Mission: To provide a diverse community with an accessible, quality education and produce a professionally oriented graduate who is interested in solving real-world problems.

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Meet structural engineer Gary Meggison, PE, BS civil engineering ’81 and MBA ’94. Growing up around Denver, he’s seen the city grow and expand into a truly metropolitan area with more than 2 million people calling it home. Meggison believes that students from UC Denver and the College of Engineering have played an integral role in the structural engineering of the ever-growing city.

He fondly recalls engineering students he knew while at UCD or students he has since met, calling UCD the training ground for many of Colorado’s engineers. One thing that impresses him the most is the students’ motivation—many need to work full-time while attending college, yet they are still successful in their studies because they are determined to thrive as an engineer. “That qualification is worth its weight in gold in the workplace,” he says.

Meggison is a senior vice president at The Weitz Company, where he started as a field engineer 25 years ago, just a few short years after graduating from the College of Engineering. To this day, “I am all about UC Denver,” he says.

Influences in the College of Engineering included Dean Emeritus Paul Bartlett from whom he learned “what you might expect of an engineer, in particular the rigor required to be an engineer.” He says that Professor Ernie Harris taught him that engineering can be fun. In a timber course, Harris shared his structural drawings for the artist Christo’s “Valley Curtain” project hung near Rifle, Colo., and Meggison was impressed with the creativity involved.

However, his gravitation toward structural engineering began when he was a kid. “For me it was never anything else. From trucks, tinker toys, and building blocks to erector sets, I was always building something.” It also helped that inspiration was all around him—from Meggison’s uncle, an engineer who leant toward invention, wrote patents, and was entrepreneurial about his ideas, to his two grandfathers, one in railroads and the other in mining.

While at Weitz, he’s worked on many different projects. One of his favorites was the Sonnenalp Resort Hotel in Vail. Developed by owners originally from Bavaria, Meggison was project manager and enjoyed

“...Building something.”

29 years later, engineering alum is still “all about UC Denver”
Connecting with the college

This is my first contribution as dean to Engineering on the Move. I am extremely excited to begin my new duties at the University of Colorado Denver and the College of Engineering and Applied Science.

When I look at the many challenges facing our country today, including affordable health care, energy, environment, sustainability, homeland security, and infrastructure, I see the clear need for engineering innovation. The country as a whole will need a stronger and wider pipeline of well-trained and motivated engineers and computer scientists who not only have the requisite technical capabilities, but also are willing to serve in leadership roles. I believe that, despite the economic downturn, there will be tremendous opportunities in the next three to five years for engineering colleges that position themselves well—we have distinct advantages, including a strong student base, talented faculty, and a stimulating urban environment to meet the challenges and take advantage of these opportunities.

The college just launched a new Department of Bioengineering; we welcome our first graduate class this fall. We are in the process of getting approvals for our undergraduate degree in bioengineering and a collegewide umbrella PhD program. The Center for Sustainable Infrastructure Systems has developed multidisciplinary research, educational, and outreach programs to address sustainability issues faced by communities, businesses, and governments. The center has established itself as global leader with numerous international collaborations. We have a dedicated faculty committed to engineering education and pushing the frontiers of research.

As with any new administration, change is inevitable. This is an excellent time for the college to reevaluate its priorities, establish new thrusts, and refine its strategic vision. However, I believe that it is also important for the college to be well integrated into the community.

One of our goals must be to act as a catalyst for economic development and to provide educational and training opportunities within the region. Therefore, as we develop new strategic aims, it is important to solicit input from the community. The college has many constituencies and would like to reach out to as many individuals and groups as possible. If you have ideas, comments, or suggestions that you want to communicate to the college, we would love to hear from you. Further, if you have particular talents or resources that you can contribute to the college, please let us know. Whether you are an alumnus, local businessperson, or simply an interested citizen, this is a wonderful time to reconnect with the college.

Thanks in advance for your input and best wishes,

Marc Ingber

Dean, College of Engineering and Applied Science
Jason Ren receives grant from EPA  | Civil Engineering Assistant Professor Z. Jason Ren was awarded a grant from the EPA Pollution Prevention Source Reduction Assistance grant program for his proposal, “The Potential of Microbial Fuel Cells in Bioenergy Recovery and Green House Gas Mitigation—A Waste-to-Energy Case Study in Colorado Convention Center.” This pilot project will develop a microbial fuel cell reactor for direct waste-to-electricity conversion.

