

South Dakota School of Mines and Technology

THE **HARDROCK**TM

A publication for our Alumni,
Faculty, Staff, Students, and Friends

FALL 2008

Scaling New Heights

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...and much more!



Perspectives



Dear Alumni and Friends,

The 125th anniversary of the South Dakota School of Mines and Technology in 2010 is on the horizon. As we approach this significant historic event, we can take pride in knowing that one of Mines' best traditions is that it is, and has been, a great institution. Jim Collins, author of the bestselling book *Good to Great* (2001) and subsequent monograph *Good to Great and the Social Sector* (2005), writes "A great organization is one that delivers superior performance and makes a distinctive impact over a long period of time." At Mines we clearly "deliver on our mission and make a distinctive impact, relative to our resources." Mines achieves great results.

Thanks to you, some of these great results include an engaged and successful learning environment for our wonderfully bright, talented, and dedicated students; building on our tradition of excellence in undergraduate and graduate education. Another great result is our ability to attract and retain our stellar faculty directly impacting our students' career placement (99 percent placement rate for 2006-07 graduates--more than 90 percent of our 2007-08 graduates are already working in their career fields or pursuing advanced degrees) and future career success (with average starting salaries of approximately \$56,000 in 2008) while serving the needs of industry, academe, and the global society through the preparation of highly qualified, young leaders in science and engineering. This, of course, is achieved through dynamic partnerships contributing to our students' internships and coop experiences. Thanks to many, the School of Mines was recently named one of America's 100 Best College Buys for the eleventh consecutive year.

Our research opportunities are expanding for undergraduate and graduate students under the superior guidance and support of our fine faculty who are growing the research enterprise with great dedication and success. As you know, our initiatives at the Deep Underground Science and Engineering Laboratory are continuing to be a golden research collaboration for all involved and brings our students in contact with world-renowned scientists and researchers in many disciplines.

We must continue our tradition of greatness at Mines. To do so, it is critical to enhance our prospects for sustainability by increasing our enrollment from throughout South Dakota, the U.S., and the world with careful attention to increasing our recruitment of women and underrepresented populations.

We need you to continue to contribute to an energetic, future focused, thriving Mines that embraces the best of its traditions. So I would ask you to tell friends and prospective students in your community and throughout the world about the greatness of Mines, and continue to give generously so that we have the resources for educational growth including new programs and research opportunities to give our students the finest, world-class educational experience on the planet.

As members of the School of Mines family, our every action is critical to advancing the university's position as an educational leader in the 21st century. As alumni and friends, you play an incredibly important role in upholding and advancing the university's reputation. The School of Mines is preparing the next generation of leaders in science, engineering, and technology. I invite you to collaborate in this enterprise - together we will create transformational opportunities for our students, continue our tradition of greatness, and *invent tomorrow*.

Sincerely,

Robert A. Wharton
President

P.S. If you are not already receiving my e-newsletter, mailed approximately twice per month, and would like to be included, please register at <<http://president.sdsmt.edu>> or contact my office by emailing <carol.jensen@sdsmt.edu> or by phone at (605) 394-2411. The *Hardrock* is also available on-line at <<http://news.sdsmt.edu/hardrock/>>.

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On the cover:

Cover Photo: The South Dakota School of Mines and Technology welcomes institution's 18th leader, Robert A. Wharton, Ph.D. *Story p. 6*

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Perspectives

Dear Alumni and Friends,

What fun it has been to meet and visit with our alumni over the past year! Memorable adventures include driving to Yankton across Highway 18 in a blizzard, road tripping with **Larry Simonson** (EE69) from Tulsa to Memphis to New Orleans, and then the following weekend with **Mary Jane (Meola) Green** (CE78) from Wichita to Kansas City. Everywhere I have been I find alumni have at least three things in common: pride in our roots, personal and professional drive, and lots of enjoyable memories to share of South Dakota and our times at the School of Mines.



Following the mid-July Alumni Association Board meeting, the Alumni Association sponsored a "Meet the New President Mixer" with Rapid City area alumni to give a warm welcome to the eighteenth President of the South Dakota School of Mines and Technology, Dr. Robert Wharton, and first lady, Dr. Carolyn Fassi Wharton.

Alumni Association participation and funding continue to be our challenge. Alumni Board Treasurer **John Davies** (ChE71) is working with the Executive Committee and the Alumni Office to prepare a simplified annual report for the Association this year, which marks the beginning of our 75th Anniversary (1934-2009) as an Alumni Association. Our objective is to provide transparency of our financial situation. Additionally, an Alumni Association/Foundation task force is exploring potential opportunities to create administrative efficiencies between both organizations.

While reading the memorial section of the last *Hardrock*, I was saddened to learn of the death of one of my classmates. I had not seen him since graduation, but had always hoped to reconnect at some point. I am reminded of the precious nature of our relationships with friends and alumni. The evolution of technology and pace of life has changed us. Instead of picking up the telephone it has become our custom to launch an e-mail to get in touch and our more recent alumni are likely to use Internet communities to maintain friendships. Connecting alumni to each other remains a strategic objective of the Alumni Association and we will continue to pursue tools to make that simpler - your alumni contributions can help make that possible.

Ralph Wagner (CE75) was inaugurated in early October as your 2009 Alumni Association President. It will be a busy year with significant attention devoted to preparation for the 2010 reunion - July 7-11, 2010!

Thank you for your support!

Warm regards,

Marlene Nelson

Marlene Nelson (ME 74)
SDSM&T Alumni President

Our mission: To advance the interests, influence and reputation of the South Dakota School of Mines and Technology, by fostering and developing the continued interest and active support of alumni and friends.

Campus Profile

South Dakota School of Mines and Technology has been a national leader in preparing world-class engineers and scientists since 1885. Our graduates design, construct, and operate the most modern technology to meet complex challenges such as global warming, health care delivery, energy resource development, mineral extraction and processing, environmental quality, futuristic transportation, and national defense. Our alumni are held in the highest regard by their fellow leaders in industry, consulting, government, health, research, and education.

The School of Mines continuously adapts to meet the needs of engineering and science. Rugged individuals and pioneers in engineering and science founded the School of Mines' intellectual environment more than a century ago. Our faculty, staff, students, and alumni carry on that tradition today.

The School of Mines is a state supported university that provides graduate and undergraduate degrees in science and engineering. The School of Mines is an AQIP institution, accredited by the Higher Learning Commission and committed to quality and continuous improvement.

2008-2009 Enrollment:

2,061 students from 40 states and 29 countries.

Costs and Fees:

A School of Mines education has never been more affordable. 2008-2009 annual undergraduate costs for tuition, fees, books, room, and board total approximately \$13,170 per year for South Dakota residents and \$14,490 for non-residents.

Research:

Researchers conduct state-of-the-art research that benefits the state, the region, and the nation through advances in technology and economic development. In Fiscal Year 2008, researchers received more than \$10.1 million in funding for 90 projects. Funding agencies included the National Science Foundation, the State of South Dakota, NASA, the Department of Education, Army Research Laboratory, and many more.

Faculty:

The School of Mines employs 135 full-time faculty members, more than 74 percent of whom hold doctorate or other appropriate terminal degrees.

Honors and Awards:

- One of America's Best College Buys for the eleventh consecutive year
- One of approximately 200 Colleges of Distinction

Placement:

Starting salary offers to our graduates average approximately \$56,000. More than 99 percent of 2006-2007 graduates have found jobs in their career fields or graduate professional programs.

Bachelor of Science Degrees

Chemical Engineering
Chemistry
Civil Engineering
Computer Engineering
Computer Science
Electrical Engineering
Environmental Engineering
Geological Engineering
Geology
Industrial Engineering and
Engineering Management
Interdisciplinary Sciences
Mathematics
Mechanical Engineering
Metallurgical Engineering
Mining Engineering
Physics

Master of Science Degrees

Atmospheric Sciences
Biomedical Engineering
Chemical Engineering
Civil Engineering
Computer Science
Electrical Engineering
Geology and Geological Engineering
Materials Engineering and Science
Mechanical Engineering
Paleontology
Technology Management

Doctor of Philosophy Degrees

Atmospheric and Environmental
Sciences
Biomedical Engineering
Chemical and Biological Engineering
Geology and Geological Engineering
Materials Engineering and Science
Nanoscience and Nanoengineering

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Golden Nuggets



School of Mines holds 157th commencement

The School of Mines held its 157th Commencement May 10, 2008, and awarded degrees to more than 200 undergraduate and graduate students. In addition, 35 alumni from the class of 1958 attended the ceremony and received certificates commemorating the fiftieth anniversary of their graduation.



The School of Mines 157th commencement was held at the Rushmore Plaza Civic Center Arena on May 10, 2008



Commencement speaker Dr. Thomas O. Hunter, president of Sandia Corporation and director of Sandia National Laboratories

Dr. Thomas O. Hunter joined the School of Mines as commencement speaker. Dr. Hunter currently serves as president of Sandia Corporation, a Lockheed Martin Company, and director of Sandia National Laboratories. Sandia Corporation manages Sandia National Laboratories, with principal sites in Albuquerque, New Mexico, and Livermore, California, for the United States

Department of Energy's National Nuclear Security Administration. Dr. Hunter joined Sandia in 1967 and became president in April 2005. His responsibilities include managing the Laboratories' \$2.2 billion annual budget and approximately 8,400 employees.

Dr. Hunter earned a bachelor's degree from the University of Florida, master's degrees from the University of New Mexico and University of Wisconsin, and a Ph.D. from the University of Wisconsin. He has been recognized as a distinguished alumnus by both the University of



Members of the class of 1958

Florida and the University of Wisconsin.

Firas Khoury (EE08) and **Wes Snaza** (ME08)



Senior class representative
Firas Khoury (EE08)

represented the student body. While attending the School of Mines, Khoury was involved in International Student Ministry, Eta Kappa Nu Association, and Tau Beta Pi honor society. Khoury received several honors and awards during his time at the School of Mines, including the Outstanding Electrical Engineering Senior in 2008, Tau Beta Pi Scholarship, Robert and Corinne Ferris Scholarship, Maurice L. Cleland Scholarship, Peter Stephens Scholarship, and placed on the Dean's List.

During his time at the School of Mines, Snaza participated in multiple activities including Society of Automotive Engineers (SAE), Formula SAE, Center of Advanced Manufacturing and Production, Connolly



Senior class representative
Wes Snaza (ME08)

Hall resident assistant, Mechanical Engineering Student Advisory Board, Student Ambassador, Student Orientation Leader, Phi Eta Sigma Honor Society, and Tau Beta Pi honor society. Snaza served as treasurer of the Society of Automotive Engineers and held multiple leadership positions within Formula SAE including sponsorship coordinator, project manager, and engineering lead of the sixth place 2007 team. He was honored as an outstanding student organization member and inducted into the student leadership hall of fame for his work as a team member of Formula SAE and mentoring within CAMP.

The School of Mines also honored **Jerrold L. Brown** (CE65) with the Guy E. March Medal. After graduating in 1965 with a bachelor's degree in civil engineering, Brown was commissioned as second



Guy E. March Medalist
Jerrold L. Brown (CE65)

lieutenant in the United States Army Corps of Engineers. In 1966, he entered the United States Army where he graduated from Army Paratrooper School at Fort Benning, Georgia. Brown served at Fort Campbell, Kentucky and went to South Vietnam in 1967. He served with the 87th Engineer Battalion (Construction) as a platoon leader and company commander. He was awarded the Bronze Star, the Vietnamese Service Ribbon, and the Vietnam Campaign Ribbon.

In the fall of 1968, Brown entered graduate school and earned a master's degree in civil engineering in 1970. He began working for Birdsall Sand & Gravel Co., Rapid City, South Dakota, in September 1969. In 1981 he became president and chief executive officer of the company. Brown retired as vice president and general manager for Pete Lien & Sons. He was awarded the 2001 South Dakota Engineering Society's Engineer of the Year award.

School of Mines inducted into Great Plains Cooperative Ecosystem Studies Unit

The School of Mines has been approved for membership in the Great Plains Cooperative Ecosystem Studies Unit (GP-CESU). The mission of the GP-CESU is to determine the ecological state of public lands of the Great Plains and examine its future within the context of private lands. This determination is focused on improving the scientific basis for managing ecosystems in the region, through more active and interactive technical assistance, research, and education among the partner institutions and agencies.

Inclusion of the School of Mines as a partner in the GP-CESU is a recognition by its peers of its unique facilities and expertise. Membership is selective and requires a unanimous vote of the CESU executive committee which bases its decision on the ability of the prospective partner institution to significantly expand the capabilities and skills of the unit.

Established in October 2000, the GP-CESU, with the addition of the School of Mines, has 14

university partners and seven federal agency partners. Its membership includes the University of Nebraska, Black Hills State University, Colorado State University, Kansas State University, Langston University, North Dakota State University, South Dakota State University, Texas A&M University, the University of Minnesota, the University of North Dakota, the University of Oklahoma, the University of South Dakota, and the University of Wyoming. The federal agency partners are the U.S. Geological Survey, the Bureau of Land Management, the National Park Service, the U.S. Forest Service, the United States Bureau of Reclamation, the Natural Resources Conservation Service, and the United States Fish and Wildlife Service.

School of Mines wins DAC Scholars Award

For the fourth consecutive year, the School of Mines is the recipient of the Dakota Athletic Conference (DAC) Scholars Award.

The award is presented annually to the school with the highest percentage of student-athletes honored as DAC Scholar-Athletes. Forty-eight percent of Hardrockers athletes earned recognition for their academic achievements.

In order to be recognized as a DAC Scholar-Athlete, a student-athlete must have a cumulative grade point average of 3.25 or better and have earned twelve or more credit hours for a semester in which he/she participates in a conference sponsored sport.

Technology Management program named best buy



The technology management master's program at the School of Mines has been ranked as a best buy by GetEducated.com. A Best Buy designation indicates that a program has been reviewed and judged to offer a high quality distance degree to a national audience at tuition rates well below the national average. The average cost of a distance masters in the engineering area, according to the national survey, which included 216 programs, is \$23,203. At \$9,280, the School of Mines ranked fifth.



For the complete rankings, visit http://www.geteducated.com/rankings/best_engineer.asp.



Scaling New Heights

During the past decade the South Dakota School of Mines and Technology has continued to strive for excellence in science and engineering education and research. With the recent retirement of **Dr. Charles Ruch** as president, and the subsequent presidential search, the School of Mines found the perfect fit in **Robert A. Wharton, Ph.D.**

The South Dakota Board of Regents and the School of Mines were looking for a president who was much more than an able academic and administrator. The search was on for someone with a unique perspective who could establish the university's national presence and profile and who had stature in both academic and industry circles.

On July 1, 2008, Wharton became the eighteenth president of the South Dakota School of Mines and Technology. President Wharton will lead the university in a time of tremendous opportunity and change, past new milestones and challenges. Through President Wharton's strategic focusing efforts, the School of Mines is committed to continuing and accelerating the university's growth and enhancing the strong community and institutional relationships already in place.

President Wharton found just what he was looking for in the School of Mines: a university with a reputation for preparing student leaders as the next generation of engineers and scientists, which was focused on research and technology commercialization, and heavily involved in economic development. The legacy of accomplishments left by President Emeritus Ruch provided the university with the perfect profile to match President Wharton's interests, abilities, and aspirations. A number of opportunities are at the doorstep ready for President Wharton's leadership.

The National Science Foundation's recent selection of the Sanford Underground Science and Engineering Laboratory at Homestake as the development site for the Deep Underground Science and Engineering Laboratory (DUSEL) is but one of the many recent opportunities for the School of Mines to showcase its excellence and provide leadership. The project, led by Co-Principal Investigator **Dr. Bill Roggenthen** (GeolE69), professor of geology and geological engineering, provides for unlimited research potential in projects ranging from physics and geology to biology. Roggenthen and others at the School of Mines have worked closely with renowned scientists from the University of California Berkeley, the project lead on DUSEL, as well as eminent researchers from around the world. A number of School of Mines' faculty members are already taking advantage of these opportunities, with research

projects ranging from seismology to microorganisms living in the extreme conditions of the former mine.

