The College of Engineering is proud to announce that no state funds were used in the production of this magazine. We are extremely grateful to Dale (Metallurgical Engineering ’67) and Lala Placey, close friend of the college, whose contributions have made this special publication possible.
Throughout the field of engineering and across its diverse disciplines, there is a collective, often-lamented sentiment: We need more female engineers.

To fill this need, many engineering programs throughout the country are focusing on the advancement of women in engineering disciplines. The College of Engineering at the University of Nevada, Reno is also heeding the call.

We have taken several steps in recent years to promote an increase in the number of women engineers. These steps include programs and activities to facilitate recruitment, enrollment, retention, graduation and professional placement of female students in all engineering disciplines. In addition, the college encourages opportunities to support leadership and social activities through student sections of the Society of Women Engineers and Women into Computer Science and Engineering. We support and promote the participation of women in all engineering student organizations and encourage their professional development through our internship, mentoring and placement programs. At the same time, the college pursues the recruitment of female faculty and engineering instructors by offering a program characterized by academic excellence and a supportive working environment.

In terms of student recruitment, we are working in close collaboration with our school district to emphasize the many opportunities engineering careers can offer to women. The college has focused on retention and the enhancement of the educational experience of our female students by promoting excellence, fairness, a comfortable educational environment, a comprehensive advisement system, opportunities for undergraduate research and graduate research assistantships.

As a result of these efforts, the College of Engineering has experienced a significant growth of female faculty and students in the last 10 years. Our female faculty have become leaders in their fields and have developed a strong national and in some cases international reputation in their research disciplines. Our female undergraduate enrollment has approached the national average of 20 percent, while our female graduate enrollment fluctuates between 20 and 27 percent of our total graduate student population. The majority of our graduates have made successful careers in their engineering fields, while several of them today hold leadership positions in federal and state organizations, as well as in private industry.

This special issue of our Engineering Magazine has been inspired by the many significant success stories of our female faculty, students and graduates. It has been conceived, prepared and produced exclusively as a publication “for women, by women”. I invite you to read through the many articles and featured stories and share with me the pride that our College of Engineering feels for the success and accomplishments of our female engineers.

Finally, I hope this publication will inspire more women to consider the many rewarding fields of engineering. We in the University of Nevada’s College of Engineering are committed to the further enhancement of our efforts to support the advancement of women in engineering.

Manos Maragakis, Dean
College of Engineering
Future focused: Associate Dean looks to research, students and partnerships to change the future of engineering

It may not be a well-known field, but it’s an important one: Bioelectromagnetics is the study of how electromagnetic fields interact with and influence biological processes and organisms.

And it’s a decades-long area of interest for Associate Dean Indira Chatterjee, a local pioneer in bioelectromagnetics research who also serves in a critical leadership role for the College of Engineering.

The concepts of leadership, innovation and the path not taken are far from foreign to Chatterjee. “My mother was a trailblazer and a pretty amazing woman,” she said. “She came from India in the late ’40s to get a doctorate in electrical engineering at the University of Michigan, Ann Arbor. That was probably unheard of in those days.”

Chatterjee has parlayed the lessons from her parents’ focus on science and higher education into a productive and prolific 23 years at the University of Nevada. As the head of the Bioelectromagnetics Laboratory, Chatterjee continues important research while also reaching out to local industry leaders to work with engineering students and faculty.

Her work in the field of bioelectromagnetics includes a 15-year interdisciplinary research partnership with Gale Craviso, professor in the Department of Pharmacology at the Nevada School of Medicine. Together, Chatterjee and Craviso have received about $5 million in research funding from federal grants for their research on the effects of electromagnetic fields on cells and tissue.

Their most recent project — funded by the Air Force Office of Scientific Research and in collaboration with Sierra Nevada Corporation — investigated the possibility of mitigating fatigue in skeletal muscle using millimeter wave radiation. This work and similar research could lead to the development of clinical applications in the treatment of neurological diseases.

As Associate Dean, Chatterjee also invites productive partnerships with local industry; her two years in this role have seen partnerships between the college and Sierra Nevada Corporation and the Desert Research Institute, and others are in the works. She also develops exchange agreements with universities overseas (a university in South Korea and China are already on board), and she oversees the advisement, recruitment and retention functions of the College of Engineering.

Though the 1995 F. Donald Tibbitts Distinguished Teacher Award winner is not currently teaching, it is obvious that apart from conducting her own research, Chatterjee is a passionate student advocate. She has been the primary advisor of dozens of graduate students and has advised undergraduates for many years.

“I hope to go back to teaching someday, because I do miss the students,” she said.

Chatterjee first studied physics in college, transitioning into electrical engineering for her doctoral degree. She comes from a family imbued in engineering; both her father and mother were engineering professors.

“With my parents’ encouragement, I ended up in the sciences too,” she said.

Recognition

In 2005, Indira Chatterjee received the Silver Compass Award for Extraordinary Commitment to Students, University of Nevada, Reno.

Indira Chatterjee
Photo by Theresa Danna-Douglas
Amy Childress, Civil and Environmental Engineering Chair and professor, seems to juggle all of her roles effortlessly. In the mornings and evenings, she is a wife and a mother of two. Throughout the day, she is a researcher, a professor, a mentor and the department chair. But throughout it all, she remains an innovative engineer.

From heading a recent research project at the water/energy nexus, to innovating new ways to attract students to the College of Engineering and overseeing the daily operations of one of the most productive departments on campus, Childress continuously works to improve and contribute to the field of engineering.

Childress came to the University of Nevada, Reno in 1997 after receiving her doctoral and master’s degrees from the University of California, Los Angeles, where she first began her research in water treatment and wastewater reclamation.

Childress and her research group were most recently funded by the Bureau of Reclamation for a project involving a combination of membrane processes, pressure retarded osmosis (PRO) and reverse osmosis (RO), to develop a system to produce drinking water at a lower energy requirement than state-of-the-art RO systems.

“This system would demonstrate that pressure retarded osmosis (PRO) is a viable source of renewable energy” she says. “When the system is completed, it would be the first PRO pilot system in the country.”

Though the involved processes are not new techniques, the combination of PRO, RO and pressure exchangers is. Childress and her research group, namely post-doctoral scholar Dr. Andrea Achilli, along with graduate students, have applied for a patent. If the testing results are favorable, this system would not only produce drinking water at a lower energy requirement but would also decrease the impact of desalination on the environment.

“One of the big issues with existing seawater desalination systems is that they may discharge a highly concentrated brine into the ocean that can have detrimental effects on marine life,” Childress said. “Through this process, we dilute that highly concentrated brine so that it is discharged at the same concentration as the ocean.”

Childress is active both in her research and as the department chair, a position she assumed in 2009. One of her most recent implementations as chair is the Graduate Student Spring Visit, wherein graduate students visit the University to learn about the college’s faculty, research and program. The students also get to participate in the outdoor activities the Great Basin offers — appropriate, considering this is one of Childress’ hobbies.

“As a chair, you make decisions about the direction in which the department is going,” she said. “It’s particularly gratifying being chair with Manos (Maragakis) as the Dean because he is making great things happen. He works with the chairs to implement new ideas — he enables us to keep moving forward even in tough economic times.”

**Recognition**

In 2008, Amy Childress was the President of the Association of Environmental Engineering and Science Professors (AEESP), which is made up of professors in academic programs throughout the world who provide education in the sciences and technologies of environmental protection.
For Nevada lecturer Nancy LaTourrette, her professional focus can best be summarized in a few short words: It’s all about the students.

“I love to teach,” she said. “It’s my passion to not just have students learn what I have to offer, but also I want them to love to learn.”

Until recently, LaTourrette played a dual role in the College of Engineering: serving as manager of engineering computing resources and as a lecturer in the department of Computer Science and Engineering. As manager, she maintained the college’s website and managed the Engineering Computer Center and advised faculty and staff on computing issues.

But while computers are a part of her passion, she is now able to devote 100 percent of her time to the college’s academic offerings. Her time will be spent inspiring students through teaching, advising and mentorship opportunities.

LaTourrette collaborates frequently with Dr. Judith Frederickson of Truckee Meadows Community College (an alumna of Nevada’s College of Engineering); much of their work together focuses on increasing the matriculation of TMCC students to the university through articulation agreements and grant proposals.

LaTourrette is currently drafting a grant proposal with professor and graduate director George Bebis and Fredrickson that would incorporate scenario-based learning and research into the community college courses to expose students to research.

“In Scenario Based Learning, students have projects based on scenarios that they might experience in the workplace,” LaTourrette said. “We are proposing to expose community college students to research through scenarios in order to increase their workforce skills and encourage them to matriculate to the university.”

Though LaTourrette teaches several classes, she says her “absolute favorite” is Automata and Formal Languages. The class is based on the theoretical foundations of computer science, which appeals to LaTourrette’s original professional love: math.

The two-time Senior Scholar Mentor is also the faculty advisor for Women into Computer Science and Engineering, a student group that offers a support group for female students interested in computer science and engineering (though LaTourrette says several active members are men).

She also is serving as lead on creating online programs in Nevada’s College of Engineering, including an upcoming online graduate certificate in renewable energy. The work to develop the online certificate is funded by a grant received from the Nevada Renewable Energy Consortium. The graduate certificate in renewable energy is a collaboration between the Desert Research Institute, University of Nevada, Las Vegas and the colleges of Engineering, Business, Science and Liberal Arts at the University of Nevada, Reno.

Recognition

Nancy LaTourrette recently became the University of Nevada, Reno’s 2011 Women of Achievement Honoree, an award that is sponsored each year by the Nevada Women’s Fund.
While the term “isolation” typically conjures images of loneliness, the concept may actually save structures and lives during seismic events.

Assistant Professor Keri Ryan, who teaches in Civil and Environmental Engineering Department at the University of Nevada, is conducting research that focuses on isolation devices, seismic protective systems that absorb the energy of an earthquake’s ground motion to prevent the structure from bearing the brunt of the force and to lessen the damage incurred on the structures.

“Seismic isolation is a technique to protect a building or bridge from damage by providing a flexible interface between the structure and its foundation,” she said. “The isolation devices are much more flexible than the structure, such that the structure will actually vibrate rigidly above its isolation system.”

As effective as isolation systems are, currently only about 200 to 300 buildings in the United States have them, according to Ryan. Many reasons account for their limited use, including financial and technical impediments. Ryan’s students have found that adding an isolation system to a low-rise office building can increase the total cost of the structure by up to 10 to 15 percent.

“People generally don’t realize that the building codes don’t target damage-free performance of a structure in a large earthquake,” Ryan said. “Instead, engineers design structures only to protect life safety. But protective devices like isolation have the potential to eliminate damage entirely in an earthquake, and the approach will become more affordable if we increase the demand for it.”

Ryan is currently working on a project funded by the Network for Engineering Earthquake Simulation program (NEES) within the National Science Foundation focused on addressing the major impediments to more widespread use of isolation devices, including the possibility of decreasing the costs. Ryan and her research group are analyzing the economic losses in buildings both with and without seismic protective system when subjected to a large earthquake.

Ryan is also working on improving isolation systems’ effectiveness, particularly how they perform in extreme earthquakes that generate larger lateral movements than for which the isolation system was designed.

“Our research aims to find the most desirable, safest way for the system to reach its limit state such that it won’t collapse,” Ryan said.

This specific project, which Ryan began before coming to Nevada, will culminate in testing structures in Japan at E-Defense, one of the world’s largest shake table labs. For future projects Ryan needs only to walk around the corner of the engineering building to the University’s own earthquake lab, one of the reasons Ryan came to Nevada.

“With the NEES program, I could write a proposal to use any NEES facility for testing,” she said. “But I couldn’t pass up the opportunity to come to a school with an NEES facility. I also wanted to have the opportunity to work with my extremely successful colleagues who are doing similar and complementary research.”

Recognition

In 2007, Keri Ryan received the NACADA Outstanding New Advisor Certificate of Merit — Faculty Academic Advising.
Computer Sciences and Engineering Associate Professor Monica Nicolescu’s research interest is readily apparent to those who have visited her office; visitors there may assume the computer would be the center of attention, but instead, a two-foot-tall robot standing under the window is the room’s most revealing technology.

In the Robotic Research Laboratory on campus at the University of Nevada, Nicolescu and her research group are enhancing robots’ ability to recognize intention, replicate tasks and work with several other robots to complete tasks.

These ongoing projects stem from Nicolescu’s desire to “make robots more accessible to society at large,” out of the lab and into workplaces and homes.

“We would like the robots to be able to interact with people through natural means of communication and to work with people through natural means,” she said. “One of the things I’m interested in is teaching robots to learn from demonstrations. Instead of someone sitting at a computer to program a robot, you would show the robot what you wanted it to do and it would learn from that demonstration.”

One of the issues plaguing such advancements in robotics includes the robot’s sensory limitations.

Furthermore, robots must also be taught how to understand humans’ intentions, an ability so difficult to teach to machines that Nicolescu and her group are working on a separate project, funded by the Office of Naval Research, to explore the possibility of robots understanding implicit means of communication.

“Implicit communication is what people use in everyday life,” Nicolescu said. “Gestures, or the fact that I’m doing something, is indicative to people around me of my intentions. We are very good at detecting what others’ intentions are because we are wired to recognize them. If you have robots that have the same capabilities, they would be better prepared to interact with humans to be better helpers or collaborators.”

Nicolescu is also working on how multiple robots work with and allocate tasks to one another.

Her work with robots began during a research assistantship while studying at the University of Southern California for her doctoral degree. But Nicolescu’s fascination with computer sciences began before that, stemming from her interests in science and math.

“I would see in the movies how people working on computers would solve complicated problems,” she said. “I thought if I could do something like that all my life, I would love it. So when it came time to choose a college in Bucharest, Romania, I went to the computer science department.”

Now a part of Nevada’s Computer Science Department since 2003, Nicolescu is making strides to expand the department, both in contributing to students’ knowledge and to robotics research as a whole. Part of this effort includes preparing a new class to offer to students that focuses on the functions and programming of humanoid robots, bipedal machines that move similarly to humans.

“I’m hoping to be able to expand all of these areas of robotics that we are working on and get to see some of these capabilities being used in real robots,” she said. “It would be ideal to see our work actually make it in the field of practical robot applications.”

Recognition

In 2006, Monica Nicolescu received the highly prestigious Early Career Development Award from the National Science Foundation.
It’s not a common interest, but it’s one that may have significant implications on our society: Chemical and Materials Engineering Assistant Professor Qizhen Li’s research focuses on the mechanical behavior of materials.

“I’m interested in the mechanical behavior of materials and studying different types of advanced materials such as shape memory alloys, composites, thin films, porous materials and lightweight materials,” Li said.

She says her research in advanced structures/materials could have far-reaching applications. “We want to study lightweight materials and improve their mechanical properties,” Li said. “If we can use lighter and stronger materials other than the current material we use for vehicles, for example, and decrease the weight of cars and trucks, at the end we can improve fuel efficiency, save energy and lower exhaust emission.”

Li’s research interests and expertise have already earned her a national spotlight: She was recently awarded a highly competitive National Science Foundation five-year CAREER Award.

The $569,120 award will allow her to develop, study and experiment with magnesium-based nanoporous materials for use in applications like energy storage, biomedical joint replacements and auto body parts.

