University of Colorado
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Faculty and Staff
NEWSLETTER

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**March 17, 2010**

In this issue...



## Letter from the Editor

The University of Colorado *Faculty and Staff Newsletter* welcomes letters to the editor from current or retired CU faculty and staff about issues of interest to the university community. Please send submissions to newsletter@cu.edu.

If you have a news item you'd like to share with the CU community, please send it to Jay.Dedrick@cu.edu.

-Jay Dedrick

# Health plan forums rescheduled

***Slate now runs March 30 through April 6***

Payroll & Benefit Services and representatives from the university health plan renewal team have announced a series of employee forums to discuss what's new for the 2010-11 plan year. They'll also discuss plans for prevention and wellness initiatives, and will seek employee input to develop features of future plans.

The forums, rescheduled to accommodate those on spring break, are:

**CU-Boulder**

- 2:30-4 p.m. April 2, Eaton Humanities Building, Room 250

**UCCS**

- 12:30-2 p.m. April 1, University Center, Theater, Room 302

**UC Denver**

- 2:30-4 p.m. March 31, 1250 14th St., fourth floor, Room 480

**Anschutz Medical Campus**

- 2-3:30 p.m. April 6, Research 2 Building, third floor, Room 3109

**1800 Grant St.**

- 2-3:30 p.m. March 30, First Floor Conference Room

# Doctor brings Haiti experience to free lecture

***'Work After the Earthquake' to be presented April 8 at UC Denver***

Gretchen Berggren, an international health consultant in maternal and child health nutrition and one of the few doctors serving large populations in developing nations such as the Congo, Haiti and Ethiopia, will discuss what happens in Haiti after the devastation during a lecture next month on the University of Colorado Denver campus.

Gretchen Berggren

Berggren has spent much of her career in Haiti, first arriving there in 1967. Using a community outreach program, Berggren and her staff were able to reach and care for an estimated 200,000 people.

Her talk, "Haiti: Work After the Earthquake," will be at 7 p.m. April 8 in North Classroom 1130 on the Auraria campus, 1200 Larimer St., Denver. The event is open to the public.

Since the beginning of her career in medical missions, Berggren has fought to increase access to curative and preventative medical care for thousands of people all over the world.

She is a graduate of Nebraska State College, the University of Nebraska College of Medicine and Harvard School of Public Health. She held previous appointments as maternal and child health consultant for World Relief and Save the Children. She has been presented with numerous awards, including a National Council on International Health award, the Presidential Citation as "Health Hero for Children," the Donald McKay Medal in Tropical Science and the 2009 Award for Excellence in Global Health presented by the Center for Global Health, University of Colorado Denver. Berggren also served as an associate professor and lecturer for the department of international health at the Harvard School of Public Health.

For more information, contact Michelle Shiver, Program Manager, Center for Global Health at michelle.shiver@ucdenver.edu.

# Career journeys launch at 2010 Match Day

***Medical students learn immediate fate at annual ceremony***

At precisely 11 a.m. Thursday, March 18, more than 155 nervous and excited fourth-year students at the University of Colorado School of Medicine snatched up envelopes holding details of their future.

Gasps, shouts, hugs and tears followed as they opened their envelopes at the Grand Hyatt Denver Grand Ballroom in downtown Denver and learned where they will continue their education as residents.

It was Match Day 2010.

"We're staying here," Ben Mendoza exclaimed as he celebrated with fellow med student Carl Meredith. "We're staying here!"

Photo/Caroline Seib

Gillian Noel, left, and Katherine Kenerson celebrate after opening the envelopes revealing their residency program locations on Thursday, March 18, at the Grand Hyatt Hotel in Denver. Noel will stay at the University of Colorado to pursue pediatrics while Kenerson will be at the Jackson Memorial Hospital in Miami with the forensic pathology program.

Photo/Caroline Seib

From right, Toshiko Luckow, Jessica Bauerle and Kevin Bauerle toast with an Irish blessing before opening their envelopes at Match Day on Thursday, March 18, at the Grand Hyatt Hotel in Denver. Jessica Bauerle will be a resident at the Brigham and Women's Hospital in Boston for anesthesia while Luckow will be at the Medical College of Wisconsin for family medicine.

Mendoza and his wife, Jordan, had just opened their envelopes – at the same moment – compared notes and cried. Mendoza will be serving his residency at St. Joseph's Hospital; his wife will be at University of Colorado Hospital. They get to stay in the same city. They get to be together.

Every year at a predetermined time, students across the country learn simultaneously which hospital will educate them for the next three to seven years. Some will head into family practice, some to neurosurgery. Others are lined up for the military or for research-oriented academic programs. Couples, who've chosen to match together, found out where their next home will be.

Here's how the process works: The medical students, who had been applying and interviewing for weeks, ranked the places they'd like to go. The residency programs ranked the applicants. The computer-generated matches are then made by the National Resident Matching Program.

Most students were joined at Match Day by family and friends who at times were even more exuberant than the students themselves.

Meredith, who will be serving his residency at Swedish Medical Center in family practice, brought his younger brother along to open his envelope for him.