Industry partners have also stepped forward to demonstrate their commitment to the School of Mines and its students with a number of significant gifts. Nucor recently made a donation of \$1 million to fund the Nucor Endowed Professorship for Metallurgical and Steelmaking Technologies, and named Dr. Dana Medlin as the endowed professor. The new professorship will provide critical support for steelmaking research and ensure the continuation of higher education in the field. Funds will also be used to support graduate and undergraduate students working with the named faculty, support travel, dues, professional enrichment, and other necessary research and teaching expenditures.

Cargill has also donated \$500,000 to provide a bioprocessing laboratory and teaching space for the chemical and biological engineering department within the planned Chemical and Biological Engineering/Chemistry Building and to fund new bioprocessing equipment, student field trips, and continued education of the faculty of the chemical and biological engineering department (see page 10). In addition, a \$30,000 donation from Halliburton will provide student and faculty support and provide opportunities for the company to partner with the university in developing new technologies.

Strategic Focusing Efforts

- Continuous quality improvement
- Growing graduate programs and the research enterprise
- Optimizing enrollment
- Furthering our leadership role in the Deep Underground Science and Engineering Lab (DUSEL).

Support for the School of Mines also comes from private donors. A very generous million dollar gift from Linda and **Larry Pearson** (ME72) has established the Pearson Chair in mechanical engineering. The recipient will have the opportunity to focus on all areas of energy sustainability including the availability of energy resources; technologies required to extract, process, distribute, and generate power from them; alternative and



“Every day I am more impressed with this institution and its accomplishments. The attitude of the people on campus, in terms of wanting to make this the best educational experience possible for our students, is remarkable. I am confident that the School of Mines is poised to claim its position as a premier science and engineering institution, in terms of education, research, leadership, and impact.”

President Robert A. Wharton, Ph.D.

sustainable energy sources; and the best technologies and management practices for dealing with utilization efficiency and conservation of energy.

Industry and private donations are recognition of the School of Mines ascent as a premier institution, and the university looks forward to continuing these successful partnerships as well as creating new ones. These recent achievements are only the beginning. Under the leadership of President Wharton, the School of Mines will continue to provide critical support and leadership to the DUSEL project, and looks forward to a new world of opportunities for students and faculty to form collaborations within areas that weren't as available before.

The university has also been identified as the site of a new National Science Foundation (NSF) Industry/ University Cooperative Research Center (I/UCRC) in the area of bioenergy — one of only approximately 50 I/UCRC's in the nation. The new I/UCRC Center for Bioenergy Research and Development will be a consortium of universities, industrial partners, and governmental agencies (see page 8). The School of Mines is one of only eight universities to lead two I/UCRC's; the other being Friction Stir Processing established in 2004.

Guided by our far-reaching strategic foci, the School of Mines is well on the way to improving its status as one of the nation's premier science and engineering universities. The achievements of recent months offer a glimpse at the impact we are having across our state and around the world. Our potential is unlimited and with the leadership of President Wharton and the rest of our campus community, the School of Mines has embraced this opportunity to thrive.



A Perfect Fit

President Wharton came to the School of Mines from Idaho State University (ISU), where he served as provost and vice president for academic affairs. Wharton was also a tenured professor of biology at ISU and previously served as its chief research officer, leading the university's efforts to foster, support, and expand its research enterprise.

His Ph.D. in botany is from Virginia Polytechnic Institute. He also holds a M.A. degree in biology and a B.A. in botany from Humboldt State University in California. He has served with the National Science Foundation, NASA, and the Jet Propulsion Laboratory, is a Royal Geographic Society Fellow, and was awarded the Antarctic Service Medal.

President Wharton has been to Antarctica 11 times and is an avid adventurer. As a rock and ice climber, he has found the Black Hills to be a perfect fit and plans to take advantage of all the opportunities the area has to offer.

Wharton is married to Carolyn R. Fassi Wharton, D.P.A., a native of St. Louis, Missouri. Fassi Wharton has 20 years of experience working in health care administration at the federal, state, and local levels, in private industry, and in academe as a faculty member. President Wharton's son, Matthew Wharton, is a software engineer with Ericsson Corp. in Colorado.

The presidential inauguration for Robert A. Wharton, Ph.D., will be held on Monday, April 6, 2009. More information is available at <<http://president.sdsmt.edu>>.



School of Mines to Lead National Energy Research Center

The South Dakota School of Mines and Technology has been named the site of a new National Science Foundation (NSF) Industry/University Cooperative Research Center (I/UCRC) in the area of bioenergy. The new I/UCRC, the Center for Bioenergy Research and Development, will receive substantial funding at the multi-million dollar level from both the National Science Foundation and sponsoring industries.

"The selection of the School of Mines as the site of a second I/UCRC is a testament to our reputation as an outstanding research institution," School of Mines **President Robert A. Wharton, Ph.D.**, said. "We look forward to working with our partners to advance bioenergy research."

Dr. Duane Abata, professor, mechanical engineering, will serve as the I/UCRC coordinator and **Dr. David Dixon** (ChE78), professor and chair, chemical and biological engineering, will serve as the School of Mines site director.

"Energy is fast being recognized as a national problem and concern. Renewable energy will play an important part in fulfilling our national energy portfolio, and relieving our reliance on foreign oil," Dixon said. "Our new research center will examine ways to find, improve, and commercialize bio/renewable energy routes and systems. We hope to see process and economic improvements to

existing bioenergy systems like the corn ethanol industry. We also expect to see research coming out of the center that leads to innovation in the cellulosic fuel area, which has an even greater potential to positively impact our nation's energy needs."

The School of Mines will be the host institution for the center, which will be a consortium of universities, industrial partners, and governmental agencies.

"This is such a great opportunity for the School of Mines to establish national and international visibility in the bioenergy research arena. We are the only bioenergy center funded by the NSF in the country," Abata said. "This is also a wonderful opportunity for our students to participate in cutting-edge, ground-breaking bioenergy research."

This idea of proposing a bioenergy research center has been brewing for at least two years, long before energy prices shot up and the government determined the importance of alternative energy production. It was in the back of Dr. Abata's mind when he became engineering dean in 2006.

"I knew our bioprocessing interest and capabilities were very strong," he said. "We started talking with other universities and everyone was very enthusiastic. We met in Minneapolis with potential site directors and then launched a massive effort to recruit industry partners and submit the NSF application."

Members of the consortium include South Dakota School of Mines and Technology, South Dakota State University, Kansas State University, North Carolina State University, State University of New York Stony Brook and the University of Hawaii. These schools have already shown a strong commitment to, and understanding of, the great need for bioenergy research, investing a combined total of more than \$100 million prior to the creation of the center. The universities benefit from the opportunities to partner with other leading institutions to conduct industrially relevant research, and receive seed funding and recognition as a National Science Foundation (NSF) research center with access to professional resources and guidance aimed towards enhancing





global competitiveness.

Each university pledges, as part of the membership agreement, to bring five industry or governmental partners on-board, which yields a strong industry commitment of more than 30 members. The membership fee for industries is \$50,000 per year. While that is a substantial commitment, it is a mere fraction of what the industry partners would pay to do independent research. It allows them to leverage their research and development funds while gaining access to multi-university centers renowned for their innovative research capabilities.

University researchers benefit from collaborative efforts with their counterparts at the other institutions, increasing productivity by avoiding duplication of work. They are also not competing against each other for the same niche research funding. They have the advantage of exposure to real world industry research needs.

Industrial partners are able to benefit from the talents and resources of the universities, directing research toward topics which may otherwise not be investigated. They are permitted to jointly discuss pre-competitive work without direct violation of anti-trust laws. This partnership also proves to be an excellent recruiting tool, building the future for the

“This is such a great opportunity for the School of Mines to establish national and international visibility in the bioenergy research arena.”

Dr. Duane Abata
coordinator
Industry/University Cooperative
Research Center (I/UCRC)

company and providing job opportunities for graduates.

The School of Mines has already seen considerable benefits from its Friction Stir Processing I/UCRC, which was started in October 2004. It has given many students the opportunity to participate and be funded in their research efforts.

“We bring the undergraduates in early, get them excited, and engage them in research. In the beginning they may not completely understand everything they are asked to do in the lab, but as they go through their academic courses, what they see in the classroom becomes more tangible because they have seen how it is applied,” William Arbegast, director, Center for Friction Stir Processing, said. “It is also quite an honor to be chosen to be the host university for our second NSF I/UCRC.”



Cargill Donates \$500,000 Toward Biorefinery Laboratory

In March 2008, officials from the South Dakota School of Mines and Technology and Cargill announced a major gift of \$500,000.

"On behalf of the entire university, I would like to thank Cargill for its generous gift," School of Mines **President Robert A. Wharton, Ph.D.**, said. "Our longstanding, successful partnership has been strengthened by this generous donation that will help prepare

\$250,000 will be used to fund new bioprocessing equipment, student field trips, and continued education of the faculty of the chemical and biological engineering department.

"We've had a great relationship with Cargill over the years," **Dr. Dave Dixon** (ChE78), chair, chemical and biological engineering, said. "And now one of the primary recruiters of our chemical engineering students is also one of our major contributors. We couldn't be happier."

Dr. Patrick Gilcrease, assistant professor, chemical and biological engineering, is leading the development of the bioprocessing curriculum. He



future engineers and scientists."

Cargill's gift - which will be donated over a five-year period - will be split into two components. The first \$250,000 will be used to provide a bioprocessing laboratory and teaching space for the chemical and biological engineering department within the planned Chemical and Biological Engineering/Chemistry Building. The second



explained, "While chemical engineers have traditionally worked in the oil and gas/petrochemical industries, global demand for nourishing foods, biofuels, biopharmaceuticals, and bioremediation requires that chemical engineers understand both chemical and biological systems."

"Our chemical engineering program is evolving to teach the skills and knowledge that bioprocessing companies like Cargill need; these skills are also critical for the development of value-added agriculture within the state of South Dakota," he said.

The gift was made possible by contributions from several of Cargill's businesses including Cargill Corn Milling; Cargill Grain and Oilseed Supply Chain; and Cargill Dressings, Sauces and Oils.

"Cargill has a long history with South Dakota School of Mines and Technology, and many of its graduates are now valued employees," Bob Siegert,

vice president of Cargill's corn milling business, said. "We're proud to partner on this project and help these students achieve success in the classroom and beyond."

Cargill is an international provider of food, agricultural and risk management products and services. With 158,000 employees in 66 countries, the company is committed to using its knowledge and experience to collaborate with customers to help them succeed. For more information, visit <http://www.cargill.com>.



Geology Goes Global

More than 100 students experienced hands-on geology this summer through the Black Hills Natural Science Field Station.

The station, a cooperative program formed by a consortium of colleges and universities including South Dakota School of Mines and Technology (the host institution), the University of Mississippi, the University of North Dakota, and the University of Wisconsin-Milwaukee, offers a variety of field courses in geology and geological engineering every summer. This year, 101 participants from 34 universities, including the School of Mines, Harvard, Texas A&M, and Purdue University, attended camps in Turkey, India, and the United States.

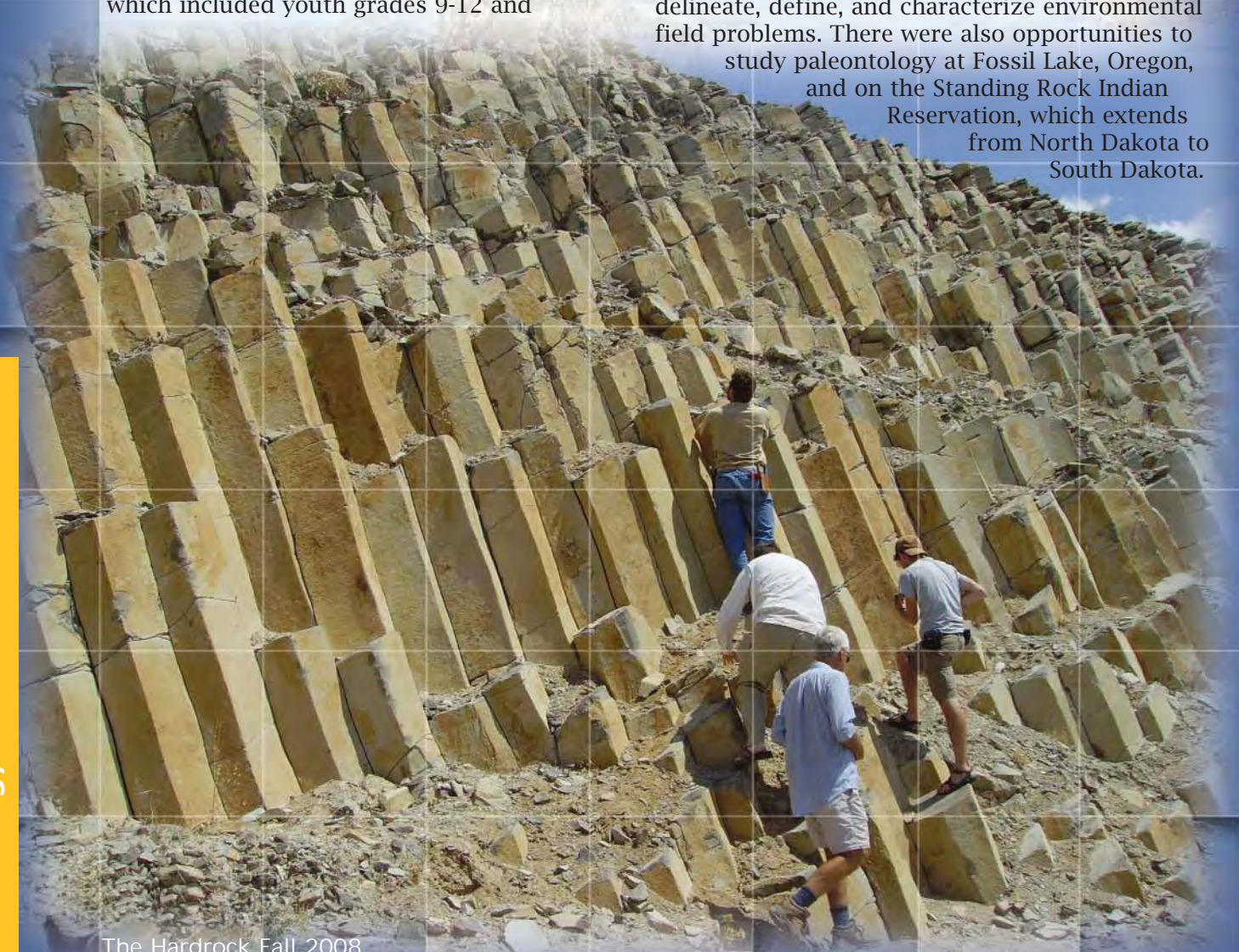
In the United States, camps were offered from Ranch A, a historic log mansion located in the northern Black Hills near Beulah, Wyoming and from the School of Mines campus in Rapid City.

Participants of the basic geology camps, which included youth grades 9-12 and

college freshmen, were taught to read a compass and topographic and geologic maps and to understand water, volcanoes, landslides, and earthquakes. They also learned about the unique geology of the Black Hills and how they were formed.

More advanced camps were held for college juniors and seniors studying geological engineering, physical geology, mineralogy, petrology, stratigraphy/sedimentation, and structural geology. Practical applications of engineering and environmental problems were emphasized with a good portion of the time being devoted to engineering problems including surface-water and ground-water hydrology, geomechanics, engineering work design, and mineral resource assessment in the northern Black Hills and northeastern Wyoming.

An environmental geology field camp was offered for undergraduate and post-graduate students requiring additional training to current field and laboratory methods that are utilized to delineate, define, and characterize environmental field problems. There were also opportunities to study paleontology at Fossil Lake, Oregon, and on the Standing Rock Indian Reservation, which extends from North Dakota to South Dakota.



In Turkey, the field camps were based at the Taskesti field station, located on the North Anatolian Fault Zone, about 150 miles east of Istanbul. Participants studied the spectacular geology and culture of the Tethys realm. Cultural experiences included Sunday trips to museums and shopping centers in Ankara and Istanbul and to beaches on the Black Sea.

In India, an environmental geology field camp, exploring coastal environmental issues, was held in the Andaman Islands and the port city of Chennai. It was sponsored by the Black Hills Natural Science Field Station and the Institute of Atmospheric Sciences at the School of Mines in cooperation with Anna University in Chennai. This camp was an intense three-week training in coastal ecological issues including groundwater studies,

mangrove ecology, and coastal and ocean biogeochemistry. It also integrated hard rock geology and a comparative study of tsunami-impacted and unimpacted coastal ecosystems in the Andaman Islands off the coast of India. The students also gained unique research experience in ocean biogeochemistry as they were allowed to take part in a cruise of the Indian Ocean aboard an ocean research vessel.

