Foresight

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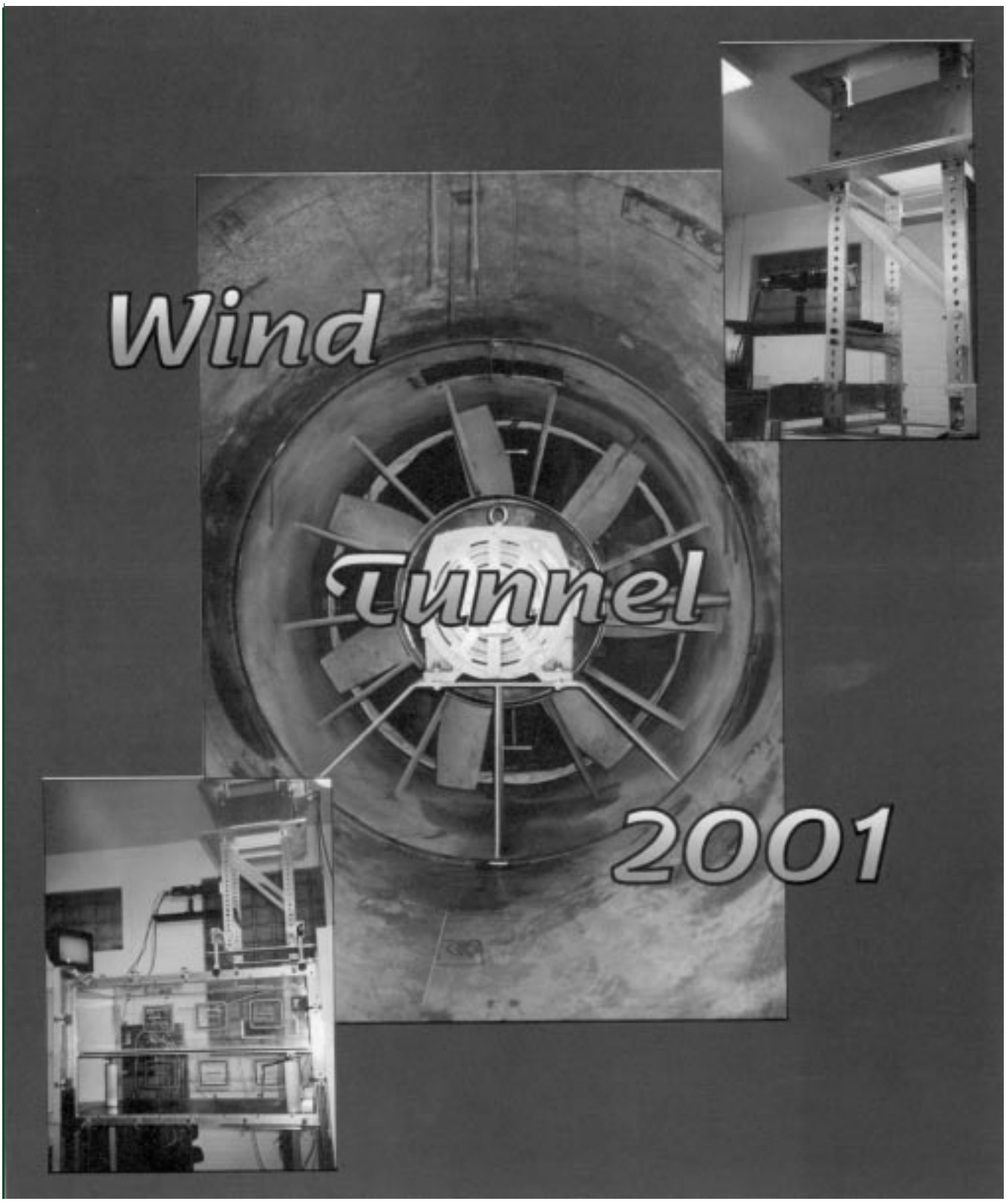


Dean's Desk

Dr. David L. Whitman
Associate Dean for Academics

Dean Plumb offered me his column in this edition of *Foresight* to bring you up to date with respect to enrollment numbers and recruiting activities in the College of Engineering. As more and more of the University of Wyoming's budget is supported by tuition and fees, increased enrollment becomes one method by which we stay adequately funded. As an example, for the current fiscal year, UW's funding is broken down as 41% from State funds, 38% from self-generated funds, and 21% from tuition income.

