

FORESIGHT

UW COLLEGE OF ENGINEERING AND APPLIED SCIENCE

FALL 2015, Volume 41, No.1



STUDENT LEADERSHIP

Born Leaders • A Summer of Learning • Join the Club



COLLEGE OF
ENGINEERING AND
APPLIED SCIENCE



“The two things that have caused me to be successful are the work ethic and values that go with the state of Wyoming and the education I got there.”

Greg Hill, President, Hess Corporation

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90% of our graduates have jobs or enroll in graduate programs within six months of receiving their degree.

89% of our graduates earn starting salaries greater than **\$50,000** annually.



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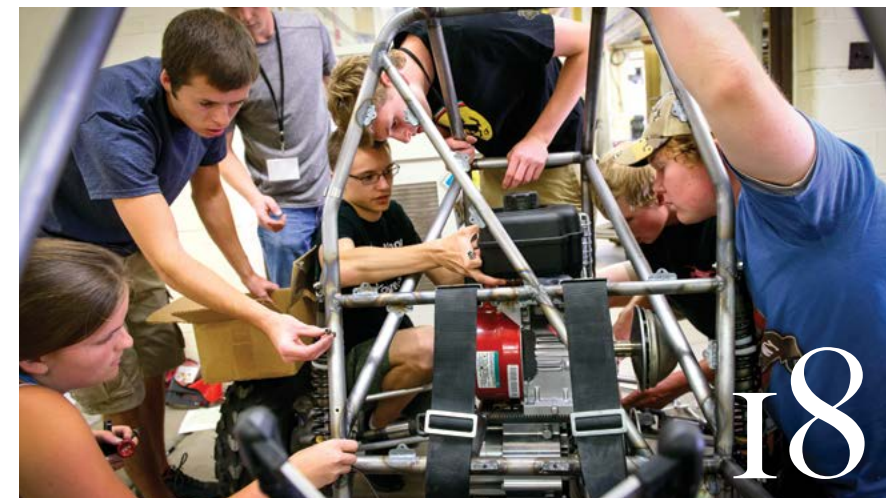
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and Applied Science

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Persons seeking admission to the University of
Wyoming shall be considered without regard to race,
color, religion, sex, national origin, disability, age,
veteran status, sexual orientation, or political belief.

Our Students Lead The Way

As you'll see in the following pages, this edition of *Foresight Magazine* is focused on leadership. But not just any, run-of-the-mill leadership—the unique kind that is displayed by the talented undergraduate and graduate students in the College of Engineering and Applied Science.

Leaders from our college inspire others to become more. They have a vision and attack it with a single-minded determination.

Even with the arduous workload that comes from being in one of our many challenging programs, our students give their time generously to volunteer for programs like the Engineering Summer Program, Engineers Without Borders or the Laramie Robotics Club. They participate in enrichment programs, like one of the many student societies on campus. They lead groups at orientation or on prospective student visits, or serve as ambassadors for the college.

Perhaps one of the most important aspects of leading is how our current students interact with youngsters from elementary schools, all the way up to seniors in high school. Our students can help shape generations of future engineers through their outreach efforts.

Every time our students interact with young people, connections are made. The young ones can look up to them and think, “Why can’t that be me?”

But like any great leader, our students listen to those around them. They’re willing to consider other views. Read on, and see just how our leaders share their vision and drive to accomplish goals.

The CEAS is producing graduates who will set an example for others in industry, academia and the world. They will shape those areas in the coming years. Ultimately, that is what a college education should be about.

Sincerely,



Andy Chapman
Editor, *Foresight Magazine*



Stay tuned for the January issue
of *UWyo Magazine* with a
special section devoted
to our service to Wyoming!

Subscribe today!
uwyo.edu/uwyo

On the Move

Since our last issue, the college has experienced some change regarding personnel and staff. Here are some notable moves.

Retirements

- Susan Allen, Office Associate, Department of Atmospheric Science, 37 years
- Patricia Colberg, Professor, Department of Civil and Architectural Engineering, 28 years
- Thomas Edgar, Associate Professor, Department of Civil and Architectural Engineering, 34 years
- Andrew Hansen, Professor, Department of Mechanical Engineering, 30 years
- Theresa Lucero, Accounting Associate, Sr., Dean’s Office, 38 years
- Derek Montague, Associate Professor, Department of Atmospheric Science, 27 years
- Norman Morrow, Wold Chair, Department of Petroleum Engineering, 23 years
- Steve Ownbey, Executive Computer Support Specialist, Department of Mechanical Engineering, 40 years
- Jay Puckett, V.O. Smith Professor, Department of Civil and Architectural Engineering, 32 years
- Richard Schmidt, Department Head/Professor, Department of Civil and Architectural Engineering, 30 years
- Jeffrey Van Baalen, Professor, Department of Computer Science, 36 years

Appointments

- Carl Frick, Associate Professor, has been appointed the head of the Department of Mechanical Engineering.
- Dennis Coon, Professor, has been appointed the interim head of the Department of Chemical Engineering.
- Hertanto Adidharma, Associate Professor, has been appointed the head of the Department of Petroleum Engineering.
- Anthony Denzer, Associate Professor, has been appointed the head of the Department of Civil and Architectural Engineering.
- Paul Dellenback, Professor, has been appointed Associate Dean for Advancement, previously serving as the head of the Department of Mechanical Engineering.

Professional Promotions

- James Caldwell was promoted to Professor in computer science.
- Ruben Gamboa was promoted to Professor in computer science.
- John Hitchcock was promoted to Professor in computer science.
- Cameron Wright was promoted to Professor in electrical and computer engineering.
- Ryan Kobbe was promoted to Associate Lecturer in civil and architectural engineering.
- Rimvyda Valiukenas was promoted to CEAS Director, Business Operations.
- Elizabeth Henn was promoted to CEAS Business Manager.

New Faces

- Teddi Hofmann, K-14 Senior Project Coordinator, CEAS Student Services
- Ann Jones, Associate Director, CEAS Student Services, liaison to UW Career Services
- Stephanie Boman, Accountant, CEAS Centers for Excellence
- Eve Hickman, Senior Accounting Associate, Dean’s Office
- Stevee Jones, Coordinator, Student Advising, Department of Petroleum Engineering
- Zach Lebo, Assistant Professor, Department of Atmospheric Science
- Shawn Griffiths, Assistant Professor, Department of Civil and Architectural Engineering
- Johnn Judd, Assistant Professor, Department of Civil and Architectural engineering
- Dilpuneet Aidhy, Assistant Professor, Department of Mechanical Engineering
- Ken Baum, Visiting Professor, Department of Petroleum Engineering
- Brian Toelle, Visiting Professor, Department of Petroleum Engineering

NEWS & NOTES



UW President Dick McGinity, left, speaks with FEI Vice President and General Manager for Oil and Gas Mark Bashforth following the announcement of a \$24 million collaboration among UW, FEI and the state of Wyoming.

UW's Tier-1 Engineering Initiative Benefits From \$24 Million Collaboration

Scientific and technical instrument manufacturer FEI will provide state-of-the-art imaging equipment, software and support for digital rock research with far-reaching impacts for Wyoming's oil and gas industry and its economy. Through this public-private partnership, UW and FEI intend to focus on advancing digital rock technology to gain better insight into flow and transport behavior in unconventional and conventional oil and gas reservoirs.

The Wyoming Legislature's state matching program will contribute an amount equal to the equipment and support provided by FEI for a total impact of \$24 million.

The investment will create the

new Center of Innovation for Flow in Porous Media, which will fund research to improve understanding of how to maximize recovery from conventional and unconventional oil and gas reservoirs, part of UW's Tier-1 Engineering Initiative.

The center will continue to advance scientific understanding of subsurface flows. It will develop the tools and knowledge necessary to predict the behavior of these flows, an essential component of both carbon recovery and storage. The fundamental research will provide key insight into energy problems significant to the state of Wyoming, the nation and the world.