Photo/Cathy Beuten

Ben Mendoza and his wife, Jordan Mendoza, open their envelopes and celebrate their same-city assignments. Jordan is headed for University of Colorado Hospital in OBGYN; Ben's residency will be at St. Joseph's Hospital.

"He is the only person I could trust to do something like this," he said. "I definitely needed him here. Otherwise I would have just stared at the envelope for 45 minutes."

Meredith is ecstatic because Swedish was his first choice. It's where he was born. Vividly recalling his own Match Day in the 1970s, Medical School Dean Richard Krugman, M.D., shared his experience with the 2010 class as they waited for the clock to strike 11. He said that when he opened his envelope, it read University of Colorado School of Medicine. His wife looked him and said, "You promised me water." Krugman replied, "Don't worry. It's temporary."

Although his placement did not end up being temporary, Krugman stressed to the graduates that – whether or not they like their placement – this is a start to a new adventure, a step in their lives they'll never forget.

# Procurement: Copier agreement should save up to 60 percent on costs

***University's latest strategic sourcing initiative on display at campus events in April***

New sourcing agreements covering copier machines are expected to save university departments between 30 percent and 60 percent on copier costs, compared to costs under the current State of Colorado pricing agreements.

The Procurement Service Center (PSC) announced that the university's new strategic partners, Konica Minolta and Xerox, were given a dual award for photocopiers as the result of a Request for Proposals (RFP) process. Copiers are the latest strategic sourcing initiative for the university, joining office products, mailing/shipping services, and scientific supplies.

Besides lower costs, the new agreements mean a streamlined ordering process. The machines available under the new agreements include several features that previously were available only as options. Some of the now-standard features include scan/print capabilities; finisher with stapling capability; staples; no required monthly minimum, equipment maintenance and repair, and default duplex copy/printing.

For the university, these agreements replace the current state of Colorado pricing agreements. For those who have machines under a state agreement, it's business as usual; your current supplier will continue to invoice you and service your machine until your existing contract expires. At that time, you'll choose a new copier from either Konica Minolta or Xerox.

The PSC will host copier product shows featuring Xerox and Konica Minolta at each campus. These are opportunities to preview popular copier models, learn about the newest features and copying speeds, find out about pricing and service levels and ask questions. The shows will feature hands-on demonstrations of copiers.

CU Boulder: 9 a.m.-noon Friday, April 2, UMC Room 235
UCCS: 9 a.m.-noon Wednesday, April 7, University Center, Room 116
UC Denver: 9 a.m.-noon Thursday, April 8, Anschutz Medical Campus, Research Center 2, Second Floor Conference Room P15-2100

Please RSVP to: http://www.surveymonkey.com/s/psc2010copiershows

Contact Duane.Tucker@cu.edu or 303-315-2150 for more information.

The Procurement Service Center soon will be moving. Kelly Fox, vice president and chief financial officer for the university, has announced that PSC will move from its Lawrence Street location to the fifth floor of 1800 Grant St., Denver.

"We are excited about this move and believe that it will enhance collaboration and service for the system and the university as a whole," Fox said. "In addition, this move will result in cost savings for system administration."

The move is expected sometime in the next several months.

# Board of Regents announces search for director of internal audit

***New leader will take on broad scope of activities related to compliance, risk assessment***

The Board of Regents has launched a search for a new director of internal audit at the University of Colorado. Initially, the search will be limited to current university employees.

The department contributes to the university's objectives by helping the university community understand and apply sound business practices, through independent examination and evaluation of current processes and internal controls, and providing counsel and education to those responsible for them. Jean Stewart, the current director, is retiring.

The board seeks a candidate who can effectively lead and administer the department's broad scope of activities related to compliance and risk assessment. Under the director's leadership, internal audit is expected to:

- Improve the university's operations through independent and objective consulting activities
- Evaluate and improve university processes through systematic and disciplined audits
- Audit functional areas unique to higher education such as: academic health center operations; sponsored projects; intercollegiate athletics; information technology and data security in a university setting; human resources in an academic environment; and compliance with federal, state and university laws and regulations
- Observe, measure and report on the implementation of policy direction established by the Board of Regents and university administration
- Coordinate external audits and serve as the university's liaison with the State Auditor's Office and other external auditors

For more details on the position, go to jobsatcu.com and search for job posting No. 809731. The application deadline is Monday, April 5.

# Longtime physics leader from CU-Boulder nominated for White House post

***Distinguished Professor Wieman tapped for Office of Science and Technology Policy***

By Cynthia Pasquale

Carl Wieman

Carl Wieman, the director of the Science Education Initiative (SEI) at the University of Colorado and the *Carl Wieman Science Education Initiative (CWSEI)* at the University of British Columbia, has been selected for nomination to a post in President Obama's administration.

The SEI programs are aimed at achieving widespread improvement in undergraduate science education. Wieman currently spends 20 percent of his time at CU-Boulder and 80 percent at UBC, where he also is a professor of physics.

Obama announced his intent on Monday, March 22, to nominate Wieman for the position of associate director for science in the Office of Science and Technology Policy.