Plans are in the works for a geology field camp in the Himalayas in summer 2009. These field camps provide students the opportunities to not only learn more about geology, but about culture and collaboration.

"This type of experience is life-changing,"

Dr. Nuri Uzunlar (Ph.D. Geol83), director of the Black Hills Natural Sciences Field Station, said. "In a compound they are living with faculty and students day and night. They come away with a different perspective in both science and life, and a huge leap in personal and professional growth."



School of Mines Helps Local Industry Keep on Rolling

It's a common theme that graduates of the South Dakota School of Mines and Technology receive the education and experience that allows them to work anywhere they want. But what if they want to stay in the area?

Lehman Trikes USA, Inc., a company that began as a family project and has grown into an international and publicly-traded operation, has given several School of Mines graduates the opportunity to do just that. Lehman Trikes received its start from the conflict between founder John Lehman's love of motorcycles and his wife Linda's objection to riding a motorcycle with one of their two small children on the back.

Lehman envisioned building a three-wheeled motorcycle that would provide Linda peace of mind, and he set out to do just that. He bought a 1981 Honda® CB900, and began working on what would be the prototype of today's modern three-wheeled motorcycle, or trike. Production started small with just a few employees and a small space, but demand grew as word began to spread about Lehman's trikes. In 1993, Lehman's long-time friend, Larry Strilchuk became John's partner in Lehman Trikes, Inc.

In 2001, the company became publically traded, and it has kept growing from there. Lehman, often referred to as the "Leader of the Three World," is now partnered by some big names - customers can choose a Lehman trike powered by Honda, Suzuki, Victory, or Harley Davidson.

Lehman Trikes now employs six School of Mines alumni: **Lisa Bell** (IE06), **Nick Case** (IE06),





side,” McCoy said. “The School of Mines prepared me very well for this – it gave me the foundation that I needed and the ability to pick up things fast.”

The School of Mines continues to have an impact on employees at Lehman Trikes, even long after they have graduated. McCoy was part of an engineering group from the company that came to the School of Mines in the fall of 2007 for a course on vehicle dynamics to help the group have a greater understanding of their own assemblies.

“The automotive engineering-related courses at the School of Mines are vital for our industry and staff,” Bob Sieve, vice president of operations at Lehman Trikes, said. “We would be remiss not taking advantage of this quality of education in our back yard.”

Sieve sees the proximity of the School of Mines to Lehman’s offices as a benefit to both. “It is often difficult to bring in recruits from outside of this region to the Black Hills. Graduates of the School of Mines know the region, have fallen in love with the Black Hills, and want to call it home,” he said. “The School of Mines is somewhat of a ‘best-kept secret’, as far as I’m concerned. The quality of the engineers coming out of this school is very good.”

For more information about Lehman Trikes, visit www.lehmantrikes.com.

Gary Hamilton (ME73), **Thore Jenshus** (M.S. ME97), **Alan McCoy** (MetE98), and **Frank Sullivant** (IS96).

McCoy joined Lehman Trikes in 2006, where he is a product engineer and serves as project manager for Victory Products. He credits the School of Mines for giving him the ability to handle the on-the-job training that was necessary for his beginning at Lehman Trikes.

“At Lehman, I get to do more hands-on work and exercise--more of the engineering



Education Across Borders

In today's increasingly connected world, it is becoming critically important that students gain the skills to work in a global society. Engineers and scientists have a unique ability to work across borders – both literal and cultural – and the School of Mines is committed to promoting global mobility. One way this happens is through study abroad programs.

Aryn Rowe (GeolE, Rapid City) took advantage of one such program, the European Project Semester (EPS), to expand her horizons both academically and culturally. The EPS program hosts students from all over the world. There are seven participating institutions, held in six countries: Copenhagen, Denmark; Oslo, Norway; Valencia and Villanova, Spain; Lutz, Poland; Kiel, Germany (Rowe's location); and Hertogenbosch, Netherlands. "I really wanted to study abroad to meet new

people and other students doing the same type of work I was," Rowe said. "It was a chance for me to see the "competition" and have a really great cultural experience."

Once enrolled, the students study elements of engineering design and break into teams of 2-5 students to work on a senior design project. Rowe's project centered on wind energy and her team worked directly with a German firm.

"This was an amazing experience because the work that I did counted towards my major in engineering," Rowe said. "Being able to work firsthand with an international company was a chance to see what the rest of the world is doing."

She found that the education she has received at the School of Mines to this point prepared her well for the rigorous program. According to Rowe, each time she was introduced in an academic



“This was an amazing experience because the work that I did counted towards my major in engineering.”

Aryn Rowe
Junior
Geological Engineering
Rapid City, SD

setting there was instant name recognition of the School of Mines and its reputation for excellence.

Besides students enrolling, the School of Mines has another tie with the EPS program. **Dr. Duane Abata**, professor, mechanical engineering, has travelled to Copenhagen and Oslo for 10 years to teach a course on environmental engineering for the program. Abata believes the experiences students have in program like EPS are invaluable.

"The international experience of an exchange program is something that will last a lifetime," Abata said. "It is extremely important that students obtain some type of global experience to learn how others might approach engineering problems and solutions from different perspectives, to learn about different cultures, to understand how to work in international settings, and to experience how to work in multicultural and international teams. "



According to Abata, it is important that students understand the increasingly interdependent nature of the world and prepare themselves. "Much of what we witness today in engineering is global. Industry is global. Our economy is global," he said. "To remain ignorant of the world around us significantly limits one's vision and career."

EPS had the effect of removing any limits Rowe might have sensed. She feels the experience helped make her more decisive and structured, and gave direction for her future career. Studying abroad is a decision that Rowe does not regret.

"Education is so much more than classes," she said. "I learned a lot about myself through this experience, and I really feel like it will give me an edge."



Scientist to Patent Nano Research

School of Mines research scientist **Dr. Haiping Hong** has developed breakthrough techniques for maintaining nano particle dispersions in heat transfer fluids such as water and lubricants. Hong has filed a patent on this research.

Current lubricant and coolant products have poor thermal conductivity. There is a lot of interest in utilizing nanomaterials, which have excellent thermal properties, to significantly enhance the heat transfer and thermal property of coolants and lubricants. This improved level of heat transfer properties allows for less fluids to be used, which means engines can be made smaller and lighter.

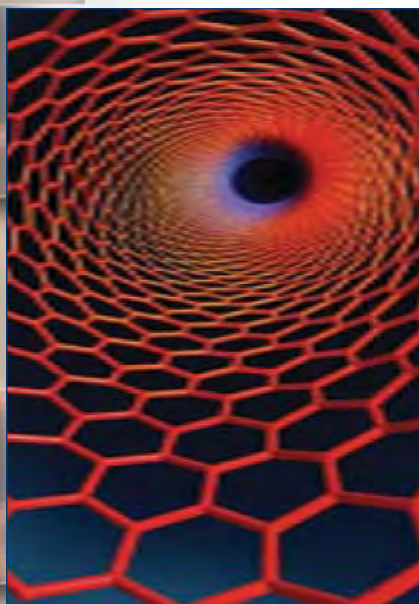


Illustration of a nano tube. Advantages of nano grease include increased lubricity, lower friction coefficient, higher oxidation resistance, better chemical stability, enhanced thermal and electrical conductivity.

This is especially appealing to the airline and automobile industries, and of course to consumers, as it has the potential to bring down operating costs. There have been previous

research efforts in using nanomaterials to enhance fluid properties but, until now, no one has been able to maintain a suitable dispersion of them in oil and water, obtaining homogenous and stable fluids. If the materials are not well dispersed they precipitate.

This research is supported by the Army Research Laboratory (ARL). ARL is the Army's corporate basic and applied research laboratory. The research program will provide innovative science, and technology to enable full-spectrum operations. The Army relies on these nano particle projects for scientific discoveries, technologic advances, and analyses to provide warfighters with capabilities to succeed on the battlefield.

Two companies have expressed an interest in licensing the technique. "This technology will more than likely be licensed to an existing company in the lubricant/coolant business," **Dale Skillman** (ME73), interim vice president for research and director of the Office of Technology Transfer, said. "Royalty revenues may support additional work in this field by Dr. Hong and others."

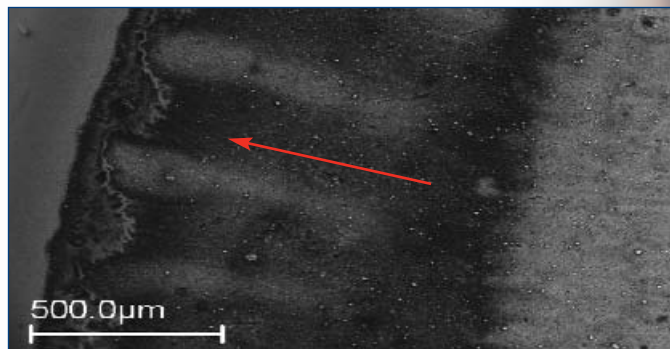
Opportunities to assist in research projects like this are very beneficial to students as it gives them confidence in lab work, better preparing them for their career.

"I am very grateful to the School of Mines for their generous support, allowing me to pursue this very interesting research field," Hong said. "I would also like to acknowledge the collaboration of my colleagues at the School of Mines and in the scientific community as a whole."

"Dr. Hong's work is creating a new direction of research in nanofluids," Dr. Sungho Jin, chair of materials science at the University of California, San Diego, said. Jin is a world-renowned nanotube researcher and a collaborator of Hong.



Dr. Haiping Hong



Scanning Electron Microscopy (SEM) pictures show that the nanotubes and nanoparticle align well under the influence of a magnetic field. This backscattered electron SEM image shows 0.01wt% Ni coated single wall carbon nanotubes aligned with a magnetic field. (Red arrow is magnetic field direction).

Investment Pays Off for School of Mines Graduates

South Dakota School of Mines and Technology graduates have some of the highest starting salaries in the Midwest and are among the best-paid in the nation, according to a recent report by Payscale Inc., a Seattle-based research firm.

The PayScale 2008 Education and Salary Report, released July 30, places the School of Mines ninth among Midwestern universities in terms of salary potential. According to the report, the starting median salary for School of Mines graduates is \$55,800. The report also ranked the School of Mines 15th in the nation for Best Engineering Colleges by Salary Potential.

"This report shows that a School of Mines education is truly an investment in a student's future," **Dr. Robert Wharton, Ph.D.**, School of Mines president, said. "By choosing a career in engineering or science, students not only have the opportunity to change the world, but will also be well-compensated for doing so."

Last year, 218 different employers from 26 states recruited School of Mines students. In addition, employers conducted 1,730 interviews on campus. Graduates of the 2006-2007 class have achieved 99 percent placement, and the 2008 class has already achieved 89 percent placement, less than three months after graduation.

All undergraduate programs emphasize



"The 2008 Fall Career Fair was the largest in campus history."

Darrell Sawyer
Director
Career Center

advanced science and math, and all combine classroom instruction with hands-on laboratory work. In addition, 75 percent of graduates have relevant work experience through co-ops and

internships. That increases their marketability to employers. For more information, visit <http://sdmines.sdsmt.edu/career>.

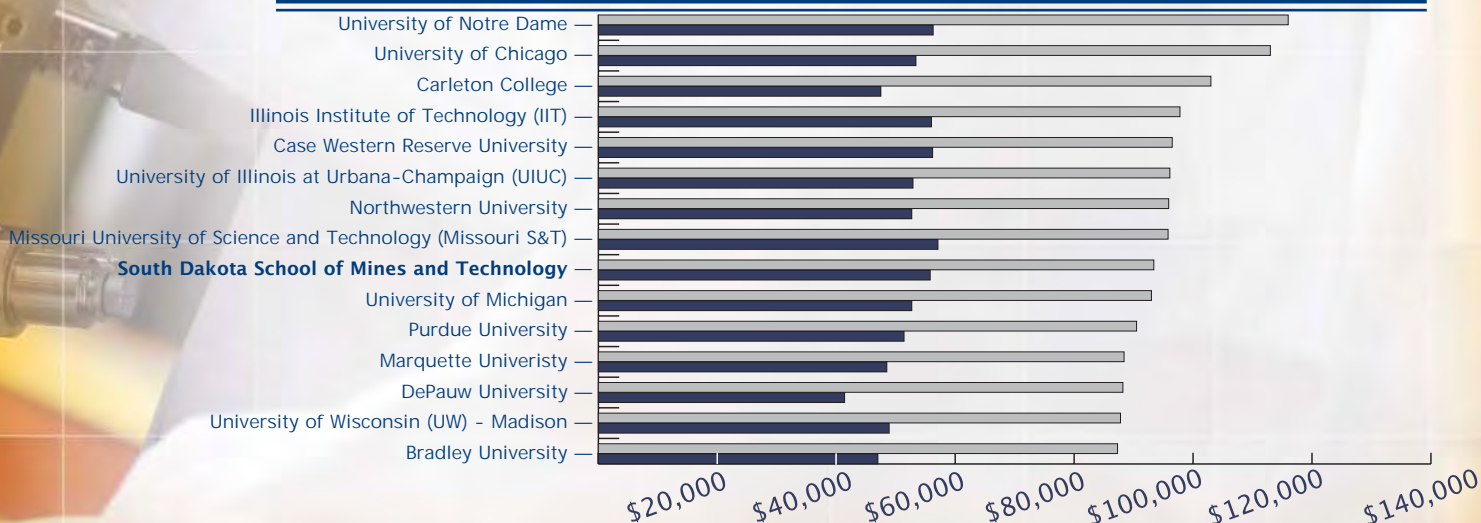
"This combination sets up our graduates for success. They leave the School of Mines with the theoretical and practical knowledge and the experience they need, and employers recognize this," **Darrell Sawyer Ed.D.**, career planning director, said. "This is reflected in the number of recruiters for our biannual Career Fairs, which have steadily risen over the past few years. The 2008 Fall Career Fair is the largest in campus history, and reached maximum capacity for employer registrations."

The PayScale report includes more than 2,000 data points, including salary data for 40 majors, from more than 300 U.S. based undergraduate colleges and universities. The report is available online at www.payscale.com/best-colleges.



Top Midwestern Colleges by Salary Potential

■ Starting Median Salary
■ Mid-Career Median Salary



Building Computers, Building Futures

A new program at the South Dakota School of Mines and Technology aims to address the disparity in American Indian students enrolled in science and engineering disciplines.

The American Indian Science and Engineering Program (AISEP), held in conjunction with the Rapid City School District, is a pre-college program that will help prepare American Indian high school students in science, technology, engineering, and mathematics (STEM) fields, while having fun in the process.

"The idea is that this will spark student interest in science and engineering," **Dr. Karen Whitehead**, School of Mines provost and vice president for academic affairs, said. "We hope that they will continue in those fields, whether here or at another institution." Whitehead serves as principal investigator on the National Science Foundation grant that funds the program. Donations from 3-M and a private donor also provide support.

The program is multifaceted. Students first agree to enroll in high school trigonometry, chemistry, and physics, earning a "C" or higher, prior to graduating. Second, they participate in computer building and software training and network sessions, held at the School of Mines and supervised by two School of Mines students that act as mentors and assistants to the students. The assembled computers will then be placed at Central High School for student use. Once each student completes the program, they will earn one of the computers for their own personal use. As each cohort graduates from the program, they

will act as teachers and mentors to the incoming cohort of students.

If students choose to pursue a STEM degree from the School of Mines, they can continue to be a part of the program. The AISEP approach is to support students academically, financially, and socially in order for participants to graduate from college and find placement in a career.

The program takes inspiration from the Alaska Native Science and Engineering Program (ANSEP), developed by Dr. Herb Schroeder of the University of Alaska-Anchorage. Schroeder was interested in expanding the successful program to other parts of the country, and thus the Indigenous Alliance project, of which AISEP is part, was born.

"This expansion project is another step in our national effort to effect a systemic change in the hiring patterns of Indigenous Americans in the fields of science, technology, engineering and mathematics by increasing the number of individuals on a career path to leadership in STEM fields," Schroeder said.