FEI's digital rock technology will be used to create images and models that deliver valuable information to support critical business decisions. The precision 2-D and 3-D pore-scale images, and the digital rock models, inform decisions on how to optimize drilling and production.

UW Graduate Joins Wyoming Aviation Hall of Fame

A University of Wyoming graduate used his education to achieve more, as the Wyoming Aviation Hall of Fame selected Glen Larson as its lone entrant in 2015.

Wyoming Aviation Hall of Fame President John Waggener said Larson was selected out of nearly 40 nominations and became the 23rd inductee in the state's hall of fame since its inception in 1995.

Larson graduated from UW in 1970 with a degree in mechanical engineering with an aerospace option. Shortly after, he became a decorated Vietnam War fighter pilot, directing air strikes and logging 221 missions and 422 combat hours. He earned four Distinguished Flying Crosses, 19 Air Medals and the Legion of Merit.

After combat, he served as an experimental test pilot and was a finalist for the NASA astronaut program in 1984. He began work in management with McDonnell Douglas in 1988 and served 10 years, taking over engineering for a division of Goodrich Aerospace in 1998. He also served as vice president of Aircraft Systems until 2001.

Originally from Rawlins, Wyo., Larson serves on the National Advisory Board for the UW College of Engineering and Applied Science. Larson currently lives in St. Louis and works for BAE Systems.

For more information on the Wyoming Aviation Hall of Fame, go to dot.state.wy.us/home/aeronautics/aviation_hall_of_fame.html.

WyCEHG Receives Major Research Instrumentation Award

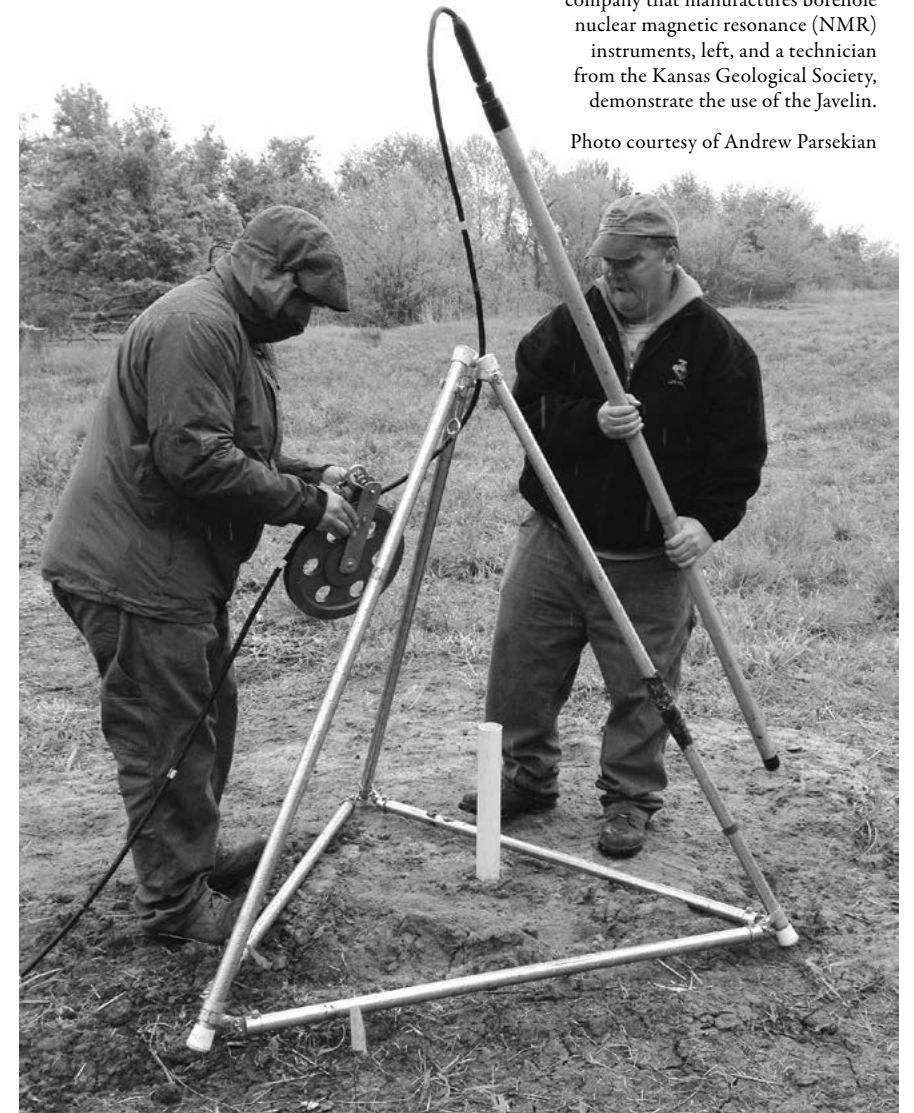
The study of hydrology and geophysics at the University of Wyoming just got a big boost, thanks to a research award that will give the university cutting-edge technology.

UW's Wyoming Center for Environmental Hydrology and Geophysics (WyCEHG) received a two-year \$408,000 National Science Foundation (NSF) Major Instrument Research Award for a borehole nuclear magnetic resonance (NMR) instrument. This geophysical tool, also referred to as a Javelin, can be deployed into boreholes and analyze how much water is in the aquifer and how easy or difficult it might be to extract that water. The instrument works on the same physical principles as medical MRI imaging.

"This is a relatively new technology for water," says Andrew Parsekian, an assistant professor in UW's Department of Geology and Geophysics as well as the Department of Civil and Architectural Engineering.

"The technology has been used for decades in the oil exploration industry. However, it has only emerged for use in hydrogeology within the past few years. This borehole NMR instrument will be the only one owned and operated by an academic institution in the United States at the current time."

Bill Gern, UW's vice president for research and economic development, says the piece of equipment "fills out the WyCEHG instrumentation suite for examination of subsurface hydrology. This will help UW



An operator from Vista Clara, the company that manufactures borehole nuclear magnetic resonance (NMR) instruments, left, and a technician from the Kansas Geological Society, demonstrate the use of the Javelin.

Photo courtesy of Andrew Parsekian

become one of the top five universities in subsurface hydrology in the United States."

Parsekian says the instrument will be used to visualize where water is stored underground; what the geometric properties of aquifers are; and how water changes over time. Initially, the instrument is scheduled to make

measurements on projects related to fractured-rock aquifers; permafrost thaw, which releases carbons into the atmosphere; weathering in the Critical Zone (everything between the ground surface and the bottom of the aquifer, including plants, soil and rocks); and return flow from irrigation and macro-pore flow into tropical soils.

NEWS & NOTES



Jonathan Naughton poses for a portrait near a wind turbine.

Study Demonstrates Benefits of Pairing Wyoming and California Wind

A new University of Wyoming study further demonstrates that combining the strengths of Wyoming wind with California wind and solar will reduce the intermittency of renewable energy and smooth the power supply, leading to benefits for utilities and energy consumers alike.

Conducted by UW's Wind Energy Research Center, the study digs into the details of geographic diversity relative to renewable energy and is based on one year of actual one-minute average wind and solar electrical production data from California and data from four operating meteorological towers in Wyoming. This analysis builds on previous research based on general atmospheric and modeled data. The new study results were previewed June 11 at the Wyoming Infrastructure Authority's Spring Energy Conference.

Analyzing this precise wind data

over the course of days and over the course of a year, the UW researchers confirmed that Wyoming and California wind patterns are not only very different, but also very complementary. Based on a yearly average, California wind is strongest at night, while Wyoming wind is strongest during the day and peaks in the afternoon—coinciding with the time when the sun is beginning to set while the electric load is still increasing into the evening hours.