Though Wieman left his full-time position at CU-Boulder in January 2007, he remains a Distinguished Professor on the faculty. A Presidential Teaching Scholar, he also was a fellow and former chair of JILA (a joint federal-university institute for interdisciplinary research in the physical sciences) at CU. Wieman conducted extensive research in atomic and laser physics and shared the 2001 Nobel Prize for the creation of a new form of matter known as "Bose-Einstein condensation."

He was the founding Chair of the National Academy of Sciences Board on Science Education and received numerous awards, including the National Science Foundation's Distinguished Teaching Scholar Award (2001), the Carnegie Foundation's U.S. University Professor of the Year Award (2004) and the American Association of Physics Teachers' Oersted Medal (2007) for his work on science education.

Wieman received his bachelor of science degree in physics from the Massachusetts Institute of Technology in 1973 and his Ph.D. from Stanford University in 1977.

"If confirmed by Congress, Dr. Wieman will be a dynamic leader in helping to form effective science and technology policies for our nation," said CU-Boulder Chancellor Philip P. DiStefano. "He has been a peerless researcher and teacher, and has been tireless in his devotion to science education over the last decade, revolutionizing how we teach at CU-Boulder and changing the landscape of teaching globally and nationally."

If named to the White House post, Wieman would take a leave of absence from both CU-Boulder and UBC.


Photos courtesy of Linda Kogan

A typical day in Linda Kogan's work week has its ups and downs. Either she's craning her neck to evaluate a building's lighting system or looking in the opposite direction while she digs through trash. Not exactly a 10 on the glamour scale the way she describes it, but then she's not interested in celebrity status; she wants to save the environment.

Kogan helped to create the Office of Sustainability at the University of Colorado at Colorado Springs four years ago, and serves as its director. She's managed a $1.3 million fund to retrofit projects for water and energy savings.

In 2007, the sustainability office initiated a comprehensive recycling program with a goal of recycling 50 percent of the campus' trash by 2012.Â  As a signatory to the American College and University Presidents Climate Commitment, the university must reduce emissions and develop a long-term strategy for reaching carbon neutrality. That's where Kogan comes in. She measures greenhouse gas emissions, develops conservation behavioral campaigns and pursues renewable energy projects such as solar and wind.

Through all her efforts, she's slowly changing the nonchalant, throw-away culture. Sometimes, Kogan forgets when her workday ends and can't help but stare at lights and look for recyclables at friends' houses or events around town.


Photos courtesy of Linda Kogan

Like a flat screen in the Science and Engineering Building at UCCS, Linda Kogan spreads the word about green features in that and other facilities throughout the campus.

It's all in the name of rescuing the planet she loves. You might find her climbing peaks for a little spring telemark skiing or heading out for long hiking journeys. A year ago, she spent nine days alone in the Weminuche Wilderness. Her only company was an "extended family of eight mountain goats."

— Cynthia Pasquale

**1. What are some of the initiatives you've instituted to help the university make wise decisions about trash?**

We have worked to provide sufficient recycling infrastructure. That means a recycle bin next to every trash can on campus and recycling containers in almost every room. For the past three years, we have participated in RecycleMania, a national competition among college campuses to determine who can reduce their waste and recycle the most. It is a great way to educate students about the reasons for recycling. Most people do not know that trash in a landfill creates methane, which as a greenhouse gas emitter is about 72 times more potent than carbon dioxide. We have held numerous public events to raise awareness and change behavior such as Mount Trashmore, where we brought all of one day's trash to the center of campus and went through all of it to see how much was recyclable. About 50 percent of it was. We have publicized those results and focused on the main items that could have been recycled like plastic bottles, drink cans and all forms of paper. We also started a program of having zero-waste goalies, fashioned after the CU-Boulder program, to monitor trash and ensure recycling at basketball events. We still have a long way to go to change the culture to reduce waste by actions such as bringing reusable water bottles or coffee mugs and printing only when needed.

In 2007, Gov. Bill Ritter created the Greening of State Government Executive Orders. One of the components was a goal for state agencies to strive for zero waste in both operations and construction. UCCS, as a state entity, is working toward that goal while recognizing that it won't be easy. Depending on the waste stream, about 70 percent of materials can be recycled. With industrial composting, the amount left for the landfill is less than 10 percent. UCCS currently recycles about 28 to 30 percent of our waste from operations. In construction, we have done much better with an 89 percent recycling rate for the Recreation Center, and a 94 percent recycling rate for the Science Engineering Building. We have a lot more work to do in order to push our recycling rates up. We do not have industrial composting in Colorado Springs, so we are somewhat limited. However, we have recently started a campus garden, which is coordinating with Sodexho to initiate food composting and reduce the amount of organic materials going to the landfill.

**2. How much does the university spend on energy and how much has that decreased in recent years because of campus initiatives?**
In 2009, energy costs for UCCS were $1.7 million. As a school that has averaged 2.3 percent full-time-equivalent student growth since 2006 and a 3 percent growth in building square footage, our utility costs have not decreased. Additionally, energy costs from the utility company have escalated each year. However, due to energy retrofits on existing buildings and the addition of three new buildings designed to LEED Gold standards with more than 30 percent increased energy efficiency above baseline buildings, we have reduced our energy use intensity per square foot by approximately 12 percent. This has provided for roughly $2.5 million of avoided utility costs for UCCS.