The School of Mines is one of four institutions that are participating in the "Build a Computer" project. The others are the University of Colorado - Boulder, the University of Idaho, and the University of North Dakota.

Programs such as AISEP are particularly important in South Dakota, where the American Indian population is at an economic disadvantage. Four of the five counties in the nation with the lowest per capita income are located in South Dakota's American Indian reservations. This type of economic climate can have the effect of discouraging native youth to not only graduate from high school, but also to seek higher education.

Currently, only 66 percent of American Indian students who attend public high school in South Dakota graduate. Furthermore, only 2 percent of students enrolled in South Dakota's state universities are Native American. Innovative programs such as AISEP can help turn this tide, having a profound effect not only on the students, but on the communities where they live.

"Native peoples represent a great untapped resource," Whitehead said. "To develop that interest, we have to spark it early and provide motivation. The ANSEP program has a stunning success rate, and we hope to emulate that with AISEP."



Athletes Team for Success

In many sports, the ability to work together is critical to a team's success. For two School of Mines' cross country runners, this is a concept they learned together a long time ago, and have run with it ever since.

Kendra Crisman (IS, Rapid City) and **Brittney Hovdenes** (ME, Rapid City) competed together at Stevens High School in Rapid City, and have transitioned into college teammates as well. The opportunity to run for the School of Mines played in a big part in drawing them both to the university.

"I had gotten some offers from other schools, but after talking with Coach Schafer I knew right away that the School of Mines was where I wanted to go," Crisman said. The School of Mines offers a degree I am interested in and it sounded like Schafer was putting a great team together that I wanted to be part of."



Kendra Crisman
(IS, Rapid City)

run," she said. "The team is small enough that we are all like family."

The opportunity for the two to run together was also a plus. According to both Crisman and Hovdenes, the years they spent training together have made them well-matched.

"It is awesome to be able to compete with Brittney through high school and also through college. She is always there to keep pushing me to become a better runner," Crisman said. "The part I like best about running with Brittney is that she is such a positive person and runner. Another reason is that we are such similar runners, coming from the same high school coach, that we know how to work together in a race and be able to push each other."

Jerry Schafer, cross country coach, sees this similarity. "The first time I saw them run last fall, it was uncanny watching them," he said. "It was hard to pick out whose stride was whose, because they were so in synch."

According to Schafer, Crisman and Hovdenes act as motivators to each other, but also to the entire team.

"They bring an enthusiasm with them. They enjoy each other's company and the company of the team, and it shows," Schafer said. "They bring the fun side of the sport to the table, yet they still train with great intensity."

Coach Schafer picked up on a large part of what Crisman and Hovdenes enjoy most about running together and being a part of the Hardrock team - fun.

"The thing I like the best about running with



Brittney Hovdenes
(ME, Rapid City)

Kendra is that we have fun. It could be the hardest workout ever and we always find a way to laugh and stay upbeat," Hovdenes said. Crisman agrees. "The best part about running for the School of Mines is that we have such a fun atmosphere to work in," she said. "Everyone on the team is really easy to get along with and we are able to help

each other improve. It doesn't matter whether it is just doing ab workouts after practice or giving advice on how to run hills."



Continued on page 25

Team Successes

At the South Dakota School of Mines and Technology, team successes are just as important as those achieved by individuals. By working together, students learn skills such as participation, organization, and leadership that will be invaluable when they enter the workplace.

Competing teams range from discipline-specific to multi-disciplinary. In addition, students in the Center of Excellence for Advanced Manufacturing and Production (CAMP) continue their tradition of developing technical skills in real-world situations that involve fundraising, planning, deadlines, and international competitions.

2008 Aero Design West Competition

The School of Mines team captured third place in design at the competition. They also took trophies for the best design report and largest payload. The School of Mines took first place



overall at the 2005 and 2006 competitions.

The team members: Camdon Depaolo (ME, Casper, Wyo.), **Sara Hagie** (ME, Rapid City), **Eric Husman** (Eng, Gardena, Calif.), **Adam Lungren** (ME, Gillette, Wyo.), **Megan Mallett** (EE, Fargo, N.Dak.), **Lyndsey Penfield** (ME, Olds, Iowa), **Ray Tapper** (ME, Rapid City), **Jimmy Tomich** (ME, Farson, Wyo.), **Steve Schnabel** (ME, Rapid City), **Nick Swanson** (ME, Chaska, Minn.), **Chris Vickery** (ME, Luvurne, Minn.), and **Blake Woodward** (ME, Rapid City).

American Institute for Chemical Engineers

The ChE car team placed third in the poster competition and fourth in the performance test. In

addition, the team won awards for the most creative drive system and the most team spirit.

The team members: **Benjamin Bangasser** (ChE, New Hope, Minn.), **Scott Connor** (ChE, St. Bonifacius, Minn.), **Brent Gawryluk** (ChE, Dickinson, N.Dak.), **Elizabeth Gores** (ChE, Sioux Falls), **Justin Hagerty** (ChE, Spearfish), **Nathan Huft** (MetE, Pierre), **Carly Keeney** (EnvE, Rapid City), **Evan Keffeler** (GeoE, Sturgis), **Dustin Kohler** (ChE, Dickinson, N.Dak.), **Matthew Ladenburger** (ChE, Rapid City), **Sam Lane** (ChE, Fort Collins, Colo.), **Kristi Murphy** (ChE/EnvE, Rapid City), and **Spenser Wagner** (ChE, Sioux Falls).

Bangasser also received the nationally competitive AIChE Fuels and Petrochemicals Division Harry West Student Paper Award for his research project, "Reversible Hydrogen Storage Properties of Ti Catalyzed Lithium Borohydride and Aluminum."

American Society of Mechanical Engineers Human Powered Vehicle Challenge

The School of Mines team placed ninth at the competition. They also took fourth in the endurance race and eighth in the sprint competition.

The team members: **Jenika Bishop** (ME, Rock Springs, Wyo.), **Tyler Engberg** (ME, Burnsville, Minn.), **Mike Fontaine** (ME, Rapid City), **Philip Gardner** (ME, Moorhead, Minn.), **Sam McBride** (ME, Spearfish), **Gerald Ott** (ME08), and **TJ Winowiecki** (ME08).



American Society of Civil Engineers student conference

The School of Mines chapter finished third of 14 schools at the regional conference. The

concrete canoe team took third in design paper and third in presentation. The steel bridge team finished third overall. The bridge placed first in efficiency, first in lightness, second in construction speed, third in economy and fourth in stiffness. The overall third place finish of the steel bridge team qualified them to compete at the national steel bridge competition, where they placed 32nd overall and received second place in display.

In additional competitions, **Eric Brandner** (CE, Aberdeen) took third place in the non-technical paper competition, and **Brady Wiesner** (CE, Watertown) took third place in the technical paper competition.

The team members: **Eric Brandner** (CE, Aberdeen), **Beth Comes** (CE08), **Jennifer Davis** (CE/Math, Rapid City), **Chris Hammrich** (IS, Milbank), **Phillip Knodel** (CE, Aberdeen), **Kaz Kunishige** (CE, Rapid City), **Chelsey Larmie-Rhoades** (CE, Rapid City), **William Lein** (CE, Batesland), **Janile Lewis** (EnvE, Spicer, Minn.), **Manny Lewis** (IE, Hill City), **Joseph Matuska** (CE, Lake Andes), **Shawn McFarland** (CE, Selby), **Brett Morford** (CE, Brandon), **Jesse Morris** (CE, Black Hawk), **Terri Morris** (CE, Belle Fourche), **Leah Nehl** (CE08), **Michelle Redmond** (CE, East Corinth, Vt.), **Adam Riley** (CE, Pierre), **Ben Sampica** (CE, Canton), **Michelle Stadel** (CE, Redfield), **Molly Tobin** (CE, Lincoln, Neb.), **Chelsea Wattier** (CE, Conde), **Brady Wiesner** (CE, Watertown).

Institute of Electrical and Electronics Engineers Region 5 Competition

The School of Mines team entered three robots in the competition, eventually capturing third, fourth, and ninth places.

The team members: **Tony Adams** (CEng, Grand Forks, N.Dak.), **Joe St. Amand** (ME, Waconia, Minn.), **Tony Amundson** (EE/CEng, Hutchinson, Minn.), **Alex Brech** (CEng, Currie, Minn.), **Rod Carroll** (CSc, Rapid City), **Joshua Collison** (CSc/Phys, Sioux Falls), **Mark Cullison** (ME, Sioux Falls), **Cody Horner** (ME, Wagner), **David Huft** (EE, Pierre), **Ryan Kroetch** (EE, Rapid City), **Susan Larkin** (EE08), **Logan Loeb** (EE, Raleigh, N.Dak.), **Steve Malsom** (CEng08), **Andrew McGuire** (CEng, Rapid City), **Ben Swan** (CEng, New Ulm, Minn.).

2008 Baja SAE Competition

The contest pitted the School of Mines against nearly 100 teams from across the country and around the world. The School of Mines raced two cars, car number 7, a new car designed and built by the senior students this year (with assistance from underclassmen), and car number 117, the car built last year and managed by the underclassmen this year. Car number 117 won the endurance

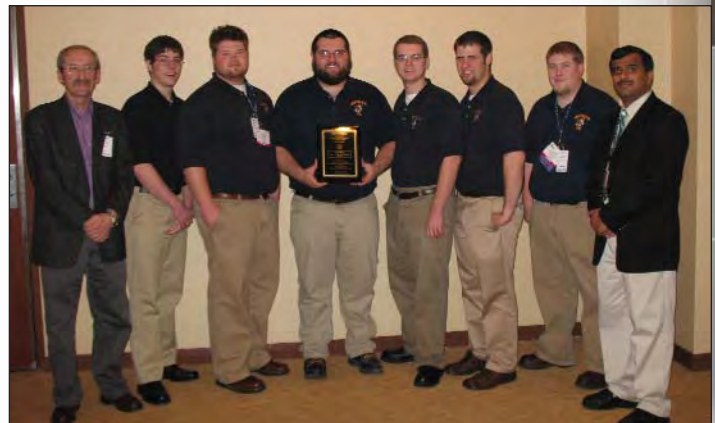
event. Car number 117 also won the sales presentation event. Car number 7 was in the design finals and placed in fourth place overall in the design event. In the overall competition, car number 117 finished in fourth place and car number 7 finished in sixth place. Also, car number 117 scored the highest design report score with 49 out of 50. Car number 7 scored 48 and tied for third place.

The team members: **Ayla Brausen** (ChE, Ipswich), **Amanda Bumann** (ME, Sioux Falls), **Cody Egle** (ME, McCook, Neb.), **Jason Fields** (ME, Milbank), **Ben Franchuk** (ME, Dickinson, N.Dak.), **Pat Fraser** (ME, Huron), **Chris George** (ME, Huron), **Ben Grassel** (ME, Spearfish), **Craig Grunenfelder** (M.S. BME, Billings, Mont.), **Jesse Heaton** (ME, Midland), **Wade Heidecker** (ME, Belle Fourche), **Stephanie Johnson** (ME08), **Trevor Krugman** (ME08), **Amery Kuhl** (ME/Phys, Worthington, Minn.), **Kris Olson** (ME, Snohomish, Wash.), **Jason Williams** (ME, Piedmont), and **Travis Zelfer** (ME/MetE, Black Hawk).

Society of Mining Engineers

The School of Mines team placed third in the Society of Mining Engineers Student Competition.

The team: **Caleb Bestgen** (MEM, Green River, Wyo.), **Jordan Hoff** (MEM08), **Ryan Horton** (MEM, El Dorado Hills, Calif.), **Craig Johnson** (MEM, Baltic), **Andrew Johnson** (MEM08), and **Collin Rogers** (MEM, McKinleyville, Calif.).



Formula SAE West Competition

The School of Mines finished in sixteenth place overall against 82 registered teams. The competition consisted of eight separate events including design, cost, manufacturing, sales presentation, skid-pad, acceleration, autocross, and endurance. Of these events, the team took third in autocross, third in sales presentation, fourth in design, fifth on the skid-pad, eighteenth in acceleration, and forty-fourth in cost.

The team members: **Aaron Guliuzza** (ME, Rapid City), **Adam Hemmingson** (ME/MetE, Sioux



Falls), **Kevin Hunt** (ME08); **Eric Lee** (ME, Madison), **Dillon Lichtsinn** (ME, Milbank), **James Lunders** (ME08); **Arthur Morris** (ME08); **Andrew Pautsch** (ME/CSci, Gaylord, Minn.), **Clayton Pojorlie** (ME/CEng08), **Nolan Pray**, (ME, Sioux Falls), **Nathan Salden** (ME, Waconia, Minn.), **Christopher Saufley** (ME, Rapid City), **Jake Seeger** (ME, Dent, Minn.), **Wes Snaza** (ME08); **Sam Voegeli** (ME, Winner), **Jason Wendling** (ME, Bismarck, N.Dak.).

SAE Clean Snowmobile Competition

The School of Mines' alternative fuel vehicle placed fourth overall at the competition. The team received first in the drawbar pull and Manufacturer Suggested Retail Price events, second in the range event, third in the objective handling event, and fourth in the subjective handling, noise, and presentation portions of the competition. They were also the only vehicle in the zero emissions category that finished the competition without losing their maintenance bonus (100 bonus points that are awarded for not working on the vehicle throughout the competition).



The team members: **Kris Bertsch** (CEng08), **Dylan Ekstrom** (ME08), **Erik Engelmeyer** (EE, Alexandria), **John Neuberger** (ME08), **Lance Rikala** (IE08), **Lance Wright** (ME08).

2008 International Aerial Robotics Competition

The School of Mines unmanned aerial vehicle (UAV) team received four awards at the competition. The team received the Best Technical Paper Award, Best T-shirt Design Award, tied for the Best System Design Award, and received more than \$8,000 in prize money for their efforts. Team member **Mark Sauder** (IE 04) received a special award for sportsmanship. The team took first place in 2006 and second in 2007.

The team members: **Tyler Batt** (ME08); **Raunaq Bhushan** (IE, India), **Alex Brech** (CEng, Currie, Minn.), **Roderick Carroll** (CSci, Rapid City), **John Heiberger** (ME, Rapid City), **Adam Helmers** (EE, Rapid City), **Brian Jensen** (IE, Rapid City), **Erik Kaitfors** (ME08), **Scott Nelson** (CEng, Rapid City), **Jacob Oursland**, (Math/CSci, Rapid City), **Mason Pluimer** (EE, Rapid City), **Thomas Simpson** (CEng, Box Elder), **Justin Williamson** (M.S. ME, Rapid City). Visiting alumni: **Ray Burg** (ME54), **Mark Sauder** (IE04), and **Jason Howe** (ME/CEng05).

Red Bull Soapbox Race

The School of Mines team, The Good, The Bad, And The Nerdy, took home first place with their oversized calculator craft named "The Numerator 2.0" at the 2007 Red Bull Soapbox Race. The race, organized by the energy drink Red Bull, challenges teams to design, build and race gravity powered soapbox crafts in a downhill race against the clock. Teams are judged on three criteria: speed, creativity, and showmanship.

The team members: **Anthony Johnson** (ME07), **Brett Moorman** (IS, Rapid City), **Charlie Murray** (IE04), **Justin Williamson** (M.S. ME, Rapid City), and **Mark Chase** (ME, Saint Louis University).



Continued from page 21

Their enthusiasm and talent carried them both to DAC All Conference honors, and Coach Schafer expects only bigger and better from them in the coming season.

"They brought instant leadership to the women's team. They both want to excel and improve, and they have a drive to do well as a team," he said. "I expect to see great things from them."



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THE *HARDROCK* E-NEWS

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All we need to add you to the list is your e-mail address. Send your request to be added to the list to alumni@sdsmt.edu.

Also, please keep us current with your work, home, and family information via the same Alumni Association e-mail address.

SEE YOU IN THE E-NEWS!

alumni@sdsmt.edu

Student Spotlight

School of Mines Student Published in Journal

Travis Walker (ChE08) has published an article in *Chemical Engineering Progress*, the professional journal of the American Institute of Chemical Engineers (AIChE). The article, "Harnessing Natural Energy," is based on a report that Walker wrote as a participant in the Washington Internships for Students of Engineering (WISE) program. The article deals with the need for storage for intermittent energy sources such as wind and solar and can be read at <http://www.aiche.org/uploadedFiles/CEP/Issues/2008-03/0308S23.pdf>.