Ken Ortega receives three-year NSF grant  | Mechanical Engineering Professor J. Kenneth Ortega has received a three-year NSF grant for his proposal titled “An Investigation of Biophysical Variables in Stiff and Hypertropic Mutant Sporangiophores of Phycomyces Blakesleeanus.” His current research objective is to gain insight into the relationships between the biophysical variables and associated biological processes that control expansive growth and growth behavior by using mutant sporangiophores that exhibit abnormal growth behavior.

Anu Ramaswami to chair U.S.-China workshop  | Civil Engineering Professor Anu Ramaswami, director of the new Center for Sustainable Infrastructure Systems, has been selected by the National Science Foundation to chair a joint U.S.-China workshop on “Pathways Toward Low-Carbon Cities: Quantifying Baselines and Inventories.” The workshop will be planned in conjunction with faculty from University of Wisconsin and Hong Kong Polytechnic University and will be held on December 13-14 in Hong Kong.

Linda Cohen retires  | On May 31, Linda Cohen retired from the University of Colorado. After working 18 years in the College of Engineering, Cohen is moving to the Chicago area. She just received the Advanced Communicator Bronze Award from Toastmasters International.

Yiming Deng receives 2010 ASNT faculty grant award  | The American Society for Nondestructive Testing (ASNT) awarded Electrical Engineering Assistant Professor Yiming Deng a 2010 ASNT Faculty Grant Award based on his proposal entitled “Developing New Nondestructive Testing Courses to Serve the Denver Metropolitan Area and the State of Colorado.” Within the grant period, two courses with necessary lab facilities will be developed.

Stephan Durham honored at UC Denver faculty recognition awards  | Civil Engineering Assistant Professor Stephan Durham received campus recognition in two categories at the UC Denver Faculty Recognition Awards: Excellence in Research and Creative Activities and Excellence in Teaching. He also was chosen as the overall campus winner for Excellence in Teaching.

ME program assistant is UC Denver Staff Council Employee of the Month  | Petrina Morgan, Department of Mechanical Engineering program assistant, was the March UC Denver Staff Council Employee of the Month. In addition to her responsibilities as program assistant, she serves as the college human resources manager.

Thank You, N.Y.

Nien-Yin “N.Y.” Chang served the College of Engineering as interim dean from June 2009 to June 2010. We greatly appreciate his dedicated and energetic service. Thank you, N.Y.!

Dear Friends:

I would like to sincerely thank all of you for supporting the college this past year while I served as interim dean. I also ask you to render strong support to our new dean, Marc Ingber, in the future.

This newsletter was initiated in fall 2009 with the intent to share our college news and to solicit your input on future development and improving our service and educational mission. We want to connect you to the college.

The college is here to serve the alumni, the engineering profession, and the general public. Please share with us your recommendations.

With best regards,

N. Y. Chang
Professor of Civil Engineering
Department news

Electrical Engineering (EE)

Chair, Miloje Radenkovic

The electrical engineering faculty members have expertise in systems and controls, signal processing, communications, microelectronics, photonics, power systems, robotics, and computer engineering.

Two members of the EE faculty became full professors this summer: Hamid Fardi and Miloje Radenkovic.

This summer the power system laboratory underwent a full renovation. Beginning this fall, state-of-the-art equipment will be available for experimental work for students in the areas of energy conversion, electric drives, and power electronics.

EE faculty continue to conduct research and present results through journal articles and conference presentations. They received grants to enable this research, such as Dan Connors’ grant from the National Science Foundation for research into high-performance computing and Titas Papantoni’s subcontract from the U.S. Air Force Office of Scientific Research at George Mason University to model and detect cyber exploits in computer communication networks.

During the summer the faculty continued professional development in other places: Mark Golkowski participated in an NSF Polar Aeronomy and Radio Science Summer School and performed an active experiment using HAARP, a very large HF antenna array used for ionospheric research, in Alaska (see story on page 6). Fernando Mancilla-David was a visiting professor at L’Ecole supérieure d’électricité in Gif-sur-Ivetté, France, where he engaged in collaborative research in advanced control algorithms for renewable energy systems. Jan Bialasiewicz attended the IEEE International Symposium on Industrial Electronics held in Bari, Italy, where he presented a paper and was the co-chair of the special session “New Challenges in Power Quality.”