Perhaps most important, Li says, is that the award will allow her to bring graduate and undergraduate students into her research, helping her train students for the workforce and stimulating further interest in the practical applications of science and engineering.

“With this, we can give young students access to work in a research lab, to expose them to this environment with hands on experience and attract them to the field of materials engineering,” Li said.

The prestigious NSF Faculty Early Career Development (CAREER) Program Award is given to faculty members at the beginning of their academic careers and is one of NSF’s most competitive awards, placing focus on high-quality research and education activities.

Li earned her doctoral degree at Ohio State University in 2004. Following her time as a post-doctoral research associate at the Northwestern University from 2004 until June 2006, Li joined the College of Engineering at the University of Nevada, Reno.

She says the application of in-depth research to hands-on, practical uses provides an inherent appeal for her field of interest. “If we look around us, everything is made of some kind of material,” she said. “Material sciences are so closely related to our lives. Without materials, I don’t know what our lives would look like.”

Recognition

In 2011, Qizhen Li was awarded a highly competitive National Science Foundation five-year CAREER Award. The $569,120 award will allow her to develop, study and experiment with magnesium-based nanoporous materials.

Qizhen Li

Photo by Theresa Danna-Douglas
Early classes, long hours, not to mention the part-time jobs that most students need to get them through four years of college. It takes ambition, determination and the will to succeed to make it as an engineer. But, here at the University of Nevada, Reno, our students have what it takes to make it.

**Brain power**

*Post-doc student studies interaction between neuroscience and computer technology*

Laurence Jayet Bray’s educational journey has taken her from Cannes, France to South Carolina — and then to Reno, Nevada.

She first came to the U.S. on a tennis scholarship, attending South Carolina’s Clemson University for her undergraduate and graduate degrees.

“Then I moved to Reno to do my Ph.D.,” said the 30-year-old Jayet Bray, who just received her doctoral degree in Biomedical Engineering in December 2010.

She is currently working in the Computer and Engineering Department in a post-doctoral position conducting brain computation research.

“After graduating with my Ph.D., I have continued working in the brain lab as a postdoc,” she said.

“My education at the University of Nevada, Reno, helped me develop a variety of skills in science and engineering thanks to interesting classes, qualified professors and a friendly environment.”

Jayet Bray says she enjoys spending time with husband Adam and 19-month-old son Jack, sometimes going to movies and playing golf. That’s when she’s not in the lab, conducting intensive brain computation research.

“The highlight of my education has been expanding my biological and engineering knowledge by combining interdisciplinary fields, especially neuroscience and computer science,” she said.

She hopes to secure a position with a large company, designing and improving cardiovascular and neurological medical devices.

“My goal is to become a successful scientist and engineer,” she said.

**Third time’s a charm**

*Returning student finds passion in programming*

Like many students, Erin Keith, 31, had some difficulty deciding what she wanted to be when she grew up.

That was, until she discovered Nevada’s College of Engineering.

“This is my third stint in higher education,” she explained. “Last time, I initially thought I wanted to be a high school math teacher, until I realized how much energy it might take away from raising my own children. Then, as a math major, I was required to take the CS 135 (‘Intro to Programming’) class. I fell in love; programming marries my language, logic and problem solving skills.”

So she returned to the University of Nevada, Reno, with a renewed focus and a new major. Keith is now planning to receive her bachelor’s degree in Computer Information Engineering in May, 2012.

“I decided to challenge myself by focusing more on hardware and discovered the joy I find in building stuff,” she said. “I do not enjoy research as much; I am an engineer.”

The undergraduate had done extensive work with CSE professors, most recently completing a project predicting wind behavior and investigating whether such predictions can improve electricity generation in wind turbines.
Learning the ropes
Nevada student seamlessly melds passion for outdoors and education

Alex Hill, who plans to receive her bachelor’s degree in Mechanical Engineering in 2012, says engineering wasn’t always in focus.

“Though I have always loved science, and math has always come naturally, I actually chose engineering for its flexibility,” said the 21-year-old student. “I wasn’t sure what I wanted to do after college; I had always assumed grad school, but I wasn’t sure which profession I wanted to pursue and knew that engineering would allow me to make that choice, rather than having my major dictate my decision.”

But she says, in retrospect, she should have seen the signs that her future would be intimately tied to engineering.

“As a child, I was constantly ‘inventing’ things, and as engineers are, in my mind, the modern day inventors and creators, I should have seen this coming,” she said.

But she has found a home and her passion in the College of Engineering, where she has been involved in diverse clubs and activities, and taken leadership through becoming President of her sorority and even becoming elected as a Senator for the college.

“In my mind, more than any other college on campus, the College of Engineering teaches students hard work, creative thinking and perseverance,” she said.

Her love of the outdoors has driven some of her educational interests — and her professional passion. Over the summer, she works at a local ropes course.

“It has helped foster my love for the mountains, climbing and leadership development,” she said.

Keith plans to finish her research project and degree, then searching for a job programming embedded systems (preferably “smart” devices) in Oregon. She says her time at Nevada has been complemented by research, great classes and membership in clubs and activities.

“Being a little older, I counsel any student, especially girls, to be involved and get to know the faculty,” she said. “I’ve received plenty of opportunities because faculty members know who I am, and they like to chitchat as much as anyone. My involvement demonstrates and cultivates the pleasure I get from my field. I’ve had plenty of jobs I didn’t like. It’s so important to study a field that you enjoy.”

NASA Bound
Recent graduate hopes to translate internships into career

Katie Browne, 23, is not interested in resting on the laurels of her just-earned degree in Computer Science.

“I graduated in December with my bachelor’s and plan to graduate from the University of Nevada, Reno with my master’s in December 2012,” she said.

“I am hoping to do a co-op with NASA Goddard while getting my master’s and then go onto work at Goddard after I graduate.”

Such drive is characteristic of Browne, who has overcome challenges related to a rigorous education combined with a potentially limiting disease.

“My cerebral palsy prevents me from writing legibly, but I still managed to graduate as the Senior Scholar in a major that is math and writing intensive,” she said. “My dream to work at NASA is my inspiration, along with the possibility of a successful future.”

Browne has already completed two internships at NASA, which she hopes to parlay into a career. In her first internship at NASA’s Ames Research Center in California, she was charged with detecting anomalies in data; last summer she traveled to Maryland’s NASA Goddard Academy, where her team worked on getting a robot to navigate through unknown terrain.

“My two internships at NASA has definitely been the highlight of my education so far,” she said. “I got to learn a lot and work with adverse group of people. And I have enjoyed my time at the University of Nevada. All of my professors in the Computer Science Department have been very helpful and interested in my future.”

“We started (the Association for Computing Machinery club) this past year from scratch and have gone from zero to 50 members in one academic year,” she said. “I love participating in the ACM club, where like-minded students can come together to achieve goals and organize events outside of our everyday curriculum...My participation in these clubs definitely enrich my educational experience.”
**Dual identity**  
*Young student chooses path with dual majors — and diverse opportunities*

Yes, she’s still a teenager — but that doesn’t prevent 19-year-old Emily Hand from aiming high.

The Computer Science and Engineering and Applied Mathematics dual major, who expects to earn her bachelor’s degree in 2013, plans to continue with her education, ultimately earning a Ph.D. in Computer Science or Applied Math.

“I started at the University of Nevada, Reno as an Applied Mathematics major,” she said. “As a math major, two CS classes are required, and I fell in love with them and couldn’t choose between Math and CS, so I added CSE as a second major. I’ve found that this department, and this college overall, has been absolutely wonderful. The resources are amazing, and the professors are very intelligent and very willing to help students.”

Such help has even translated into jobs. After Hand showed interest in her first CS class, her professor, Dr. Sushil Louis, offered her a position as a tutor for that class the next semester.

“He saw that I was putting in a lot of effort in both my classes and my tutoring, and offered me a research position in his lab, ECSL (Evolutionary Computing Systems Lab),” she said. “Another professor informed me of an internship opportunity in Computer Vision for this summer, and I applied, with a recommendation from him, and was accepted into the program.”

So her summer will be spent in Florida, where she will be undertaking a Computer Vision research project with a Ph.D. student at the University of Central Florida.

“If you show interest and work hard, professors can give you recommendations that will get you into programs that give you practical experience in your field of study,” Hand said, adding that professors in the College of Engineering have diverse connections in industry as well as at other universities.

Hand also serves as president of Women Into Computer Science and Engineering (WICSE) and is a member of the Association for Computing Machinery (ACM) and Math Club. And while she says she notices the fact that men outnumber women in her fields of interest, her diverse resume clearly illustrates a lack of perceived gender bias.

“I would say that being a woman in CS has helped me much more than it has hurt me,” she said. “When professors see a woman who is really interested in CS, and willing to put in the work, they are very interested in you and can take you places.”

**Breaking boundaries**  
*Nevada graduate combines an interest in environment, computer science*

For Adrienne Breland, 38, a diverse background will undoubtedly lead to incredible opportunities.

The Nevada graduate, who just received a Ph.D. in Computer Science, started school with an avid interest in environmental science: She holds a bachelor’s degree from the University of California at San Diego in Biology and two master’s degrees (one in Environmental Science and the other in Computer Science) from Nevada.

“I just wanted to expand my capabilities as a researcher,” Breland said of her decision to pursue a doctoral degree in computer science. “A lot of research these days is highly dependent on having the right software to answer specific questions. Being able to write my own programs gives me a lot of flexibility in what I can accomplish and even consider in problem solving.”

Breland is currently a research associate at Nevada, and she plans to pursue a post-doctoral position in computing relating to biological questions.

“I would like to continue on with research in the biological sciences — environmental, medical, or both,” she said. “Teaching would be great . . . I am still not sure what post-doctoral position I will take, but I will probably be working with genomic data relating to disease management.”

The accomplished researcher is also proud of another, completely different part of her life.

“I am the single mother of a 7 year old,” she said. “So my spare time is spent trying to be a good mom. I also enjoy yoga.”
A marriage of mind and spirit
Nevada grad and her husband are both successful engineers

Sierra Brewer, 26, secured both an incredible education and met her soul mate during her time at the University of Nevada.

Proving that two different types of engineers can peacefully coexist, Brewer, who received her bachelor’s degree in Civil Engineering in 2007, married Mechanical Engineer Monte Brewer two years ago.

“What inspires me is my husband and my job,” Brewer said. “I want to grow to be a successful person, and they both make me want to do it. I enjoy getting up in the morning to go to work.”

In 2006, Brewer was offered an internship at Farr West Engineering. The internship led to a full-time civil engineering position. She worked as a designer and as a project manager. In response to a slowing market, the firm let her go.

She currently works for the United States Forest Service as a civil engineer, a job she says she found by networking through the Society of Women Engineers (SWE).

“I work on a broad amount of engineering,” Brewer said. “From water engineering/design to construction management and bridge and dam inspections: It’s never a dull moment at the Forest.”

Brewer notes that her time at Nevada helped her grow as a person and gain a real-world perspective about life and her profession.

“My experience at the University of Nevada, Reno was one of a kind,” she said. “They have great professors that dedicate their life to engineering and students. I don’t think I could have chosen a better school: They offered many different degrees in engineering, extra-curricular activities and really gave us a preview of real life.”

When she’s not working diligently on behalf of the U.S. Forest Service, Brewer spends time with her husband and enjoys all that the outdoors has to offer in northern Nevada.

Flying high
Aviation engineer experiences soaring success

College of Engineering graduate Kara Bymers recently spent four months commuting from her home base in Reno to Las Vegas, assisting the design of an apron reconstruction project at McCarran International Airport. A few weeks later, she was on site in Houston at George Bush Intercontinental Airport, planning a project to widen runway and taxiway shoulders to accommodate larger aircraft.

And with the recent purchase of the nationwide corporation she previously worked for, PBS&J, by global engineering giant Atkins, there may be even more exotic locales in her future.

“I see a great future with Atkins,” said the 26-year-old Bymers. “I see even more doors and greater career opportunities ahead.”

The 2007 civil engineering graduate said aviation engineering was not her first career goal; instead, she entered the University of Nevada, Reno with an interest in structural engineering, lured by lore of earthquake research and the renowned shake tables.

But in 2006, after taking various engineering courses (none specific to aviation), she was offered an internship at PBS&J: in the aviation division.

“I had taken a lot of traffic classes, and I was interested in transportation and design,” she said. “I had no idea about aviation. But I was willing to learn.”

The internship led to full-time employment immediately following graduation. And now Bymers, whose title is Project Engineer 2, couldn’t be happier about her choices.

“I had great experiences at Nevada, especially participating on the concrete canoe team and my involvement with SWE and ASCE,” she said. “I’m prepared for my future and ready for the challenges to come.”
**Research driven**

*Ph.D. graduate studies genetics of cancer*

Sara Nasser, 33, was born in Hyderaba, India. But it is in Nevada that she has found her true calling.

A 2008 Ph.D. graduate in Computer Science and Engineering, Nasser is now a post-doc at the Translational Genomics Research Institute.

“I am a computational biologist at TGEN,” she said. “TGEN is a non-profit research institute located in Phoenix, Ariz., dedicated primarily to cancer research. I work with biologists and oncologists on modeling gene networks that are used to study the genetics of the disease.”

Nasser moved to Nevada in 2001 to pursue her higher education.

“I was initially interested in network security, and at that time Dr. John Black from the Computer Science department at the University of Nevada, Reno was leading the research,” she said. “But after joining the University of Nevada, Reno, I changed my research area. I graduated under the advisor-ship of Dr. Frederick Harris.”

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**Strength from straw**

*Local researcher suggests straw can protect and improve the lives of the poor*

According to the classic fairy tale, the Big Bad Wolf easily blew down the Little Pig’s straw home. But such conventional wisdom is being questioned by one Nevada graduate, who is proving that straw may just provide an affordable, safe building component for homes in developing countries.

Darcey Donovan, 48, helped found the Pakistan Straw Bale and Appropriate Building organization (PAKSBAB), which was created in the wake of a devastating 2005 earthquake in northern Pakistan. Its magnitude was measured at 7.6 on the Richter scale, and it killed an estimated 100,000 people, destroyed over 780,000 buildings and rendered more than 3.5 million homeless due to poor building construction.

“My engineering degree has been key to PAKSBAB’s accomplishments to date and important for our continued growth,” said Donovan, who received a master’s degree in Civil Engineering from Nevada in 2006 and an undergraduate degree in mechanical engineering from Stanford in 1986. “I feel I received an excellent higher education at the University of Nevada, Reno and made personal ties with many of my professors. I have learned applicable skills and knowledge which I use daily.”

Donovan has a structural engineering consulting practice, EcoEngineering, specializing in ecologically oriented residential design, with an emphasis on straw bale, passive solar and green building. And as PAKSBAB’s CEO, she is developing unique, earthquake-resistant straw bale building methods that are affordable, energy efficient and utilize local labor and indigenous renewable materials.

“In 2008-2009 I was the principal investigator for a seismic research project conducted at the Large Scale Structures Laboratory at Nevada,” she said. Designated as a NEES shared-use project, it used one of the College of Engineering’s famed “shake tables” to evaluate the performance of a small, full-scale straw bale house, subjecting the structure to eight simulated earthquakes of increasing intensity.

The result: It survived accelerations of about twice the estimates of Pakistan’s 2005 earthquake.