School of Mines Students Select Student Association

South Dakota School of Mines and Technology students recently elected class representatives to the Student Association, the student governing body.

Seniors: **Brandon Lampe** (GeolE, Salem), **Melanie Satchell**, class president (IS, Pleasant Dale, Neb.), **Matthew Schulte** (ME, Geddes), **Evan Waddell** (ChE, Indianola, Iowa)

Juniors: **Katie Aurand**, class president (EnvE, Rapid City) **Sean Hayes** (ME, Eagle, Idaho), **Patrick Satchell** (IE, Milford, Neb.), **Christopher Weyer**, (CSci/EE, Sturgis)

Sophomores: **Erica Kjar** (engineering, Akron, Iowa), **Derek Nordby**, class president (MetE, Stanton, Neb.) **Marcus Bartlett** (IE, Firesteel) will serve as president, and **Lukasz Dabaj** (IS, Poland) will serve as vice president.



Student Association Vice President **Lukasz Dabaj** (IS, Poland) and President **Marcus Bartlett** (IE, Firesteel).

School of Mines Students Recognized with Giant Vision Awards

More than half of the winners at the 4th Annual Governor's Giant Vision Business Plan awards competition held recently have ties to the School of

Mines.

Two teams each earned second place awards and \$2,500 cash prizes in the Student Division: **DJ Kjar** (ME06) and **Jason Howe** (CEng05) for Valde Robotics, which specializes in designing and manufacturing urban environment unmanned aerial vehicles; and **Chris Flack** (ME, Rapid City) and **Jordan Johnson** (ME, Rapid City) for Krystal Klear Kart Bodies, with an innovative design for clear go-kart bodies. Earning a third place finish in the Business Division was then high school senior **Jordan Krell** (ME, Plankinton) and Krell Safety Products (KSP) for Smart Swim, a patent-pending drowning alert system.

Treavor Hendrickson (ME, Rapid City) and Jeff Schnabel (ME, Emery) supported another second-place winner through a senior design project.

School of Mines Student Accepted into National Workshop

Shawn Honomichl (IS, Rapid City) has been accepted to the 2008 National Center for Atmospheric Research Undergraduate Leadership Workshop. Each year, about 20 participants from the current pool of the college senior meteorology students nationwide are selected for this program.

School of Mines Leads Nation with Eleven Tau Beta Pi Scholars

Eleven School of Mines students have been named Tau Beta Pi Scholars for the 2008-2009 academic year. The chapter with next highest numbers of scholars has five.

In addition, **Travis Walker** (ChE/Math08) has been named a Tau Beta Pi Fellow for 2008-2009, and **Melanie Vedvei** (IE08) has been named a 2008 Laureate.



2008 Leadership Hall of Fame. (From left to right) Back: **Karl Barfuss** (IE08), **Jason Fields** (ME, Milbank), **Fanariot Sefa** (ChE08), and **Wes Snaza** (ME08). Front: **Jade Herman** (IS, Mission), **Melanie Vedvei** (IE08), and **Kaycee Carson** (Math08).

Continued on page 66

Campus Briefings

Whitehead receives Athena Award

Dr. Karen Whitehead, provost and vice president, academic affairs, has been named the recipient of the Rapid City Area Chamber of Commerce's Athena Award. The award is presented to an exceptional individual who has achieved excellence in her/his business or profession, has served the community in a meaningful way and has assisted women in their attainment of professional goals and leadership skills.



(From left to right) Julie Smoragiewicz, Vice President for University Relations, Dr. Pat Mahon, Vice President for Student Affairs and Dean of Students, Athena Award Recipient Dr. Karen Whitehead, Provost and Vice President for Academic Affairs, and Robert Wharton, Ph.D., President

C-Lock receives technology award

C-Lock Technology, Inc. has been awarded the



Black Hills Industrial Technology Award. The Black Hills Industrial Technology Award is a Black Hills Community Economic

Development (BHCED) award given to outstanding innovative companies in the region that have excelled in the use of applying technology to achieve their broader business goals. This is one of four awards given annually to businesses and entrepreneurs in Western South Dakota for outstanding achievement in business excellence.

Surovek Receives Educator Award

Dr. Andrea Surovek, assistant professor, civil and environmental engineering, has been awarded the 2008 Ferdinand P. Beer and E. Russell



Johnston, Jr. Outstanding New Mechanics Educator Award, on behalf of the Mechanics Division of the American Society for Engineering Education (ASEE). Established in 1992, this award is given annually to up to three individuals who have shown a strong commitment to mechanics education.

Braman Selected for Symposium

Dr. Karen Braman, assistant professor, mathematics and computer science, was selected for the Householder Symposium, an international gathering devoted to matrix computations and linear algebra. Dr. Braman's work on the QR algorithm using middle deflations was selected from the highly competitive list of applications. The symposium was held in Zeuthen, Germany during the first week in June.

Weiss Recognized at Conference

Dr. John Weiss, professor, of mathematics and computer science, presented a paper at the 23rd International Conference on Computers and Their Applications (CATA-2008), held April 9-11, 2008, in Cancun, Mexico. His presentation involved research that resulted from his involvement in the Unmanned Aerial Vehicle



(UAV) competition. The paper, "Hierarchical Template Matching for Real-Time Symbol Detection", was selected for the best paper award submitted to the conference.

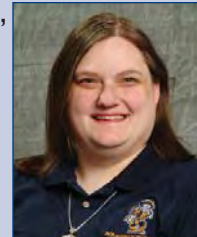
Riley Named Mathematical Association of America Governor

Dr. Kyle Riley, chair, mathematics and computer science, has been elected to the Board of Governors of the Mathematical Association of America. Dr. Riley will serve as governor for the Rocky Mountain section of the MAA and will represent the section at the national level.



Professors Featured in Article

Dr. Carter Kerk, professor, industrial engineering, and **Dr. Jennifer Karlin**, assistant professor, industrial engineering, have been cited in the April 2008 issue of Material Handling Management in the article "Meeting at the Crossroads: Man/Machine Intersection". The



Campus Briefings

article, which discusses the need for employee input on creating an ergonomically sound workplace, can be viewed at <http://ie.sdsmt.edu/news/MatrlHndlApr08.pdf>.

Kellogg Elected to ASEE Post



Dr. Stuart Kellogg (M.S. EE92), chair and Pietz Professor, industrial engineering, has been selected as president-elect of the Rocky Mountain Section of the American Society for Engineering Education (ASEE) for 2009-2010. The Rocky Mountain Section covers West River, Wyoming, Colorado and Utah. The 2010 annual conference will be hosted at the School of Mines.

Also, at the ASEE Rocky Mountain Section annual conference Dr. Kellogg's paper presentation, "Utilizing an Inverted Classroom Approach to Develop Complex Thinking Skills," was honored with the Best Presentation Award.

Lisenbee Named 2008 J.P. Gries Geologist of the Year



The South Dakota Section of the American Institute of Professional Geologists (AIPG) has named **Dr. Alvis Lisenbee**, professor emeritus, geology and geological engineering, the 2008 J. P. Gries Geologist of the Year. The award is given each year by the Section in memory of Dr. John Paul Gries, a longtime professor of geology at the South Dakota School of Mines and Technology. The 2008 award was presented to Lisenbee for his many contributions to our current understanding of Black Hills regional geology.

Martin Named to South Dakota Hall of Fame



Dr. James Martin (Geol71), professor, geology and geological engineering, was one of 13 individuals chosen to be inducted into the 2008 South Dakota Hall of Fame.

Karlin Named to Leadership Forum

Dr. Jennifer Karlin, assistant professor, industrial engineering, has been selected to the Texas Leadership Forum, held October 8-10, 2008, at Baylor University. Two Regional



forums are held each year with only 25 higher education faculty selected for each forum. Participation in the Leadership Forums is highly competitive with final selection made by the American Council on Education.



Refer a Student



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SOUTH DAKOTA



SCHOOL OF MINES
& TECHNOLOGY

The School of Mines is committed to an active research program that expands knowledge, pushes technological and scientific advancement, and contributes to economic development in the state and region.

School of Mines faculty members and researchers received 90 awards totaling more than \$10.1 million during the 2008 fiscal year. The funding came from many different agencies, including the National Science Foundation, the State of South Dakota, NASA, the Department of Transportation, Army Research Laboratory, Air Force Research Laboratory, and many more.

The School of Mines is home to several research institutions and centers. Plans are currently underway to expand the number of graduate degrees and to enhance the technology-transfer process.

William Arbegast, director, Advanced Materials Processing and Joining Laboratory (AMP), and instructor, materials and metallurgical engineering; and **Dr. Michael West**, assistant professor, materials and metallurgical engineering, received \$6,000 in additional funding from the National Science Foundation for the project, "Friction Stir Processing Industry/ University Cooperative Research Center."



Arbegast; West; and Dr. Antonette Logar, (CSc85)

professor, mathematics and computer science, received \$70,000 in additional funding from the National Science Foundation for the project, "Friction Stir Processing Industry / University Cooperative Research Center."



Dr. Sookie Bang, professor,



chemical and biological engineering, and **Dr. Sangchul Bang**, professor, civil and environmental engineering, received \$12,250 in additional funding from the National Science Foundation for the project, "Microbial Dust



Suppression."

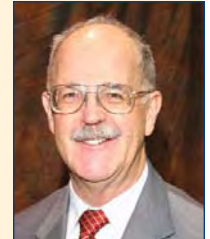
Dr. William Capehart, associate professor, atmospheric sciences and Institute of Atmospheric Sciences, received \$46,000 in additional funding from NASA for the project, "Evaluating the Effects of Institutional Change on Regional Hydrometeorology: Assessing the Vulnerability of the Eurasian Semi-arid Grain Belt."



Dr. Arden Davis (GeolE79), Mickelson Professor, geology and geological engineering; **Dr. David Dixon**, professor, chemical and biological engineering; and **Dr. M.R. Hansen** (CE69), professor, civil and environmental engineering, received \$12,467 from South Dakota State



University for the project, "Thermal Stability of Limestone Waste for Recycling after Arsenic Removal from Drinking Water."



Dr. Davis also received \$5,000 in additional funding from the U.S. Department of Interior - Bureau of Land Management for the project, "Conduct Studies of Inactive/Abandoned Mine Sites on BLM Lands and to Monitor Inactive/Abandoned Mines Sites."

Dr. Edward Duke, manager of analytical services, Engineering and Mining Experiment Station, and professor, geology and geological engineering; **Dr. Pallaoor Sundareshwar**, assistant professor,



atmospheric sciences department; **Dr. Maribeth Price**, chair and associate



professor, geology and geological engineering; and **Dr. Donna Kliche**, (MS Mtro90), research scientist III, Institute



of Atmospheric Sciences, received \$177,000 in additional funding from the National Aeronautics and Space Administration for the project, "South Dakota Space Grant Consortium."

Dr. Duke also received \$250,000 additional funding from NASA for the project, "South Dakota NASA EPSCoR Research Infrastructure Development Program."

Richard Farley, (ChE69), research scientist IV, Institute of Atmospheric Sciences, and **Dr. Sundareshwar** received \$44,398 in additional funding from the Western Research Alliance Foundation for the project, "Great Plains Center for Atmosphere and Human Health."

Dr. Hansen received \$7,890 from the South Dakota Department of Military and Veterans Affairs - South Dakota Army National Guard for the project, "Pervious Concrete Development, PH 1."



Dr. Stan Howard, professor, materials and metallurgical engineering, received \$5,000 from the South Dakota Board of Regents for the project, "Recycling of

Research Notes *continued*

Enriched GE from the Detector Production Circuit.”



Dr. Jon Kellar (MetE84), chair and professor, materials and metallurgical engineering, and **Dr. Keith Whites** (EE86), professor and Steven P. Miller Chair, electrical and computer engineering department, received \$463,582 additional funding from South



Dakota State University for the project, “2010 Initiative: Science-Based Leadership for South Dakota.”

Dr. Melvin Klasi (Math62), associate professor, civil and environmental engineering, received \$29,081 from the Federal Highway Administration – South Dakota Department of Transportation for the project, “South Dakota Local Transportation Assistance Program 2008.”

Dr. Charles Kliche (MinE74), professor, mining engineering and management, and **Dr. Zbigniew Hladysz**, professor, mining engineering and management, received \$57,275 from the U.S. Department of Labor- Mine Safety and Health Administration for, “Mine Health and Safety Training.”



Dr. Alvis Lisenbee, professor emeritus, geology and geological engineering, and **Dr. Davis** received \$15,878 from the West Dakota Water Development District for the project, “Aquifer Mapping (1:24,000) of the north half of the Hill City Quadrangle, South Dakota.”

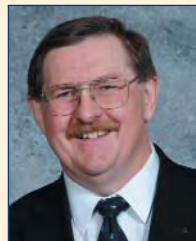


Dr. Gautam Pillay, former vice president, research, and **Dr. Sherry Farwell** (Chem66), former research scientist IV, Institute of Atmospheric Sciences, received \$42,743 in additional funding from the U.S. Department of Defense Army Research Laboratory for the project, “Advanced Materials and Processes for Future Combat Systems.”



Dr. Pillay and **Dr. Umesh Korde**, professor, mechanical engineering, received \$305,000 in additional funding from the U.S. Department of Defense – Air Force Research Laboratory for the project, “Lightweight and Novel Structures for Space.”

Dr. James Martin (Geol71), professor and paleontology program coordinator/curator of



vertebrate paleontology, geology and geological engineering, received \$45,946 from the U.S. Department of Interior- National Park Service - Badlands National Park for the project, “Provide Quality Paleontological Educational Experience at Pig Dig for the 2008 Field Season and 2008/2009 Academic Year.” **Dr. Martin** also received \$12,600 from the U.S. Department of Interior – Bureau of Reclamation for the project, “Paleontological Survey, Angostura Reservoir, Fall River County, South Dakota”, \$76,580 from the United States Department of Interior – National Park Service - Badlands National Park for the project, “Curatorial Backlog of Museum Specimens, Badlands National Park”, and \$2,000 from the U.S. Department of the Interior – Bureau of Land Management for the project, “Curation of Fossils Collected from Fossil Lake (CCS project).”

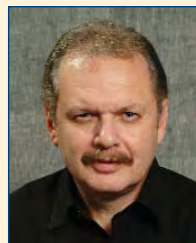
Dr. Dana Medlin, associate professor, materials and metallurgical engineering, received \$5,000 from the South Dakota Board of Regents for the project, “Development of Ultra-Pure Copper for the Underground Germanium Detectors.”



Dr. Todd Menkhaus, assistant professor, chemical and biological engineering, received \$25,000 in additional funding from the National Science Foundation for the project, “SDSM&T RET Site: Inspiring Educations in Rural America through Research.”



Dr. Andre Petukhov, chair and professor, physics, received \$15,000 in additional funding from the University of Nebraska-Lincoln for the project, “Spintronic Devices Enabled by Semiconducting Boron Carbide.”



Dr. Jan Puszynski, professor, chemical and biological engineering, and **Dr.**

Rajesh Shende, assistant professor, chemical and biological engineering, received \$299,948 from the National Science Foundation for the project, “Novel Redox Materials for Hydrogen Generation by High Temperature Water Splitting.”



Dr. Lance Roberts (CE98), assistant professor, civil and environmental engineering, received \$5,283 from FMG Engineering, Inc. for the project, “Development of a Reliability-Based Design Algorithm for Deep Foundation Systems.”

Dr. Rajesh Sani, assistant professor, chemical and biological engineering, received \$5,000 from the South Dakota Board of Regents for the project, "Generating Preliminary Microbial Data on Homestake Gold Mine to Support NSF S4, S5, and Faculty Early Career Development Proposals."



Dr. James Sears, director, additive manufacturing laboratory, received \$849,673 from the U.S. Department of Defense- U.S. Department of Army- U.S. Army Medical Research Acquisition Activity for the project, "Bio-Medical Materials Initiative (BMI)."



Dr. Larry Stetler (Geole79), associate professor, geology and geological engineering, and **Dr. Davis** received \$75,000 from the National Science Foundation/SGER for the project, "Characterization of the Precambrian Aquifer at the Homestake DUSEL."



Dr. James Stone, associate professor, civil and environmental engineering, received \$6,000 in additional funding from the National Science Foundation for the project, "Degradation of Antimicrobial Agents Tylosin and Chlorotetracycline during Swine Waste Treatment."