Over the past decade, the total enrollment at the University of Wyoming has declined about 20%. Today UW has an enrollment of about 11,000. New goals and initiatives at the University level will attempt to increase the enrollment to 13,000 by 2005.

Fortunately, the decline in engineering students over the past decade has been at a lower rate and the downturn in undergraduate enrollment has been arrested due to the recruiting efforts of our faculty, staff, and alumni. For example, in addition to normal recruiting activities such as letter writing campaigns to prospective students, last year the College implemented an aggressive recruiting program that involves having faculty, staff, and students visit with high school students in their math and science classes. This Fall, we visited over 1300 high school students in Wyoming, Colorado, Nebraska, and South Dakota. However, we still need your continued help in the form of names and addresses of potential engineering students.

Following are some facts related to our undergraduate enrollment:

- The number of new freshmen enrolling in engineering is up 16% over the past three years.
- The enrollment in architectural engineering has doubled (to over 200) since 1990.
- The enrollment in the new (Fall 2000) computer engineering degree is already at 35 (primarily freshmen). Through advertisement, and due to national demand, we expect this major to grow rapidly in enrollment.
- The enrollment in mechanical engineering has increased nearly 25% since 1990.

Why Wyo?

- UW is one of only 300 U.S. four-year institutions featured in the fifth edition of Barron's *Best Buys in College Education*.
- UW has been selected, for the sixth consecutive year, for *America's 100 Best College Buys*, by Institutional Research & Evaluation, Inc.
- UW is listed as one of the top 55 honors programs at a public university by *Ivy League Programs at State School Prices.*
- The seniors in the College of Engineering pass the Fundamentals of Engineering exam at a rate that is more than 20% higher than the national average (about 90% compared to less than 70%).
- Students from WUE states (Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, and Washington), as well as students from Nebraska, may be eligible for a substantial reduction in out-of-state tuition at UW. Current non-resident tuition and fees are $7693 per year. The WUE and Good Neighbor (Nebraska) scholarships reduce this cost by $4035 to a net cost of $3658 per year. Students will find this very competitive with in-state tuition rates at institutions in their state of residence.
- Non-resident students who are sons or daughters of UW alumni are also eligible for the same tuition reduction listed above — without their parents having to become a life member of the Alumni Association.

There are many other reasons that you can think of that would make the University of Wyoming a good place for your sons, daughters, and friends to study engineering. I would encourage you to help us out in any way possible. If you would like brochures or other information to distribute to potential students, please let me know. Feel free to email me at whitman@uwyo.edu or call the College at (307) 766-4253.

David L. Whitman

Wind Tunnel 2001

Twenty-seven years ago, in 1974, the main wind tunnel at UW was constructed by mechanical engineering faculty and graduate students under the direction of Dr. John Nydahl. Over the next decade, academic instruction and projects utilizing the wind tunnel grew to the point where space became a factor. The initial specifications for the new Engineering addition (1983) contained a request to relocate the wind tunnel to a larger lab area. When the architectural plan of the new building was submitted, the lab was on an upper floor. Due to noise and vibration considerations, this was not acceptable. However, all space that would have accommodated the extensive lab on a ground floor had already been allocated.

It was decided that a separate laboratory be constructed to house the wind tunnel and other facilities that required large amounts of floor space. Locations near the old power plant and north of Lewis Street were suggested. The University of Wyoming soon fell prey to the State-wide funding crisis, and the fate of the wind tunnel expansion became a moot point.

The wind tunnel was shifted here and there in the College until the addition of two new mechanical engineering faculty members, Drs. Jon Naughton and Doug Smith. Both men have impressive wind tunnel credentials and wished to pursue research opportunities in that area. In 1998, relocation planning began, with cooperation among the Office of Academic Affairs, the Research Office and the College of Engineering.

The University of Wyoming's 2' x 2' Subsonic Wind Tunnel has been moved to a new laboratory in Agriculture Building D. The University, the College of Engineering, and the Department of Mechanical Engineering have spent over $50K to refurbish this laboratory into a modern research facility. The lab has been completely gutted, and a new ceiling, floor, electricity, water, lighting, and compressed air lines have been added to the 2000-square foot room. Additional funds have been spent on upgrades to the wind tunnel including a new motor and drive system, a new 2' x 2' test section, modifications to the diffuser section, and a new flow-conditioning section. These improvements will make cutting-edge aerodynamic research possible. Planned future improvements to the wind tunnel include the replacement of the fan and redesign of the diffuser section.