**3. If money were no object, what would you do to push the campus to be more green?**
My priority, as well as many practitioners in the sustainability arena, is to reduce greenhouse gas emissions. There are many important areas for focus, but climate disruption presents the most immediate threat to our current quality of life.

A focus on reducing emissions is a bit of a catch-all for sustainability in that it can result in significantly reduced energy, water and petroleum costs, more local and organic food, better air quality and reduced risk from potential future carbon costs. While investing in energy efficiency provides a better return than either the stock market or real estate, it still represents a significant outlay in an era when state funding is drastically shrinking. Despite our increasing energy efficiency on campus, our emissions are growing with new buildings and greater enrollment.

In order to meet our climate commitment, we will need to prioritize some funding for investment in efficiency initiatives as well as renewable energy.

I would also like to direct funds toward conservation campaigns. Many students and others on campus have no idea that buildings are the largest source of our carbon emissions. Our energy – especially in Colorado – for lighting, heating and cooling comes predominately from coal and natural gas. Because we don't have smokestacks coming from our buildings and carbon dioxide is invisible, many people think that cars are the major culprit. They are important, but people on the campus can have a big impact by shutting off lights, computers and coffeemakers when not in use, and using power strips to avoid the phantom loads of energy that are consumed even when appliances are off but plugged in.

**4. What do you love about your job and what frustrates you?**
What excites me most about this job is the creativity that is needed to change the culture. I never have two days that are the same. I may spend the morning presenting sustainability practices at a new staff and faculty orientation, then meet with project managers to discuss what type of low-flow, dual-flush toilet to install, then dig through trash as part of a public event to increase awareness about recycling, and finish the day with a meeting to further sustainability in the Colorado Springs community.

I am especially jazzed when I witness individuals on the campus making decisions that incorporate energy, water or waste reduction, or when an increasing number of faculty incorporate sustainability in their curriculum. Being a change agent is exciting because I always need to be out in front learning about and furthering the best sustainability practices available.

The most challenging aspect of the job is that there is so much to do – sustainability covers all aspects of the university including food, water, energy, purchasing, strategic planning, construction, waste, transportation, curriculum and more. As a small office it is impossible to accomplish all of the initiatives that feel urgent. I wish that more people felt the urgency of sustainability and viewed it not only as a responsibility, but also as potentially a tool to achieve a better quality of life.

One of the amusing aspects of my job is the reaction I sometimes get from others on the campus. People hide disposable water bottles when I come in the room, provide me with elaborate reasons why they can't walk or

bike the 10 minutes to campus or confess that they just must have a personal refrigerator in their office. On the flip side, many have excitedly shared how they changed out all of the light bulbs in their house to compact fluorescent bulbs and now are saving lots of money!

**5. How did you choose this career path?**
In some ways it feels like my life has been leading to this particular career all along. My undergraduate work was in business and political science. I ended up doing something completely different and worked with Outward Bound for 10 years leading trips, teaching about wilderness ethics, working to instill a sense of wonder and protection of our natural resources and facilitating leadership skills and self discovery. I reconnected with my business degree by working with the Pikes Peak Sustainable Business Network to help green businesses in the region. I then completed my master's in geography and environmental studies at UCCS. My thesis focused on measuring the institutional sustainability of UCCS using the ecological footprint tool. So, even before I started this job, I was counting kilowatt hours, measuring trash and considering ways to significantly increase the sustainability of UCCS. The business degree has been very helpful in communicating the competitive advantage strategies and potential cost savings of pursuing sustainability. I feel fortunate to have chosen this field because it is growing exponentially and requires innovative thinkers to solve today's issues.

*Want to suggest a faculty or staff member for Five Questions? Please e-mail Jay.Dedrick@cu.edu*

# People

**Young faculty honored with science grants**

Six University of Colorado at Boulder faculty have been selected to receive National Science Foundation CAREER Awards.

**Aaron Bradley, Robert McLeod,** and **Li Shang** in the department of electrical, computer and energy engineering were selected to receive awards, along with **Sriram Sankaranarayanan** of computer science, **Rebecca Flowers** of geological sciences, and **Hang (Hubert) Yin** in the department of chemistry and biochemistry.

All are assistant professors. McLeod joined the CU-Boulder faculty in 2003, Flowers and Yin in 2007, Bradley and Shang in 2008 and Sankaranarayanan in 2009.

The NSF's Faculty Early Career Development Program, or CAREER, is one of the nation's most prestigious honors directed toward young faculty. The 2010 awards, which come with a five-year grant ranging from $400,000 to $530,000, help to establish integrated research and educational activities while addressing areas of important need.

Bradley's award is aimed at developing a new model-checking technique for analyzing the properties of computational systems to achieve increased performance on multi-core and networked computers.

Flowers' research will use recent advances in thermochronological tools to investigate what is causing the uplift and erosion of the southern African Plateau, a large and elevated region of the continent's interior.