Dr. Stone, Dr. Stetler, and Dr. Sundareshwar received \$238,742 from the U.S. Environmental Protection Agency- South Dakota Department of Environmental and Natural Resources for the project, "Statewide Mercury TMDL Assessment Project."



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area MEETINGS

Rapid City, South Dakota – Women in Science Conference

The School of Mines held the second annual Women in Science conference on campus, March 18, 2008. Women in Science (South Dakota) is a one-day workshop designed to introduce young women in grades six through 12 to careers in science. There were more than 300 girls from western South Dakota middle and high schools. The Honorable Stephanie Herseth Sandlin, congresswoman for South Dakota, opened the conference and was followed by the keynote speaker and Alumni Association President **Marlene Nelson** (ME74), Boeing's director for aviation safety. Throughout the day, attendees rotated through exhibitors and speakers who included archeologists, meteorologists, engineers, forest managers, botanists, women in various medical fields, and many more. The list of speakers and committee members included alumnae: **Cabot-Ann Christofferson** (Chem97); **Carmen Cole** (GenSt03); **Terran Elliott** (Chem05); **Linda Foster** (GeolE03); **Jessica Gould** (CE01); **Kris Grinnell** (Chem05); **Meagan Holm** (M.S. Atm05); **Kathryn Johnson** (Ph.D. Geol86); **Gwen Lipp** (EnvE04); **Brenda Mabbs** (IS04); **Marilyn Montgomery** (EE89); and **Kelly Whitaker** (M.S. TM98); and many other local professional women. If any



The School of Mines' Nancy Anderson-Smith thanks volunteers for WISE

other alumnae participated, we apologize for not printing your names. However, the 2009 WIS event is planning for more than 800 girls, so there is another chance to get involved. This event was made possible through the monetary support of South Dakota EPSCOR, the National Science Foundation, South Dakota Space Grant Consortium, GCC Dacotah Inc., and other Rapid City businesses. For more information on learning opportunities for people of every age group please visit <<http://sdmines.sdsmt.edu/learn>>.

Las Vegas, Nevada – Hardrock Club Golf Event

Highland Falls Golf Club was the site for the first annual Arizona-Nevada-South Dakota Hardrock Club Golf Tournament and alumni get-together on March 29, 2008. A star-studded cast included several School of Mines presidents – School of Mines **President Chuck Ruch**, School of Mines **President Elect Robert Wharton**, Foundation President **Rod Pappel** (ME77), and Alumni Association President Elect **Ralph Wagner** (CE75). Ralph's team, including **Tom Bender** (MetE76) and **Roy Pulfrey** (CE76), scored top honors at the tournament. Thanks also go **Mark Lux** (MinE80) and Hardrock Club Director Tom Rudebusch for co-organizing the event, and the many



Las Vegas winners Roy Pulfrey (CE76), Ralph Wagner (CE75), and Tom Bender (MetE76)



U.S. Representative Stephanie Herseth Sandlin introduces Marlene Nelson (ME74) as keynote speaker



Alumni President Marlene Nelson (ME74) talks to future Women in Science



Co-organizers **Ralph Wagner** (CE75) and **Mark Lux** (MinE80)

School of Mines staff, coaches, and alumni boosters that attended.

Casper, Wyoming

Once again, the Casper Petroleum Club was a gusher evening with great company, conversation, and food on April 11, 2008. Alumni Executive Vice President **Paul Gnirk** (MinE59) and Director **Tim Vottero** (Chem84) were eagerly drilled for information about the School of Mines. Alumni spanned six decades of graduation, including several from the 2000 decade. As always, thanks go to **John Dolan** (GeolE77) and **Mark Opitz** (CE74) for platting the site and event.



A big Wyoming alumni toast in Casper

Gillette, Wyoming

Gillette, Wyoming mined a few alumni and friends out for an evening of fun and reminiscing at the Boss Lodge (formerly Boot Hill) on April 12, 2008. Alumni Executive Vice President **Paul Gnirk** (MinE59) and Director **Tim Vottero** (Chem84) were found mucking around the venue in advance of the event, and they delivered news from campus and South Dakota to the crowd. Thanks go to **Kathy** (Chem74) and **Ken Miller** (CE75) for staking the claim and to **Jamie Lembke** (ChE02) for taking the reins



l to r: **Paul Gnirk** (MinE59), **Brent Hardy** (CE06), **Jason and Jamie Lembke** (ChE02), **Tim Vottero** (Chem84), **Kathy** (Chem74) and **Ken Miller** (CE75), **Lona and Curt Belden** (GeolE71), **Owen Lindbloom** (CE93) and **Reba Lindbloom**, and **Joel Grace** (MinE73)

of this chapter for future events. Campbell County continues to be a great source of students (future miners) for the School of Mines.

Yankton, South Dakota

Joe Vig (CE71) and Yankton alumni rolled out the red carpet and a blanket of white snow for Alumni President **Marlene Nelson** (ME74) on April 25, 2008. Marlene braved the spring blizzard to share thoughts on the Alumni Association and the School of Mines. She also offered thanks to everyone who plowed through the heavy, wet, white stuff to join the group at Hillcrest Golf and Country Club.



Courtney and Carson Merkwan (ChE05), **Karen and Harvard Schulz** (CE65), **Patti and Dan Eisenbraun** (CE75), **Nancy and Brad Wenande** (EE93), **Sarah** (IE98) and **Steve Sager** (IE96), **Dave Crumrine** (CE86), **Lyla Gukeisen**, **David Carda** (ME91), **Chuck Gukeisen** (GE56), **Patti and Joe Vig** (CE71), **Marlene Nelson** (ME74), **Jim Sprague** (EE03), **Jody Clark**, and **Hartley Alsgaard** (Math76). Not pictured: **Jim Cox** (ME69)



Located in southwestern South Dakota, Badlands National Park consists of nearly 244,000 acres of sharply eroded buttes, pinnacles and spires blended with the largest, protected mixed grass prairie in the United States. Sixty-four thousand acres are designated official wilderness. Sage Creek Wilderness is the site of the reintroduction of the black-footed ferret, the most endangered land mammal in North America. The Stronghold Unit is co-managed with the Oglala Sioux Tribe and includes the sites of 1890's Ghost Dances.



Photo courtesy of Mitchell Vander Vorst
Director of Communications

The Hardrock Fall 2008

area MEETINGS

Sioux Falls, South Dakota

After the spring snow storm passed and the interstate opened, alumni and friends from the Sioux Falls area and beyond gathered at Champps (yes, two p's) on April 26, 2008 for a nice buffet dinner and great Mines camaraderie. Alumni President **Marlene Nelson** (ME74), Executive Vice President **Paul Gnirk** (MinE59), Foundation representative **David Gnirk** (ME74), and Alumni Director **Tim Vottero** (Chem84) greeted guests from as far away as Rapid City and Keystone, South Dakota. Thanks go to **Jim Belbas** (MetE90) for making the arrangements at



Jerry Hansen (EE85), **Marlene Nelson** (ME74), **Jason Cook** (Chem91), **Jim Belbas** (MetE90), **Chad Gortmaker** (ME97), **Frank Blaine** (ChE87), **Mark Meyer** (EE70), **Tim** (IE02) and **Jenny Vavra** (IE01), **Chris** (MinE97) and **Tammy Klein** (IE96), **Grove Rathbun** (MinE52), **Darlene Weber** (ChE88), **Jan Rathbun**, **Bob Hayes** (MinE51), **Brian Bernhard** (CE70), and **Tim Vottero** (Chem84)

Champps. Thanks also go to Mark Meyer for making the first purchase of a bottle of School of Mines signature labels from Valiant Vineyards in Vermillion and the SDSM&T Alumni Association. Valiant has provided an opportunity for an income stream to the Alumni Association associated with the purchase of these custom-labeled wines. See the wines and special labels via <www.buffalorunwinery.com>.

Rapid City, South Dakota – Class of 1958 Reunion and 157th Commencement

A banner group of alumni who graduated 50 years ago returned for their class of 1958 reunion, and received recognition during the spring commencement ceremony. From an original graduating class of 156 and the 123 surviving members, 35 members from the class of 1958 and their guests from across the United States and even Norway gathered for three days of reminiscing and enjoyed seeing the many advances since 1958 at our alma mater. Additionally, 27 also participated at graduation, walking across the stage to receive their certificate commemorating the 50th anniversary of their graduation.

A special note of thanks goes to the generous efforts of students, faculty, and staff in providing a warm welcome and memorable reunion for these 50-year graduates.

The 1958 alumni in attendance included: **Jim Adams** (ChE), Kerrville, Texas; **Alva (Tad) Addy** (ME), Spearfish, South Dakota; **Don Almen** (GenE), Albany, Oregon; **Dick Berg** (CE), Littleton, Colorado; **Darral Brooks** (CE), Philip, South Dakota; **John Burggraft** (ME), Vashon, Washington; **Bob Davee** (ChE), Florence, Oregon; **Jim Emch** (GenE), Redmond, Washington; **Jim Erickson** (CE), Palo Alto, California; **George Garlick** (EE), Richland, Washington; **Melvin Glerup** (GeolE), Highlands Ranch, Colorado; **Dick Itlis** (GenE), Salem, Oregon; **Jim Joyce** (EE), Custer, South Dakota; **Bob Kelley** (CE), Rapid City, South Dakota; **Roger Kiel** (GenE), Sedona, Arizona; **Everett Kjerulff** (EE), Redmond, Washington; **Fred Klawiter** (ChE), Buchanan, Michigan; **Les Larson** (CE), Rapid City, South Dakota; **Errol Matzke** (Math), West Hartford, Connecticut; **Wes Mendenhall** (CE), Rapid City, South Dakota; **Harold Nelson** (GenE), Gilbert, Arizona; **Neil Nerison** (ME), Sioux Falls, South Dakota; **Lanny Outlaw** (GenE), Hill City, South Dakota; **Gene Poch** (CE), Cheyenne, Wyoming; **Lloyd Potter** (GeolE), Pierre, South Dakota; **Tom Ranney** (ME), Spearfish, South Dakota; **Bill Reinsmith** (ME), West Hartford, Connecticut; **Gil Rennhack** (MinE), Camden,

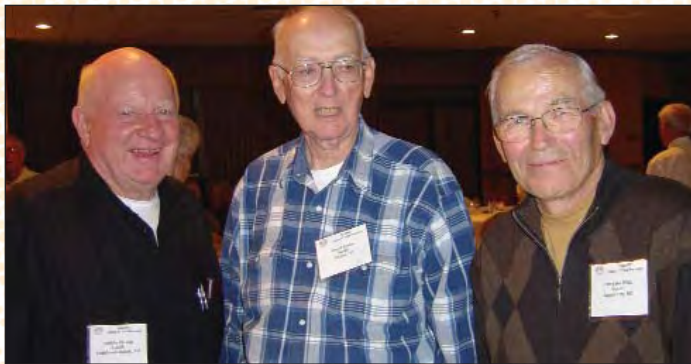


Larry Kloiber shares a laugh with **Bob Kelley** (CE58) and **Les Larson** (CE58)



Roger Kiel (GenE58) and **Gene Poch** (CE58)

South Carolina; **Dave Seefeldt** (GeolE), Rapid City, South Dakota; **Ernie Sundstrom** (ME), Traverse City, Michigan; **Dick Todd** (ME), Rapid City, South Dakota; **Stuart Ulfers** (EE), Annandale, Minnesota; **Jan Waage** (ME), Norway; **Richard Warder** (ME), Memphis, Tennessee; and **Wayne Wilcox** (GenE), Arlington, Virginia. Also attending along with spouses and guests was Larry Kloiber of Minneapolis, Minneapolis.



Mel Glerup (GeolE58), **Lloyd Potter** (GeolE58), and **Dave Seefeldt** (GeolE58)



Class of 1958 attendees and guests at March Dake Plaza



Dr. Dan Dolan, professor, mechanical engineering, explains CAMP to the class of 1958



157th commencement at the School of Mines

More than 200 graduates received degrees at the spring commencement. Dr. Thomas O. Hunter, president of Sandia Corporation, a Lockheed Martin Company, and director of Sandia National Laboratories, delivered the commencement address. Hunter also addressed more than 100 alumni, campus, and community leaders in a special Technology Based Economic Development (TBED) luncheon on the Friday before commencement, co-sponsored by the Alumni Association and Rapid City Economic Development. Dr. Hunter joined Sandia in 1967 and his responsibilities as president includes managing the Laboratories' \$2.2 billion annual budget and approximately 8,400 employees.

Firas Khoury (EE08) of Israel and **Wes Snaza** (ME08) of Webster, South Dakota delivered the senior class messages. Khoury was active in International Student Ministry, Eta Kappa Nu Association, and Tau Beta Pi honor society. Khoury has been accepted into the Navy's Nuclear Propulsion Officer Program. Snaza participated in multiple activities including Society of Automotive Engineers, Formula SAE, Center of Advanced Manufacturing and Production (CAMP), Connolly Hall resident assistant, Mechanical Engineering Student Advisory Board, Student Ambassador, Student Orientation Leader, Phi Eta Sigma Honor Society, and Tau Beta Pi honor society. He will begin his career with Terex Utilities in Watertown, South Dakota as a design engineer.

Also during the ceremony, the School of Mines honored alumnus **Jerrold L. Brown** (CE65) with the 2008 Guy E. March Medal. After graduating in 1965 with a bachelor's degree in civil engineering, Brown was commissioned as second lieutenant in the United States Army Corps of Engineers. In 1966, he entered the United States Army and was awarded the Bronze Star, the Vietnamese Service Ribbon, and the Vietnam Campaign Ribbon. Brown earned a master's degree in civil engineering in 1970 and began working for Birdsall Sand & Gravel Co., Rapid City, in September 1969. In 1981 he became president and chief executive officer of the company. Brown retired as vice president and general manager for Pete Lien & Sons. He also served as board member, executive vice president

area MEETINGS



2008 March Medalist **Jerry Brown** (CE65) following 1999 March Medalist **Paul Gnirk** (MinE59) to the stage

and president of the SDSM&T Alumni Association, president of the Triangle Fraternity Alumni Association, and was named one of the School of Mines' Centennial 100 in 1985.

The Guy E. March Silver Medal was established in 1975 in remembrance of the exemplary service provided by **Dr. Guy E. March** (EE22) to the South Dakota School of Mines and Technology. Jerry Brown worked with Guy March on many projects, reunions, and events involving students, faculty, staff, and alumni, and continues to embody this exemplary ethic.

Kabul, Afghanistan

Do two or more alumni an Area Meeting make? Well, it certainly does in Kandahar, Afghanistan. **Kevin Groves** (EE96) emailed that he "had the good fortune of meeting **Brad Prisbe** (GeolE95), now a captain in the U.S. Air Force, on a flight [he] made from Kabul to Kandahar Afghanistan on 31 May 2008." Kevin continued, "On the return trip we decided to take a photo of an impromptu alumni 'reunion' at the Kabul International Airport and submit it to the Hardrock." Fellow pilot, J.D. Rodriguez is also a former School of Mines student in a master's program. Brad is stationed in Afghanistan with the Air Component Coordination Element as their space effects planner. Brad added, "It is amazing 10,000 miles from 'home' who you will randomly meet." Thanks also go to **Larry Simonson** (EE69) for forwarding the story of this

unique reunion.