“This was the first shake table simulation of a straw bale house and has provided convincing evidence that PAKSBAB’s construction system is indeed earthquake resistant,” she said.

With her help, the resources provided by the University of Nevada’s College of Engineering, a research grant from EERI, and the innovation of the organization she helped found, residents in developing countries may be safer from earthquakes and natural disasters. To date, the organization has built 25 straw bale houses in northern Pakistan.

“I hope to scale PAKSBAB’s work and establish straw bale construction as a viable and sustainable building solution in Pakistan,” Donovan said of her goals for the future. “I would like to develop a cost-effective, two-story design for urban areas. And I hope to train other engineers in Pakistan to design and engineer straw bale buildings.”
Shake and quake
Nevada’s renowned shake tables inspire research, success

At press time, Sarira Motaref, 29, had just finished her Ph.D. in civil engineering — just a few months prior, in fact.

“I was dealing with different issues during my education in the U.S.,” said the Iranian-born graduate. “Being an international student, being away from my home country and my parents, and having a child during last year of my Ph.D. education were among the challenges that I dealt with.”

She credits her husband, Arash Esmaili Zaghi (who holds a Ph.D. in civil engineering from the University of Nevada, Reno), and her 16-month-old daughter Raha with the inspiration to accomplish her goals.

Sarira Motaref is pictured above from left to right: Arash Esmaili Zaghi (husband); Dr. M. Saiidi Saiidi (professor, CEE); Sarira with daughter, Raha

Perspectives
Lolene Terry (BS, Civil Engineering, ’80) contributed to the historic Hoover Dam Bypass project as Roadway Manager for HDR Engineering. She says an engineering education is a good opportunity for those who enjoy math, science and seeing things through from design to construction. “I think women in the field bring a different perspective, a more holistic and sustainable perspective that is good for the future,” she said.

And she also acknowledges the role of her professional passion in driving her toward success: Motaref’s interests lie in earthquake-resistant bridge design.

“The University of Nevada, Reno has one of the unique labs for earthquake engineering research,” she said. “This lab incorporated the shake tables to simulate the earthquakes for different types of structures such as bridge columns, multi-span bridges, buildings, etc. Working with well-known faculties in the Civil Engineering department was another motivation for me to pursue my Ph.D. at the University of Nevada, Reno.”

She recently worked as a member of the Earthquake Engineering Research Institute (EERI) and a research assistant in the Department of Civil & Environmental Engineering at Nevada. In her last semester, she was a teacher assistant in a Civil Engineering course.

Motaref says her passion for teaching and research is preparing her for her post-Ph.D. challenges.

“I practiced both teaching and research during my Ph.D.,” she said. “I was a mentor of three undergraduate students last summer. This experience helped me to learn how to lead a research group to achieve the research goal.”

These experiences will help as she undertakes her new role: She and her family recently moved to Coventry, Conn., where she will work as a postdoc at the University of Connecticut. She says taking advanced engineering courses during her tenure at Nevada provided her the opportunity to learn from distinguished professors in the field of civil engineering.

“This helped prepare me for a future job,” she said. “Experimental studies on bridge columns got me involved in working with instructors who taught me to consider many other parameters in my design apart from what I learned in school.”

The diverse Nevada graduate fosters more right-brain activities as well, spending time volunteering at a foundation of intercultural dialogue and organizing some of the club activities such as book club and cooking class. She also recently discovered a new interest in oil painting.

And when not researching cancer genetics, painting or helping spread a multi-cultural message, she and her husband — also an engineer — spend time caring for their newborn son.

Nasser sees a bright future developing her passion for engineering research and honing her skills.

“I plan to continue in research, and at some point, I would like to start teaching,” she said. “The college trained me to be systematic, and that is an essential factor in becoming successful.”
Innovators; barrier-breakers; pioneers; trailblazers. These are all accurate descriptions for our many engineering graduates who have led long, fulfilling careers as corporate powerhouses.

Pioneering Spirit

Early female engineering graduate broke down walls – and built a remarkable career

She embraced her role as the sole female, developing a strong sense of humor and enjoying the competition with her male peers. “But there was a price to pay,” she recalled. “After one physics final, some of the guys threw me into Manzanita Lake.”

She broke down the walls in her education, then undertaking the same challenge in her professional life. After graduation, she went to work at the U.S. Bureau of Mines Reno Research Center, doing extractive metallurgical research. “I started doing bench-scale research, which was a great experience,” she said. “It was hands on from the design and building of the equipment, to conducting the experiments and interpreting the data, and presenting the results.”

She spent the final 11 years of her career in supervision and management. In 1995, Congress decided to close the agency, and during this process she spent six months as the Acting Research Director of the Salt Lake City Research Center, returning to Reno to take its Acting Research Director of the Reno Center and took the employees and facility through the closure process.

“I shut down the Reno facility and oversaw its transfer to the University of Nevada,” she remembered. “In August 1996, after 30 years working for one Federal agency and spending the entire time in one location, I locked the doors and walked away. I don’t think many will have that luxury of working for one employer and in one location in today’s world.”

The retired female engineering pioneer now spends her time with husband Tony and their blended family of six grown children and seven grandchildren, with twins due in October. She will be attending her 50-year reunion at Reno High School this summer.

“Life has been good to me,” she said. “My parents are my heroes. They were very supportive and were always there for me and my sister and brother. They prepared me to be tenacious and to try no matter what adversity came my way. I am so proud that all of our children have gone to college and four of them have advanced degrees. And grandchildren, they are the best gift given to us.”

“I hate giving advice. But I do strongly believe all young women need to prepare themselves to take care of themselves and their families. There are no guarantees in life, so prepare yourself to earn a living, to earn a good living, and to enjoy doing it. Don’t be afraid of your intelligence, and don’t hide your brains. Use them.

Nevada gave me the credentials I needed for a career I never expected.”

Andrea E. DeSantis Clark

Nevada Women Engineers
A sign of the times
Different decades, different outcomes for Nevada graduate

Susan Roush graduated from high school in 1975. While she had an interest in science and math at the time, she says gender roles did play a part in her education.

“I did get my bachelor’s then, but not in engineering,” she remembered.

“Twenty years later, I went back to get my engineering degree and found it very much easier. It was never about the subject material, it was about feeling comfortable in the classroom setting. While some of it was probably my maturing over that time, I really believe during those years it became very much more acceptable for girls to be in these subjects.”

So she returned to college in the 1990s, taking diverse engineering classes at the University of Nevada — many full of fellow women.

“My education allowed me to enter a field where I could do meaningful work, be with great individuals day in and day out, and make decent money,” she said.

And with a long history of engineering in her family, the legacy may just continue: Gilstrap has nine grandchildren, and her niece Ashley Saarem recently graduated from Carson High School — with an expressed interest in what may be an educational birthright.

“She is considering engineering — maybe the University of Nevada, Reno — and she’s getting numerous scholarships for UNR,” she said.
Debbie Jenkins places together complex pieces of diverse engineering puzzles

Civil engineering graduate Debbie Jenkins likens her work to a game — though it’s a highly cerebral game, to be sure.

“I think what I like about engineering is it’s a puzzle,” she said. “It doesn’t matter what you’re trying to do, but it’s trying to put the pieces together, ensuring everything fits and all the agencies are happy with the work. It’s never the same from day to day. There is always something new.”

Today's challenges: various tasks related to her role as Senior Engineer at Eastern Sierra Engineering, where she contributes to the rehabilitation of roads and bike trails in Reno, Truckee and Lake Tahoe.

A licensed Professional Engineer, Jenkins has been at Eastern Sierra Engineering (ESE) for four years. She is responsible for overseeing various projects, ensuring they are completed on time, within budget and comply with engineering specifications for the city, county or state. Jenkins interacts with multiple clients and agencies, including the U.S. Forest Service, the Nevada and California Departments of Transportation, the Town of Truckee, City of Reno and the Regional Transportation Commission of Washoe County (RTC).

Her most recent work at ESE involves the Truckee Pioneer Trail roundabout in Truckee, which was designed ultimately as a double lane roundabout and constructed as a single lane roundabout that essentially, serves as a gateway to Truckee. The roundabout improvements provide a safe crossing for bikes and pedestrians and add to the Truckee Trails bike plan.

“We do a lot of inspection and materials testing and design a lot of roadway rehabilitation work,” she said. “But we also do a lot of erosion control and utility work as well.”

After graduating with a bachelor’s degree in civil engineering from the University of Nevada, Reno, Jenkins started out as a Staff Engineer and worked up to Senior Engineer at MACTEC where she worked for ten years. She also held positions at Wood Rodgers, Inc. and Nichols Consulting Engineers as a Senior Engineer.

Her work at ESE has opened new doors, as Jenkins and her team have also spearheaded projects for the North Tahoe Public Utility District and for Douglas County’s utilities. Jenkins also has completed erosion and water quality work in the Lake Tahoe Basin.

She is currently assisting other ESE Engineers by coordinating with Nevada Department of Transportation (NDOT) on the Virginia Street Enhancement Project for RTC and the City or Reno.

“You never get grouped into a...specific thing,” she said. “We’re doing a roadway widening project in Truckee right now, but they also want a pedestrian connection and sidewalk installations. On Virginia Street we’re installing concrete paving and in addition we are providing streetscape improvements including stamped concrete sidewalks, street lights, trees and planter boxes.”

Jenkins participates in the American Public Works Association, the International Erosion Control Association and the American Society of Civil Engineers.

In her spare time, she is a volunteer ski instructor for Sky Tavern and participates in the Pyramid Lake Spring Triathlon. Jenkins and her husband, a Principal Engineer at Eastern Sierra Engineering, seem to have passed their engineering interests onto their two children, who are currently in the civil engineering program at the University of Nevada.

Perfect fit

World of difference

Travel and experiences open doors for local graduate

Dawn Martens wears a wide diversity of roles proudly.

She is a software engineer; wife; world traveler; and new mother of a baby boy. And the skill she most universally applies to all of these roles: problem-solving abilities.

“I think the most important part of the College of Engineering’s curriculum is its emphasis on teaching students to solve problems,” said the 2004 bachelor’s recipient in Computer Science, who also just finished an MBA in 2010. “I also learned discipline and prioritization while in school — taking a full load of courses and working part-time made it necessary to make tough choices and trade-offs, another skill I’ve found useful in the real world.”

The prioritization skills are definitely paying off now, as the new mother spends her days as a Senior Software Engineer at Intuit.

“I’ve been with the company full-time for seven years,” she said. “I started out as an intern, and that’s how I got the full-time position. Before working at Intuit, while I was still a student, I worked in network security at the University of Nevada, Reno, a job I think was vital to my current success — my supervisor taught me everything from building servers to coding real applications to maneuvering around a Linux box.”

Martens met her future husband in the Computer Science program while competing in a programming contest in Northern California. The duo has spent the last few years traveling to destinations like South America, Europe, Hawaii and Mexico, even studying abroad in Copenhagen, Denmark for seven weeks last summer.

And as for the future, while globe-trotting may be somewhat limited for a few years, Martens plans to use those problem-solving skills for life’s new challenges.

“I definitely enjoy what I’m doing now,” she said. “The most important things for me going forward are doing challenging, meaningful work while still maintaining a work/life balance that will allow me to spend time with my family.”

18 Nevada Women Engineers
It’s all relative
Engineering graduate passes on her love of learning

As a returning college student after starting a family, Rita Johnson, now 58, enjoyed a privilege few mothers do.

“I attended graduate school in Civil & Environmental Engineering with my two middle children,” Johnson said. “We all had graduate offices on the second floor of Scrugham Engineering and would often have coffee together. The three of us later worked together at Stantec Consulting in Reno.”

In fact, all four of her children graduated from the University of Nevada, Reno — the family matriarch receiving a bachelor’s in civil engineering in 2003 and a master’s in the same field (with an emphasis on structures) the next year.

“When my youngest daughter entered junior high, I was able to attend the University as a full-time student,” she said. “It takes a supportive family to take up the slack in such a situation but I am lucky to have such a family...I have been lucky to have had two amazing careers; first as a mother, and now as an engineer.”

Johnson also credits her professors at Nevada for their support and encouragement — though she acknowledges that it is up to each student to put in the work and explore opportunities.

“One particular professor, Dr. Saidi, had a big influence over my future,” she said. “I became his undergraduate researcher in my junior year, and later, his graduate student. Through my involvement in the University of Nevada, Reno, student chapter of EERI (Earthquake Engineering Research Institute) I met other dynamic graduate students and future employers.”

The successful grad has held diverse and rewarding opportunities through various employers since graduation, now moving to San Diego to begin the next chapter.

“I find it interesting that I have been offered every job that I have interviewed for since graduating,” Johnson said. “All of my employers, even those in San Diego, have heard of the University of Nevada, Reno. Graduates of Nevada’s College of Engineering are well trained and prepared for the engineering profession. This translates to many opportunities for Nevada graduates.”

Project(ing) pride
Diverse projects highlight an extensive engineering career

Lolene Terry, who earned her bachelor’s degree in Civil Engineering in 1980 from Nevada, recently contributed to a project that she calls a professional highlight.

“I worked on the Hoover Dam Bypass project, and it really is something to see,” she said. “I did the roadway — not the fancy bridge — but still, it was quite a project.”

Anyone who has experienced the national landmark, which lies between Nevada and Arizona and has been called one of the Top 10 Construction Achievements of the 20th Century, can attest to the size and scope of the project. For those who visited before the bypass, the experience was characterized by long traffic lines and unsafe pedestrian journeys.

“I manage large design build projects,” she said of her current work, in which she just finished serving as assistant design manager for the I-15 CORE project, the state of Utah’s largest transportation construction project to date.

“Doing something new inspires me — working at a fast pace on a large project and seeing it built,” she said. “That is what civil engineering is all about: When you get to use the facility you helped design, there is great satisfaction in that.”

For those who have visited since the bypass was operational, the experience is now characterized by smoother lines, safer journeys and an additional photo op inspired by the monumental bridge.

“It is really humbling to work on a project that you know will be viewed by many and photographed a multitude of times, because it truly is an engineering achievement,” she said. “Even though I had only a very small role, it is really something to see the result of our efforts.”

Terry now is a Principal Project Manager for HDR Engineering in Las Vegas. HDR was the lead design firm on the Hoover Dam bypass project, where Terry then served as Roadway Manager.
SUCCESS STORIES

We taught them what they needed to know and then proudly watched as they achieved their goals. Now we celebrate their successes! These incredible former students reflect a clear affinity to the college and the programs that helped them become the prosperous professionals they are today.

Susan Martinovich

Driving force: Martinovich uses education to make roadways safer

She began her 27-year tenure at NDOT following college graduation, though she also worked summers at the department within the internship program. Upon graduating with her bachelor’s degree in 1983, Martinovich entered the rotation program, where she worked within several engineering divisions throughout the department.

She eventually took a permanent position in the bridge division where, among many other projects, Martinovich designed new roadways and structures along the US 95 West leg and other structures in Carson City, Reno and Las Vegas.

“To work on a project from its inception and concept to the final completion and to get to drive on it and see it, that’s really exciting,” she said.

As NDOT director and a licensed Professional Engineer, Martinovich interfaces with other government agencies and organizations to ensure that roads and highways are maintained and safe and that new projects are being funded and developed to address the needs of travelers. A part of Martinovich’s vision for the department includes integrating transportation more into the community, building collaboration among local community members and business leaders.