"Although the benefits of geographic diversity to renewable energy have been suggested for some time, only recently have there been attempts to quantify these benefits," says the study's author, Jonathan Naughton, a UW professor of mechanical engineering and director of the Wind Energy Research Center.

"The renewable energy quality metrics proposed in this study are a start at being able to characterize different combinations of renewable energy sources. The result of applying these metrics to energy produced from Wyoming wind and California renewables provides a quite compelling case for geographic diversity."

Tau Beta Pi Recognizes Outstanding CEAS Members

The University of Wyoming's Tau Beta Pi chapter announced this summer the yearly awards for standouts in the ranks of the College of Engineering and Applied Science. One of the highlights of the academic year for the college, TBP honorees were announced at the annual banquet, which featured a dinner and awards ceremony.

Outstanding Sophomore:
Jessica J. Dutton

Outstanding Junior:
Richard Ruiqi Yang

Outstanding Undergraduate Teaching Award:
John (Jack) Evers, Ph.D.

Sam D. Hakes Outstanding Graduate Research and Teaching Award:
Zhien Wang

TBP Outstanding Staff Award:
George E. Janack

CEAS Outstanding Staff Award:
Henry Plancher

Wyoming Eminent Engineer:
James M. Pearce, P.E.

Alumnus Eminent Engineer:
David L. Whitman, Ph.D., P.E.

Outstanding Tau Beta Pi Member Award: Christopher M. Laursen

Joint Engineering Council Outstanding Senior: Ben Pelton

UW Engineering Students Compete in Design Challenges

A nationwide push to build energy-efficient homes spurred a group of University of Wyoming students to compete in a house-design challenge, sponsored by the U.S. Department of Energy.

Five UW architectural engineering students and one College of Business student collaborated on the design of a specialized house and presented the project to a panel at the National Renewable Energy Laboratory in Golden, Colo., in May 2015. UW was among 33 teams from the United States and Canada participating in the competition. The Race to Zero encouraged students to work with builders, developers, community leaders and other industry partners to meet stringent design requirements and create marketable, affordable concepts.

Architectural engineering student Yara Thomas from Wilson served as the team leader. She was joined by fellow engineering students Kyle Friel, Cambridge Springs, Pa.; Shane Halverson, Orr, Minn.; Zeng Li, Yantai, China; and Danah Murad, Laramie. College of Business student Fielding Lewis from Wilson was part of the team.

The group designed a zero-energy house for the "Race to Zero" competition. The house, called "Mountain Side Zero," was designed for a site in the sustainable community of Mountainside Village in Victor, Idaho. By definition, such high-performance homes are so energy efficient that renewable

power can offset most or all of annual energy consumption.

UW Department of Civil and Architectural Engineering lecturer Jon Gardzelewski was the faculty adviser on the project, assisted by faculty professors Anthony Denzer, Gang Tan and Liping Wang. The students also worked with a variety of industry partners, including architect Larry Thall and Carney Logan Burke Architects.

A second team of UW architectural engineering students designed an innovative housing scheme for the Dencity Competition 2015 organized by *Shelter Magazine*.

The competition organizers asked students to design solutions to improve slum conditions worldwide during the coming decades. Currently, there are more than a billion people living in unplanned urban settlements. These slums do not have adequate housing, water or electricity and have high crime rates.

The UW students designed a flexible and adaptive set of rules for housing schemes based on inspiration from a natural phenomenon called cellular automata.

"The design focuses on the individual unit—the family and the home—and how it relates to its surroundings to promote health, safety and an overall standard of living," Gardzelewski says.

The project was designed by architectural engineering students Todd Anderson, Laramie; Friel; and Matt Schneider, Worland.



Gang Tan poses for a portrait.

Photo courtesy of Gang Tan

Tan Receives DOE Grant for Cooling of Power Plants

University of Wyoming's Gang Tan, in collaboration with colleagues from the University of Colorado-Boulder, has been awarded a \$3 million project by the U.S. Department of Energy (DOE).

Tan is an assistant professor in civil and architectural engineering. His project is called "Radiative Cooled-Cold Storage Modules and Systems (RadiCold)." This research will develop radiative cool storage modules to enable efficient, low-cost supplementary cooling for power plants. The project is funded by DOE's ARPA-E ARID (Advanced Research in Dry cooling) program. A Postdoctoral Research Fellow at UW will be supported.

students **in** action



Devoted to Giving Back

By Micaela Myers

Getting out of his comfort zone is where Adam Block found his true passion.

After graduating from high school, the Cheyenne, Wyo., native spent two years volunteering overseas. He helped citizens in developing countries, especially children with special needs. Now this University of Wyoming mechanical and energy systems engineering student plans to use his education to give back even more.

“As soon as I graduated from high school, I went to Northern Ireland for a year. I worked with adults with special needs in a self-sustaining community,” Block says. “After that, I went to South Africa for a year and did something similar, working with children with special needs.”

From then on, he knew his future career would include volunteering and working with children.

“It’s indescribable how much it taught me,” he says.

UW offered many things which attracted Block, including the affordable tuition. He added a minor in chemistry and plans to graduate in December 2016. After gaining work experience as an engineer, he may go on to medical school.

“If I go to medical school, my ultimate goal would be to work with Doctors Without Borders and tie that back to my passion for working

with children in the developing world.

After graduation from UW, I’d first like to work in the oil and gas industry and develop some skills to take back into a medical degree. I would translate that into being a doctor, engineer and entrepreneur to help develop communities,” he says.

Block has found himself busy, involving himself with the engineering honors society Tau Beta Pi, the UW Engineering Fund for Enrichment, the Joint Engineering Council, intramural sports and the Honors Program. He also serves as a mechanical engineering ambassador and teaching assistant. Block participated in a jazz combo and volunteers through the UW chapter of Engineers Without Borders.

He now is in his second year as president of Engineers Without Borders. His group works on two major projects: developing a dormitory for Hope School near Mbita, Kenya, which primarily serves children who are orphaned and vulnerable and a project in Comunidad Maya, Guatemala, to develop a new water distribution system.

Block took part in his third internship this summer with Encana Corp. and believes UW’s knowledgeable and approachable faculty are preparing him well for his dream job, which will combine skills learned in school with his passion for helping others.

Writing Skills Come In Handy For CEAS Student



Photo courtesy of Meghan Jacobs

By UW Institutional Communications

University of Wyoming student Meghan Jacobs gained valuable experience over the summer with a major corporation.

A native of Sheridan, Wyo., Jacobs was impressive as she was named runner-up in a writing competition

sponsored by the Billings, Mont., unit of ConocoPhillips. All of the company’s summer interns could submit articles about work they had accomplished during their internships.

Jacobs, a first-year facilities engineering intern, was runner-up among 43 entries, most of them submitted by second- or third-year interns. Her paper, “True Vapor Pressure Optimization of Bakken Crude,” expressed a way to meet North Dakota Industrial Commission requirements that sold crude oil has to be less than 13.7 pounds per square inch.

“If we don’t comply with this regulation, our wells can be shut down, and we can be fined,” Jacobs says. “This is extremely important for our production, for our safety and for the environment.”

As a member of the operations and the maintenance team, Jacobs worked with the equipment and the gas, crude

and water from the ground until sale. In her paper, she discussed a solution to the regulation and described how it would pay off financially.

She spent three weeks with production engineers, where she learned about downhole issues, how pumping units and flowback works and forecasting of how the wells will do over time.

“I was extremely impressed with the teamwork aspect of the company and the way they all work toward a common goal,” Jacobs says.

UW classes helped prepared her well for the assignment.

“I feel I am right on track to receiving all the knowledge necessary to ensure my success at this company,” she says. “I will be starting my petroleum engineering emphasis this coming spring and hope to further my knowledge and, in turn, be hired to work fulltime for ConocoPhillips.”

Student Contingent Delivers Robotic Arm



Graham Barrett helped deliver a robotic arm to a client.

