have partnered with CU in helping to pass 16 bills that allow for greater operational efficiency – such as procurement cards, the capital construction approval process, negotiating purchasing contracts and more.

Also furthering efficiency: winnowing the number of university policies to 88 from 210 a decade ago. By self-insuring, begun in 2011, CU saves between $3 million and $4 million annually, while an insurance audit instituted in 2012 saves $2.8 million annually.

Culturally, CU has made strides in diversity over the past 10 years. Minority student enrollment is 29 percent, up from 18 percent; minority tenure and tenure-track faculty is 17 percent, up from 14 percent.

The launch of the Visiting Scholars in Conservative Thought and Policy at CU Boulder has boosted diversity of thought, Benson said.

Such improvements across the four campuses contribute to positive evolution of CU’s reputation, he said.

“Right now, we poll at 75 percent positive, which is up 8 percent since the last poll,” Benson said of impressions of CU among Coloradans. “I would love to get that up to 80 percent. But overall, people are pleased with this university. Keep up your great work.”

In other business at last week's Faculty Senate/Faculty Council meeting:
The governance group heard an update from Anna Hasenfratz, chair of the Privilege and Tenure Committee. During the current academic year, three grievances have been filed, one closed grievance remains in mediation, four potential grievances remain and there is one potential dismissal for cause action. One appeal was filed and three faculty inquiries were made. The number of cases is higher than in recent years, Hasenfratz said, and means the workload is too much for the current committee membership. She encouraged the campus Faculty Assemblies to recruit faculty members to the committee. Faculty heard an update on the review of Article 5 and Policy 5, which is currently being examined[8] as part of the systemwide review of Regents Laws and Policies. Michael Lightner, vice president for academic affairs, said many valuable comments from faculty had been provided. The goal remains to have a first draft of specific proposed revisions posted on the public website[9] by Friday for further review and comment.

Sale of CU bonds results in gross savings of $49.2 million for university[10]

With uncertainty over federal tax reform looming – and pressure increasing on rates in major tax-exempt, fixed-income markets – the University of Colorado last week achieved a bond refunding that results in gross savings of $49.2 million for CU.

Dan Wilson, treasurer and associate vice president of budget and finance, said the Nov. 30 sale of $471.3 million in bonds was extremely well-received in the market. The largest CU issue to date, it resulted in a present value savings of $35.2 million and total debt service savings of $49.2 million over the life of the bonds. The true interest cost of the borrowing was 3.21 percent.

"In recent weeks, since the tax reform announcement, there has been tremendous upward pressure on rates in all major tax-exempt fixed income markets," Wilson said. Since the Nov. 16 Board of Regents meeting, rates had risen 7-10 basis points (1 basis point equals 1/100 of a percent).

By responding quickly, Wilson said, "We have removed the potential negative impact of tax reform on a large portion of our debt and reduced our exposure to further interest rate increases on over one third of our existing debt."

The CU bonds priced stronger than comparable offerings last week by the University of Texas system and the Texas A&M system. The pricing also was an improvement over CU's May 2017 issue by 4-5 basis points, relative to CU's spread to AAA credit. This was improved over prior years thanks largely to the positive impact of CU's Moody's credit rating improvement in April 2017.[11]

"I give full credit for our success to our internal team at CU, led by Chuck Cook, associate treasurer and director of liabilities, the Treasurer's Office, support of the Controller's Office, Finance and Budget, General Counsel's Office and the campuses in helping us compile, in record time, the information needed for the Official Statement (200-page offering document) and rating reviews," said Wilson, who also credited support from external professionals including Wells Fargo, Stifel, Citigroup, RBC Capital Markets, Hogan and Lovells, Kutak Rock, Ballard Spahr and North Slope Capital.

"The entire team worked together extremely well in accomplishing these significant savings for the university."

Faculty Council Committee Corner: Women[12]

Editor's note: This is part of an ongoing CU Connections series in which the Faculty Council[13] highlights each of its committees and their efforts. See past installments here.[14]

Charges to the University of Colorado Faculty Council Women's Committee include assessing the cultural climate of

the university as it pertains to opportunities for women faculty for academic advancement, productivity, appropriate compensation and making recommendations for creating an academic environment that fosters the academic success of women faculty. Key to these charges is support of women faculty who are breastfeeding and their ability to do so while they maintain productive faculty positions.