“It’s not just roads for cars and trucks, it’s a transportation system with rail, transit, bikes and pedestrians,” said Martinovich, who also is the first female director of the American Association of State Highway Transportation Officials. “My goal is to open that communication and open that collaborative effort so that we are working together in working on that transportation system.”

Under her direction, the Department of Transportation, in collaboration with other agencies, developed a statewide strategic highway safety plan to improve highway safety and responses to accidents. This collaborative effort included components of education, enforcement and emergency response with the ultimate goal of “determining strategies to keep people alive.” She said that within three years of the plan’s implementation, the number of highway fatalities dropped from 435 to just over 300.

The department is also developing a new interstate highway south of Las Vegas, improving interstate traffic and communication and looking for new ways to maintain funding.

“The neat thing about Nevada is that it offers a lot of extremes, from very rural areas to urban areas,” Martinovich said. “Being in the transportation industry and in the public sector really allows me the opportunity to benefit people and to make a difference in how the state develops.”
Julia Randall
Organization dedication: Student turned professional explores diverse careers due to leadership background

While a Nevada student, she met recruiters for Chrysler at an SWE conference in Houston, Tex.; after graduating with her bachelor’s degree in 1999, Randall moved to Detroit to work for Chrysler and to pursue a graduate degree at Wayne State University.

Master’s degree in hand, she then worked for Jeep-Truck Engine Systems field testing vehicles in extreme conditions — August trips to Arizona and February trips to Minnesota were highlights.

“I knew Engine Systems would put my education to the test and challenge my engineering skills,” Randall said. “I wanted to see if hard-core engineering was for me or whether I wanted to pursue the managerial track. It was an intensely technical field where you had high-tech gadgets to measure every sensor imaginable in a vehicle — what engineer wouldn’t like that?”

Still even with the challenging technical aspects, Randall discovered how much she enjoyed and missed working more with people, touching different departments and pulling things together from a big picture perspective.

In 2003 Randall moved back to Reno to work for International Game Technology. Working in Manufacturing Engineering at IGT, she was responsible for the introduction of new products into the manufacturing environment. But she still wanted to work on larger-scale projects and have a greater impact from concept to installation, so she transitioned to Hardware Engineering.

Now as the Lead Technical Project Manager in Hardware Engineering, Randall is responsible for multimillion dollar R&D projects. This role includes estimating project and product costs, creating project schedules and ensuring that the project meets expected delivery dates.

The move was evidently a good fit for Randall, as she recently received an IGT Peak Performer award for 2010 — an award given to only 50 of IGT’s 5000 employees.

“This position allows me to work with multiple departments within IGT,” she said. “Working on the people side of things... is something that I really enjoy and something that I feel I excel in, mostly due to my leadership experience in collegiate engineering organizations like SWE and ASME. This position also allows me to get a broader perspective on our business and how our company operates.”

Words of Wisdom

“Don’t be intimidated to pursue an engineering career as a woman. Enjoy the learning process, take advantage of opportunities, and get to know your professors.”

Darcey Donovan,
MS in Civil Engineering, ’06

“If you like math and science, like solving puzzles, understanding why and how things work, helping others, organizational approaches to solving problems, you might consider engineering. And the College of Engineering at the University of Nevada, Reno will give you the tools you need to gain meaningful employment in engineering, or even open the doors to you to many other areas.”

Ingrid Gilstrap,
BS in Electrical Engineering, ’89
Catriona Black’s career path has been a varied one: She has transitioned from work in nutrition to a role in the Washoe County Sheriff’s Office then back to college, where she laid the groundwork for a career as an engineer.

Now as a Tripp Enterprises project manager, Black looks forward to a future rooted in her original aspirations to help and connect with people.

Black has been with Tripp Enterprises since early 2004 and now works as the project lead, a role in which she interacts with clients and ensures that deadlines, requirements and costs are met for the design and manufacture of devices. Tripp Enterprises manufactures and designs devices for the gaming, renewable energy, aerospace and medical fields, with such past and current clients as Honeywell Industries and International Gaming Technologies.

“I’m involved from the design and delivery of the prototype,” she said. “Typically my projects are anywhere from a year to two years in terms of our first interaction with the client to the point where we’ve launched manufacturing.”

Black’s trajectory to a project management position started in 1995, when she first began as an engineer in the aerospace division at Precision Castparts after graduating with a bachelor’s degree in Materials Sciences from the University of Nevada, Reno.

“That position was basically a project management position, which included defining requirements, costs, profits, manufacture and delivery,” she said. “I had a lot of autonomy and responsibility in that position; it trained me on the business and customer side of engineering.”

Black says her passion to help people has only complemented her career progression. She volunteered as a teenager for American Red Cross, YMCA and Girl Scouts, which translated well into her role as an officer in the Washoe County Sheriff’s Office and now as the project lead at Tripp Enterprises.

“I love being an engineer but love being a project manager more,” she said. “I get to collaborate with people at every level of business, which is satisfying.”

Black was involved with professional organizations as a student and certainly saw engineering as a natural fit, coming from a “family rich with engineers.” She volunteered with the Society of Women Engineers and though not currently a member, keeps in close touch and sometimes offers her services as a liaison. Black is currently a member of the Northern Nevada Chapter of the Project Management Institute, volunteers for church-based groups among other community service and remains passionate about nutrition as a volunteer Nutrition Coach for the Cambiati Wellness Program.

The native Australian also emphasizes the importance of family; she has a 6-year-old daughter and a 10-year-old son. Apart from volunteering, Black also spends her free time skiing, swimming, hiking or camping with her children and husband Tom.
Sohila Bemanian could have retired about four years ago, but her passion for her work and engineering motivates her to continue an already prolific career.

Bemanian is a life cycle cost and pavement design specialist at Parsons Transportation Group. She specializes in public-people partnerships, or P3, which involves competing with other consultants for work with public agencies.

Her specialties include highway, roadway, bridge and interchange projects. She is currently involved in a project that aims to replace the Gerald Desmond Bridge in Long Beach, Calif., and has worked with Interstate 50 in Southern Nevada. But Bemanian’s work is not limited to the region; she travels all over the world, including the United Arab Emirates, Brazil, Africa, Guam and Turkey.

“We design and construct the projects,” Bemanian said. “We promote innovation, expedite the project and minimize the agencies to the owner.”

Prior to her work at Parsons, Bemanian worked with the Nevada Department of Transportation (NDOT) for 25 years. She was most recently the system chief materials engineer for the department, in which she was “in charge of all the roads that were in the responsibility of NDOT...in the state.”

Bemanian said one of her highest achievements with NDOT was changing the way road and pavement was maintained. With her new strategy, the pavement was treated and maintained at regular intervals, as opposed to “waiting until the pavement completely failed and reconstructing it then.” She received the Nevada Taxpayers Association Award and the American Association of State Highway and Transportation Officials Presidents Award in 2000, the highest award a state employee can receive.

“As a result of that, the department saved a lot of money,” she said. “We had some of the smoothest roads in the country without extra fiscal expenditure.”

She started at NDOT as an intern in the Summer Corp Program and joined the department as a newly minted bachelor’s degree holder in Civil Engineering in January 1982.

Bemanian eventually chose roadway design in the materials division following a rotation program providing her with exposure to different positions. She eventually found herself needing further education in the field, returning to school for her master’s degree with a specialization in materials and pavement, which she received in 1997.

She even applied her master’s thesis to her day job, implementing a $20 million project on concrete pavement life cycles, which eventually became standard practice at NDOT.

At this point in her career, Bemanian does not plan to slow down. She is an active member of the Society of Women Engineers and spends time off on the slopes, hiking, camping, visiting family, spending time with her children and “giving them solid advice.” Indeed, with a career as successful as Bemanian’s, it would be difficult not to listen.

“Work passionately, life passionately both out and in your professional life,” she said. “Because of that passion, the wonderful people I’ve worked and surrounded myself with, life is more interesting and more fun.”
While an undergraduate at the University of California Riverside, Kelly Lyttle found herself struggling to find her passion. It wasn’t until a conversation with her peers about the acclaimed College of Engineering at the University of Nevada that Lyttle developed her plan.

She left Southern California and transferred to Nevada, completing her bachelor’s degree in Civil Engineering in 2006. She then continued with her graduate studies, earning a master’s degree in Structural Engineering in 2008.

Like many of her peers, the College of Engineering’s renowned “Shake Tables” provided allure for study and research. Her thesis, sponsored by the California Department of Transportation, was on the effects of earthquake connections in freeway approach spans. Shortly after graduation, she worked at the Nevada Department of Transportation for 10 months as an engineer in the bridge division.

Through Lyttle, a licensed Professional Engineer, said she initially had more interest in fieldwork than research, she accepted the program coordinator position at the Center for Civil Engineering Earthquake Research in Nevada’s Large Scales Structures Laboratory, sponsored by the Network for Earthquake Engineering Simulation. There she manages a large research project on curved bridges, which is part of a larger study sponsored by the Federal Highway Administration on the seismic resiliency of highway systems.

“The curved bridged portion consists of constructing a 145-foot long, horizontally curved bridge, which will span across all four shake tables in our lab,” she said. “The objective of the project is to...clear up the different design codes for curved bridges, merge the different design codes, make sure everything is consistent and that everyone is designing them properly.”

In addition to her research and management capacity, Lyttle handles educational outreach for the Center. She conducts and schedules tours for visitors, from grade school students to potential donors. She also directs the Research Experience for Undergraduates (REU) program, which allows undergraduate students to participate in hands-on graduate level research for 10 weeks in the summer months.

As a former participant in the REU program, Lyttle enjoys outreach and allowing students to get a behind-the-scenes look at the research being conducted in the lab.

“I really liked the idea of interacting with a lot more people,” she said. “I was an REU student in 2005, so I know it’s a huge thing as a student to go somewhere new, meet new people and do undergraduate research. I’ve been there and I like being able to perpetuate that and help other students get that experience as well.”

Understanding just how important extracurricular experience is for students, Lyttle also is the practitioner advisor for the American Society of Civil Engineer’s student chapter on campus and the concrete canoe team.

“Working at the university allows me to interact with the students and encourage them to pursue opportunities such as joining ASCE and completing undergraduate research,” she said. “I hope to continue working with students to give them access to the same opportunities I had.”

**Recognition**

ASCE Committee on Student Activities recognized Kelly Lyttle as the 2011 Practitioner Advisor of the Year, Region 8, for exemplary service and dedication to the University of Nevada, Reno ASCE Student Chapter.

**Concrete Canoe**

The University of Nevada, Reno has been selected to host the American Society of Civil Engineer’s 25th Annual National Concrete Canoe Competition in 2012, thanks to the assistance in part of Kelly Lyttle.

“We were very impressed with the organization, enthusiasm and support that we saw from students, faculty, staff and administration during the site visit and know that the University of Nevada, Reno will do a fantastic job in hosting this important event,” Ping Wei, Director of Educational Activates for ASCE, said.

The team has had top-10 finishes in the past five years: second place last year; fifth place in 2009; first place in 2008; third place in 2007 and sixth place in 2006. The competition includes equal points for engineering design and construction, technical design report, formal business presentation and a set of five canoe races.

For more information about the team visit the team’s website at www.nevadacanoe.com
It is rare these days to find a person who devoted three decades to one field; rarer still to find the same person ending one 30-year career to embark on a new challenge with a new company.

Nevada graduate Lori Williams enjoyed 30 years at Sierra Pacific (now NV Energy) and Truckee Meadows Water Authority, an experience she says has prepared her for the challenges ahead.

“I think I had the dream career,” Williams said. “I started in an entry-level position and worked my way up to a top-level position and had a lot of great opportunities in between.”

She started as an intern at Sierra Pacific in 1979 thanks to an introduction by her father, who worked at the company for 28 years. Once she received her bachelor’s degree from Nevada in 1983, she took on a full-time position in the power plant engineering group. The next 30 years offered her diverse experiences in a variety of positions, including coordinating the environmental emissions control equipment at a new power plant in North Valmy, being a part of a merger transition team and supervising operations and maintenance in the water department.

During her tenure, she headed up the water operation for Sierra Pacific Power for six years. In this position she focused on treatment distribution, storage and water resource agreement negotiations.

“The whole gamut of making the water supply for this community and all of the peak development was occurring during that period,” Williams said. “It was a really interesting time to be managing the water utility during that high-growth period.”

Clearly, her successes in the industry resulted in a reputation that preceded her. During a recent year-long sabbatical to spend time with her children after her 30-year career at Sierra Pacific and Truckee Meadows Water Authority, she was recruited by the owner of Trisage Consulting (also a former colleague) who needed a project manager at the firm.

She joined Trisage, which focuses on environmental and consulting work with utilities and the renewable resources industry, in November 2009. Williams generally handles environmental permitting and monitoring, assisting clients with policy and procedure development, management consulting and energy audits. Though Williams usually works on any number of projects at one time, she is currently working with Liberty Energy, an energy company based at Lake Tahoe, to streamline and manage their energy efficiency programs as well as assisting Nye County to develop a hazard mitigation plan.

“I’m working on a lot of emergency, safety, process improvement and my background extends beyond the water field,” she said.

Despite the completion of one career and the beginning of another, Williams still finds time to contribute to other professional organizations as well as maintain her certifications, which include a Grade 4 Certification in Distribution and a Grade 4 Water Treatment Certification. She is a member of the Nevada Women’s Fund and volunteers for her sons’ schools, the Parent-Teacher Organization and Boy Scouts. In her spare time, she likes to ski, hike, bike and spend time with her family.

“Here I am 30 years out. I have two great sons and a great husband... who I met at the North Valmy Power Plant,” she said.

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Remembering Friends

Already having lived a full life before obtaining her degree in engineering, Peggy Bowker was a widow with a small child who through sheer determination and hard work, put herself through college and had the distinction of being the first female civil engineer to be licensed in the state of Nevada.

Margaret F. Bowker ’78 Civil Engineering
1941 - 2010

Margaret F. (Peggy) Bowker earned her B.S. in engineering at the University of Nevada, Reno in 1978. Peggy was an expert in water hydrology and flood control. She worked in floodplain management in both Arizona and Nevada and consulted for FEMA. Peggy was the president, owner and principal engineer for Nimbus Engineers of Reno. She was the recipient of both the Pioneer Award and Lifetime Achievement Award from the Association of Floodplain Managers.
Stephanie Luongo

Soaring to success: Graduate combines passion for flying with electrical engineering prowess

Stephanie Luongo

Photo by Theresa Danna-Douglas

Sierra Nevada Corporation Systems Engineer Stephanie Luongo has found her perfect equation for success: melding her passion with her profession.

The Professional Engineer spends workdays crafting and testing radar landing systems for clients like the U.S. Army and Navy. And in her downtime, the licensed pilot takes to the skies.

Luongo started as an intern at SNC in 2004 and was promoted to systems engineer in 2005. In her seven-year tenure at SNC, Luongo has primarily worked on Automatic Carrier Landing Systems (ACLS), mobile air traffic control towers and unmanned aerial vehicle landing systems.

Her most recent work involves redesigning a receiver for an ACLS for the Navy. She and the rest of her multi-disciplinary team are currently building a prototype and plan to complete the assembly and test it by the end of the summer. From there, the Navy will integrate the new receiver on a ship within the next year.