Photo courtesy of Steve Barrett

By Andy Chapman

After two years of research and development, a team of engineering students and faculty at the University of Wyoming delivered an assistive robotic arm to a client this summer.

The wheelchair-mounted arm serves

to hold and control a communication device, moving it in and out of view to meet the client’s needs. The arm was completed as part of a mechanical engineering Senior Design Project in May 2014, and work continued on it until the July delivery date.

The three students who built the device are Kyle Hurley, Casey Brauchie and Graham Barrett. All three graduated in May 2014 and currently serve as engineers in a professional setting. College of Engineering associate dean Steven Barrett and retired mechanical engineering professor Scott Morton served as project mentors.

Hurley now is a mechanical engineer and project manager for Premier Technology in Blackfoot, Idaho. Graham Barrett is a human factors engineer II for Covidien in Boulder, Colo. Brauchie is a project application engineer for

Wyoming Machinery Company in Casper, Wyo.

The robotic arm was delivered to a client who lives at an Imagine! SmartHome in Broomfield, Colo. According to the company’s information, Imagine!’s SmartHomes incorporate a variety of cutting-edge technologies designed to enhance the quality of life for individuals with intellectual and developmental disabilities, augment the effectiveness of staff as caregivers, and provide cost and energy savings.

Please contact Steve Barrett (steveb@uwyo.edu) if you are interested in a custom assistive-technology device. Projects are sponsored by the National Science Foundation Biomedical Engineering Research to Aid Persons with Disabilities (NSF BME RAPD), grant 0962380.

faculty **in** action

National Foundation Honors UW Educator



Vladimir Alvarado, left, meets with one of his graduate students.

By Andy Chapman

Vladimir Alvarado, an associate professor at the University of Wyoming, was invited to accept a national award for his work in the STEM (science, technology, engineering and math) fields.

Alvarado currently serves as an associate professor and previously was the associate department head for chemical and petroleum engineering at UW. He was selected to receive the ExxonMobil Hispanic Heritage Award for STEM from the Hispanic Heritage Foundation at an awards ceremony Sept. 17 in Washington, D.C., at the Warner Theatre during the 28th annual Hispanic Heritage Awards ceremony. As part of the honor, Alvarado was invited to an event at the home of U.S. Vice President Joe Biden.

In his award letter, foundation leaders pointed to his work not only in the field of enhanced oil recovery, but also as “innovator, leader in your field and role model to youth.” The HHF doles out awards to educators, physicians, innovators, business professionals, community leaders, elected officials, celebrities and artists.

The audience for the ceremony included up to 2,000 people, including members of Congress, White House officials, ambassadors, business and community leaders, celebrities and youth. The evening was co-hosted by more than 40 top national Latino organizations and the White House hosts a briefing for the honorees and performers.

The Hispanic Heritage Awards are considered one of the highest honors for Hispanics in America, and the program

was created by the White House in 1988 to commemorate the establishment of Hispanic Heritage Month in the United States. Past honorees include Rita Moreno, Placido Domingo, Celia Cruz, Antonio Banderas, Tito Puente, Anthony Quinn, Carlos Gutierrez, Juan Marichal, Los Tigres Del Norte, Jose Feliciano, Isabel Allende, Alejandro Sanz, Oscar de la Hoya, Gloria Estefan, Martin Sheen, Andy Garcia and Juan Luis Guerra.

The evening serves as a launch to HHF’s mission to identify, inspire, prepare and position Latino leaders in the classroom, community and workforce various priority fields and industries. HHF’s focus on youth leadership and innovation has been recognized by the White House, Congress and Fortune 500 companies. Visit hispanicheritage.org for more information.

Adaptable Robots at Forefront of UW Professor’s Research



Jeff Clune, top, assists a Laramie Robotics Club student.

By Andy Chapman

Jeff Clune, assistant professor of computer science, recently earned a Faculty Early Career Development (CAREER) Program Award from the National Science Foundation (NSF). The \$507,465 grant not only will pay for the students and equipment necessary to conduct robotic research, but it also significantly validates the value of Clune’s research. CAREER grants are given to those who exemplify the role of teacher-scholars through outstanding research and excellent education.

Nature, a prestigious weekly science journal, also recently published Clune’s research in an issue. He was among a team of researchers who

programmed robots to adapt to an “injury,” meaning they quickly learn to move in spite of damaged limbs. In less than two minutes, the six-legged creature can learn to compensate for two broken legs. Using the same technique, the researchers also created a robotic arm that could continue to move objects in spite of multiple malfunctioning motors.

“Robots will eventually provide tremendous benefits to society, especially if they can complete tasks too dangerous for humans to perform,” Clune says.

Researchers hope these robots could potentially help in disaster areas, digging for survivors in treacherous rubble and fighting deadly fires.

International Competition Features Input From UW Professor



Photo courtesy of ETH Zurich / Alessandro Della Bella

By Andy Chapman

Domen Novak, an assistant professor of electrical and computer engineering at the University of Wyoming, has been hard at work organizing a unique international competition.

Novak is on the executive board of the Cybathlon Championship For Pilots with Disabilities. The event takes place in October 2016 in

Zurich, Switzerland. Novak helped set up a rehearsal of the event this summer. Novak is planning the event, the first of its kind in the world, for racing pilots with disabilities who use advanced assistive devices, including robotic technologies.

The competition tests the skills of pilots and designers, each of whom must apply modern technology to overcome the challenges faced by these pilots. The main goal of the Cybathlon is to provide a platform for the development of assistive technologies that are useful for daily life. Organizers believe the event can help remove “barriers between the public, people with disabilities and science.”

The event has competitions for several categories, including modern powered knee prostheses, wearable arm prostheses, powered exoskeletons, powered wheelchairs, electrically stimulated muscles and novel brain-computer interfaces.

There will be two medals for each competition, one for the pilot, who is driving the device, and one for the provider of the device. The event is organized on behalf of the Swiss National Competence Center of Research in Robotics.

There has been no shortage of challenges so far. Novak and other organizers have to come up with test courses that challenge, but aren’t impossible. Venues had to be tested to determine feasibility of getting severely handicapped competitors in and out.

“I think a lot of the teams came to the rehearsal just to see what they’d be dealing with,” Novak says. “They wanted to check out the competition, but they also wanted to see if it’d be possible to get their pilot and hardware to Zurich, what sort of issues they might be dealing with and what specifically they need to improve.”

To learn more about the Cybathlon, go to cybathlon.com.

Marlin Holmes, a mechanical engineering graduate student, works in the UW Wind Tunnel Lab.



BORN LEADERS

Talented students come from different backgrounds, but share common values with UW

“I’ve never been one who believes a person achieves something on his own.”

- Marlin Holmes, mechanical engineering graduate student

By UW Institutional Communications

Regardless of where a student comes from, each can find his or her niche in Wyoming. Marlin Holmes and Brenna Doherty are just such students. Each was awarded a fellowship for academic pursuits this year. That puts them in prestigious company, and shows the value of an education in the College of Engineering and Applied Science.

Luckily for the University of Wyoming, two of the nation’s best and brightest students ended up in Laramie.

Marlin Holmes

An inquisitive mind, combined with family support, led Marlin Holmes to earn a bachelor’s degree in aerospace engineering from Georgia Tech in 2013. And it has brought him to UW, where he is in the second year of graduate studies in the Department of Mechanical Engineering, working under Professor Jonathan Naughton in UW’s Wind Energy Research Center.

Holmes received in 2015 the prestigious National Science Foundation (NSF) Graduate Research Fellowship, one of 2,000 individuals—three at UW—selected from among 16,500 applicants. The fellowships support graduate studies for students based on their demonstrated potential for significant achievements in science and engineering.

“I’ve never been one who believes a person achieves something on his own,” Holmes says. “It really does take a community to produce an individual’s success, and I’m fortunate to have had a lot of people in my camp.”