Dr. Doug Smith discusses air flow over a wing section with mechanical engineering senior Paul Medina.

Currently, four externally funded projects are being carried out in the new laboratory under the supervision of mechanical engineering faculty members Naughton and Smith. A project sponsored by NASA-Ames investigating the improvement of skin-friction measurement has recently been tested in the renovated wind tunnel by graduate student Robert Decker. Another project sponsored by NASA-Dryden is considering drag reduction on launch vehicles by manipulating flow over the front part of the vehicle. Surface coatings on a simple flat plate model are currently under investigation for this project in the wind tunnel by graduate student Weixia Li. A third NASA project (sponsored by NASA-Langley) is investigating the interaction between a flow-control actuator and the flow over a plate. This research is being conducted by Amanda Bridges, a UW undergraduate. Finally, a grant awarded by the U.S. Air Force to investigate jet control is being carried out in the new laboratory. This research has required the building of two additional test facilities, a free jet and a shear flow facility.

Dr. Jon Naughton checks tunnel conditions as the wind tunnel starts.

Robert Decker, mechanical engineering graduate student, monitors an experiment.

ES 1000 Crashes Cars

l to r: Scott Reiman prepares to swing the hammer, watched by spectators Raelynn Hoekema and Sarah Puckett.

All freshmen engineering students are required to take ES 1000, an engineering science orientation course which is part of the University Studies program. This course and its UNST 1000 counterparts are designed to provide academic and personal strategies to help the freshman student make the transition to the University. In addition, an engineering twist to the curriculum teaches skills and professional development related to engineering, especially problem solving and critical thinking.

On Saturday, November 18, these skills were put to use as more than 50 teams competed in the exciting car side-impact test. The goal of the assignment was to gain insight into the real-life problem of a tradeoff between fuel efficiency and safety in the design of automobiles. Students designed their own cars, using only 1/4-inch thick foamcore board, engineering calculation paper, and white glue. Specifications required the vehicles to be passenger cars, built to approximately 1/18th scale. A raw egg was placed in the passenger compartment. A sledgehammer, raised to a 90-degree angle, was then released to strike each car and test its ability to withstand such side impact. Approximately one-third of the cars survived the sledgehammer test.

In addition to the survival of the egg, the other factor for determining the winner was the weight of each car. An additional competition evaluated the aesthetic composition, and there was a competition for overall class performance. Meeting all these requirements, the team of Jared Hensley, Devin Hutchinson, Mike Rego, and Kyle Eyre had the best design and was declared the winner. The team of Mindy Martin, Nathan Ernst, Jarrod Kozeal, and Abbie Foristal won the competition for best overall aesthetic design.

Quincy Howe Breaks UW Record – Second in U.S. –

Quincy Howe, electrical engineering junior from Perrylands, Trinidad, turned in a mark of 53' 1 1/2" for the triple jump at the Wyoming Invitational on Jan. 20, 2001.

His jump set a UW and War Memorial Fieldhouse record and is also the second best in the U.S.

He has provisionally qualified for the 2001 NCAA championships.

Tau Beta Pi Receives Awards

In October 2000, the Wyoming chapter of the national engineering honorary Tau Beta Pi received three awards at the annual Tau Beta Pi conference. Wyoming was one of two of the 220 national chapters to be awarded a Greater Interest in Government grant, one of 36 chapters to receive a Chapter Project Award, and one of 67 chapters to receive a Secretary's Commendation Award. The grant money will be used to continue our chapter's College of Engineering tours for elementary students. The tour consists of demonstrations in the various departments, as well as a small, hands-on engineering project.

Tau Beta Pi is comprised of students in the top eighth of the junior class and the top fifth of the senior class in the College of Engineering. Students are elected to Tau Beta Pi based on their outstanding scholarship and exemplary character. Over 438,000 members have been initiated nationwide since the organization's beginning in 1885. Wyoming's Alpha Chapter has 115 members and holds meetings twice a month. Chapter advisors are Drs. Sally Steadman, Ray Jacquot, John Pierre, Jon Naughton, and alum Jack Meena. Tau Beta Pi coordinates free tutoring, blood drives and career planning seminars, and hosts the Engineering Honor's Banquet each April (see next page).