“The receiver in the system was designed and built in the 1980s and technology has come a long way since then, especially in radio frequency and microwave design,” Luongo said. “So we’re redesigning it and giving them a new one that will still work within the legacy systems.”

Before that, she contributed to the initial development and design work for a circuit card that is installed in runway lights for a mobile air traffic control tower system for the Army, which “allows soldiers to rapidly set up a complete airfield and runway lighting system.”

While all assigned work makes extensive use of her engineering background, Luongo says her tasks at SNC vary greatly, which she says “keeps things fresh and never boring or repetitive.”

In addition to her work at SNC, Luongo also teaches for the College of Engineering, which she began after completing her master’s degree in 2009. She commonly teaches Microwave Engineering and Distributed Systems and Antenna Design. Though Luongo’s passion lies in her work at SNC, she finds teaching equally rewarding.

“I feel I’m able to offer students an industry perspective,” she said. “Here’s what the textbook says, but here’s what I do at my job. I’m hoping my students are getting more out of it than just learning equations and theory.”

For any students interested in electrical engineering for aerial vehicles, Luongo can provide yet another perspective as a licensed pilot. She received her Instrument rating in September 2010 and has logged more than 200 hours, whether it’s flying to Quincy for breakfast or to Elko for a friend’s wedding. Luongo became interested in aerospace engineering and the space program as a student at Galena High School.

“I like the bird’s eye view and being at an altitude where I can see over the mountain ranges,” she said. “There’s a calming solitude about it, being the only one in the plane.”

Luongo is also a member of the Society of Women Engineers and an international women’s pilot organization called the 99s.

Words of Wisdom

What would you say to girls interested in pursuing an education in engineering at the University of Nevada, Reno?

“GO for it and bull doze your way to the end. Don’t give up and get involved with the school and extra-curricular activities they offer.”

Sierra Brewer, BS in Civil Engineering, ’07
Teresa Goodwin knows the value of a good fit — in her own profession and on behalf of her clients.

As president/owner of People Spaces Design Group, she has found autonomy and the ability to customize her business to accommodate her passions. And as an engineer who consults with clients on interior improvements to their building spaces, she knows the importance of the spaces people occupy.

“Each project is different in determining what a tenant needs and balancing that with the existing building constraints, code requirements and budget control,” Goodwin said of her company, which focuses on interior improvements for building owners or tenants moving into offices, warehouses and retail spaces.

She started the business in August 2009 in Pleasanton, Calif., the direct result of a circumstance that lesser businesspeople would have considered a professional setback. But for Goodwin, the setback led to opportunity.

In 2002, she had joined a local Reno architecture and engineering firm upon graduating from the University of Nevada’s College of Engineering with a bachelor’s degree in Civil Engineering. She began as a structural designer and eventually moved into a project management position, then as a vice president at the Pleasanton office.

In 2009, the firm decided to close the Pleasanton office in response to a slowing market. That decision left many of their clients without a local design firm. Goodwin, a licensed Professional Engineer, founded People Spaces shortly after. Two years later, many of the group’s clients have come to the firm “organically,” referred by past clients.

“After being laid off, one of my previous clients asked if I could still do their work,” she said. “At the same time I was meeting with other firms — but I determined I would rather start a company and run it my way, as opposed to working with another company who may not have the same ideals.”

“Goodwin now owns People Spaces and as President she handles daily tasks like interfacing with clients and subcontractors, marketing, as well as larger tasks including the strategic vision of the company.

“Most private developers that I work with are not willing or able to spend the extra money to develop buildings that are more sustainable,” Goodwin said. “I’m really passionate about sustainability, so I am hopeful that people like me can find ways to contribute to projects, even in small ways, that aren’t very expensive, and that over time these small improvements can amount to big change.”

Goodwin is currently involved in Commercial Real Estate Women (CREW), the Society of Women Engineers (SWE) and Make-a-Wish Foundation. As a Wish Granter, she meets with the wish children and their families to find out what their wishes are before reporting it back to the staff to coordinate.

“When I got laid off, I mentally went back through what I was doing with my time and what I hadn’t done yet,” Goodwin said. “Now, with my own company, I have the time and flexibility to volunteer more. It’s been really fulfilling to do something like volunteer for Make a Wish and to be part of bringing a little bit of magic to these children’s lives.”

She now lives in Oakland, California with her husband Elliot Goodwin, who is also a civil engineer and an alum of the University of Nevada, Reno. They are looking forward to October and the arrival of their first child.
Maeve Curley
On target: Graduate works on complex missile defense, communication systems

Former University of Nevada student and Electrical Engineer Maeve Curley has been engineering defense equipment for Raytheon Company, an international leader in defense technology, for almost 10 years. She began her career at Raytheon in the test equipment center in California, where she focused on target generators and radar system test benches. After several years, she moved to Arizona to work in their test equipment center, focusing on production support. Through the years, Curley has designed and tested equipment like RF boards, test equipment, and circuit cards for Raytheon’s Space and Airborne Systems and Missile Systems.

Now working as a team lead, Curley heads projects in the RF electronics design department in Tucson, Arizona. Her most recent projects include an obsolete parts replacement project and a redesign of the circuit cards in a communications link.

“Raytheon has about seven different business units and they all do different things, missiles and radars being the primary products I have been involved with,” Curley said. “Most of our customers are government and military.” She started working at Raytheon after meeting the company’s career representatives at a job fair in Seattle, Wash.

Originally from Ireland, her family moved to Reno when she was a teenager. With a father and several other members of her family all civil engineers, her interest in the engineering field may have come as little surprise. Curley, however, said she was more interested in electrical engineering because she liked the lab environment involved with the work. “I liked problem solving and loved math,” she said. “I have a ton of civil engineers in my family, but I didn’t want to work on a construction site. I liked working in a lab.”

Apart from her work, Curley participates in the Raytheon’s Women’s Network and the Society of Women Engineers, an organization she has been involved with since her days as a student at the College of Engineering. She received her bachelor’s degree in Electrical Engineering in 2000 and her master’s degree in 2002.

Melinda Holtzman
Teaching time: Instructor finds passion for the classroom after experience in industry

For someone with a bachelor’s degree, two master’s degrees and a Ph.D., it’s no surprise that a career in academia is a perfect fit.

Such is the experience of Melinda Holtzman, Senior Instructor at Portland State University (PSU) and Nevada Engineering graduate.

But the path was not always obvious to Holtzman, who decided to study abroad in Scotland after beginning her undergraduate study at the University of California, Santa Cruz. She received her bachelor’s degree in Physics in 1979 and her master’s degree in Physics in 1981 at Scotland’s University of St. Andrews.

Once she completed her master’s degree, Holtzman returned to the United States and worked at Rockwell International and later at Hughes Aircraft Company as a senior technical associate researching and developing semiconductor devices. Many of Holtzman’s projects at that time involved military and weapons projects, and eventually her role became more managerial.

Her transition to teaching began when she taught a class for an instructor who was on sabbatical. Holtzman quickly discovered a new passion.

“I thought I would try it, and it took me a week to discover that it was what I really enjoyed,” she said.

Holtzman returned to college in 1996 at the University of Nevada, Reno to pursue her master’s degree in Electrical Engineering. She eventually graduated in 1998 and also received a doctoral degree in Electrical Engineering in 2002. The switch from physics to electrical engineering was influenced by her previous work with fellow engineers.

“When I started to teach, I had been working for seven to eight years, and almost everyone I was working with were electrical engineers,” she said.

Holtzman has been at PSU since 2006 and specializes in semiconductor materials and devices, drawing from the expertise gained in military electronics. She spends the majority of her time teaching a variety of undergraduate classes and advising students.

Prior to teaching at PSU, Holtzman was teaching part time in the Electrical Engineering Department at the University of Nevada, Reno and in the Physics Department at Truckee Meadows Community College.

“I was looking for a full-time academic job, and as a family we wanted to move to the Portland area,” she said. “I like it because it’s an urban university with a very diverse student population, and there is a high-tech industry in this area.”

As for Holtzman’s future plans, she is content to continue teaching at PSU though hopes to have more opportunities to teach abroad. She is a faculty advisor for the Society of Women Engineers and is involved in a professional capacity as well as on the PSU campus. She is also a member of American Society for Engineering Education. In her spare time, Holtzman volunteers at the Humane Society, is an active book club member and spends time with her 17-year-old son.
Zeina Randall

Globetrotting for education: Graduate leaves Spain for Nevada — and still transcends borders in the business world

Zeina Randall's curiosity and interest in the sciences and engineering inspired international travel with an educational outcome. She moved to Reno from the Canary Islands, Spain, to pursue her college degree from Nevada's College of Engineering.

Randall received a bachelor's degree in Electrical Engineering and soon after received an Electrical Engineering master's degree with an emphasis in Microwave Engineering in 2002. In the past decade, she has held a number of engineering and supervisory positions at NV Energy.

While she started at the company as an intern, she now serves as a supervisor in the Systems Protection Group, where she oversees engineers and relay technicians.

“The relay technicians program all the devices in the substation that protect our transformers and lines to ensure the equipment is protected,” Randall said. “It’s a highly technical area and the biggest contributor to reliability, I would say, in the power engineering world.”

Randall’s interest in electrical engineering was prompted by the diverse changes facing the field at the time she graduated from high school. Her supportive family, especially her mathematician father, encouraged her to specialize in the sciences and engineering.

“I was fascinated with technology and had a huge desire to be a part of a world that was changing,” she said. “At one point I wanted to be a mathematician like my dad, but he encouraged me to do something practical with my math and science knowledge.”

Still, Randall’s various positions in management sparked a burgeoning love of the management side of the industry. She recently got her master’s degree in Business Administration in December 2010.

“Management is mostly instincts and going by with insightfulness and people skills, but I did get more out of the MBA program, like finance and organizational behavior,” Randall said. “It was an opportunity I couldn’t pass up, and I figured it would open up some doors in the future.”

While in the MBA program, Randall tapped her engineering expertise and won the 2010 Governor’s Cup Business Plan Competition. She and two chemical engineering doctoral students developed a business plan that would convert glycerol, a waste resulting from biodiesel production, into two valuable chemicals: hydrogen and glyceric acid.

“The competition really started me off in the whole entrepreneurship world,” Randall said. “But I also saw how my value as an engineer could be added to an area that’s not necessarily my specialization.”

She is now a member of the Nevada Center for Entrepreneurship and Technology and the Institute of Electrical and Electronics Engineers, for which she served as student chapter president.

Perspectives

Andrea E. DeSantis Clark (BS in Engineering Science, '66) says one of her greatest professional experiences was to assist the Nevada State Museum prepare an exhibit on the U.S. Bureau of Mines Reno Research Center honoring all the employees and the contributions they made to Nevada and the nation. “Closure of the facility presented a unique opportunity to share photos and other memorabilia with the museum and preserve some of Nevada’s history,” she said.

Susan Roush (BS in Electrical Engineering, '97), who is part of the New Technologies Introduction team at GE Energy, says turning ideas into reality involves creativity. “Engineering is about creating things,” she said. “It’s precise and exacting, but it also allows a lot of creative expression. This can be extremely rewarding.”

Dawn Martens (BS in Computer Science, '04), is now senior software engineer for Intuit. But she first started working for the international computer giant as an intern. “An internship where you can do hands-on, real engineering work is a must,” she said. “If you find such a position, make sure that you put in as much effort as you can to learn and to show your supervisors that you are hard-working and intelligent. These are the people who can either get you a full-time position at their company or recommend you for another position someday.”
The College of Engineering at the University of Nevada, Reno is proud of its Corporate Partners program, which brings together a select group of companies/firms to collaborate with engineering and computer science educators, researchers and students. The mission of the Corporate Partners program is to generate interactions between the College of Engineering and the Corporate Partners that bridge the gap between theory and practice and bring a competitive edge to the College, the Partners, the State, the Region and the Nation.

For information on the Corporate Partners program contact:

Melanie Perish  
Director of Development & Alumni Relations  
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More information is also available at:

http://www.unr.edu/engineering/corporate-partners/index.html
Mayo Clinic. UC Berkley. Penn State. These are just a few of the nationally and internationally renowned educational institutions at which our outstanding graduates continue their education, preparing them for a successful career and a fulfilling future.

**Sound advice**

*Graduate credits high school teacher with engineering inspiration*

Heather Culbertson, 23, is wasting no time pursuing her passion. She just graduated with a bachelor’s degree in Mechanical Engineering in 2010 from the University of Nevada, Reno, yet she’s already started her next chapter in Philadelphia.

“Currently I am a first-year Ph.D. student at the University of Pennsylvania,” she said. “I’m conducting research in the Haptics Lab, which is a part of the larger GRASP (General Robotics, Automation, Sensing and Perception) lab.”

She credits Nevada’s College of Engineering with allowing her to explore her options.

“I feel like the College of Engineering has provided me with a well-rounded education that has prepared me to work in the cross-disciplinary field of robotics,” she said. “As an undergraduate I was exposed to many different fields within mechanical engineering so that I was able to find my passion. I’m now doing what I love, which was only made possible because of my education at the University of Nevada, Reno.”

She notes that she entered the University of Nevada, Reno, like many of her peers, unsure of the exact variety of engineering that she wanted to pursue but with a general interest in physics and math.

“Engineering was suggested to me by my high school physics teacher,” she remembered. “I’ve never been so happy that I followed a teacher’s advice.”

Thanks to the preparation provided by her time at Nevada and her new challenges in Pennsylvania, she sees a future in which she’ll easily accomplish her dreams. And as the recipient of a National Science Foundation Graduate Research Fellowship this year, she’s finding more freedom as a graduate student to be able to conduct the research about which she’s most passionate.

“My first goal is to graduate with my Ph.D., which will hopefully take only another four years,” she said. “After that I plan to pursue a career in academia.”

Culbertson now spends any spare time she can find exploring her new surroundings in Philadelphia. She says she finds herself taking advantage of every opportunity to explore the community’s wealth of cultural offerings, tourist destinations and historical sights.

“I just moved here in August, so I really like to get out and see all of the museums, the zoo, and the aquarium because they’re all new to me,” she said.

According to the US News & World Report Rankings, the College of Engineering was ranked for the first time in 2010 on the list of “best engineering schools” (126 overall top 80 state engineering schools).
Katcha Taylor, 25, has always had a passion for research. “I had really good advising during my time at the University of Nevada, Reno, and they always knew I was interested in research,” she said. “This led to three internships while I was going to school.”

Two of the internships were at other educational institutions: one at the University of California at Riverside, the other, the Mayo Clinic.

And after receiving her Bachelor of Science degree in Electrical Engineering from the University of Nevada, Reno in December 2008, her internship at the Mayo Clinic opened a door to a new opportunity. She is scheduled to receive her Ph.D. in biomedical engineering from the Mayo Clinic College of Medicine in 2014.

“It may seem like electrical engineering and biomedical engineering aren’t all that similar, but you’d be surprised,” Taylor said. “It’s not entirely a departure. The body for instance is an integrated system, just like in control systems in electrical engineering, and different compartments can be modeled with resistors, capacitors and inductors.”

Taylor is currently working on a targeted delivery system of chemotherapy drugs using polymeric biomaterials that are both biodegradable and biocompatible.

“Essentially, we’re looking at delivering the chemotherapy drugs to the tumor site, rather than using a systemic approach,” she said. “Here at Mayo, everything has a clinical side, and the patient needs drive research. It’s an exciting place to be.”