Kevin Groves (EE96), **Brad Prisbe** (GeolE95), and **J.D. Rodriguez**

Oklahoma City, Oklahoma

Thanks to **Larry Simonson** (EE69), a hearty group of alumni met at Charleston's restaurant in Oklahoma City, Oklahoma on May 29, 2008 to kick off several weeks of travel, bringing smiles and miles from South Dakota. The small group spent the evening dancing up stories from yesteryears at the School of Mines. Of course, in fine form, Simonson also gave everyone the current moves and future steps happening on campus. Special thanks go to **Dan Naugle** (EE81) for arranging the event at Charleston's.



l to r: **Doug Schultze** (ChE78), **Stan Mueller** (EE80), **Bert Weimer** (GeolE81), **Dan Naugle** (EE81), **Chuck Natalie** (MetE74), and **Jim Couch** (CE78)

Tulsa, Oklahoma Memphis, Tennessee New Orleans, Louisiana Wichita, Kansas Kansas City, Missouri

Alumni President **Marlene Nelson** (ME74) committed to a couple of back-to-back weekends from May 30-June 8,

area MEETINGS



*Tulsa, Oklahoma group – Back row: **Marlene Nelson** (ME74), **Brian Dugdale** (CE76), **Lin Seder** (ChE69), **Neil Elliott** (EE56), **Curtis Matthews** (GeolE79), **Nick Koch** (ME03); Front row: **Charla Green** (Ex07), **Barb Seder** (Math70), **Mary-Jane (Meola) Green** (CE78), **Megan Dangel** (CE07), **Stephanie Matthews** (GeolE79), **Phyllis** and **Lance Cole** (ChE71), and **Velida** and **Reece Palmer** (ChE61); Photographer (not pictured) **Larry Simonson** (EE69)*



*Memphis, Tennessee group – Back row: **Marlene Nelson** (ME74), **Howard Hauck** (ChE71), **Susan Hodge**, **Kathleen** and **Dennis Roeber** (ME69), **John Knie** (MetE99), **Fred Voigt** (CE51), **Greg Zoller** (ChE73), and **David Gross** (Ex69); Front row: **Tara Cook**, **Angela Cook** (ChE90), **Anna Green**, and **Sandy Gross**; Photographer (not pictured) **Larry Simonson** (EE69)*

2008 to 'road trip' with **Larry Simonson** (EE69) and **Mary-Jane Green** (CE78) to Tulsa, Memphis, and New Orleans, followed by Wichita and Kansas City. At all stops, she found alumni eager to meet her and hear about the School of Mines' rich history and bright future, along with a willingness to share this strong connection among alumni.

From rekindling old friendships with "MJ" Green to meeting fellow Boeing employee **John Knie** (MetE99) to crossing paths with hometown (Martin, South Dakota) friend **Howard Hauck** (ChE71) to sharing great "Southern hospitality" at the homes of **Sandy** and **Dave Gross** (Ex69) in Memphis and **Rosie** (Math71) and **Terry Bartels** (ME71) in Kansas City – **Marlene** experienced firsthand the fun and friendship that alumni around the country rollout for



*New Orleans, Louisiana group – Standing: **Sharon Lotz**, **Tara Patten**, **Madonna Heier**, **Marlene Nelson** (ME74), **Marge Bross**, **Marci Blomberg** (ChE93) (hidden), **Jan Burlette** (Marci's sister), **Cheri Deis**, **Don Penner** (Math75); Sitting: **Wayne Lotz** (ChE64), **Michael Patten** (ChE95), **Bob Heier** (ME73), **Harold Bross** (MetE68), **Greg Deis** (ChE76), **Ron Jeitz** (CE69); Photographer (not pictured) **Larry Simonson** (EE69)*



*Wichita, KS group – Standing: **Troy Alexander** (CE87), **Robert Schott** (ME60) and **Pat Schott**, **Tara Shaffer** (hidden), **Dennis Clary** (ME01), **Rod Nelson** (ME84), **Mary-Jane (Meola) Green** (CE78), **Chris Gerken** (Chem06) and guest, **Mitch Wendt** (ChE03), **Rebecca Mitchell** (CE95), **Robert Trumpower**, **Chad Kirby** (ME07), **Bobbie** (ME06) and **Chris Kroetch** (ME06), **Erin Lachman** (ME01), **Karolyn Braun** (holding **Donovan Braun**) and **Eric Braun** (ME96) (holding **Natasha Braun**), **Stacie Penaloza**, **Matt Kraft** (MetE82); Kneeling: **Jim Morgan** (ME01), **Lea Anderson** (ME83), **Marlene Nelson** (ME74), **Darrell Jundt** (CE79), **Victoria** and **Manny Penaloza** (MetE95)*

Louisiana; **Cheryl** and **Matt Kraft** (MetE82) in Wichita, Kansas; and **Rosie** (Math71) and **Terry Bartels** (ME71) in Kansas City, Missouri. Without the help and hospitality of these alumni and friends, events like these would not happen. Thank you!

School of Mines representatives.

Many thanks go to **Larry** for driving countless miles on this and other trips throughout the year, and to our representatives in the various chapters that help arrange, organize, and attend these area events, including: **Mary-Jane Green** (CE78) in Tulsa, Oklahoma; **Sandy** and **Dave Gross** (Ex69) in Memphis; **Madonna** and **Bob Heier** (ME73) and **Marge** and **Harold Bross** (MetE68) in New Orleans,

area MEETINGS

Cedar Rapids, Iowa – Cargill Corn Milling Flood Recovery

On June 13, 2008 the Cedar River in Cedar Rapids, Iowa crested at 31.1 feet, nearly 20 feet above flood stage. The flooding caused significant damage to the city, which included damage to Cargill's Corn Milling facility located along the river in Cedar Rapids. The South Dakota School of Mines and Technology engineers pictured and mentioned below are part of a team of more than 700 Cargill employees and contractors assembled from Cargill operations and locations around the world for recovery operations at the plant. The plant in Cedar Rapids produces corn syrups, specialty and industrial corn starches, and animal feed products. Cargill expects the plant to be operational sometime in October 2008



The Alpina Chapter float at the Wildcat's 125th Anniversary Parade

Evenson (MinE72), **Lynn Presuhn** (ME71), and of course, **Howard (Dean Pete) Peterson** (GeolE50). Thanks go to **Dean Pete** for the photo.

Rapid City, South Dakota – Dean Pete's "Youthful Milestone" Celebration

On June 27, 2008 more than 100 alumni, friends, and campus personnel gathered in the Surbeck Center Ballroom to offer best wishes (and a few friendly pokes) for our very own "Dean Pete" – **Dr. Howard C. Peterson** (GeolE50). For more than a half of a century, Dean Pete's association with the School of Mines has had few rivals.

Howard has a long legacy at the School of Mines. A native of Alpina, South Dakota (see previous article) he attended the School of Mines in an era when most students were veterans of World War II and few were traditional, straight of high school students. Howard was one of the "youngsters", as he calls himself. He was active in many campus organizations, and after receiving his geological engineering degree in 1950, he worked in oil exploration for a few years. Then he found his true calling – education. He taught high school in eastern South Dakota, and during his teaching years he earned a master's degree in education in 1955 from Northern State Teachers College. He then returned to his college alma mater and was appointed assistant dean of Students. He later earned a doctorate in education from the University of South Dakota.

From the 1960s into the 1990s, Dean Pete was a personal friend to most students. He retired as dean of students in 1992, only to immediately play a leadership role that made a significant impact on the very successful, first-ever capital campaign in the university's history with his work at the SDSM&T Foundation. Howard continues to mentor students as an advisor, as a member of several university boards, and as chairman emeritus of the SDSM&T Foundation Board of Trustees.



*l to r: **Brian Bares** (ChE95), **Glain Corner** (ChE96), **Joe Dexter** (ME06), **Mike Rizer** (ME91), **Don Grunig** (ChE84). Other flood recovery team/School of Mines graduates not pictured: **Jed Kopren** (ChE03), **Danny Duniphin** (ME07)*

Alpina, South Dakota

On June 21, 2008 a hardy and dedicated group of Miners represented their alma mater in an outstanding and impressive parade celebrating the 125th anniversary of their home town of Alpina, South Dakota, which was founded two years before the School of Mines! More than 85 floats and entries participated in the parade, including the SDSM&T Alumni, Alpina Chapter float, which was deemed one of the most impressive and creative. Over the years, several graduates of Alpina High School (home of the Wildcats) have graduated from the School of Mines, and nine of these individuals found their way back home for the celebration. **Ron Schroeder** (CE67) organized the float with able assistance from **Larry Baruth** (ME66) and **Ron Baruth** (MinE72). Other alumni on the float included **Harry Baltzer** (CE57), **Alea Brandenburg** (MetE98), **Chris Brandenburg** (IS97), **Gary**



Dean Pete (GeolE50) being introduced by current Dean of Students **Pat Mahon**



Howard (GeolE50) and "good friend" **Dr. Paul Gnirk (MinE59)**



"Howard the Magnificent" (GeolE50) with emcee **Dr. Sid Goss**

It was indeed fitting to celebrate his recent "youthful milestone" in the Surbeck Center, where he spent many years with students, alumni, and friends of the college. It



Dean Pete (GeolE50) with a group of his "former students"

is also immediately connected to the dormitory named in his honor - Peterson Hall. Congratulations Dean Pete, and thank you so much for all of your life's work and love of the South Dakota School of Mines and Technology.

China - Reunion in a Coal Mine

The photo below has **Brad Peterson (MinE77)** and **Bob Chen (EE73)** touring the Coal Mine in China where Brad



Brad Peterson (MinE77) and **Bob Chen (EE73)** touring the coal mine in China

works. Bob, president and CEO of RAE Systems Inc., is interested in working with the mine safety program. Bob took a team of five to visit Brad Peterson's mine. Bob expressed his gratitude in a note with the photo that he "really enjoyed meeting Brad". Also, since Brad is in a remote location he thought it would be nice to bring some steaks with him from USA. Brad was so pleased. Thank also go to **Larry Simonson (EE69)** for sharing the story and photo.

Ulaanbaatar, Mongolia

Alumnus and Professor **M.R. Hansen (CE69)** and admissions counselor **Barbara Hansen** attended the annual meeting of the Mongolia Chapter of the SDSM&T Alumni Association this past summer. General business was discussed and they played a very interesting game called School of Mines Bingo, and Barbara gave the

area MEETINGS



l to r: M. R. Hansen (CE69), chapter President Sugar Mijir (M.S. CE05), chapter Secretary D. Battsengel (M.S. TM06), Barbara Hansen, chapter Vice President Batbaatar Chimedtsere (M.S. TM06). Absent: Baigalma Shurka (M.S. CE05), Norov Rinchin (M.S. CE01), Enkhbaatar Baasanjav (M.S. TM03), and Batbaatar (#2).

winners souvenirs for prizes. "Mongolian and American politics were discussed and refreshments were served," according to Dr. Hansen. Thanks go to the Hansens for promoting our alumni more than halfway around the globe.

Denver, Colorado

This past summer, there was a special gathering of alumnae in the Mile High City. Although Denver, and indeed the state of Colorado, may never be the same, these seven "angels" descended on the Rocky Mountains for a few days of fun and frivolity. This recently expanded group of Lady Hardrockers has been meeting annually for years to rekindle their friendships and reminisce on days-gone-by. Thanks go to **Linda Rausch** (ChE75) for sharing the photo, (was I discreet enough?)



l to r: Susan "Booty" Banks (GeolE75), Susie Jorgensen (CE76), Linda Rausch (ChE75), Kathy Miller (Chem74), Anita Freeman (EE76), Marilyn Maxvold (Math75), and Carmen Adams (ChE75)

Rapid City, South Dakota – "Meet the President Mixer"

Robert A. Wharton, Ph.D., the university's 18th president, arrived in Rapid City in late June, along with first lady Dr. Carolyn Fassi Wharton. Most recently, Bob Wharton served as provost and vice president for academic affairs at Idaho State University (ISU). Officially assuming leadership of the School of Mines on July 1, Wharton replaces Dr. Charles Ruch, who retired June 30 after five years as president.



Lori Litzen (CE81), President Robert Wharton, and Dave Litzen (ChE81)



l to r: Tom Zeller (ME70), Jim Feiszli, Kim and Jim Sears, Carolyn Fassi Wharton, and Michelle Feiszli

As the chief academic officer at ISU, Wharton was responsible for advancing the academic and scholarly life of 13,280 students and 670 faculty members on the Pocatello campus and at four outreach centers. He successfully led the first campus-wide effort to implement and align evidence-based strategic planning,



*Michelle and **Jim Feiszli** with 2008 Alumni President **Marlene Nelson (ME74)** and Curt Chenoweth*



*Alumni presidents from three decades: **Doug Aldrich (ChE62)**, **Tom Zeller (ME70)**, and **Paul Gnirk (MinE59)***

budgeting, and assessment at ISU, and led student recruitment and retention efforts that resulted in a four percent enrollment increase as of fall 2007. First lady Dr. Carolyn R. Fassi Wharton has 20 years of experience working in health care administration at the federal, state, and local levels, in private industry, and in academe as a faculty member.

The SDSM&T Alumni Association hosted an alumni and friends event dubbed "Meet the President Mixer" on July 11, 2008 at the Radisson Hotel's 445 Club. A robust crowd of 'regulars' and a few unexpected guests enjoyed the mixer and meeting the Whartons. Several alumni even dusted off their beanies and senior hats to avoid the cover charge. On behalf of all School of Mines graduates, the Alumni Association welcomes the Drs. Wharton to our alma mater and wishes them all the successes in their endeavors.

Sioux Falls, South Dakota - 11th Annual Golf Tourney

The Sioux Falls area alumni hosted its 11th Annual Golf Tournament and Social at the Spring Creek Country Club on August 17, 2008. Thirty-four alumni and family gathered for the annual event. The competitive tournament was won by the team of **Tim Renner (CSc86)**, **Scott Buss (ChE89)**, **Lance Mriden (ME84)**, and **Jeff Wendte (ME88)**. Congratulations to the winners and all that participated in this great event. Special thanks go to **Jim Belbas (MetE90)** and **Dean Herll (CE92)** for organizing the event and sending the results.



***Paul Bachman (EE74)** and Dianne, **Ray Wahle (EE79)** and Linda*



*l to r: **Jason Cook (Chem91)**, **Jim Belbas (MetE90)**, **Steve Labahn (EE91)**, **James Larson (IE91)**, **Kevin Erdmann (ME03)**, **Keith Beck (EE89)**, and **Eric Thompson (CE92)***

Anchorage, Alaska

Past Alumni President **Tom Zeller (ME70)** and Sharon Zeller were welcomed by alumni and friends in Anchorage, Alaska on August 20, 2008, as they embarked on a two-week

area MEETINGS

excursion of Alaska. It was a good turnout and everyone enjoyed the lower-48 news from South Dakota and the School of Mines. Special thanks go to **Gary Christman** (ChE74) and Sandy Hamilton (BP, Alaska Drilling & Wells) for making all the arrangements at Kinley's Restaurant and with the event.



Front Row: **Gary Christman** (ChE74) (guest: Cymbre Christman); **Janice Vosika** (ChE81); **Kyle Monkeliën** (GeolE78); **Jerry Desjarlais** (CE57) (guest: Doris Desjarlais); Back Row: **Tom Zeller** (ME70) (guest: Sharon Zeller), **Dave Fritz** (CE58); **Lynn Aleshire** (GeolE81); **Sue Moore** (CE92) (guest: Patrick Moore); **Vernon Brown** (ME70) (guest Sandy); and **Gary Wells** (ChE76) (guest: Sandra Jennings).

Rapid City, South Dakota – AMP Picnic

Another successful AMP/CFSP (See <<http://ampcenter.sdsmt.edu>>) summer of research was celebrated in fine BBQ fashion at Canyon Lake Park on August 21, 2008. Alumni, faculty, students, and staff gathered on a hot day in the park, complete with great food, great company, and great stories from the past year. AMP Director **Bill Arbegast** manned the grill and everyone contributed to the feast. There was even a special



AMP Director **Bill Arbegast** gets some "air" on the burger

presentation of the new AMP director's chair as part of the frivolity. Thanks go to all who attended and helped make this a special event and a integral part of the School of Mines.