Honors Banquet Invitation

The Tau Beta Pi (TBP) Engineering Honors Banquet is one of the annual highlights of the Spring semester. It celebrates our scholarship students and the donors who make it all possible.

Scholarships play a major role in helping us respond to the financial needs of our students. A strong scholarship program helps the College attract the brightest, most promising young men and women. In the Fall of 2000 the College of Engineering offered 335 scholarships. This year, thanks to the generosity of our donors, the College has added eight new scholarships.

The 2001 Tau Beta Pi Engineering Honors Banquet will be held Friday, April 27, at Crane-Hill Dining Hall with a reception at 6 p.m. and dinner at 7 p.m. Also recognized that evening will be the TBP Outstanding Sophomore and Junior, the Joint Engineering Council Outstanding Senior, the Wyoming Engineering Society Student of the Year, the TBP Wyoming Eminent Engineer and the TBP Alumnus Eminent Engineer. The Outstanding Undergraduate Teaching Award, the Outstanding Graduate Teaching and Research Award, the Outstanding Staff Award and the Harold O. Kester Distinguished Service Award will be presented.

Tau Beta Pi Engineering Honors Banquet Reservations

Please send your dinner reservation and payment by April 16, 2001, with the following information, or call Fred Chapp at (307) 766-4253.

Names of those attending dinner_____

# of dinner tickets at $ 15 each _____ Amount enclosed _____

Mailing address _____

Telephone # _____

Engineering major and year of graduation_____

Return form to: College of Engineering, P.O. Box 3295, Laramie, WY 82071-3295. Attn: Fred Chapp.

Banquet tickets will not be mailed, but will be distributed at registration that night.

Design Symposium 2000

On Dec. 7, 2000, over 125 engineering seniors participated in the sixth annual Design Symposium, presenting their design projects to industry judges, parents, fellow students and the general public. The event was sponsored by Mid-America Manufacturing Technology Center (MAMTC), PacifiCorp Foundation and the College of Engineering.

The projects were designed, manufactured and tested by the students. Each team or individual gave a presentation varying from 20 to 45 minutes. Those disciplines that were competitive were evaluated on explanation of project and goals; use of visual aids and communication skills; effective and clear conclusion; overall degree of difficulty of the project; and professional demeanor during the presentation.

The following winners were announced at a dinner for participants, judges and sponsors:

Electrical Engineering
Clifford Shoefelt, *Altimeter for Radio Controlled Aircraft*
Stephen Packard, *Digital Display for a Jet Ski*
Victoria Granquist, *Room Humidity Control System*

Mechanical Engineering
Libby Huskey, Thomas Rice, Kimberley Zinkgraf, *Lightweight Slurry Bomber Tank Components*
Nathan Bennett, Andrew Whitson, *Linear Motion Wall Jack*

Chemical Engineering
Derek Kahle, Martin Coleman, Matthew Hauschild, Adam Swanson, Benjamin Graham
Etoh, Inc. - Fuel Ethanol Plant Design

Civil Engineering
Jeffrey Juhala, Elizabeth Johnson, Amanda Bridges
for their project work on a Pedestrian Bridge over the Laramie River

Architectural Engineering
Instructors and industry guests viewed the event as a learning experience, rather than a competition.

Mechanical Engineering winners, l to r: Libby Huskey, Kimberley Zinkgraf, Thomas Rice, Nathan Bennett, and Dr. David Walrath, Mechanical Engineering coordinator.
Not pictured: Andrew Whitson.

Civil Engineering winners, l to r: Amanda Bridges, Elizabeth Johnson and Jeffrey Juhala

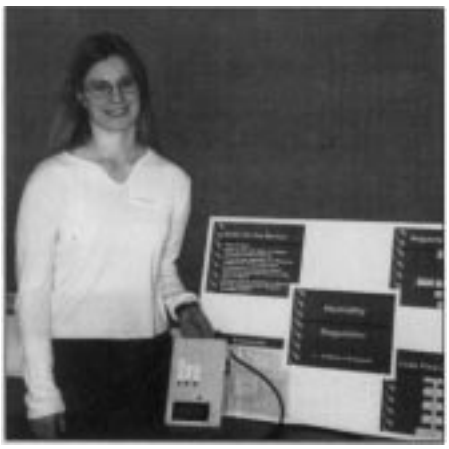
Design Symposium 2000

Members of the Etoh, Inc. team who won the Chemical Engineering competition, l to r: Derek Kahle, Martin Coleman, Benjamin Graham, Adam Swanson and Dr. David Bell, coordinator. Not pictured: Matthew Hauschild.