A native of Ghana, Taylor’s ultimate interests lie in global healthcare technology. She plans to pursue an MBA following her work at Mayo to help her realize a goal of developing innovative and affordable healthcare delivery systems in emergent nations like her home.

“My time at Nevada and now my education at the Mayo Clinic, have definitely taught me to think outside the box,” she said. “I’ve gained skills that will help me help others.”

First Mayo, then the World
Student plans to use education to enhance healthcare in developing countries

Katcha Taylor

A Word to the WISE
Community provides personal and professional resources to women

It is a living learning community, a chance for like-minded women entering college to find inspiration, answers and camaraderie.

Members of Women in Science & Engineering (WISE), an intensive first-year experience for women majoring in science, mathematics or engineering, are introduced to mentoring and support systems within the university, their specific college and beyond.

“We’re finding that our WISE students are not only staying in areas like science, they’re staying together, as friends and classmates once they’ve left WISE,” said Gina Tempel, the program’s director and associate dean in the College of Science. WISE members are first-year students who make a one-year commitment to the program. “Students in this program are developing lifelong friendships.”

Additionally, programs created specifically for WISE members provide a forum for members to explore educational, professional and leadership opportunities.

“Sometimes it’s hard for really bright women who are interested in math and science to find others who are like them,” Tempel said. “This (program) gives them a chance to really get to know other women well and connect with them well.”

The WISE community is housed in Argenta Hall and shares a floor and resources with the Honors Residential Scholars Program. WISE members have enhanced access to associated faculty, academic advising and study groups. Additionally, WISE members get to participate in all WISE-sponsored social events.

Participants are in the same boat, share the same concerns, can answer one another’s questions and share a sense of friendship cultivated by common interests.

Tempel notes that one of the primary purposes of WISE is to keep women engaged in scientific fields.

“Studies have shown that when women develop a sense of identity within their discipline, that they have a tendency to stay,” she said.

For more information, a complete list of eligible majors, other eligibility requirements and how to apply for WISE, visit www.unr.edu/wise.
Seattle resident Christine Vaggione, 27, was a star volleyball player in college. And now, post-college, her claim to fame is far loftier.

“Now I get to design bridges,” she said of her current job at TY Lin International. “My first project was a 10-lane cable stay bridge in Vancouver, British Columbia (Port Mann Bridge). I had the opportunity to work on the seismic analysis and apply a lot of the concepts I learned in school.”

Vaggione graduated from Nevada in 2007 with a bachelor’s degree in Civil Engineering; she then attended the University of California, Berkeley and earned a master’s in Civil Engineering. But her educational path wasn’t always clear, especially in her high school years.

“I really had no idea what a good fit it would be for me until after I arrived,” she remembered. “Like most high school seniors, I really had no idea what would make a college a good fit for me. I had no idea that the College of Engineering had an amazing structures lab and top-notch professors.

But she benefited from the labs, the staff, a diverse engineering experience and a valuable internship.

“My first engineering job was an internship at BJG in Reno,” she said. “I had the opportunity to work with some incredibly talented women engineers who were wonderful examples to me, and I had a boss who encouraged all of us to grow as engineers.”

She also says she made phenomenal memories as she laid the foundation for her future.

“Taking Hawaii to five games in front of almost 10,000 people as a part of the University of Nevada’s volleyball team was incredible; ... graduating with all A’s from the University of Nevada, Reno was an accomplishment that I am proud of; being a part of the presentation team for our concrete canoe team at Nationals was awesome. God has blessed me with so many incredible opportunities,” she said.

Common bonds
Student organization unites women interested in engineering

Women Into Computer Science and Engineering (WICSE) is an on-campus organization dedicated to supporting the efforts of women who are considering pursuit of a career in Computer Science and Engineering, or who show an overall interest in computers. Members are women who share common interests, concerns and ambitions in and outside of the computer science and engineering context.

The club’s goal: to help foster an atmosphere of academic, social and community support for current and prospective women in these fields.

Emily Hand, a Computer Science and Engineering and Applied Mathematics dual major, serves as the club’s President.

“As the President of WICSE, I organize events, such as lectures, and workshops on CS-related topics,” she said. “I also organized a series of mock interviews, which were extremely successful, and an outreach program to recruit more members as well as reach out to younger women interested in engineering.”

The mock interviews were designed to help prepare engineering students for the challenging interviews they’ll face in the future. The afternoon session provided a crash-course on interviewing skills, giving participants advance knowledge of the types of questions they should prepare to field.

Other club events include social activities like bowling and camping, workshops on industry topics like UNIX, internship opportunities and more.

For more information about WICSE, visit their website: http://wicse.blogs.unr.edu/

The Society of Women Engineers
Encouraging young women to study engineering

The Society of Women Engineers (SWE) is a not-for-profit educational and service organization that empowers women to succeed and advance in the field of engineering, and to be recognized for their life-changing contributions as engineers and leaders. Founded in 1950, SWE is the driving force that establishes engineering as a highly desirable career for women through an exciting array of training and development programs, networking opportunities, scholarships, outreach and advocacy activities, and much more.

Kara Bymers (BS, Civil Engineering, ’07) says her experience with the Society of Women Engineers enhanced her professional networking opportunities while at Nevada. “It allowed me to meet important people in the industry, enhance my professional skills and even develop my resume,” she said. She now serves as a professional liaison for the SWE.
The same, but different
Gazaway spends 25 years in diverse jobs for the same employer
Nevada graduate and San Jose resident Connie Gazaway always seems to have her gaze set on the next challenge.

“Most of the highlights of my life have one thing in common: I tackled and completed something successfully that I didn’t think I could do,” she said. Among highlights: She climbed Half Dome (5000 feet high, 20 miles) in Yosemite at the age of 35; and she biked through Glacier National Park in Montana a total of 180 miles in four days, crossing the Continental Divide twice.

But perhaps her most memorable experiences are from the professional realm.

The senior project manager at CH2MHILL, who received a bachelor’s degree in Civil Engineering from Nevada in 1985, recently traveled to a Muslim nation to build houses.

“It was an amazing experience where as a woman I had to resist giving advice to local Muslim men performing construction activities … I had to work fully covered and avoid looking men in the eye or acting as an equal,” she said. “Needless to say, it was quite different from managing construction projects in California.”

Gazaway has been with the same company for nearly 25 years, making her an oddity in Silicon Valley.

“The reason I have remained so long is that I have had such a variety of opportunities even though I have stayed at the same company,” she said, crediting some of her diversity with the education she received at Nevada. “If you choose to never stop learning, then you won’t become bored, and it can lead you to opportunities you may never have imagined.”

Gazaway is now assigned to the Water Business Group but works across business lines, currently managing projects for the Transportation Business Group and Environmental Business Group as well. She is also involved in Business Development.

“I am a program/project manager during the day and participate in a variety of other activities after hours,” she said, including serving on the Dean’s Advisory Board for the University of Nevada’s College of Engineering. “I am having so much fun now it doesn’t even seem like work. I am designing trails/parks in our community that I can use for biking and walking my dog with my husband.

“I am able to leverage all the different skills and knowledge I have acquired over the years because I didn’t say ‘I don’t know how to do that’ or ‘I can’t do that,’” she continued. “Just do it. You never know where your choices may lead.”

College of Engineering Advisory Board Mission Statement

The mission of the College of Engineering’s Advisory Board is to advise the University President and the Dean of the College of Engineering on matters pertaining to College of Engineering programs. It is the Board’s responsibility to work with the College to improve the academic and research programs that constitute the stature of the College of Engineering. With the changing requirements in the business and technical communities, the expertise and knowledge of the Board can prove valuable inasmuch as the Board represents firms and businesses employing graduates of the programs.

The Board is also empowered and charged with the responsibility to raise discretionary funds on behalf of the College of Engineering to assure adequate monies are available to carry on the programs necessary to maintain the quality of education now being offered. Excellence in engineering education must be offered in the future to retain the status now enjoyed in the educational community.

Further, the Board will assist in whatever means necessary to recruit and retain qualified students to the University of Nevada, Reno, College of Engineering.
Sound advice
Kathy Smith serves on Advisory Board, offers perspective from diverse career

College of Engineering Advisory Board member Kathy Smith has spent her professional career learning about all sides of engineering and business. The Nevada College of Engineering alum and Native Nevada has been a civil engineer, business owner, business developer, business broker and beyond.

Smith graduated with a bachelor’s degree in Civil Engineering in 1981, though she admits her original interest was in architecture. After receiving her degree, she worked in airport engineering with runways and terminal relocation. She also briefly worked for the highway department at the Nevada Department of Transportation.

Smith moved to Las Vegas, and in 1992 started working in the private development field with master planned communities as a partner with ESI Engineers. Smith was primarily involved in the entitlements, planning and engineering work for golf course communities in Southern Nevada.

As Smith grew in her profession and abilities she purchased the firm from her two partners and rebranded the company changing its name to VPoint. As VPoint, the firm expanded its services to provide water, wastewater and transportation engineering. The expansion of these services allowed Smith to expand offices into the Reno and Fallon locations providing planning, civil engineering and surveying throughout Nevada. In December of 2004 Smith sold VPoint Engineering to TRC, a large multifaceted, national environmental and engineering firm on the New York Stock Exchange.

Smith attempted to retire after the sale of VPoint but found herself drawn back to the business part of running an engineering firm. She went back to school and is now a Business Broker with Las Vegas Commercial and Business Sales, specializing in Business Transactions, Commercial Properties, and Ranches in Northern Nevada.

“I retired for a couple of years and that didn’t suit me too well, so I went back to work,” she said. “With business brokering, I can represent both the buyer and seller because I’ve been on both sides.”

As part of her professional work as a business broker, Smith is a member of and licensed by the Nevada Business Brokers Association. She was named one of the “Most Influential Women in Southern Nevada” by Business Las Vegas and was also called a “Woman to Watch” by the Nevada Business Journal.

As part of her role on the advisory board, Smith attends meetings and participates on committees, providing valuable advice to the dean regarding priorities and directions for engineering education and research.

Smith splits her time between Las Vegas and Ely with work and family in both locations. In her spare time she oversees her ranch in Steptoe Valley enjoying the crop production, wildlife and riding her cutting horses. When time allows she and her daughter both compete in cutting competitions in Nevada and Utah while her son in law ropes.

“Nevada has been very good to me personally and professionally and without my solid education at Nevada it would not be possible to live the life that I enjoy.”

Chief engineer
Heidi Gansert uses engineering background in role as Chief of Staff

As Nevada Governor Brian Sandoval’s Chief of Staff, University of Nevada alum Heidi Gansert says she constantly taps the lessons learned from her undergraduate study in engineering.

“I use the problem solving and analytical skills learned when studying to be an engineer every day at work,” she said. “As the Chief of Staff for Governor Sandoval, I deal with diverse issues and all departments of state government — from Business & Industry to Health and Human Services. I have also spent a great deal of time on budget-related issues for which my engineering foundation has proved to be invaluable.”

She earned a bachelor’s degree in engineering from Santa Clara University, which she attended in the early ‘80s. She then came to the University of Nevada, Reno, to earn a master’s of business administration.

“I pursued an MBA because I enjoy learning and wanted to hone by business acumen,” she said. “I also believe it is important to get the best education possible as education provides opportunity.”

Throughout her life — both educationally and professionally — she has broken down boundaries, relying on basic tenets of honesty and respect in building her reputation.

“When I commenced engineering school in 1981, I was one of only three women in my civil engineering class at Santa Clara University,” she said. “As a member of Nevada’s Assembly, I was one of three female Republican legislators and was elected the republican leader just prior to the half-way point of my second term. Now, as the Governor’s Chief of Staff, I am one of very few women leaders in state government and the Republican party.

“I believe hard work, honesty and respect for others will ensure one’s success in every endeavor — regardless of your gender or the task at hand,” she added.

Gansert now serves on the Dean’s Advisory Board for the College of Engineering.

“As an Advisory Board member, I can best support the College’s efforts to strengthen our workforce and improve the quality of life in Nevada,” she said. “I believe the College of Engineering will help educate some of our community’s future leaders and innovators … I am very hopeful that more women will study engineering, especially at the University of Nevada. The knowledge and expertise gained through an education in engineering will prove to be advantageous and rewarding.”

In addition to her professional successes, Gansert has been married for almost 25 years to Guy Gansert and has two daughters and two sons ages 12-18; her eldest will start college this fall.

“The most rewarding part of my life is my time with my family,” she said. “I love being with my children and husband — whether going for a walk or watching a movie. I am very proud of them and realize how blessed I am every day to have each of them in my life.”

Heidi Gansert

Kathy Smith
A PASSION FOR EDUCATION

Whether they found inspiration through a great teacher, have a goal to help improve the lives of future students or they simply want to share their passion with others, these women who graduated from the University of Nevada, Reno, have chosen to give back to future students in Nevada.

Work-life balance
Nevada graduate defines success in terms of passion and profession

Judy Fredrickson, 51, has focused on her family — and found success in the process. She met future husband Joel during her undergraduate study at the University of Nevada, Reno in the ’80s. They married and moved to Tallahassee, where she earned her master’s at Florida State University.

But then with two young children and all grandparents back in Reno, they found themselves crossing the country yet again. She decided to attend Nevada when the Computer Science Ph.D. program started, but found herself torn between priorities — ultimately choosing her family.

“Always loving the academic life, I returned when the girls become older and taught while working on my degree,” she said. “I had a great experience in the CSE department — teaching and studying graph algorithms. The faculty in the department was very accessible and accepting of me as an LOA and a student. It was a great experience.”

Fredrickson earned her Ph.D. in Computer Science and Engineering from Nevada in 2006.

“I returned to this degree almost 20 years after I received my master’s, so it really helped me bring my theoretical skills to a current place,” she said. “I knew at this time that teaching is where I really wanted to end up, and this degree helped make that goal so much easier to attain.”

Within a year of earning her Ph.D., she found a home teaching computer science courses at Truckee Meadows Community College, where she currently serves as Professor of Computer Technologies.

“I’ve been growing the CS program at TMCC to be a 2+2 program with the CSE program, and I encourage all my students to move through the university and beyond,” she said.

With an active family life and professional drive, she says she’s found a great sense of balance. (And on a related note: Fredrickson was lounging on the North Shore of Maui as she responded to these interview questions.)

“My goal is to enjoy life,” she said. “My education prepared me for this goal as I love to learn and love sharing the experience with others.”
Designing Woman  
Engineering Grad is Award-Winning Instructional Designer

Alina Solovyova-Vincent, 36, has come a long way from her native Uzbekistan, which she left in 1994 on an Exchange program.

“Reno was much smaller than I was used to,” she recalled of the transition from her native city, population 2.5 million, to Reno. “But I liked how the climate was similar, and I loved the mountains."

Little did she know that she’d fall in love with many aspects of Reno, and later call it home.

“I applied to grad school here in physics,” she said. “But I found myself needing to take a computer science course, and I found out that I liked that much more than physics.”

After meeting her future husband on campus — both were student workers in the library — she earned her master’s in Computer Science and Engineering in 2003. And now she is an Instructional Designer at the University of Nevada, Reno, where she applies skills learned in her master’s program to her award-winning programs.

“I’m not afraid of technology, but I also have the people skills,” she said. “I combine both by solving problems and explaining solutions in non-technie language.”