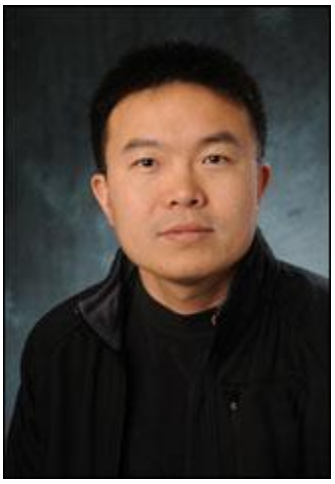
McLeod's research is focused on developing new fabrication techniques for next-generation electronic chips by breaking the existing limits on minimum feature size in optical lithography.

Sankaranarayanan is investigating automatic verification techniques for finding defects or bugs in embedded computer systems that monitor and control physical processes, such as are increasingly common in automobiles, avionics, medical devices and power-distribution systems.

Shang is investigating new communication technologies

Aaron Bradley

Robert McLeod



Li Shang

Sriram Sankaranarayanan

Rebecca Flowers

Hang (Hubert) Yin

and system designs for emerging "many-core" computer systems, which have been the key performance bottleneck in massive-parallel computer systems.

Yin will use his award to advance the integrative chemical biology program at CU-Boulder by focusing on cutting-edge technologies to advance understanding of molecular recognition in cell membranes.

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**Boulder Faculty Assembly names excellence award winners**

Twelve University of Colorado at Boulder faculty members have received the 2010 Boulder Faculty Assembly Excellence Awards.

The honors, which include a $3,000 cash prize, are awarded to individuals in three areas: teaching, service, and research and scholarly work.

Winners in the excellence in teaching category, which focuses on classroom teaching, are **Janet de Grazia,** chemical and biological engineering; **Nicholas Schneider,** astrophysical and planetary sciences and Laboratory for Atmospheric and Space Physics; **David Barnett,** philosophy; and **Mary Nelson,** applied mathematics.

Faculty service is defined as professional activities other than teaching and research performed as regular responsibilities or community outreach. Such activities may include committee work, faculty governance, student advising, service in state or national professional organization, and volunteer work in public and nonprofit organizations.

Winners in the faculty service category are **Lisa Barlow,** Baker environmental residential academic program; **Martin Bickman,** English and service learning; **Christopher Braider,** French and Italian, and **Anne Dougherty,** applied mathematics.

Excellence in research, scholarly and creative work awardees are Takacs Quartet (**Edward Dusinberre, Andras Fejer, Karoly Schranz,** and **Geraldine Walther**), music; **Frances Bagenal,** astrophysical and planetary sciences; **Thomas Johnson,** integrative physiology and institute for behavioral genetics; **Martha Palmer,** linguistics, Institute of Cognitive Science, and computer science. These awards are given for high-quality work that does not receive recognition through usual channels, such as interdisciplinary research, work accomplished with undergraduates or integrated long-term achievements.

The Boulder Faculty Assembly is the representative body of faculty on the Boulder campus and sets academic policy and advises the administration.

**Dropping names ...**

**Carole Schoffstall,** dean emeriti of the Beth-El College of Nursing and Health Sciences at the University of Colorado at Colorado Springs, was named a finalist for regional 2010 Florence Nightingale Academy of Nursing Award. She will compete in statewide award process in May. Schoffstall, who was integral in facilitating the merger of Beth-El and the university in 1997, served as dean until her retirement in August 2008. ... **Joaquin Espinosa,** an assistant professor of molecular, cellular and developmental biology at the University of Colorado at Boulder, has been named co-leader of the molecular oncology program at the University of Colorado Cancer Center. Espinosa has been a member of the center since 2005. ... **Lois Brink**, professor of landscape architecture and associate director of the Colorado Center for Community Development at the University of Colorado Denver, has been appointed to the Living City Block advisory board. Living City Block is a new project in Denver's LoDo aimed at demonstrating the potential of combining environmentally conscious business and economic development with revitalization and livability. ... **Cindy Gutierrez**, director of teacher education at the School of Education and Human Development at the University of Colorado Denver, recently published an article about online community as a pathway to teacher leadership in the Journal of Staff Development. The article highlights the development and implementation of the Online Clinical Teacher Professional Development Unit in Denver Public Schools. ... **Barbara Dray,** assistant professor at the University of Colorado Denver School of Education and Human Development, recently published the article "Teaching is NOT a Profession: How General and Special Education Teacher Education Have Failed." The piece details recommendations to improve teacher education in special education through strong teacher induction and apprenticeships, developing national certification to increase the prestige of the field, and closing the research-to-practice gap. ... **Dave Martinez,** a staff member at the University of Colorado at Boulder School of Journalism and Mass Communications, is a 2010 recipient of the Marinus

Smith Award from the CU Parents Association. The award recognizes CU-Boulder faculty, staff, coaches and administrators who have made a significant impact on the lives of CU undergraduate students. Nominations are made by CU students and their parents involved in the Parents Association. Martinez will be honored during an April 3 luncheon.