Professional service is also embraced by service on scientific panels and university committees.

Computer Science and Engineering (CSE)

Chair, Gita Alaghband

The computer science and engineering faculty members areas of expertise include algorithms, artificial intelligence, computer architectures, computer security, database systems, high-performance computing, operating systems, parallel and distributed systems, software engineering, virtual reality, and computer graphics.

This year, the department has doubled the number of doctoral students pursuing CSIS PhD degree. This is the computer science PhD degree that is offered jointly with information systems in the UC Denver Business School.

CSE faculty continue to conduct research in these areas, and subsequently publish articles and obtain external research funding for continued research.

This year, CSE continued senior design classes that involved capstone projects with real-world companies; the students participated in design reviews and also the college’s open house.

In April, the CSE department opened its new Parallel Distributed Systems Laboratory in NC 2608. The new laboratory houses a 192-core cluster to support teaching and research in all areas of parallel and distributed computing: advanced computer architectures, operating systems, parallel programming languages, applications, and high-performance computing and networking.

The computer science and engineering program has dual accreditation from the Computing Accreditation Commission (CAC) and the Engineering Accreditation Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET).

Department of Bioengineering begins inaugural semester

In March, the college initiated a new Department of Bioengineering. It is the first bioengineering department in the state, offering interdisciplinary MS and PhD programs. Integration with the medical campus gives our students an edge—the master’s program expands student expertise in medical imaging, medical device development and clinical protocols; doctoral students train under both engineering and clinical mentors. The program admitted 12 doctoral and five master’s degree students for fall 2010.

Robin Shandas (pictured left), chair of the department, holds faculty appointments with both the college and the University of Colorado School of Medicine. For fall 2010, two assistant professors joined the department: Emily Gibson and Kendall Hunter.

According to Gibson, “The new bioengineering program provides an amazing opportunity to collaborate with medical researchers and clinicians to develop biomedical devices for better detection, monitoring, and treatment of diseases.”

Learn more at engineering.ucdenver.edu/bioengineering.
Civil Engineering (CE)
Chair, Kevin Rens

The civil engineering faculty members have expertise in environmental engineering, sustainability, geotechnical engineering, structures, transportation, and geographic information systems.

External research funding in these areas was obtained from a number of sources including the Colorado Department of Transportation, the City and County of Denver, the Environmental Protection Agency, and the National Science Foundation.

CE faculty continue to publish these research results in national and international peer-reviewed journals and conference proceedings.

This past spring semester, Professor Stephan Durham received college award recognitions in two categories: Excellence in Research and Creative Activities and Excellence in Teaching. For teaching, he was chosen as the overall campus winner. Professor Durham is also active in advising the ASCE student group.

Mechanical Engineering (ME)
Chair, Sam Welch

The faculty members in mechanical engineering have particular expertise in solid mechanics, fluid mechanics, bioengineering, thermodynamics, dynamics, controls, and mechanical systems design. The mechanical engineering department offers bachelor of science, master of science, and master of engineering degrees.

During the last year, mechanical engineering faculty members have received funding from the National Science Foundation, the Office of Naval Research, and General Motors.

The faculty continue to disseminate results of their research. Professor Peter Jenkins attended the Eighth Conference of the International Sports Engineering Association in Vienna, Austria, in July 2010 and presented two papers.

Associate Professor Sean Wright is leaving the University of Colorado Denver to pursue other interests.

Graduate enrollment in the Department of Mechanical Engineering has tripled over the last three years and undergraduate enrollment continues to grow.

29 years later continued from cover

working with the group of people who developed this resort. His largest project was the recently completed Snowmass Village Base Facility near Aspen, where he was project executive on the 570,000 square-foot development. Currently, Meggison is working on estimates and construction planning for three privately developed office buildings scheduled to start mid- to late-2011.

Throughout his career, Meggison has continued to expand his knowledge base. After moving into a management position with Weitz, he realized that although he knew engineering, he also needed to know what the real estate development business was about and how a construction firm fits into the equation. Meggison returned to UCD, this time to the Business School, and studied general business administration.

“My engineering training gave me the black-and-white framework of the discipline,” says Meggison. “Business education taught me the shades of gray around the black-and-white. Taking the next step [by earning my MBA], I was able to become more valuable to Weitz and apply my engineering training in a different fashion.”