An Architectural Engineering presentation on the River Song Waldorf School, by l to r: Christie Marchetti, Nichole Soriano and Kimber Lerwick.

Not all projects were portable! A small room housed the project presented by Mechanical Engineering's Jesse Maslowski (l) and Dan Loibl (r).

Electrical Engineering winners, Cliff Shoefelt (l), Stephen Packard (above) and Victoria Granquist (r).



Foresight is coordinated by Dr. David L. Whitman (whitman@uwyo.edu) and edited by Susan McCormack (brat@uwyo.edu).

Your comments and suggestions are always welcome.

Research Competition Winners

A company based on wind power generation and one that will manufacture rock-climbing and mountaineering products have each been awarded $100 in a business plan competition coordinated by the University of Wyoming's Research Products Center. The two businesses are Windswept Energy Solutions and Rocky Mountaineering. They received the funding after providing one-page descriptions of their business ideas. At least one student-run business will be funded through Wyoming's $10K Entrepreneurship Competition.

Windswept Energy Solutions wants to provide an environmentally clean solution to the electricity generating needs of both domestic and international markets. Damian Ray, architectural engineering senior; Barry Mather, electrical engineering senior; and former engineering student Scott Haynes, now a senior in physics, are members of one of the teams who won the first level of competition, Fall Warm-Up.

l to r: Damian Ray, Scott Haynes and Barry Mather.

l to r: Joseph Pawlicki, Jacob Radkiewicz and Marvin Perry. Not pictured: December graduate, Shane Buller

Rocky Mountaineering plans to design and produce rock-climbing and mountaineering products using composite materials which will provide a competitive advantage while meeting customers' needs. The team is comprised of three mechanical engineering students: master's candidate Marvin Perry; recent graduate Shane Buller; and junior Jacob Radkiewicz. They are joined by Joseph Pawlicki who is working on an MBA in the College of Business.

All Fall Warm-Up ideas were reviewed by the Wyoming $10K Entrepreneurship Competition's judges, including an attorney, an accountant, two investors, an engineering consultant, a management consultant, and an entrepreneur. Judges' comments were sent to all teams to help them plan for the competition's second phase, the run for the $10,000. Semi-finalists will be announced early in March, finalists in mid-April and the final presentation will be on April 20, 2001.

Have you been to the College's website?
http://wwweng.uwyo.edu

We have an alumni email directory – are you in it?

What's new in our research/programs?

Have you seen our faculty web pages?

We have it all – Hall of Fame, seminar announcements, scholarship information, back issues of Foresight – and much more!

Honors

Dr. Norman Morrow, Professor in the Department of Chemical and Petroleum Engineering, was one of two recipients of the first-ever UW Faculty Award for Excellence in Internationalization. The award honors a faculty member who has a solid, long-term record in diverse activities that promote both internationalization at the University of Wyoming and UW's global reputation.

Morrow's specialty is improving the understanding of the processes by which oil is recovered. He has received awards for his research from the Petroleum Society, the New Mexico Institute of Mining and Technology, British Petroleum, the Rocky Mountain States Independent Producers Association, the Society of Core Analysts, the Society of Petroleum Engineers, and the Russian Academy of Natural Sciences. In 1999, he was inducted into the Russian Academy as a foreign member and was named J.E. Warren Distinguished Professor at UW. In 2000, he was made a senior visiting fellow of the United Kingdom's Engineering and Physical Sciences Research Council.

"Professor Morrow's accomplishments at UW are inspiring," says Dr. Lewis Bagby, Director of International Programs. "He has been particularly helpful in our international efforts in China. Seven students from that country have completed master's degrees under his guidance, and four students earned their doctorates." In addition, he has participated in cultural activities with Chinese teachers of English who have visited UW each of the past four years under the aegis of the China National Petroleum Corporation.

China is not the only international arena in which Morrow has become involved. His sabbatical leaves and extensive professional visits include Norway, Italy, France, the United Kingdom and Canada. In 2001, he will serve as the Society of Petroleum Engineers' Distinguished Lecturer and will visit Venezuela, Argentina, Peru, Kuwait, Korea and Azerbaijan.