And for the third consecutive year, Solovyova-Vincent is the recipient of an international award that recognizes innovative and engaging courses. She has spearheaded the design and delivery of winning courses for the past three years using a “course makeover program” that she created, which provides instructors with comprehensive review and feedback on the design and delivery of their courses.

This year she and Nursing Assistant Professor Michele Pelter won the 2011 Blackboard Exemplary Course Award.

“It’s wonderful to be rewarded for our hard work,” she said. “And it’s rewarding to implement changes that ultimately help students have a more meaningful educational experience.”

Riding High on Success  
After two degrees from Nevada, Reno native leads active personal and professional life

If Amber Broch, 30, seems to be in a cycle of success, it’s an appropriate metaphor.

She earned a master’s and bachelor’s degree in Mechanical Engineering from the University of Nevada. She is a research engineer in atmospheric sciences, with a focus on renewable energy, for the Desert Research Institute. She teaches two classes (Thermodynamics II and Internal Combustion Engines, both in the Mechanical Engineering Department) at the University of Nevada, Reno. She has a newborn daughter.

And where the “cycle of success” truly seems fitting: She’s also an avid bicyclist. Last year, she won the Mountain Bike Cross Country National Championships in Sol Vista, Colorado and is currently the Cat 1 National Champion.

“I enjoyed riding and racing with the University of Nevada cycling team while I was in school,” she said. “That is where I got started in competitive cycling. I had a ton of fun racing for the team, and I’ve continued to race since school, and I’m still friends with many of my former teammates.”

The drive to succeed in the cycling world mirrors her educational and professional success.

“I didn’t choose engineering until after my first semester in college, when I realized my strengths in math would be a benefit in the engineering program,” she said. “When I was finishing up my undergraduate degree, my advisor at the time (Dr. Byard Wood) had an upcoming research project and offered to support me as a graduate student. That opportunity basically got me to where I am today, as that very project eventually led to my position here at DRI.”

Currently, her work at DRI involves writing proposals and securing funding in the fields of atmospheric sciences and renewable energy. She also contributed to a feasibility study for the Regional Transportation Commission and was subsequently hired to help convert some of the buses to run on hydrogen and study their performance.

“I’ve had the opportunity to work in diverse topics in the area, such as transportation fuels (including hydrogen, compressed natural gas, and biofuels) and solar energy,” she said.
Father’s footsteps
Local graduate followed her family legacy — while raising a family of her own

Sandy Haslem’s father, an inventor and mechanical engineer, holds 23 patents. So it may be easy to guess the end result of a simple question in her home.

“In high school he was always available if I (or my other five siblings) needed any help,” she recalled. “I sparingly asked for help from him because if I did, I would have to be prepared to have a two-hour session that would start with the story of the Greek mathematician Pythagoras who developed the Pythagorean Theorem!”

But thanks to her father’s pontifications — and with the support of what she calls an amazing English teaching mother (“imagine her life with all of us engineers!” she quipped), Haslem found herself following in her father’s footsteps. She received her bachelor’s degree in Chemical Engineering in 1982 and a master’s degree in Metallurgical Engineering in 1985.

“There isn’t a day that goes by that I don’t reflect back and feel so very appreciative that I was able to get a college education that has provided so many opportunities for me,” she said. “I have spent most of my time in the mining and mineral processing industry — both in research and development and in production.”

More recently — for the last decade — Haslem has worked to support the manufacturing sector of Nevada as the Director of Nevada Industry Excellence, the Nevada System of Higher Education’s Industrial Extension Program.

“My goals for the future involve contributing to the profitable growth of the manufacturing sector in Nevada,” she said. “Education provides the basic building blocks, but building trusting relationships and being in a service role is what is driving our ability to help Nevada’s industrial community.”

And despite the idea that much of her family and friends encouraged her from a young age to follow her engineering dreams, it wasn’t unanimous advice.

“When I was offered a scholarship for Chemical Engineering, my high school counselor and math teacher recommended I instead go into education so that I could keep the same schedule as my future children,” she said. “I decided to take the scholarship and pursue engineering. In my engineering career, I’ve found I have been afforded interesting and important work all the while accommodating a schedule that worked great for raising a family.”

Remembering Friends
While she is no longer with us, we will always remember a dear friend who championed for the Earthquake Center (CCEER) at the College of Engineering and due in part to her support, the CCEER is still going strong over 25 years later and is currently undergoing expansion.

Andrea Pelter ’50 Business Administration
1929 - 2010

A third generation Renoite, Andrea was born on Feb. 21, 1929, to Andrew and Viola (Chilton, Barnes) Ginocchio. She was president and owner of Reno Iron Works for 35 years.

Andrea met her future husband, Bill Pelter, in Marcella Barkley’s fourth grade class at Mount Rose School in 1939. They went through Reno schools together and received their bachelor’s degrees from the University of Nevada, and married in 1954. Upon graduation, Andrea, with the sponsorship of Sen. Pat McCarran, was accepted in the U.S. Department of State, spending a year in post graduate work in Washington D.C. followed by two years assigned to the U.S. Embassy in Lima, Peru.

Chosen for the University Foundation its first year, Andrea remained involved in the Foundation for 25 years. As strong advocates of a medical school in Nevada, the Pelters lobbied the legislature relentlessly. With Sen. Paul Laxalt and Dr. Bruce Douglas at the helm, a group of Nevadans, including Andi, lobbied the National Science Foundation in Washington D.C. in support of the College of Engineering Earthquake Center. The University’s Reno Iron Works’ Scholarship has been in effect for over 75 years. In 1967, Andrea joined the first volunteer lecturer series for the College of Engineering.

She was the first female on any engineering committee when she joined the College of Engineering Advisory Board in 1981. She served on the Arts and Science Board, tax and legislative committees from the late 1960’s to the 1980’s.

In 1986 she received The President’s Medal; in 1987 she was named Distinguished Nevadan, and in 1993 awarded an Honorary Doctorate Degree from the University of Nevada. Andi was also recognized with the University of Nevada Service Award.
1951
Francis Smigle, Civil Engineering

1960
Yvonne Flynn, Civil Engineering

1966
Sami Eissa, Civil Engineering
Andrea E. DeSantis Clark, Engineering Science
Carey Loflin, Engineering Science

1968
Nancy Bentzen, Mechanical Engineering

1971
Bahong Kuo, Civil Engineering
Sandra Crocket, Mechanical Engineering

1972
Verlene Bonham, Electrical Engineering

1973
Doris Looper, Engineering Design Tech
Donna Brickell, Engineering Science
Narendra Patel, Mechanical Engineering

1974
Kim Walsh, Engineering Design Tech

1975
Franchesca Siepenkothen, Electronic Tech
Sarah Grable, Engineering Design Tech

1976
Patricia Buchanan, Chemical Engineering
Elizabeth Masters, Computer Information Science
Diana Haynes, Engineering Science
Christine Nelson, Engineering Science
Georgine Kabler, Mechanical Engineering
Margaret Witte, Metallurgical Engineering

1977
Jean Hartley, Chemical Engineering
Donna Hilton, Chemical Engineering
Cherie Templeton, Chemical Engineering
Ninh Dzoan, Mechanical Engineering

1978
Cynthia Klassy, Chemical Engineering
Valerie Mitchell, Chemical Engineering
Bonnie Peterson, Chemical Engineering
Jill Nelson, Civil Engineering
Lynn Orphan, Civil Engineering
Patricia Polisky, Civil Engineering
Susan May, Engineering Design Tech
Kathy Smith, Engineering Design Tech

1979
Jolaine Johnson, Chemical Engineering
Bobi Schmutzer, Chemical Engineering
Cindy Templeton, Chemical Engineering
Dawn Cassidy, Mechanical Engineering
Adrienne Parcher, Mechanical Engineering
Wendy Wilson, Mechanical Engineering

1980
Rebecca Chandler, Chemical Engineering
Denise Goddard, Chemical Engineering
Andra Juniel, Chemical Engineering
Julie Roth, Chemical Engineering
Diana Diehl, Civil Engineering
Michele Smith, Civil Engineering
Lolene Terry, Civil Engineering
Laurien Vanderharst, Electrical Engineering
Tracey Wolny, Electrical Engineering
Linda Biaggi, Engineering Design Tech
Hedyna Gomez, Metallurgical Engineering

1981
Mahnoush Bagheri, Civil Engineering
Sohila Saidi, Civil Engineering
Kathy Smith, Civil Engineering
Laura Lazzareschi, Engineering Design Tech
Michele Smith, Geological Engineering
Andrea Adamson, Mechanical Engineering
Gholamreza Zolghadr, Mechanical Engineering

1982
Sandra Haslem, Chemical Engineering
Loni Ghiorsa, Civil Engineering
Debra Starnes, Civil Engineering
Nancy Vanderhoar, Civil Engineering
Shyi-Luen Liu, Electrical Engineering
Robin Kennedy, Engineering Design Tech
Lori Williams, Eng Design Tech
Laura Robertson, Eng Design Tech
Alisa Sandoval, Mechanical Engineering

1983
Robin Duke, Chemical Engineering
Mahin Hemmati, Chemical Engineering
Lori Williams, Chemical Engineering
Shari Zaiger, Chemical Engineering
Nancy Bobb, Civil Engineering
Roberta Lewis, Civil Engineering
Susan Martinovich, Civil Engineering
Lee Harris, Electrical Engineering
Colombia Canas, Electronic Tech
Alina Racens, Electronic Tech
Lori Sanchez, Electronic Tech
Laura Williams, Eng Design Tech
Karen McGinley, Mechanical Engineering
Laura Allen, Metallurgical Engineering
Merilee Grulli, Metallurgical Engineering

1984
Georgia Dan, Chemical Engineering
Merilee Grulli, Chemical Engineering
Kimberly Piros, Chemical Engineering
Barbara Blasey, Civil Engineering
Donna Reed-Kodalen, Electrical Engineering
Pamela Sekac, Electrical Engineering
Kerry Webb, Electrical Engineering
Samira Evans-Hanson, Electronic Tech
Marthe Aston, Engineering Design Tech
Deborah Gallegos, Mechanical Engineering
1985
Vahid Dabestani, Chemical Engineering
Karen Murphy, Chemical Engineering
Jeanie Baker, Chemical Engineering
Jeanie Baker, Civil Engineering
Constance Gazaway, Civil Engineering
Marchon Miller, Civil Engineering
Denise Nikoloff, Civil Engineering
Mary Stroup-Gardiner, Civil Engineering
Gail Burns, Electrical Engineering
Ann Elliott, Electrical Engineering
Yuan Rosen, Electrical Engineering
Carol Roth, Electrical Engineering
Sylvia White, Electrical Engineering
Bryne Dyer, Electronic Tech
Janet Fisher, Electronic Tech
Dorothy Wilkins, Electronic Tech
Cynthia Ryan, Engineering Design Tech
Maureen Kalinski, Mechanical Engineering
Patricia Ruby, Mechanical Engineering
Ann Tomiyasu, Mechanical Engineering
Sandra Haslem, Metallurgical Engineering

1986
Diane Lancaster, Chemical Engineering
Renee Lawyer, Civil Engineering
Christine Luna, Computer Science
Nik Hassan, Electrical Engineering
Tracy Horner, Electrical Engineering
Susan Vacchana, Electronic Tech
Sharen Georgeson, Engineering Design Tech
Margaret Fair, Mechanical Engineering

1987
Tina Huston, Civil Engineering
Kathleen Weaver, Civil Engineering
Maurine Mihalek, Computer Science
Lynda Morrison-Rader, Computer Science
Laurie Goldy, Electrical Engineering
Zuraida Jamaluddin, Electrical Engineering
Jean Sherman, Electrical Engineering
Laura Walsh, Electrical Engineering
Barbara Holm, Mechanical Engineering
Madelyn Holtzclaw, Mechanical Engineering
Rima Kent-Stieber, Mechanical Engineering
Denise Kowal, Mechanical Engineering
Robbie-Lee Mallery, Mechanical Engineering
Linda Muklevicz, Mechanical Engineering
Mahin Hemmati, Metallurgical Engineering

1988
Laura Simpson, Chemical Engineering
Mary Soderstrom, Chemical Engineering
Karen Golder, Computer Science
Beata Olesniewicz, Electrical Engineering
Tracy Schmidt, Mechanical Engineering
Kate Templeton, Mechanical Engineering

1989
Lynn Glidden, Civil Engineering
Jana Dunn, Computer Science
Jacqueline Lawson, Computer Science
Yi-Ting Yang, Computer Science
Ingrid Gilstrap, Electrical Engineering
Hadi Kar, Electrical Engineering
Kimberly King, Electrical Engineering
Tammy Ehrmantraut, Mechanical Engineering
Huijun Hu, Metallurgical Engineering

1990
Samia Ara, Civil Engineering
Barbara Hasselbrook-Shanley, Civil Engineering
Yolanda Labia, Civil Engineering
Brenda Lila Lee-Tan, Civil Engineering
Sonja Manuel, Civil Engineering
Noelle Nicks, Civil Engineering
Karen Schllichting, Civil Engineering
Norma Velasquez-Bryant, Civil Engineering
Mary Joanides, Computer Science
Debra Wagner, Electrical Engineering

1991
Renee Russell, Chemical Engineering
Shauna Adams, Civil Engineering
Julie Ferrarelli, Civil Engineering
Deborah Jenkins, Civil Engineering
Amy Nelson, Civil Engineering
Gloria Marie Rubin, Civil Engineering
Georgia Turner, Civil Engineering
Diana Seymour, Computer Science
Luz Smith, Computer Science
Ingrid Burbey, Electrical Engineering
Kim Hansen, Electrical Engineering
Ming Pan, Electrical Engineering
Roxanne Pannell, Engineering Physics
Judy Kareck, Mechanical Engineering
Leanne Saarem, Mechanical Engineering
Alice Walker, Mechanical Engineering
Donna Noel, Metallurgical Engineering

1992
Jorgi Day, Chemical Engineering
Alana Kroll-Corbett, Chemical Engineering
Nancy Erod, Civil Engineering
Denise Inda, Civil Engineering
Kelli Petersen, Civil Engineering
Janet Reck, Civil Engineering
Jamie Roybal, Civil Engineering
Carolyn Stone, Civil Engineering
Kelly Larson, Electrical Engineering
Joann Meacham, Electrical Engineering
Winnie Tam, Electrical Engineering
Karen Konewko, Mechanical Engineering
Dana Kimbal, Metallurgical Engineering

1993
Cathy Ballenger, Chemical Engineering
Celia Reese, Chemical Engineering
Elizabeth Wilkinson, Chemical Engineering
Jeanine Barnes, Civil Engineering
Josephine Brooks, Civil Engineering
Nancy Kennedy, Civil Engineering
Yuging Zhang, Civil Engineering
Jian Cai, Computer Science
Jennifer Wright, Computer Science
Haleh Assadi, Electrical Engineering
Janet Crecelius, Electrical Engineering
Mai Luo, Electrical Engineering
Khanh Nguyen, Electrical Engineering
Dawn Collins, Mechanical Engineering
Annette Long, Mechanical Engineering
Zechuen Yuan, Mechanical Engineering