He says that he feels beholden to UC Denver. “I believe that if you are given an opportunity, you owe something to repay the debt.” For him, it means:

“Get involved. Stay involved. Promote what this university is and help make it better.”

Meggison lives that mantra. He is involved with the college through the Engineering Leadership Council and is also active with the UCD Alumni Association and the Business School. He says, “Try this university. It is something special.”

CE Alum Gary Meggison serves on the college’s Engineering Leadership Council and is active with the UC Denver Alumni Association and Business School.
EE faculty and student team up in Alaska on summer research project

As classes end and summer begins many students look forward to a break from exams and seek opportunities for internships and summer jobs. The summer is also a great time for students to get involved in academic research projects.

This past July, the study of electromagnetic effects in the Earth’s ionosphere took Electrical Engineering (EE) Assistant Professor Mark Golkowski and EE senior Matthew Webb to Gakona, Alaska. Taking part in the Polar Aeronomy and Radio Science (PARS) Summer School (www.gi.alaska.edu/PARS/), sponsored by the National Science Foundation and Office of Naval Research, Golkowski and Webb attended a series of lectures, toured research installations, and performed an active experiment using the High Frequency Active Auroral Research Program (HAARP) facility.

The HAARP facility is a large high-frequency antenna array used for ionospheric research; it is the largest instrument of its kind in the world. The PARS summer program is intended to provide instruction and experimental experience for students and their faculty supervisors and involves participants from top U.S. universities including MIT, Stanford, Cornell, and Virginia Tech. This is the first year that UC Denver has participated.

The experiment that Golkowski and Webb performed involved using the HAARP facility to heat the electrons in the plasma of the ionosphere and change the plasma conductivity. Since the ionosphere in the polar regions of Alaska contains natural electrical currents, modulated heating of the ionosphere allows for modulation of the natural currents and results in a controlled virtual antenna. To observe the currents radiated by this virtual antenna, Golkowski and Webb deployed very low-frequency radio receivers—with colleagues from the University of Florida—across distances of tens of miles from the HAARP facility. Signals measured by the receivers could be analyzed to determine the exact structure of currents in the ionosphere.

The experiment provided a unique opportunity not only to work with state-of-the-art scientific equipment but also to brave the mosquitoes and isolation of the Alaskan forest. Golkowski and Webb will build similar low-frequency receivers at UC Denver to deploy in Colorado and other sites for studying the interactions of electromagnetic waves with the natural environment.

Golkowski joined the EE faculty in January 2010 and specializes in electromagnetics and plasma physics.
Congratulations to the spring 2010 College of Engineering and Applied Science graduates!

Bachelor of Science

Civil Engineering
Ali-Mirah Mohamed Ali-Mirah  Honors
Michael John Carioscia
Gabriel E. Ledezma
Erik Edward Maloney
Jesus Daniel Martinez
Lonny Eugene Phelps
Rachelle Kay Urso
Darren Shawn Weldon
Logan Michael Young
Erika Lynn Zimmerman

Mechanical Engineering
Timothy Vincent Babb  Honors
Stephen Daniluk
Jayson David Denney
Stefan Michael Elsener
Jessica Ferdowsian  Honors
Andrew James Hagen  Honors
Timothy Robert Jones
Thaduss T. Keefauver
Jared Lodeski
Jonathan Andrew Marts
Michael Thomas Masterson, Jr.
Daniel James McCandless
Jason Allen Michelson
Lucas D. Newman
Imevbore Ayodele Ojehuooh
Gerald John Palmer, III
Fei Peng
Aaron J. Petty
Samuel Harry Petty
Keith Allan Ray
Charles W. Schreiber
Nathan Richard Smith  Special Honors
Chen Tom Vue
Matthew R. Weiseth

Computer Science & Engineering
Maged Abdulrahman Al-Swaidi
Benjamin David Bridge
Brandon Martin Chenkovich
Bryan Larson  Special Honors
Michael Dale Webb

Electrical Engineering
Hamzeh Ribhi Alhatabeh
Rashid Abdulla AlObaidli
Eric Alan Burkhart  Honors
Jack Tyler Davis
Cesar Danilo Galindo Avila
Michael Andreas Gough
Masroor Hussai
Shalija Kalla  Special Honors
Ishwar Kc
Rajesh Khwakali
Jeffrey Alan Kister