*Want to suggest a colleague — or yourself — for People? Please e-mail information to Jay.Dedrick@cu.edu*

Carole Schoffstall

Joaquin Espinosa

Lois Brink

Cindy Gutierrez

Barbara Dray

# News from the CU system - CU-Boulder

**Job searches for new grads lengthening, says career services director**

With a struggling economy still affecting the nation, college students graduating this spring are faced with long, competitive job searches, according to Lisa Severy, director of the University of Colorado at Boulder's career services office.

However, new graduates often have a leg up when the job market recovers, so patience is a must, she said.

"It is generally taking longer for students to find a job in this economy, so our advice is to start looking earlier, get as much help as possible and expand your search," Severy said.

The National Association of Colleges and Employers recently reported that employers they surveyed expected to hire about 7 percent fewer graduates in 2009-10 than they did in 2008-09. CU-Boulder has not been immune from this trend, with slightly fewer recruiters visiting campus this spring compared to last year, according to Severy.

This year's strongest sectors include the technical and education fields, although state and city school district budget cuts have weakened the education sector somewhat, she said.

One way for students to help offset the tough job market is to not limit their job search to only those positions that coincide with their major, according to Severy.

"A lot of graduates have the impression that there is a one-to-one relationship between major and career," she said. "And there are some like that, but many college graduates have degrees with many marketable skills."

"We encourage students to explore all types of opportunities, including a variety of industries and levels of positions to get a good start that may lead to bigger and better things," she said.

The best advice she can give students who are interviewing for their first major job is to practice.

"By the time we interview for our first professional job, most of us have had part-time jobs, but a professional job interview feels a little different," Severy said. "Coming to the career services office and doing a practice interview that is videotaped is really helpful, especially if you're nervous. You can practice on us and then go out into the real world."

Cleaning up online profiles on sites such as Facebook also is highly recommended. But don't stop there. Severy also suggests building up online profiles by adding professional goals and other accomplishments.

"We tell students to replace the negative information someone could find through a Google search with more professional posts on sites like LinkedIn," she said. "All it takes is one bad spring break photo to bounce you from an interview opportunity."

Being patient is another bit of advice Severy is giving job searchers this spring.

"Because the job market is tricky right now it can take longer to find a job, so students need to get a thick skin in terms of rejection," she said.

For those students who will graduate in the winter or next spring, it's never too early to start thinking about the job search process, Severy said. Sitting down with a counselor to help hone interviewing skills, prepare a resume and become knowledgeable about the job-seeking process can pay off when it is time to find a job, she

said.

Upcoming events offered by the CU-Boulder Career Services office include:

- Job and internship search workshop, 5-6:30 p.m. Monday, April 5, Ketchum Arts and Sciences Building, Room 3. The information session is open to all CU-Boulder students and alumni and is designed to help job seekers develop and brand themselves for success in their job searches.
- Resume writing workshop, 6 p.m. Tuesday, April 6, Duane Physics and Astrophysics, Room G116. The event will be in a computer lab where attendees can work on their resumes while receiving tips. Open to all CU-Boulder students and alumni.
- "Just in Time" hiring and internship fair, 10 a.m.-3 p.m. Wednesday, April 14, University Memorial Center's Glenn Miller Ballroom. Open to all CU-Boulder students and alumni. Companies attending are listed at http://careerservices.colorado.edu/students/JIT.aspx.

For more information about the CU-Boulder Career Services office visit http://careerservices.colorado.edu/.

For audio clips of Severy discussing the job outlook for spring graduates visit http://www.colorado.edu/news/broadcast/. To view a video of Severy offering interviewing tips and discussing the job outlook visit http://www.colorado.edu/news/ and click on the job outlook story.var addthis_pub="cunewsreleases";

# UCCS

**Partnership of students, businesses pays dividends in sustainable energy**

Two University of Colorado at Colorado Springs students have found their calling thanks to federal stimulus funds and a professor's resolve to offer courses in the increasingly lucrative field of energy engineering.

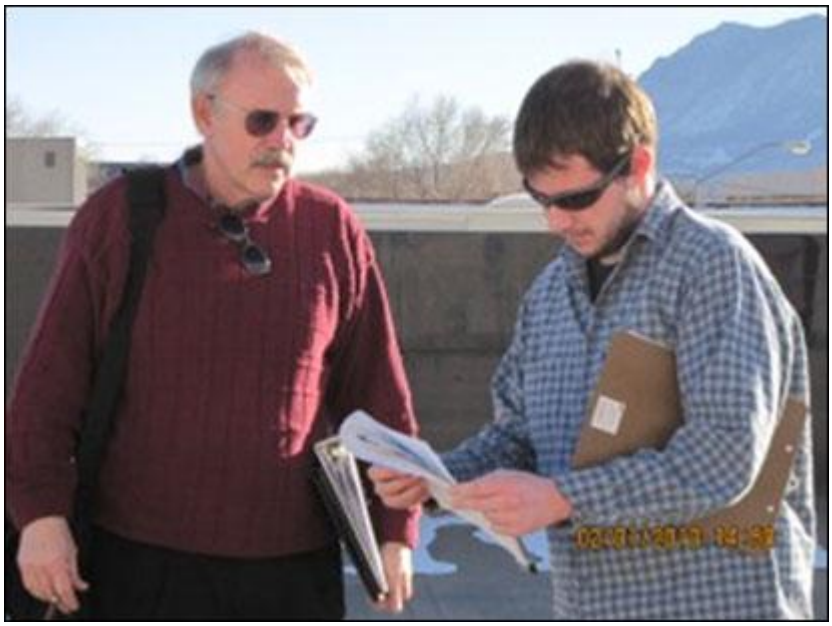
UCCS was among three area higher education institutions tapped by the city of Colorado Springs and Colorado Springs Utilities to take part in an energy efficiency study of local businesses. The $548,000 Energy Efficiency and Conservation Block Grant pays student interns to perform the audits and pays businesses to retrofit and implement the recommendations.