After growing up in Buffalo, N.Y., and Charlotte, N.C., Holmes has been immersed in his intensive graduate studies, which have the potential to benefit both the wind energy and airline industries. But he’s also made it a priority to help others. Through a separate NSF fellowship, he regularly works with young people around the state to encourage their interest in science, technology, engineering and mathematics (STEM) through activities including building model wind turbines. He teaches mathematics during the summer in UW’s TRIO Program for students who are economically disadvantaged, from ethnic minorities, have disabilities or are first-generation college students.

He’s also a member of UW’s Black Student Alliance, UW’s Martin Luther King Jr./Days of Dialogue Committee and Alpha Phi Alpha Fraternity Inc., the first intercollegiate Greek-letter fraternity established for African-Americans.

Naughton believes the NSF Graduate Research Fellowship benefits both Holmes and UW.

“I think Marlin’s decision to enroll at UW, and his reception of this award, reflect favorably on the ability of the research and graduate programs developed by the faculty in mechanical engineering to attract the best and brightest students,” Naughton says.

The pioneering research in which Holmes is involved focuses on air flow “wakes” caused by wind turbines and other rotating devices. He experiments to learn how the velocity of rotations

affects the behavior of wakes, working in UW’s wind tunnel with a “wake generator” he helped develop.

While there’s much more to do to produce data that can be applied to all situations, Holmes says it’s clear that the wind-energy industry could benefit from such research. As it stands now, companies design wind farms without complete information regarding the wakes caused by turbines, resulting in energy losses of more than 15 percent. A better understanding of this behavior could allow more efficient wind farm designs.

There could be implications for the airline industry. Airplane wing tips produce their own wakes, or vortices, and concerns about their effects on other aircraft are one of the reasons for gaps between takeoffs and landings at airports. Clearer insight into the behavior of vortices potentially could allow more precise and efficient air traffic control at airports, he says.

Holmes plans to complete his master’s degree within the next year and his Ph.D. about two years after that. He will have a variety of career options, including work in academia, industry and national laboratories. He also has an entrepreneurial bent, as evidenced by his regular participation in business plan competitions, and would love to establish his own company if the opportunity arises.

Regardless of where he goes after, his NSF Graduate Research Fellow opportunity will be beneficial.

“It opens a lot of doors,” Holmes says. “It will be a really big boon for me.”

Holmes researches to learn how the velocity of rotations affects behavior of wakes, with a device he helped develop.





Brenna Doherty received the Mickey Leland Fellow with the U.S. Department of Energy's National Technology Energy Laboratory.

Brenna Doherty

How does an ice skater who has traveled the world performing on cruise ships end up double-majoring in difficult subjects at the University of Wyoming? The question has been posed countless times to Brenna Doherty.

"People don't believe me a lot of the time. They are like 'No, that's not a possibility,' but then I show them my skating necklace and tell them my different stories about competing internationally, performing on cruise

ships and then coming straight here to UW," Doherty says.

Doherty is a professional ice skater who has competed since age 6, when her family moved to Columbia, Md. But she's more than just an athlete and entertainer.

The UW transfer junior also is a 4.0 student majoring in petroleum engineering and computer science, who made the President's Honor Roll her first semester on campus last fall. She also received a competitive award:

the Mickey Leland Fellow with the U.S. Department of Energy's National Technology Energy Laboratory, where she conducted a paid fellowship performing research at the laboratory's facilities in Albany, Ore. The fellowship helps underrepresented students in STEM programs. Participants have opportunities for hands-on research, and each presents a research paper at the conclusion of the program.

After skating professionally for two shows a day on a Royal Caribbean

cruise line last summer, Doherty flew from Barcelona, Spain, and arrived on the UW campus just as fall classes began. Previously, Doherty completed her associate's degree work online through Howard Community College in Columbia, Md., maintaining a perfect 4.0 GPA.

"When I realized I wanted to study petroleum engineering, I was actually training out in Aliso Viejo, Calif. I wanted to go on a college road trip. So, on my way home from California to Maryland, my mom and I stopped at seven different universities to check out petroleum engineering programs," Doherty says. "UW caught my eye because of the affordability, the increasing size of the program and the national prestige that is coming to the university."

She also visited schools in Colorado, Missouri, Oklahoma and Kansas, all of which have nationally recognized petroleum engineering programs.

"UW had a better feel to it," Doherty says. "I think one of the biggest things in my decision was that, when I came to UW, a lot of construction was going on, and also the plan to build a new engineering building.

"The program is expanding and, after talking to an adviser here at UW, it just seemed like the best program for me—not only because I could be here and major in petroleum engineering and computer science. I could also stay an extra year and get my master's degree."

Her research is based on carbon sequestration. She analyzes and monitors defunct oil wells, but investigates the possibility of injecting those wells with carbon so that carbon dioxide is not released into the atmosphere and, instead, can be reinjected into the ground.

"You don't see a lot of women in



A former professional figure skater, Doherty's area of study at UW is reservoir engineering.

Photo courtesy of Brenna Doherty

the STEM fields, but there are so many opportunities that come from different fellowships and internships with companies that are trying to increase their diversity by hiring females; the opportunities are just so high," she says.

Skating has opened up opportunities for her to see the world and gain perspective. Most recently, she skated on cruise ships from January 2014 through last August. Based in Fort Lauderdale, Fla., the trips took her to Cozumel, Mexico; Jamaica, Haiti, Italy,

France and, finally, Spain, where she finished her contract before enrolling at UW. Even today, Doherty skates at the Laramie indoor ice rink just to relax from classes.

"When I got to UW, it was kind of like, of course I am going to do my work, of course I am going to do as well as I can because all of these different attributes that I have gained throughout skating," she says. "I just use them in my schoolwork. I have not regretted it since I have been here at UW. I love it here."

A SUMMER OF LEARNING

Unique program grooms next generation of world's leaders



Hugh Gaevort of Shoreline, Wash., prepares to pilot an ATV in the Engineering Summer Program.



Wayne Allen of Rock Springs, Wyo., prepares a beam for stress testing in the composite materials lab.

By Andy Chapman

Chris Laursen has a unique perspective about the College of Engineering and Applied Science's Engineering Summer Program (ESP) at the University of Wyoming. After all, he is a rare example of someone who has seen the program from both sides, as a student and as an instructor.

Laursen, a University of Wyoming Ph.D. student, has spent part of his last four summers as an instructor for the ESP. But he got his start in it several years ago, attending as a high-school aged student in 2005.

"I knew I wanted to be an engineer and really enjoyed it," he says of his time in the program. "It's fun to be taking the next step and being a teacher."

He, along with nearly 20 other instructors, spent the week of June 22-27 teaching the core concepts of engineering and the applied sciences to students aged 16-18. Laursen and his group built and subsequently stress tested materials to learn how they play a part in building sound structures.

"I have a good time working with these guys. It's fun to get the opportunity to teach—everyone is so excited and asking questions," Laursen says.

The various students, who hailed from 10 states and two countries, learned about concepts including electrical engineering, atmospheric investigations, computer electronics, computer science, composite materials, biomaterials, ATV design and transportation systems. Among the group were 14 female and 22 male participants from Wyoming, Colorado, Kentucky, Montana, Oregon, Pennsylvania, South Dakota, Texas, Utah and Washington, along with one student from Germany.

The Engineering Summer Program is a weeklong on-site summer camp intended to give 36 top students from across the nation an opportunity to learn about various engineering fields through a hands-on experience. It also offers current UW undergraduates and graduate students a chance to take part in the development of the next generation of the world's foremost engineers.

Katie Foster is pursuing a Ph.D.

in atmospheric science, and shared her knowledge and experience as an instructor for the ESP program.

"I also lead trips for the outdoor program on campus, so I enjoy teaching other students and sharing skills and knowledge," she says. "I think I get a little better at figuring out how to explain things and communicate effectively each time I practice, so I certainly benefited from teaching the ESP course this year professionally."