Master of Engineering

Civil Engineering
Andrei S. Georgescu
Gregory F. Glazner
Whitney Paige Hall
Wei-Te Hsu
Lawrence Maggitti
Jose Roberto Ortiz Olivo
Michael Benjamin Williams
Tibebe Argaw Woldeyesus
Antonio Francis Bollotti Wolf
Alexis Hawkins Woodrow

Computer Science
Rohan Agrawal
Ibrahim A. Alfaaires
Musaad Mesfer Alqahtani
Neeta E. Bhadane
Nao Takano

Electrical Engineering
Scott Arlo Anderson
Rita Gurung
John A. Lifrig
Shih-Kung Lin
Diel Minh Ly
Hamid Nikmanesh
Kunal Balkrushna Patil
Brian Christopher Stuebe
Sanzen Yang
Fengkai Yuan

Mechanical Engineering
Robert Joseph Dence
Vinita Nalla
Marilea Papapanache
YingYing Zhao

PhD
Rui Liu  Civil Engineering

Our new website is live!
After a two-year process, we are happy to announce that our new website has launched! Check it out at engineering.ucdenver.edu.

Add us to your social networks!
Follow the college on Facebook and Twitter! Find us at www.facebook.com by searching for “University of Colorado Denver College of Engineering” and on Twitter at www.twitter.com/UCDengineering.

New alumni LinkedIn site
We’ve recently established an alumni group on LinkedIn, including subgroups for each department. We invite you, our alumni, to join our group as a way to share news relevant to engineering, ask questions, participate in discussion topics, or post job opportunities that may interest the group. Go to www.linkedin.com/groupRegistration?gid=2745291.

Expand your horizons!
As training and professional development for engineers becomes more essential, the Continuing Engineering Education Program (CEEP) strives to best meet the needs of the engineering work force.

Visit the new CEEP website at engineering.ucdenver.edu/ceep to check out this year’s courses, including FE and PE refresher classes. For more information, contact program manager Heidi Utt at 303-556-4907 or heidi.utt@ucdenver.edu. Bookmark this site for your future engineering education needs!
Mark your calendars!

**Fall Engineering Senior Design Open House**

**Friday, December 17, 2010 | 10 a.m. – 1 p.m.**  
North Classroom Atrium on the Auraria Campus

*Check our website for details and to RSVP.*  
engineering.ucdenver.edu/openhouse

**Reconnecting You With the College**

Come mingle and network with fellow alumni and current faculty at our winter alumni reception.  
**January 21, 2011 | 5-7 p.m**  
Tivoli Turnhale on the Auraria Campus

*Check our website for details and to RSVP.*  
engineering.ucdenver.edu/alumni

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**CU Family Night at the National Western Stock Show**

**Friday, January 21, 2011 | 7:30 p.m. | National Western Complex**

From barrel racing and steer roping, CU alumni from across the Front Range will have a blast at CU Family Night at the National Western Stock Show. Your ticket provides access to the stock show grounds and entrance to the rodeo. Check out buffalo and longhorns as you wander through the stockyards, then take a seat to watch cowboys compete for prizes. Don't miss the Mutton Bustin' Contest where future rodeo stars are made!

*For information contact the the UC Denver Alumni Office at 303-315-2333 or UCDAlumni@ucdenver.edu.*

**Rock Bottom Ruckus Dinner and Auction Benefiting Scholarships**

**Sunday, Feb. 28, 2010 | 5:30 p.m. | Rock Bottom Restaurant & Brewery (Corner of 16th and Curtis Streets)**

Spit shine those boots, polish up your spurs and join us for Denver's finest auction.

The attire may be western, but the dinner is gourmet, with our friends from the Rock Bottom Restaurant & Brewery donating their time, their vittles, and every seat in the house so all proceeds benefit Denver Campus scholarships.

*Check the alumni website for details, www.ucdenver.edu/alumnievents.*

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**We’d Like To Hear From You!**

Send us a class note at http://ucdenver.edu/classnotes.  
Update your information at http://ucdenver.edu/alumniupdate.  
Or complete the information below and send it to Marilee DeGoede, Campus Box 104, P.O. Box 173364, Denver, CO 80217-3364.

Look for your update in the next issue of *Engineering on the Move.*

First name                     Middle initial

Last name

Maiden name

UC Denver degree

Major                                                 Year

Preferred e-mail address

Current street address *(check a box if this is a change)*

Former street address *(if address above is new)*

Home phone *(check box if new cell phone)  check box if new work phone*