David Nicholas, former Defense Advisor to the U.S. Mission to NATO, and vice president of the UW International Board of Advisors, says "for all these reasons – his international reputation, funding, publications; his attraction of outstanding students from overseas; his outreach and service to the State and campus; his awards from industry and academia – Dr. Morrow represents the very finest in our efforts to internationalize the University of Wyoming."

Dr. Douglas R. Smith, Assistant Professor in the Department of Mechanical Engineering, has recently received an instrumentation grant through the 2001 Defense University Research Instrumentation Program (DURIP) and the Air Force Office of Scientific Research (AFOSR). The money in this grant will be used to purchase a Three-Dimensional Particle Image Velocimetry system. This system uses images of small seed particles suspended in a fluid stream to determine the velocity field in the stream. The seed particles, small enough in size to faithfully follow the fluid motion, are introduced into the fluid upstream of the region of interest. At the measurement location, the particles are illuminated twice with a short-duration-pulse of laser light, and the two resulting sets of particle images are recorded with a high-resolution digital camera. By tracking the change in the position of the particles from one image to the next, a velocity of the particle, and the fluid, can be estimated. The acquisition of this instrumentation will not only enhance research-related education in the Department of Mechanical Engineering, but will also allow the department to be more competitive for future research funding.

Congratulations to Aaron Frude

The civil engineering junior was inducted into Cardinal Key, UW's junior/senior honor society. His selection recognizes his academic achievement, community service and involvement in student activities.

Honors

Dr. Donald Adams, Professor Emeritus of the Department of Mechanical Engineering, and current president of Wyoming Test Fixtures, Inc., has received the American Society for Testing and Materials (ASTM) Wayne Stinchcomb Award. The award is presented annually for outstanding contributions to the testing of composite materials.

An organization with over 33,000 members, ASTM is primarily concerned with writing standards for materials. Adams' research focuses on reinforced composite materials. The tests performed determine the quality of the materials and set the standard and the tests used to determine those standards.

One of Adams' products, the losipescu shear test fixture, is an ASTM standard. Named for the Romanian who came up with the original concept, the device is used worldwide to determine shear strength of materials. The automotive and aerospace industries are particularly interested in such applications.

Adams retired in 1999 after 28 years at the University of Wyoming. Prior to his career in academia, he worked for 15 years in the aerospace industry. His company, Wyoming Test Fixtures, Inc., is a spin-off of his work with composite materials at the College of Engineering.

Top Profs Honored by Mortar Board

Induction into UW's Mortar Board is one of the most prestigious honors a senior can receive. Each of the 31 members of the senior honor society named his or her Top Prof, recognizing that faculty member for the positive impact on the student's college experience. The following engineering faculty were named:

Pradeep Agarwal, Chemical Engineering
Steve Barrett, Electrical Engineering
Thom Edgar, Civil Engineering
Jonathan Naughton, Mechanical Engineering
John Pierre, Electrical Engineering

Gabor Vali, Professor in the Department of Atmospheric Science, has been re-elected to a three-year term as a Trustee of the University Corporation for Atmospheric Research (UCAR). A not-for-profit organization, UCAR is a consortium of 63 universities plus an increasing number of academic and international affiliates and corporate partners. The UCAR mission is to support, enhance and extend the capabilities of the university community, nationally and internationally; to understand the behavior of the atmosphere and related systems, and to foster the transfer of knowledge and technology.

"UCAR is an important focal point for our profession, and we're very proud that Professor Vali has been re-elected as Trustee," says Al Rodi, Professor and Head of the Department of Atmospheric Science. UCAR, based in Boulder, Colorado, manages the National Center for Atmospheric Research (NCAR) in Boulder under sponsorship of the National Science Foundation. The activities of the UCAR Office of Programs are also funded by the FAA, NASA, NOAA, EPA, and DOE. Among its many activities, NCAR gives scientists access to major atmospheric observing facilities such as airplanes, radar installations and large-scale computers.

Glenn Mullens - In Memoriam

The College of Engineering lost a special friend when Professor Emeritus Glenn Mullens passed away in December 2000. A Wyoming native, he was a UW alum and a faculty member in Civil Engineering for 38 years. Even after his retirement, he was a frequent and most welcome visitor to these halls.

After his first degree (BSME '41), Mullens worked for the Union Pacific Railroad, then moved to Los Angeles, California to work for the North American Aviation Company. During World War II, he served in the Army Air Corps as a B29 flight engineer. He returned to Wyoming after the war and earned two more degrees (BSCE '47, Professional Degree Civil Engr. '50) before he went to the University of Illinois for his master's degree in civil engineering ('54).