"I am most interested in the direct teaching of the students. It could be any discipline. My bachelor's degree is in physics, so I enjoyed pushing the students' understanding of the physical world around them from the first day."

Zach Petersburg, 17, of Sheridan, Wyo., says of the UW instructors, "It helps them to connect with us because they are around our age. They're good people and very hands-on."

Pourya Nikoueeyan, a four-year UW student who is in his first year pursuing a Ph.D. in mechanical engineering, assisted in Rob Erikson's



Tom Mitchell of Pinedale, Wyo., and Sasha Stramel of Highlands, Colo., adjust a mechanical component in the ATV design lab.

ATV design lab.

"Our (graduate) projects are much more complicated, but I'm always interested in this kind of project," he says. "That made me want to become an engineer—to create and build something."

Nikoueeyan says when he saw a chance to work with high school students, he thought it would be an opportunity to get them interested in what he is interested in and "show them the beauty in technology." He assisted the students with parts, processes, explanations and designs.

"I always wanted to become a university professor, so this is my opportunity," he says. "It's teaching at its most interesting and basic levels. It's hands-on experience. It's mechanical engineering in practice."

His experience in the ESP program has given him valuable skills for the future.

"You have to get leadership skills and be able to communicate with other people who aren't in your field (like the students) to tell them what

you need from them," he says.

Laursen uses a similar tactic to lead his students, because he remembers what it was like when he attended the ESP.

"Teaching these guys will help me interact with people who aren't engineers or have that same mindset," he says.

"I don't like to be a formal ruler of the class—it's more about interacting with them on a fundamental level. That's what they'll carry away from this."

Victoria Knight, 16, came to Laramie all the way from Germany, where her parents were stationed at a military base. Her mother was working on finishing a UW degree, so she came along for the ride.

"They are very passionate about what they do," Knight says of the UW undergraduate and graduate instructors with whom she worked.

"You can tell they truly like what they do, and it translates to how they teach. If I see them get excited, it makes me feel like I can get excited about engineering."

ESP 2015 Participants

Name - City/State

Cassidy Alexander - Cody, Wyo.

Wayne Allen - Rock Springs, Wyo.

Kathryn Beardslee - Sheridan, Wyo.

Joshua Billups - Arvada, Colo.

Evan Carollo - Green River, Wyo.

Jacob Dickenson - Encampment, Wyo.

Janell Donegan - Park City, Utah

Louis Eastham - Greensburg, Ky.

Julia Fenn - Sheridan, Wyo.

Colton Fertig - Cheyenne, Wyo.

Jace Florquist - Lander, Wyo.

Hugh Gaever - Shoreline, Wash.

Londyn Glass - Jamestown, Pa.

Mason Grayson - Kingwood, Texas

Adam Griffin - Powell, Wyo.

Kristian Gubsch - Edgewood, Wash.

Michael Harris - Superior, Colo.

Kennedy Kimsey - Rock Springs, Wyo.

Victoria Knight - Germany

Maxon Lube - Big Horn, Wyo.

Thomas Mitchell - Pinedale, Wyo.

Samuel Mittleide - Douglas, Wyo.

Lynda Pace - Cheyenne, Wyo.

Jessica Pastor - Edgemont, S.D.

Zachary Petersburg - Banner, Wyo.

Dean Ricker - LaGrande, Ore.

Benjamin Rude - Cheyenne, Wyo.

Isabelle Schlautmann - Gillette, Wyo.

Ben Sekutera - Colorado Springs, Colo.

Lucas Sekutera - Colorado Springs, Colo.

Alexandra Stramel - Highlands Ranch, Colo.

Brooklyn Swiggett - Recluse, Wyo.

Narisse Trippel - Worland, Wyo.

Shelby Whitman - Casper, Wyo.

Neil Wittorff - Shepherd, Mont.

Collin Zoeller - Casper, Wyo.

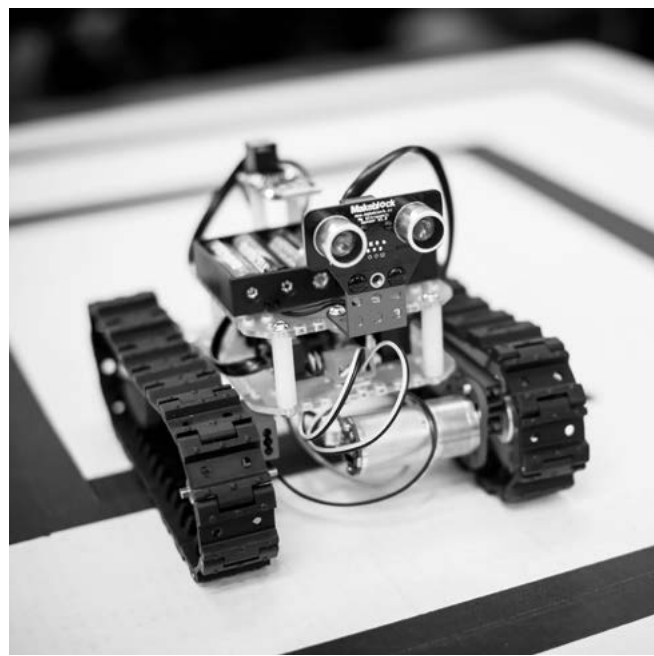
A programmable robot awaits coding instructions from a student in the Laramie Robotics Club.

join the club

UW students seize opportunity to shape young minds



Assistant professor of computer science Jeff Clune, right, assists LRC students.



Students can create computer programs to guide a robot through a maze.

“Part of my work here is a desire for these students to have the things I didn’t.”
- Roby Velez, computer science graduate student

By Andy Chapman

There are 24 hours in a day, and sometimes it seems like Roby Velez needs just about all of them.

He’s a graduate student in computer science at the University of Wyoming. He’s helping perform research with professors and has added the title of teaching assistant recently. There’s always something to do—lab work and homework. And then there’s the Laramie Robotics Club.

Every Wednesday during the school year, Velez oversees a two-hour evening session for middle- and high-school aged students.

He’s assisted by other six to eight graduate and undergraduate students, but Velez is the leader of the group.

“We support him, but he has taken ownership of the club and poured his heart into it, and the results of his efforts have been extraordinary,” UW professor Jeff Clune says.

On this particular night for the LRC, nearly 15 students pile

into Room 4045. Some sit at monitors and continue working on programming video games, using coding and illustrations. Some head for robots and the corresponding maze for navigation purposes. This is about problem solving and STEM (science, technology, engineering and mathematics) education. There’s a plan, but students can go about it in their own way.

Fifteen-year-old Kaden Wood designed a “Choose Your Own Adventure” program in which users interact with the computer to eventually figure out the story.

“It’s subject to your aspirations. You can ask them ‘How do I do this?’ but so far, they haven’t told me not to do anything,” he says.

Velez got involved in the LRC at the ground level. Clune and a Laramie parent came up with the foundation for the organization, but students were needed to run day-to-day operations. Velez develops

the teaching plan and manages the other graduate instructors. He also has researched the robots, purchased them, built the software and curricula.

“Before I got here, I was always interested in robotics,” Velez says. “We’ve learned a lot along the way. We make it fun to keep people engaged and they are willing to put in the work to learn how to write and save a basic script and program. If you make it a game, they stay engaged. Some kids enjoy the graphic portion. Some enjoy the robotics.”

Velez believes this is a unique opportunity for Laramie students to gain access to technology most don’t have, and learn in a comfortable, non-traditional setting.

“If I had this in high school, I would’ve designed graphics and games. Part of my work here is a desire for these students to have the things I didn’t,” Velez says.

“I’m not a good student in the traditional sense. I have a hard time



UW graduate student Joost Huizinga, left, shows LRC student Dane Oliver features of a robot.