Cameron Butcher, a commercial real estate group, is one of 12 businesses participating in the audit program to determine how to use resources efficiently.

The semester-long internship has flicked on the career switch for mechanical engineering seniors Ted Geneva and William Rees.

Electricity meters at the Cameron Butcher building in downtown Colorado Springs.

Geneva and Rees, along with peers from UCCS, the Colorado College, and Pikes Peak Community College, have been poking around heating and cool ducts, examining records, and conducting cost analyses for a dozen Colorado Springs businesses since January.



Glen Thieszen, an engineer from the Farnsworth Group Inc., oversees UCCS engineering senior William Rees' on-the-job training during the energy auditing internship.

They are making some remarkable discoveries.

"I have learned that the vast majority of structures in Colorado Springs are over-lit and under-insulated," said Geneva, a senior set to graduate in 2011.

Even more illuminating, he said, is how fired up he has become by the work.

"I find myself waking up at 8 a.m. for some site visits and feeling fine about it," Geneva says. "I've never been a morning person and I can wake up early for this job."

Timing also has been key for Rees. He, like Geneva, was urged last fall by his engineering instructor, Julie Albertson, to apply for the internship. The encouragement came at a critical juncture.

"I needed to obtain actual engineering experience," said Rees, who graduates in December. He added that if this opening hadn't come along he might still be floundering. "This program has helped me narrow my goals."

Albertson, senior instructor, Mechanical & Aerospace Engineering, not coincidentally, was teaching a class, Sustainable Energy Systems, at the time.

"The whole concept of sustainability is important to me. It's something we need to educate our students about and it's why I created that course," Albertson said.

Albertson's Sustainable Energy Systems is designed to ground students in the engineering, scientific and political principles of global renewable energy sources such as wind, biomass, solar and geothermal.

The technical elective debuted in fall 2007 with a class of 12. When Albertson taught it a second time, last fall, enrollment doubled to 30. Fueled by student-interest, Albertson created yet another environmental engineering elective — Biomass Energy Analysis — to be offered for the first time this fall.

The attraction to sustainable technology appears to be mirroring a green jobs explosion.
Experts say a national energy crisis coupled with recent federal mandates that big cities obtain an increasing percentage of electricity from renewable resources is igniting the green job fields market. Small and medium-size start-ups, infused by millions of dollars from private investors and the federal government, are proliferating.

Environmental engineers are in particular demand, according to the Green Research Council.
Geneva says the on-the-job experience has already been invaluable: "I've honestly learned more working knowledge about energy saving measures and HVAC systems in two months working than I have ever learned from school."

This is what Albertson likes to hear. A primary academic interest of hers involves developing methods to assist students in understanding the engineering world and steering them toward practical applications for their coursework.

As such, Albertson jumped at the chance to assist Linda Kogan, director, office of sustainability, in coordinating university participation in the program.

The energy audit program will end in May.

So far, it's been a "great partnership" and a "win-win" for businesses, students, and educators, said Gail Connors, who directs the grant administration for Springs Utilities. It's too soon to say if a similar model might be offered again.

Geneva, meanwhile, is already applying his newly acquired skills to a personal project.

"I am in the design phase for a greenhouse for my mom's place in New Mexico," Geneva said. "I'm directly using calculations and knowledge I'm picking up at work to build something from scratch. I'll tell you, it feels pretty awesome."

# UC Denver

**Physicist's underground work results in dark matter "sightings"**

The Soudan Underground Laboratory rests deep in the earth — more than 2,000 feet below the surface — in an inactive mine in northern Minnesota. Today, it is one of the leading underground science and engineering laboratories in the United States. Martin E. Huber, Ph.D., professor of physics and electrical engineering at the University of Colorado Denver, has worked among a consortium of researchers from several institutions over the past 10 years, in the search for the elusive "dark matter" — most easily defined as one or more undiscovered fundamental particles of physics beyond known theory, but something that physicists hypothesize makes up the majority of our universe.

Science magazine recently published findings from Huber and colleagues involved in the Cryogenic Dark Matter Search (CDMS) experiment, which indicate they have detected two events deep in the earth within the 125-year-old mine that are consistent with what scientists would expect to occur when an interaction with one specific dark matter candidate — particles collectively known as weakly interacting massive particles or "WIMPs" — transpires.