1994
Traci Loftin, Civil Engineering
Shannon Ragan, Chemical Engineering
Joanna Ambroz, Civil Engineering
Cari Anderson, Civil Engineering
Donette Barreto, Civil Engineering
Julianne Collins, Civil Engineering
Theresa Jones, Civil Engineering
Jessica LaPlante, Civil Engineering
Ssu-Wei Loh, Civil Engineering
Trina Magoon, Civil Engineering
Huizhi Xie, Civil Engineering
Aoilbama Diaz, Computer Science
Susan Mathew, Computer Science
Jiuyu Yu, Computer Science
Tasha Bingham, Electrical Engineering
Mingdi Jin, Electrical Engineering
Anywan Tan, Electrical Engineering
Kathleen Altman, Metallurgical Engineering
Xiaotong Su, Metallurgical Engineering

1995
Heather Schiller, Chemical Engineering
Susan Weiss, Chemical Engineering
Angela Huefle, Civil Engineering
Mary Legenbauer, Civil Engineering
Susan Pederson-Stahl, Civil Engineering
Kerry Schmick, Civil Engineering
Mylinh Tang, Civil Engineering
Alissa Turner, Civil Engineering
Hayian Armstrong, Computer Science
Nagarathna Dutt, Computer Science
Debra Estabrook, Computer Science
Mei Ling, Computer Science
Krishnareddy Sista, Computer Science
Jianzhun Sun, Computer Science
Pingyan Tan, Computer Science
Li Wang, Computer Science
Huiing Zeng, Computer Science
Susan Hood, Geological Engineering
Catriona Black, Materials Science & Engineering
Kelly Buchanan, Mechanical Engineering
Naota Hansen, Mechanical Engineering
Wei Snider, Metallurgical Engineering

1996
Jennifer Hagins, Chemical Engineering
Kristi Lammel, Chemical Engineering
Thorunn Snorradottir, Chemical Engineering
Susan Hood, Civil Engineering
Debra Kaye, Civil Engineering
Janet Melander, Civil Engineering
Rhonda Ruiz, Civil Engineering
Tamela Germano, Computer Science
Jie Fan, Electrical Engineering
Donna Ladouceur, Electrical Engineering
Bei Wang, Electrical Engineering
Hongyan Wang, Mechanical Engineering
Sharon Brown, Metallurgical Engineering
Renee Russell, Metallurgical Engineering

1997
Monette Greer, Chemical Engineering
Karla Perriza, Chemical Engineering
Natalie Calderone, Civil Engineering
Stacia Dolphin, Civil Engineering
Sharon Foerschler, Civil Engineering
Alexandrea Foster, Civil Engineering
Michele Maher, Civil Engineering
Penelope Oteri, Civil Engineering
Diana Pyatov, Computer Science
Trista Schulze, Civil Engineering
Kirsten Thomas, Civil Engineering
Shari Whalen, Civil Engineering
Jane Brooks, Computer Science
Judith Johnson, Computer Science
Sharon Limroth, Computer Science
Rebecca Singleterry, Computer Science
Min Zhang, Computer Science
Susan McDole, Electrical Engineering
Jennifer Adkisson, Mechanical Engineering
Krysty Arnold, Mechanical Engineering

1998
Jill Daugherty, Chemical Engineering
Jeanne Cardin, Civil Engineering
Adrienne Davis, Civil Engineering
Jennifer Moore, Civil Engineering
Thorunn Snorradottir, Civil Engineering
Carey Wilson, Civil Engineering
Xiaomei Chao, Computer Science
Taisa Deaconu, Computer Science
Daigi Ying Lin, Computer Science
Wei Liu, Computer Science
Reshma Murthy, Computer Science
Melinda Holtzman, Electrical Engineering
Elizabeth Meister, Electrical Engineering
Desiree Sause, Electrical Engineering
Lyndi Yankey, Electrical Engineering
Julene Boardman, Mechanical Engineering
Stacey Daniel, Mechanical Engineering
Cheri Eslinger, Mechanical Engineering
Darlene Ollom, Mechanical Engineering
Minna Martinovic, Metallurgical Engineering
Jennifer Nugent, Metallurgical Engineering

1999
Tasha Lopez, Chemical Engineering
Tiffany Bowling, Civil Engineering
Denise Bullock, Civil Engineering
Jennifer Davis, Civil Engineering
Alison Lark, Civil Engineering
Kristi Lammel, Civil Engineering
Kathy Nelson, Civil Engineering
Archna Rawat, Civil Engineering
Kaci Thomas, Civil Engineering
Sayedalkashi Srinivasan, Computer Science
Mei Wu, Computer Science
Regina-Gracia Anderson, Electrical Engineering
Kati Graham, Electrical Engineering
Yinhui Weng, Electrical Engineering
Janet Bird, Mechanical Engineering
Megan Gill Oehlert, Mechanical Engineering
Julia Randall, Mechanical Engineering

2000
Huma Chaudhery, Chemical Engineering
Rupali Mohansingh, Chemical Engineering
Archna Rawat, Chemical Engineering
Catherine French, Civil Engineering
Michelle Gamble, Civil Engineering
Virginia Ibarra, Civil Engineering
Janet Thomas, Civil Engineering
Brenda Winkler, Civil Engineering
Chih-Hui Jan, Computer Science
Gangshan Jin, Computer Science
Nerissa Oberlander, Computer Science
Xiaosheng Tu, Computer Science
Van Van, Computer Science
Saman Zhang, Computer Science
Zeina Ajajawi-Mashlab, Electrical Engineering
Molly Close, Electrical Engineering
Serena Green, Electrical Engineering
Satyashree Gummuluri, Electrical Engineering
Maeve (O'Brien) Curley, Electrical Engineering
Gina Miller, Mechanical Engineering
Nkechinyere Okezie, Mechanical Engineering
Jennifer Reid, Mechanical Engineering

2001
Crystal Brokaw, Chemical Engineering
Rebecca Bernier, Civil Engineering
Doris Blandino-Kelly, Civil Engineering
Rae Ford, Civil Engineering
Carie Huff, Civil Engineering
Claudia Pulido-Collantes, Civil Engineering
Sonya Volce, Civil Engineering
Rong Hu, Computer Science
Freda Kurtz, Computer Science
Shannon Swanson, Computer Science
Jianhua Weng, Computer Science
Yibei Zhao, Computer Science
Melissa McKeand, Electrical Engineering
Anita Rawat, Electrical Engineering
Adrienne Breland, Environmental & Natural Resource Science
Candice Bauer, Mechanical Engineering
Denise Lane, Mechanical Engineering

2002
Ambere Banghart, Civil Engineering
Teresa (Kulesza) Goodwin, Civil Engineering
Alexandra Lutz, Civil Engineering
Anita Lyday, Civil Engineering
Christianah Olaegbe, Civil Engineering
Ozlem Ozmen, Civil Engineering
Amy Pochmann, Civil Engineering
Kimberly Rigdon, Civil Engineering
Elham Alavi, Computer Science
Jigna Bhatt, Computer Science
Mary Cheung, Computer Science
Shanqing He, Computer Science
Zixuan Huang, Computer Science
Yingyu Lu, Computer Science
Olja Milic, Computer Science
Rakhi Motwani, Computer Science
Shana Rheaunt, Computer Science
Judy Tortelli, Computer Science
Ogechi Ugwuebe, Computer Science
Yiun Xu, Computer Science
Xiaoqin Yuan, Computer Science
Dinah Cisco, Electrical Engineering
Kelly Griswol, Electrical Engineering
Emily Rahn, Electrical Engineering
Megan Severt, Electrical Engineering
Erica Borum, Environmental Engineering
Kelly Fitch, Environmental Engineering
Coral Taylor, Environmental Engineering
Aleta Hagman, Materials Science & Engineering
Nigar Cobanoglu, Mechanical Engineering
Linda Manning, Mechanical Engineering
Ann-Marie Volkstedt, Mechanical Engineering
Nichole Whisman, Mechanical Engineering

2003
Kavitha Elugula, Chemical Engineering
Catherine Harrison, Chemical Engineering
Luceria Rodriguez-Barahona, Chemical Engineering
Mei Xin, Chemical Engineering
Rita Johnson, Civil Engineering
Megan Overton, Civil Engineering
Angalkki Ragavan, Civil Engineering
Lila Yacom, Civil Engineering
Neelima Budim, Computer Science
Carol Freinkel, Computer Science
Van Van, Computer Science
41
2004
Karen Corliss, Chemical Engineering
Katherine Laird, Chemical Engineering
Jenna Atkinson, Civil Engineering
Erika Barum, Civil Engineering
Aimee Deutschendorf, Civil Engineering
Amber Goicoechea, Civil Engineering
Jessica Gradick, Civil Engineering
Erica Gresham, Civil Engineering
Tracy Larkin, Civil Engineering
Katherine Mellon, Civil Engineering
Ashley Santti, Civil Engineering
Brianna Schroeder, Civil Engineering
Kelly Steelhammer, Civil Engineering
Kara Van Valkenburg, Civil Engineering
Meenakshi Iyer, Computer Engineering
Yan Tong, Computer Engineering
Laura Akers, Computer Science
Rosa Arias, Computer Science
Maryann Chandy, Computer Science
Shirlee Eitel-Bingham, Computer Science
Laurel Jones, Computer Science
Yining Li, Computer Science
Jitnapa Mahaviriyakul, Computer Science
Dawn Martens, Computer Science
Dhanya Menon, Computer Science
Shyamala Palanisamy, Computer Science
Fang Wang, Computer Science
Bei Yuan, Computer Science
Xiaoran Zheng, Computer Science
Rebecca Zimmerman, Computer Science
Summer Ahuna, Electrical Engineering
Gretchen Bocks, Electrical Engineering
Maryam Etezadi-Amoli, Electrical Engineering
Shara Guzzetta, Electrical Engineering
Sara Koef, Electrical Engineering
Vidya Malajala, Electrical Engineering
Rui Liang, Electrical Engineering/Computer Science
Bailey Cannon, Environmental Engineering
Johanna Ker, Environmental Engineering
Leilani Ungaro, Environmental Engineering
Kelsey Azarate, Mechanical Engineering
Diptiben Bhatka, Mechanical Engineering
Denz Dogruer, Mechanical Engineering
Jennifer Hagen, Mechanical Engineering
Dana Hansen, Mechanical Engineering
Sara McAllister, Mechanical Engineering
Roshelle Olson, Mechanical Engineering
Nuray Ozman, Mechanical Engineering
Jamie Scott, Mechanical Engineering
Jessica Corral, Metallurgical Engineering
Shailaja Varma, Metallurgical Engineering

2005
Beril Karakas, Chemical Engineering
Sarah Struble, Chemical Engineering
Belinda Suwe, Chemical Engineering
Melissa Aarskaug, Civil Engineering
Courtney Beadle, Civil Engineering
Melissa Gabriel, Civil Engineering
Catherine Harrison, Civil Engineering
Erika Hull-Stancliff, Civil Engineering
Kirsten Kehe, Civil Engineering
Jillian McNanahan, Civil Engineering
Rupali Mohansingh, Civil Engineering
Sandra O’Kelly, Civil Engineering
Cherie Pettersson, Civil Engineering
Maricika Petty, Civil Engineering
Hanni Schwiesow, Civil Engineering
Devrin Lee, Computer Science
Chris Martin, Computer Science
Stephanie Luong, Electrical Engineering
Sisra Panchagnula, Electrical Engineering
Katharina Toepfer-Bidwell, Electrical Engineering
Bronwyn Williams, Electrical Engineering
Tasha Goodrich, Engineering Physics
Melissa Resnick, Environmental Engineering
Lauren Yoshida, Materials Science & Engineering
Candice Carolla, Mechanical Engineering
Anusha Nambakam, Mechanical Engineering

2006
Angie Deschutter, Chemical Engineering
Ashley Howden, Chemical Engineering
Tiffany Lau, Chemical Engineering
Brenda Lok, Chemical Engineering
Rebecca Weber, Chemical Engineering
Brittany Wood, Chemical Engineering
Changjun Xue, Chemical Engineering
Yon Sohn, Chemistry Professional
Ashley Abrahani, Civil Engineering
Candice Abrams, Civil Engineering
Samantha Asikainen, Civil Engineering
Bailey Cannon, Civil Engineering
Devon Church, Civil Engineering
Darcey Donovan, Civil Engineering
Clarissa Hammett, Civil Engineering
Sharirna Loop, Civil Engineering
Kelly (Doyle) Lytle, Civil Engineering
Stella Montalvo, Civil Engineering
Ma. Jessanell Perez, Civil Engineering
Mary Joy Tidby, Civil Engineering
Tamara Tulloch, Civil Engineering
Linda Humphrey, Computer Engineering
Gayathri Parthasarathy, Computer Engineering
Tungaporn Intrappan, Computer Science
Xin Yu, Computer Science
Jacqueline Ahmad, Electrical Engineering
Judy Fredrickson, Electrical Engineering/Computer Science
Kristin Krasnicka, Environmental Engineering
Nora LaTourrette, Environmental Engineering
Danielle Ramos, Materials Science & Engineering
Yon Sohn, Materials Science & Engineering
Veronica Tognoni, Materials Science & Engineering
Sarah Alison-Yoel, Mechanical Engineering
Rachel Fulstone, Mechanical Engineering
Neelima Mallidi, Mechanical Engineering
Rashi Tiwari, Mechanical Engineering
Alexandra Vanderhoff, Mechanical Engineering
Kathryn Voors, Mechanical Engineering
Yon Sohn, Metallurgical Engineering
Nazipelen Eldekekioglu, Professional Construction Management

2007
Cherish Hoffman, Chemical Engineering
Jennifer Jomes, Chemical Engineering
Reka Aczel, Civil Engineering
Sierra (Andereg) Brewer, Civil Engineering
Lindsey Buis-Kelley, Civil Engineering
Kara Bymers, Civil Engineering
Silas Callahan, Civil Engineering
Jessica Dennis, Civil Engineering
Kimberly Dziegle, Civil Engineering
Christine Eklund, Civil Engineering
Lulu Gonzales, Civil Engineering
Christine (Harms) Vaggione, Civil Engineering
Frederick Kingdom, Civil Engineering
Brittany Miller, Civil Engineering
Jessica Myer, Civil Engineering
Maria Prather, Civil Engineering
Heather Rosenkoetter, Civil Engineering
Haejin Shin, Civil Engineering
Tanya Soleta, Civil Engineering
Jamie Steinman, Civil Engineering
Marissa Titlow, Civil Engineering
Tyra Wang, Civil Engineering
Chang Jia, Computer Science
Jennifer Knowles, Computer Science
Burcu Nemetu, Computer Science
Asya Nikitina, Computer Science
Radhika Radhakrishnan, Computer Science
Amandeep Sohal, Computer Science
Laney Elmore, Electrical Engineering
THURSDAY, OCTOBER 6, 2011

The College of Engineering
Distinguished Lecture Series Presents:

LIVING ON SHAKY GROUND
An Earthquake Awareness Symposium
Davidson Math & Science Center Auditorium

The State of Nevada is located in “earthquake country.” It lies within the Basin and Range Province, one of the most seismically active regions in the United States.

Hear from the experts why earthquakes happen, their aftermath, and what to expect when one strikes.

Learn how the College’s Center for Civil Engineering Earthquake Research creates “Earthquakes on Demand” to better understand this phenomenon and its consequences.

For more information, contact the Dean’s office:
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