UW graduate student Roby Velez, right, oversees the LRC and explains robotic concepts to a student.

sitting still in class and focusing. Working with these programs, that’s the best way of reaching these students who have a hard time paying attention. Having them interact with a robot—it’s a big help, a different kind of learning experience.”

The younger students are the reason for hosting the club, but the UW instructors make the club work.

“Being a graduate student is a time of transition,” Clune says. “You go from being purely a student in undergrad to being someone who’s contributing to the cutting edge of science and technology through research, and learning to be a professor as a teaching assistant.

“The Laramie Robotics Club is another dimension of having the graduate students learn to instruct and communicate information and inspire the next generation of programmers and technical students. They are thinking about the best way to communicate what’s in their head, which causes them

to reflect on their own knowledge.”

Ahn Nguyen, a Ph.D student, helps students navigate the maze with their robots.

“It’s great to see them learn and help them. That’s my motivation,” he says. “We try to let the students figure out what they want to do because sharing knowledge is awesome.”

Not every student will learn or grasp the concepts the same way. That means there’s got to be some variation on how each student is approached.

“The grad students have done a good job of identifying students in the club who aren’t as motivated as others by certain activities,” Clune says. “Maybe 70 percent of the students like the robotics and they’re off to the races. There are other ones who don’t engage in that. As it turns out, they loved creating their own computer games and choose-your-own-adventure stories.

“It’s about creating the ability for each student to do something they are

passionate about and drives them to learn technical skills to implement their ideas.”

Dane Oliver, 13, spent weeks mastering the navigation of a two-wheeled robot that can sense the surface under it and chart a course. He’s always been interested in computers and has spent a year and a half in the robotics club.

“I knew some of this prior to my time in the club, but they close that knowledge gap for you,” Oliver says.

Velez plans to stay involved in the LRC as long as he is at UW, and hopes to use it as a springboard for future endeavors.

“It’s a great opportunity for communication, for mentoring, for leadership,” he says. “If you sit down with a student for half an hour and explain something, they might not know it. You have to ask ‘Do you really understand the topic? Can I structure it another way?’ I want to provide that kind of experience for these kids. This experience has shown me I could teach.”

alumni **in** action



Photo courtesy of Punit Soni

Tech Mogul With UW Roots Returns Home

By Andy Chapman

Punit Soni came to the United States to pursue his dreams of making a splash in the fast-paced world of technology. After an amazingly successful career in America, he'll turn his attention to chase an even more promising opportunity back to his native India.

Soni, who graduated with a master's degree in electrical engineering from the University of Wyoming in 2000, recently took over duties with India's leading online shopping company, Flipkart. He is based in Bangalore, working for the company as its chief product officer.

"I worked with some of the best professors in the trade and learned a lot of the basics of electrical engineering from them," Soni says. "It's what got me my first break. If not for (my education at) Wyoming, I would not be doing the kind of work I get to do today."

His resume is quite impressive. Previously, he spent eight years with global commerce giant Google, in various positions like product manager and mobile app developer. Prior positions came at Cadence Design Systems, Intel Capital and eventually, he moved on to Motorola Mobility as a vice president of product management. His leadership helped launch the Moto E, G and X smartphones.

Now at Flipkart, his responsibilities include all aspects of the product development, including crafting strategy, building teams and executing to go to market.

"I enjoy the ability to touch millions of lives through my products," Soni says. "I used to lead the Mobile Apps group at Google. This means that the first or second version of everything from Gmail, Chat, YouTube, Calendar, Search and Maps came from my team. The phones we built at Motorola are huge successes across the world, and jumpstarted the low-cost Android device revolution."

"Flipkart has reinvented the commerce infrastructure and is changing the lives of 20 percent of the world's population. If India rises, so does the rest of the world."

While Soni has relocated to another continent, he hopes to establish a visible presence in the tech cradle of the U.S., Silicon Valley in California. It could attract potential U.S. employees as the team is assembled in Bangalore.

"Over time, we will build programs to attract the best talent to Bangalore and also establish a significant presence back home in the Valley," he said. "I feel privileged to have gotten all these opportunities, but none of this was possible if I had not gotten an education at Wyoming."

UW Grad Soars Above It All



Photo courtesy of Rob Streeter

By Andy Chapman

Look to the skies in the coming months, and you may see the work of one of Wyoming's up-and-coming professionals.

University of Wyoming alumnus Rob Streeter will be returning to Encampment, Wyo., in October to

assume duties at Ryan Electronics. The company manages the radio contracts for a local refinery, select emergency response agencies and many federal weather stations throughout the state. Ryan Electronics is working to expand its interests beyond radio, into areas such as high-speed rural internet and potentially into emergency-response applications for unmanned aerial vehicles (UAVs).

"Being involved in the UAV industry, particularly as a researcher, is incredibly fascinating," Streeter says.

Streeter, who received undergraduate and graduate degrees from UW, has been busy over the last few years. Since graduating in 2013 with a master's degree in electrical engineering, he moved to Colorado Springs, Colo., to work for the U.S. Air Force Academy's Center for Unmanned Aircraft Systems Research. As a research engineer, Streeter built and repaired airframes, designed

power and control distribution systems for unmanned aerial vehicles and programmed autonomous behaviors developed in the center. He credits his time in Laramie with preparing him for a demanding position.

"The hands-on approach UW takes with rigorous labs associated with many courses helped tremendously," Streeter says.

Streeter achieved at a high level in his undergraduate and graduate work. He was active in Tau Beta Pi, Institute of Electrical and Electronics Engineers and was named the Wyoming Student Engineer of the Year in 2011.

"The faculty at UW are awesome," Streeter says. "Drs. Steve Barrett and Cam Wright provided a connection to the U.S. Air Force Academy that proved invaluable to earning the position here. It will be refreshing to return 'home,' but demanding and exciting to keep working with UAVs. Things only get better from here."

Alberta Honors Accomplished UW Oilman

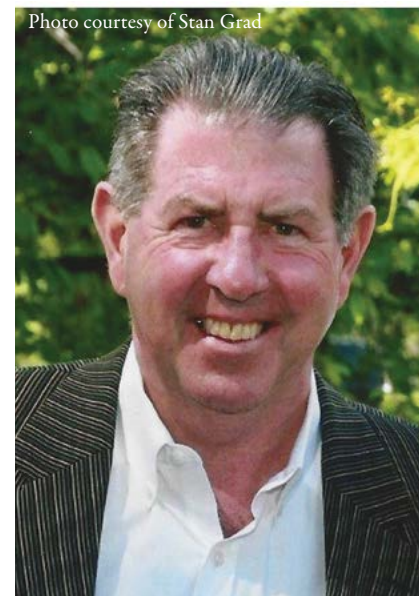


Photo courtesy of Stan Grad

By Andy Chapman

Stan Grad has made his mark in two thriving Canadian industries, earning the respect of his peers across the nation.

In October, the rancher, oilman and University of Wyoming graduate will receive the Alberta Order of Excellence, the highest honor the province bestows.

Grad grew up in Alberta, spending his summers working on a local dairy farm. After graduating from Southern Alberta Institute of Technology, he moved on to Laramie. He became a graduate of UW, earning his degree in petroleum engineering in the 1970s.

"As a pretty average student, math was difficult for me, and (former UW professor) Dorothy Stodola was a great teacher who took the extra time and interest to get me through," Grad says.

Previously, Grad served as president and chief executive officer of the Grad and Walker Energy Corp. That was bought by Crestar Energy in the late '90s, and Grad went on to found additional oil and gas companies. His career in

the energy industry allowed him to see the world. Still active in the business, he is a partner in Canyon Technical Services, one of Canada's largest hydraulic fracturing companies.

Nowadays, he spends much of his time on Soderghen Ranches as an owner and founder. The operation runs a breeding herd of 2,600 cows. Including deeded and lease land, the three ranches spread across southern Alberta encompassing 22,500 acres.