Virtually undetectable because it neither reflects nor absorbs light and only rarely collides with "normal" matter (what we know as solid objects and known gases), dark matter is present all throughout the universe. Originally hypothesized to exist by an astrophysicist in 1933, scientists have spent the past 80 years or so in search of an understanding of exactly what dark matter is — what is this stuff that makes up the rest of a galaxy besides the stars, planets and gases? What are the unseen particles that keep a galaxy from flinging apart in its very movement? What is it that constitutes more than 80 percent of the mass of the universe?

Physicists use proven theories of gravity along with computations of masses of the stars in a particular galaxy to determine expected stellar trajectories and overall mass, and it just doesn't add up — something else has to be out there holding it all together beyond gravity and we can't see it. Not only that, but even though we can't see it or feel it (it doesn't bounce off anything like other known forms of matter would), dark matter is expected to be all around us, all of the time, floating through us and everything around us. Through many indirect astrophysical observations, there is little doubt — and compelling evidence — that it exists.

The experiment in the Soudan mine uses some of the most advanced methods to date to try to detect and determine the properties of dark matter. Hidden deep inside the earth, which acts as a filter for any cosmic rays (or normal particles from space) that might mimic a WIMP signal, a collection of detectors approximately the size of hockey pucks and made from germanium crystals sits silently and patiently waiting for a rare occurrence when a WIMP might collide in just the right way with a germanium atom to deposit some of its energy in the crystal. Dedicated computers monitor the detectors every second of every day, recording all disturbances, regardless of their source.

Theoretically, WIMPs are passing through the detectors (even the entire planet) all of the time, and germanium presents one of the best opportunities scientists have to observe the rare interaction of a WIMP with normal matter. Such an interaction would create a miniscule vibration, or a very tiny amount of heat; causing an associated rise in temperature that signals the collision of a WIMP and atom inside the crystal detectors.

The CDMS researchers cool the crystals to nearly absolute zero (a chilling minus 460 degrees Fahrenheit) so that there is virtually no energy in the atoms.

"The atoms of the germanium crystals are nearly motionless at this temperature," Huber said. "And, sitting more than 2,300 feet below the Earth's surface, where most external events are blocked, we have the opportunity and sensitivity to identify any WIMP interactions that might occur."

Huber likens a potential WIMP interaction to the very pure, quiet ring that occurs when you tap a crystal glass. In this case, the WIMP "taps" the germanium nucleus, causing the nucleus to recoil or "ring." Just as the sound can be converted to an electronic signal by a microphone, the nucleus recoil is converted to an electronic signal by a very sensitive thermometer attached to the germanium crystal. The properties of that signal allow the researchers to distinguish the difference between types of interactions — looking for that rare signal that has properties consistent with a WIMP collision. After reviewing the data, the researchers have observed two instances of this type of collision and have concluded they are possible candidate events for dark matter.

"While we can't say for sure that we 'saw' dark matter, we also can't say for sure that we 'didn't' see dark matter," Huber said. "All we know is that two events occurred that are consistent with a dark matter interaction; we'd need to see many more such events before we could claim a 'discovery.' Either way, it's a very exciting time for us and for everyone else who is watching and waiting for proof of the direct detection of dark matter."

Huber said the next step for the CDMS researchers is to build a bigger and more sensitive detector, one that has the potential to observe three, four, five or more candidate events that will bring them one step closer to being able to say, "Yes, we have found dark matter." Right now, it's a bit of a scientific race, with bragging rights and a likely Nobel Prize for the fortunate team of scientists who directly observe dark matter first in a terrestrial experiment. Huber is optimistic: One of the two candidate events occurred on his birthday. "Is this meaningful?" Huber said. "No, of course not. But it sure makes a great story."

# Anschutz Medical Campus

**Regional stem-cell center launched by School of Medicine**

A new center at the University of Colorado School of Medicine promises to expand one of the frontiers of medicine: stem cell research and treatment.

Stem cells already have been studied since 2007 under a School of Medicine program. But the name change – from program to center – also could create a medical game change. With its higher profile, the Charles C. Gates Center for Regenerative Medicine and Stem Cell Biology is expected to:

- Attract more private and federal financial support for research
- Advance stem-cell treatment rapidly through a partnership with the Colorado Prevention Center (CPC). The alliance will combine strategic planning and funding of key clinical trials.

The overall goal is to move stem-cell discoveries into therapies that could revolutionize medicine with new treatments for heart disease, Parkinson's disease, spinal cord injury, childhood diabetes, cancer and many more.

"The Center designation really lets us take off," said Dennis Roop, head of the stem-cell program at the Anschutz Medical Campus in Aurora since 2007 and now the center's director. "This stature will help raise private support and federal grants."

The center, a cooperative regional venture, will draw on expertise from the University of Colorado at Boulder, Colorado State University, University of Colorado Hospital, the Denver Veterans Administration Medical Center, National Jewish Health, The Children's Hospital and other branches of Anschutz Medical Campus. The new stem-cell center is the only one of its kind for 500 miles.

The program is named for the late Colorado businessman Charles C. Gates, whose children carry on his philanthropic work. The change was recommended by Richard Krugman, M.D., dean of the School of Medicine. UC Denver Chancellor M. Roy Wilson, M.D., approved the center on March 15.

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