As the Women's Committee has investigated this issue, we have found that lactation spaces for breastfeeding mothers – faculty, staff, students and visitors – on the four University of Colorado campuses are lacking. Our committee is invested in ensuring there is adequate, appropriate lactation space on each campus and that these spaces are easily identifiable and accessible by those who need them.
[15]

Recognizing that each campus may have its own challenges with creating physical space and obtaining financial resources required to create more lactation spaces, the committee has been researching alternatives, such as the possibility of adding lactation pods to each campus. A lactation pod, like those created by Mamava, is a self-contained, private mobile pod with benches, a fold-down table, electrical outlet (for plugging in a breast pump) and a door that locks. The pods are small – 32 square feet – but can accommodate more than one person in the event that a breastfeeding mother has other children with her. While there are no official ADA standards for lactation pods, the Mamava company also has ADA-compatible pods that are slightly larger (50 square feet) to accommodate mothers who may have special needs.

These lactation pods could be used as semi-permanent lactation spaces while permanent spaces are being constructed or could be used temporarily for campus events.

We invite comments – which may be posted below – regarding lactation space issues on your campus and welcome thoughts on how an investment by the university in these lactation pods would benefit women across the CU system. Questions may be directed to co-chairs Leann Morgan (lmorgan7@uccs.edu[16]) and Sarah Anderson (sarah.anderson@ucdenver.edu[17]).

University of Colorado Faculty Council Women's Committee members (2017-2018): **Sarah Anderson** (Co-Chair; CU Anschutz, Pharmacy and Pharmaceutical Sciences), **Leann Morgan** (Co-Chair; CU Colorado Springs, Counseling and Human Services), **Uyen Troung** (CU Anschutz, Medicine), **Jane Kass-Wolf** (CU Anschutz, Nursing), **Michaele Ferguson** (CU Boulder, Political Science), **June Gruber** (CU Boulder, Psychology and Neuroscience), **Kathryn Tallman** (CU Boulder, University Libraries), **Polly Bugros McLean** (CU Boulder, Media Studies), **Irina Kopaneva** (CU Colorado Springs, Communication), **Lori Notestine** (CU Colorado Springs, Counseling and Human Services), **Maria Buszek** (CU Denver, Visual Arts), **Rian Kerrane** (CU Denver, Visual Arts), **Shruti Poulsen** (CU Denver, Counseling), **Grace Wagner** (CU Denver, Student Representative).

CU employees, eligible dependents can save money on spring tuition[18]
[19]

To provide accessible educational opportunities to faculty, staff and their families, the University of Colorado's Tuition Waiver Benefit[20] grants waived or discounted college credit hours to CU employees or their eligible dependents[21] for credit-bearing graduate or undergraduate courses.

While CU employees can attend any campus and waive up to nine credit hours every academic year, the tuition discount for dependents can be used in two different ways[22]: **Option A (Home Campus)** or **Option B (Other Campus)**.

For dependents who choose to attend the campus the employee is employed by (option A), the tuition waiver can cover up to nine credit hours an academic year (at CU Denver, CU Anschutz and UCCS) or 30 percent of tuition for dependents of CU Boulder employees.

For dependents who choose to attend a campus an employee is not employed by (option B), a maximum of $270 per credit hour on up to nine credits may be waived. To learn more about these options, click here[22].

Note: Before a dependent can use the tuition waiver, the employee must waive their benefit. The benefit applies only to the cost of credit hours. Employees and dependents are responsible for all non-waived tuition, additional campus fees and taxes.

Tuition Waiver Benefit forms for the upcoming spring semester are now being accepted by Employee Services through the campus portal[23]. Because the form is submitted through the portal, **employees must submit the form on their dependents' behalf.**

To learn how to access the form within the campus portal, click here[24].

For important deadlines and learn more about the Tuition Waiver Benefit, visit the Employee Services website[20].

Five things to know about the tax reform legislation [25]

Campus Q&A: What the tax reform would mean for graduate students[26]

Colorado Springs Gazette: UCCS a best workplace[27]

Alumnus wins prestigious national chemistry award[28]

Expert on air pollution, tobacco control takes reins of ColoradoSPH[29]

Kaufman feels at home in Boulder[30]

Kasa recognized as shining star[31]

Horrell joins USU board of directors[32]

Holers honored by American College of Rheumatology[33]

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