The ranches feature several cattle breeds such as Charolais, Simmental, Red and Black Angus, and Grad's own composite breed, the Red and Black Max line. That line of cattle has been among their most successful among buyers in Western Canada.

"Drive and ambition trump education alone," Grad says. "Putting the two together, you are unstoppable."

Since our last issue, we regret to announce the passing of the following alumni. Our greatest sympathy is extended to the families of these valued friends.

- Mr. Charles A. Collins
BSCE '64 — Kaycee, Wyo.
- Mr. Daniel A. Cook
BSCE '94 — Shawnee, Kan.
- Mr. Frank S. Cordiner
BSME '48 — Casper, Wyo.
- Mr. Theodore S. Cross
MS '68 — Casper, Wyo.
- Mr. Mark H. Henderson
BSCE '40 — Springville, Utah
- Mr. Hans J. Heuer
BSME '49 — Evergreen, Colo.
- Mr. John E. Hildreth
BSCE '49 — Laramie, Wyo.
- Mr. Russell E. Hynes
BA '56 — Kalispell, Mont.
- Mr. Joseph L. Kisicki
BSME '73 — Centennial, Colo.
- Mr. Robert L. Larsen
BSCE '48 — Laramie, Wyo.
- Mr. Bush J. Loucks
BSCE '50 — Yerington, Nev.
- Mr. Tony S. Markve
BSPE '00 — Golden, Colo.
- Mr. Joseph M. McPhie
BSCE '91 — Ranchester, Wyo.
- Mr. E. Howard Pepper
BSEE '56 — Tucson, Ariz.
- Mr. John R. Reesy
BSEE '52 — Green Valley, Ariz.
- Mr. Lloyd R. Spillers
BSCE '49 — Washoe Valley, Nev.
- Mr. Frank E. Voler
BSME '52 — San Tan Valley, Ariz.

MARK YOUR CALENDARS
OCT. 10-17

University of Wyoming
ONCE A COWBOY
ALWAYS A COWBOY
HOMECOMING 2015

SCHEDULE OF EVENTS

DAILY - Homecoming Mums • Half Acre Gym Passes
• UW Art Museum Fall Exhibitions • 1965 Senior Class Display at William Robertson Coe Library

SATURDAY, OCTOBER 10 - The Big Event and Homecoming Kickoff • SFJazz Collective Concert

WEDNESDAY, OCTOBER 14 - Homecoming Sing (sponsored by Iron Skull)

THURSDAY, OCTOBER 15 - Class of 1965 Reunion Registration

FRIDAY, OCTOBER 16 - Class of 1965 Reunion and Alumni Registration • Department Open Houses and Receptions • Special University Store Discounts and University Store Fan Friday • Distinguished Alumni Speaker Receptions • UW Early Care and Education Center Kids Homecoming Parade

SATURDAY, OCTOBER 17 - Alumni Registration • Special University Store Discounts • Homecoming Parade • College Receptions and Tailgate Parties • Pokes Pre-Game Pep Rally • Pepsi Pregame Zone • Fraternity and Sorority Life Activities

2015 Homecoming Football Game:
Cowboys vs. Nevada

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- ☐ Department of Computer Science
- ☐ Department of Electrical and Computer Engineering
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- MAIL: Make checks payable to the UW Foundation, indicate your allocation preference and mail to the address above. Your gift is tax-deductible by law.
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Thank you for your continued support!

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College Donors

Provide Steadfast Support



By Jessica Robinson

The impact of a simple phone call was huge for Brian and Lynne Seitz. A Cowboy Caller—an engineering student—contacted them to ask if they wanted to support the college.

“What started it was the university reconnecting,” Brian says. “A welcome part of any fundraiser is trying to make that personal connection, and the University of Wyoming does that.”

The call started it, but the continued support from the duo stems from their desire to give back to the university that had given so much to them. Both graduated from UW in 1985, Brian earning his bachelor’s degree in petroleum engineering, and Lynne taking a master’s degree in natural science.

“I got a very quality and low-cost education at Wyoming, and it’s served me well,” Brian says. “I’ve had a rewarding career, and the university still maintains that reputation of providing a quality affordable education, and that’s difficult to get, so that has kept me donating—just paying back a bit.”

Lynne adds, “Too many students

think that you have to go to a big name university to get a great education, and I don’t agree with that at all. You can get a really good education—and it has to be reasonably priced—and people who go into severe debt to get a big name are really missing out.”

The couple lives in Anchorage, Alaska, where Brian works for ConocoPhillips. The company matches the donation funds from the couple, increasing the impact that Brian and Lynne’s gifts have had on UW and encouraged them to continue their support.

“It makes your dollar seem so important,” Lynne says.

“You’re getting a two-for-one there,” Brian adds. “You’re doubling down on every dollar given, and it’s a way for ConocoPhillips to support causes that are important to their employees.”

Aside from donating to the College of Engineering and Applied Science, they don’t specify what program their gifts can be used for. They leave it up to the college to use the funds in areas that need it most.

“My hope is that it retains that low-cost education through either

scholarships or ability to keep tuition down,” Brian says.

UW annual giving focuses on acquiring regular yearly contributions, thus creating a vital and dependable source of non-legislative support for Wyoming’s university. Annual giving is the only fundraising program of the university that reaches all alumni, parents, faculty, staff and friends on a yearly basis to offer giving opportunities for direct support of UW’s colleges, departments and programs.

Although the state of Wyoming provides the base of funding UW needs to operate a modern university, it takes the annual support of alumni, parents, faculty, staff and friends for UW’s colleges, departments and programs to excel. Because of annual gifts, discretionary funds are available when there is an unexpected need or a sudden opportunity. Contributors to UW annual giving programs may designate their gifts to any area, college, department or program within the university. These gifts help UW fulfill its mission of being one of the nation’s finest public land-grant research universities.

UW CALENDAR OF EVENTS

OCTOBER

Homecoming week: Oct. 12-17
Cowboy Football vs. Nevada: Oct. 17
Cowboy Joe Club Auction: Oct. 16
Midsemester: Oct. 23
UW Art Museum Gala: Oct. 24

NOVEMBER

Advising week for spring 2016: Nov. 2-6
Cowboy Football vs. Colorado State: Nov. 7
Cowboy Basketball vs. Bristol: Nov. 13
Cowgirl Basketball vs. Chadron State: Nov. 17
Discovery Days: Nov. 14
Thanksgiving break begins: Nov. 25
Cowboy Football vs. UNLV: Nov. 28

DECEMBER

Last day of fall 2015 classes: Dec. 11
Fall 2015 commencement: Dec. 11-12
Finals week: Dec. 14-18
Residence halls close for fall 2015: Dec. 19
UW offices closed: Dec. 24-Jan. 1

JANUARY

Showcase Saturday: Jan. 30

FEBUARY

Discovery Days: Feb. 13

MARCH

Advising week for fall 2016: March 28-April 1



For the latest events and information, visit uwyo.edu/calendar.
UW Cowboys and Cowgirls: gowyo.com
Fine arts: uwyo.edu/finearts



Fondation Jérôme Seydoux-Pathé in Paris, by Renzo Piano Building Workshop



Trocadero and Eiffel Tower, Paris



Emirates Airline, London, with a guest lecture from Expedition Engineering



Musée d'Orsay, Paris

Architecture Summer Study Abroad Program



Sky garden of the "Walkie Talkie" building, London, by Rafael Viñoly Architects

This summer, 15 undergraduate students, led by UW architectural engineering faculty, toured Europe and study the architecture, engineering and urbanism of historic cities in person. This was a four-week program, beginning in May, with stops in London, Paris and Barcelona, Spain.

*Photos courtesy of Tony Denzer and Jon Gardzelewski



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“ UW caught my eye because of the affordability, the increasing size of the program and the national prestige that is coming to the university. ”

- Brenna Doherty, undergraduate student in Petroleum Engineering and Computer Science