Mullens started his teaching career in the College as a part-time instructor of "engineering drawing" and ended known for his expertise in teaching structural engineering. A registered Professional Engineer and Architect in Wyoming, he also worked as a consulting engineer for the Laramie firm of Hitchcock and Hitchcock Architects. In 1995, he was named Tau Beta Pi Wyoming Eminent Engineer.

He served his community well, as president of the board of trustees for the Cathedral Home for Children, as a long-time member of St. Matthew's Cathedral, on the Hunter Hall Board for the Episcopal Diocese of Wyoming, and as a member of the Laramie Lion's Club.

The College extends its deepest sympathy to his wife, Elinor, and their children, Dave, Ann and Jim. Glenn Mullens was an asset to the College and a warm friend to us all. He truly will be missed.

Those who wish to contribute to the Professor Glenn B. Mullens Scholarship to honor this exceptional teacher and friend may contact the College of Engineering, P.O. Box 3295, Laramie, WY 82071.

Albert M. Dale - In Memoriam

Albert M. Dale passed away this Fall in Bartlesville, Oklahoma. A 1952 graduate of Civil Engineering, he was a faithful and generous supporter of the College of Engineering. We would like his family to know how much we appreciated that support. Many deserving students have benefitted from Albert M. Dale's generosity. Our thoughts and prayers are with you.

He's Doing *WHAT?!* Jim Smith in Retirement ...

Dr. Jim Smith, former Head of Agricultural Engineering, retired from Civil Engineering in 1997. He and his wife, Helen, have picked up an old hobby: restoring old farm tractors. (Helen says that all Jim ever wanted to be anyway was a tractor mechanic!) Currently, they have restored a 1947 Model D Gibson (pictured) and are about finished with restoring a 1946 tractor, which they found in a pile of rusty parts. The 1946 tractor is the oldest Model D presently known. Gibsons were manufactured in Longmont, Colorado, from 1946-1952.

Helen and Jim enjoy attending tractor shows, and this past Fall at the Burnett Corners, Wisconsin Tractor Show, they were awarded the Best of Show trophy for their 1947 Gibson. A field of 435 small riding and garden tractors were entered in the competition.

The show coordinator, Jim Cunzenheim remarked, "Your Gibson was the most deserving of any tractor at the show. It is probably the best restoration of any tractor I have ever seen. The attention to small details was what really set it apart from all the other restorations. The time you spent working on it and the effort that went into it was certainly worthwhile."

Would we expect anything less from a fine engineer?

WES Student Engineer of the Year

Each year, the Wyoming Engineering Society (WES) honors an outstanding UW senior. The candidates, nominated by their departments, are chosen for excellence in academics and outstanding leadership qualities in student, civic and humanitarian activities.

This year's nominees were: Diane Beeck, Chemical; Heidi Blakely, Electrical; Joe Hall, Architectural; David Hooper, Mechanical; and, Lindy Johnson, Civil.

Joe Hall, WES Student Engineer of the Year, is congratulated by Joe Lord, WES Secretary/ Treasurer.

A distinguished panel of WES members have selected Joe Hall as the Student Engineer of the Year. With his 3.9 GPA, Hall is no stranger to awards, having received honors as Outstanding Freshman and Junior, and nominated as Outstanding Sophomore. He has had an impressive list of scholarships in his years at UW and is a student member of the American Concrete Institute and the Architectural Engineering Institute.

UW sports fans will recognize Hall as a stellar member of the track team. He has been named to the First Team All-WAC in Cross Country (1998) and the All-MWC in Indoor and Outdoor Track Team (2000), was a four-time Academic All-Conference honoree, a four-time Conference Scholar Athlete and a two-time Academic All-District Team selection. Hall has also been Athlete of the Week on several occasions.

In his application, Hall stated "Many of life's lessons are learned outside the classroom." Practicing what he preaches, the Buffalo, WY native has worked for BridgeTech, Inc., International Publishing, Inc., Walter/Vogl Construction Company and has been an undergraduate research assistant at UW. Where does he go from here? "I want to push the envelope of traditional engineering by integrating more sustainability into new and existing structural systems and incorporating retrofit designs into existing structures, rather than always building new."

Are there any doubts that Joe Hall will succeed in whatever he chooses to do?

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