Seated, front: **Michael West**, **James Haiston** (Math/CSc, Rapid City), **Bill Arbegast**, **Colleen Narciso**. Back row, l to r: **Matt Heringer** (CE06), **Jordan Ritz** (CSc, Mandan, N.D.), **Adam Gladen** (ME, Wahpeton, N.D.), **Ravi Jonnalagadda** (M.S. MES, India), **Bharat Jasthi** (M.S. MES, India), **Dustin Blosmo** (ME07), and **Todd Curtis** (ME, Wall)

Watertown and Aberdeen, South Dakota

Larry Simonson (EE69) canvassed Eastern South Dakota in late August co-hosting two casual event with alumni, family, and friends. On August 22, 2008 several gathered



Watertown, South Dakota – l to r: **Nick Marek** (ME02) (holding Oliver), **Brooke Marek** (Math03) (behind baby Lincoln), **John Stephenson** (ME05), **Jason Thuringer** (ME01), **Larry Brusse** (ME66), **Julie Skott** (IS00) (holding Rachel), **Erik Skott** (ME01) (holding Ethan), **Pat Scott**, **Sara Struckman** (holding Abby) and **Glenn Struckman** (CE97), and **Jack Scott** (CE64)

area MEETINGS

for a picnic at Bramble Park Zoo in Watertown, South Dakota. **Jason Thuringer** (ME01) helped Simonson



Aberdeen, South Dakota: Candance and **Paris Briscoe** (ChE86) with children, Jamaica and Seattle, Suzanne (holding Carter) and **Pat Moen** (ME99) (holding Norah), **Todd** (CE02) and **Barb Hauge** (IE02) (holding Addison), **Lisa Jorgenson** (CE98) (holding Andrew) and **Jason Jorgenson** (ChE97) (holding Genevieve), young Matt, Kimberly, Zachary, and **Matt Helde** (ME99)



Aberdeen, South Dakota: Mark and Lori Simon, **Jeremy Simon** (EE, Aberdeen), **Travis Hoon** (ChE, Aberdeen), **Eric Brandner** (CE, Aberdeen), and **Robyn Krage** (CSc, Aberdeen)



Aberdeen: **Mark Wismer** (EE78) and Susan, **Dick Wismer** (GeolE54) and Elaine, **Katie Henning** (Chem04), **Bill McQuillen** (ChE75), **Carolyn Trautman** (GeolE88) (nice senior hat!), **Leonard Alberts** (MinE78) with Nick and Sheri

arrange for the food and everyone contributed with their time and talents. The next day found an even larger group of Miners and future Miners descending on the Rolling Hills Golf Club in Aberdeen, South Dakota on August 23, 2008. Larry and fellow 1969 graduate **Roger Wilson** (EE69) rolled out the "green" carpet for everyone attending. Many thanks go to all who helped, and especially to **Larry Simonson** (EE69) for making the trek east once again.



Aberdeen: Esther and **Larry Afdahl** (CE62), Linda and **John Malsom** (EE75), Ashley and **Eric Larson** (EE05), Pam Larson, **Jerry Schley** (ME73), **Glen Larson** (ChE71), **Roger Wilson** (EE69), **Rich Rovang** (ChE71), Maureen and **Fran Brink** (CE61), Connie Wilson, **Ray Kub** (EE69)

Rapid City, South Dakota

Betty Brink and Past Alumni President **Jay Brink** (EE56) hosted a group of alumni, family, and friends, including their grandson and School of Mines student **Christopher Shagla** (ME, Rapid City) for an end-of-summer cocktail



Front row: **Christopher Shagla** (ME, Rapid City), **Jay Brink** (EE56), **Glenn Barber** (CE60), **Duff Erickson** (MinE55), **Bernie Hoogestraad** (GeolE56), **Les Larson** (CE58), **George Dunham** (ME56). Back row: **Paul Gnirk** (MinE59), **Dave Seefeldt** (GeolE58), **Nancy Ward Dunham** (EE57), **Stacey Brink-Brown** (Math88), **Tim Vottero** (Chem84)

party at their home in Rapid City. A "Who's Who" of local and out-of-state alumni spent the evening in what always proves to be great conversation and School of Mines stories. Sincere thanks go to Jay and Betty for always making this an entertaining gathering.



class NOTES

1940s

A note from **James England** (CE47) shared that "on July 22, 2008 my wife Carol and I celebrated our 65th wedding anniversary!" (On a sad note, the Alumni Office offers condolences to Jim and his family at the passing of his dear wife Carol Mae England, 83, who died peacefully in his care this past August 2008. Carol was born in Blunt, South Dakota, and her family moved to Rapid City, where she attended school through graduation from Central High School in 1943. She married her high school sweetheart, James R. England, in 1943 in Rapid City. In high school she was an extraordinary student, especially enjoying Math Club and she shared her angelic voice in the church choir. As an adult woman she was active in her PEO chapter and was a coordinator for drivers for the American Cancer Society. Carol enjoyed an avid love of gardening, played in several bridge clubs, and traveled the world with a zest for learning. She always embraced new experiences and to all who knew and loved her she was loving, showing a genuine caring for others. Carol will be remembered as a loving wife, mother, grandmother and great-grandmother.)

Surrounded by his wife of 60 years, Rosalie, and several of their six children, 17 grandchildren, and four great-grandchildren, 91-year-old **Tom Malone** (GenE40, Hon D.Eng62, and March Medal Recipient 1976) on April 19, 2008 was presented with the Living Spirit Award of the interfaith Spiritual Life Center for "outstanding contributions to share spirituality with the larger community in Connecticut."

Elinor and **Jack Meeker** (EE47, ME48) are residing at the Sound Living home (21234 1st Place South, Des Moines, WA 98198). The facility is quiet, clean, and has very attentive adult care. Jack also required assisted care for a few weeks as he recovered from near death last year

in early December when a fire claimed their home and nearly all their possessions. Jack and Elinor's house was totally destroyed and Jack was burned and suffered smoke inhalation, requiring CPR. Tragedy then struck the Meekers again in June 2008 when their son Paul passed away on June 21, 2008 as a result of injuries received from a motorcycle accident on June 13. His brother John and family were at his side when he passed away. Obviously, this has been a tragic year for the Meekers beyond comprehension. If your lives have been touched by these special people over the years, as has been the case for so many alumni, please send your notes, thoughts, and prayers to Jack and Elinor. A special thanks go to Pat and **Vernon Abild** (EE50) and Elynor and **Ward Zimmerman** (ME50) for sending periodic updates to the Alumni Office during the past few months and being true friends to the Meekers.



Elinor and Jack Meeker (EE47, ME48) in July 2008 (Photo courtesy of Ward Zimmerman)

1950s

An update from **Myron Andersen** (GenE56): "My son Dana is director for late-stage cell culture bioprocess development for Genetech Corporation in Menlo Park, California. He has a wife and two children - a boy and a girl. Our other

son, Eric, is R&D engineer, copy solutions, for Hewlett Packard in Meridian, Idaho. He and his wife have three children - two girls and a boy. I also have one nephew who lives in Sturgis, South Dakota with a wife and two children - a boy and a girl. I hope to continue visiting my sons' families, grandchildren, and also my nephew."

The Alumni Office received the following memorial from **Neil Isto** (GenE55) in honor of his wife, Rosemary Virginia Isto - "Rosemary went to meet the Lord on July 1, 2008. Her wonderful smile and happy voice will be dearly missed by her family and friends. Our beloved Rosemary succumbed to the ravages of Amyotrophic Lateral Sclerosis (ALS) after a two-year battle with this terrible disease. Rosemary was born on July 25, 1937 in Miles City. She grew up on a ranch near Sheffield, attended grammar school at the Calabar School and high school in Miles City. After graduating in 1955, she attended Parks Business College in Denver, Colorado. She subsequently was employed by Shell Oil Company in Billings. It was there that she met her future husband, Neil, who worked as an engineer for Shell. They were married Aug. 18, 1957. From this union were born two children, Mark and Heidi. Rosemary and her family lived in many places. While living in Houston, Rosemary was very active in the Republican Party and the Fort Bend Republican Women's Club, where she was honored as Woman of the Year in 1990. She was also a delegate to the Republican National Convention in 1992. After Neil's retirement in 1992, they moved to Joliet, Montana where they have been residents since 1994. Rosemary loved to cook and made many delicious meals for her family and friends. She also loved her flowers, herb garden, and traveling. She and Neil visited 26 countries in their world travels. After being diagnosed with ALS, Rosemary and Neil made trips to China and Mexico for stem cell treatments. Rosemary is survived by her husband of 50 years; their children Mark and Heidi and their families, including three

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grandchildren; and three sisters along with other dear family members." Our sincere condolences go to Neil and his family. Rosemary was also very dear to their many School of Mines friends and family.

A note from **John Mohr** (EE56) shared, "We took an Amazon River cruise in Peru in December 2007. Sight seeing and interaction with the natives were fantastic. Fishing for piranha was a bust - they bit, but rarely found the hook!"

Grove Rathbun (MinE52) sent the following story: "SOUTH DAKOTA AVIATION HISTORY IN THE MAKING: On Sunday, July 27, 2008 50 home-built experimental aircraft launched from the Mitchell, South Dakota airport in a race to Oshkosh, Wisconsin. This race, the AirVenture Cup Race, is one of the most successful air racing events in aviation. The race was founded in 1998, and the previous starting locations have been Kitty Hawk, North Carolina and Dayton, Ohio. However, due to increased air traffic control restrictions a new route was needed. The decision to choose Mitchell was based on the airport location and facilities. The unknown element was whether or not South Dakota could provide for the myriad of support tasks and accommodations required for an operation of this size. Eric Whyte, director of the race, sent a

letter in January to Grove, (who is president of the South Dakota Pilots Association) requesting help in organizing the local flying organizations to provide this needed help. Through contacts with the South Dakota Aeronautics Commission, local EAA Chapters, South Dakota Civil Air Patrol and the Mitchell area civic and commercial organizations, a more than adequate group was arranged. More than 1,000 people from the Mitchell area came to see the variety of aircraft in the race as they assembled on Saturday. The facilities and support given the race this year should make South Dakota a prime candidate for the race in future years. For more information on the race please visit the <www.airventurecup.com> website.



Cirrus Design sponsored this support plane, complete with South Dakota decals

Bob Smith (EE54) emailed, "Man, they outdid themselves on this Hardrock issue (spring 2008). How that school has grown and changed. Pretty impressive. We were in the dark ages. The museum had just one turtle skeleton and a rock then. We took notes on slabs of slate. Slept with the slide rule. Couldn't spell computer. Rode goats to school. EE department had a battery and a motor." Thanks for the cheers, Bob!

1960s

James Clement (ME69) wrote, "Meridian Automotive Plant closed in Jackson, Ohio during the summer of 2007, where I was ISO coordinator. I

am now employed at John Deere Engine Works in Waterloo, Iowa as a quality engineer effective March 31, 2008. My wife Margaret, daughter Raina, and I are now living in Raymond, Iowa."

James Cox (ME69) wrote, "Betty and I are still in Yankton, South Dakota. Our son **Chuck Cox** (ME00) is living in Kansas City working at LaFarge. Our other son Garrett is a third-year medical student at USD's Yankton campus."

Merril Evans (GeolE60) sent this update: "When friends pose the question 'How are you?' my current reply is, 'In the context of having celebrated my 80th birthday last June, I'm doing OK'. I'm upright, ambulatory, and beset with only a minimum of aches and pains that accompany being a 'senior citizen.' We live in a gated community of senior citizens. It is only a 30 minute drive to the Jersey shore where we spend considerable time in the summer. I continue to do furniture restoration and refinishing. Our youngest son, Eric, and family live nearby so we see them often. In August of 2006 their second child was born - a baby boy named Griffin Merrill. He is our only grandson. I waited 79 years for him. Now and then we go into Manhattan to shop, visit friends, or to see a stage show. In December of 2007 our two sons and daughter took us to the famous old Jazz club, Birdland, to celebrate our 50th wedding anniversary. Since I have long been a jazz fan, the evening was doubly special for me. My best regards to all."

Lowell Hanson (EE61) wrote, "We have moved to Wisconsin to be nearer to our children and other relatives. My wife's health is causing us to greatly minimize our activities."

George "Duff" Kruse (ME66) "has spent more than 35 years managing technology companies and has been with Pacer for more than 11 years

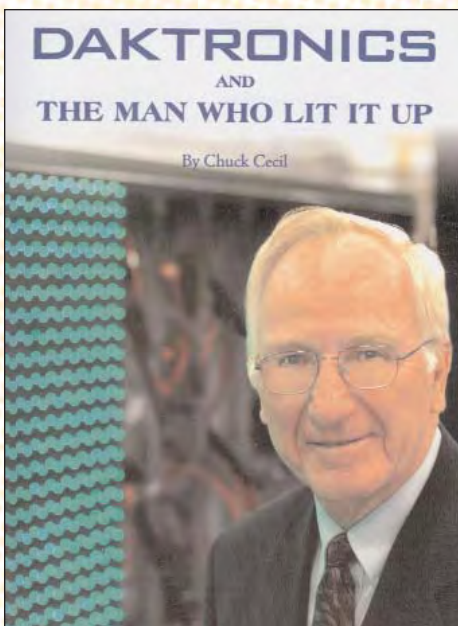


Steve Hamilton, SDPA executive director and Grove Rathbun (MinE52)

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developing new products, processes, and reserves to meet growing customer demands. Prior to joining Pacer, Duff was director of operations for the Johnson & Johnson electronic medicine division in Denver, Colorado, and the production engineering manager at the Honeywell Test Instruments Division also in Denver. Duff was born and raised in the Black Hills area. He is dedicated to maintaining Pacer's status as a leader in environmental concern and reclamation and is active as well in technology based economic development of the Black Hills area."

Named one of eight National Ernst & Young Entrepreneurs Of The Year® chosen from nearly 4,000 nominees throughout the country, Daktronics chairman and co-founder **Dr. Al Kurtenbach's** (EE61) inspirational story is told in the Pine Hill Press, Inc. book entitled "Daktronics and The Man Who Lit It Up" (January 2007) authored by Chuck Cecil. Daktronics was founded in 1968 by School of Mines Distinguished Alumni Drs. Aelred Kurtenbach and **Duane Sander** (EE60), while professors of electrical



"Daktronics and The Man Who Lit It Up" by Chuck Cecil

engineering at South Dakota State University in Brookings, South Dakota. The company began with the design and manufacture of electronic voting systems for state legislatures. In 1971, Daktronics developed the patented Matside® wrestling scoreboard, which was the first product in the company's growing and evolving line of "catalog" scoreboards. The company branched out into the design and manufacture of large custom scoreboards and computer-programmable displays. Daktronics now offers the most complete line of scoreboards and display products of any company in the world, including long-lasting light emitting diode (LED)-based systems. Today a majority of the company's display products utilize LEDs because of the low power requirements and high reliability of the technology. The company employs more than 2,300 people working under more than 500,000 square feet of its manufacturing and office facilities. In 1994, Daktronics, Inc. (<www.daktronics.com>) became a publicly traded company, offering shares under the symbol DAKT on the NASDAQ National Market system.

An update from **David Lee** (CE62) shared that he "retired from Lockheed Martin in March 2007. My wife Mary Lou and I intend to remain in Aledo, Texas but with a summer escape to Iowa."

Ur-Energy Inc (www.ur-energy.com) and its board of directors are pleased to announce the appointment of **Thomas Parker** (MinE65) as a director of Ur-Energy's board of directors. A mining engineering graduate from South Dakota School of Mines and Technology, with a master's degree in mineral engineering management from Penn State, Parker has worked extensively in senior management positions in the mining industry for the past 40 years. Tom Parker is president and chief executive officer of Gold Crest Mines Inc., a Spokane-based gold exploration company. Gold Crest has properties in southwest Alaska in the Kuskokwim Mineral Belt and in the Yellow Pine District of Idaho. Prior to Gold Crest, Parker was

the president and chief executive officer of High Plains Uranium, Inc., a junior uranium mining company with more than 120,000 acres (48,562 hectares) in claims and lease agreements that was acquired by Energy Metals Corporation in January 2007. Parker spent 10 years as executive vice president of Anderson and Schwab, a New York-based management consulting firm where his clients included UBS Warburg, Norilsk Nickel, Southern Peru Copper Company, Arch Coal Company, and Goldman Sachs. Prior to Anderson and Schwab, he was chief executive officer of Costain Minerals Company, a \$425 million company with 22 operating coal mines, and with the Brewer gold mine and Montana Talc. Earlier in his career, Parker worked 10 years for ARCO where he was president of Beaver Creek Coal Mines, general manager of Nevada Moly, president of Thunder Basin Coal Company, and vice president for engineering, exploration, and business development. He was also general manager of the Jacobs Ranch mine for Kerr McGee Coal Company, and served as project manager for Conoco for the Imouraren uranium deposit in Niger. He opened, staffed, and managed Conoco's Paris office, which was established to coordinate Conoco's activities with those of the two other partners - the French Atomic Energy Commission (COGEMA) and the Niger State Mining Company (ONAREM). He has worked in the potash, limestone, and talc industries, and has extensive experience in Niger, France and Venezuela.

Gary Radford (ME60) wrote, "Consulting business is good in Texas and looking forward to the next reunion!"

An update from **Carol Reed** (Geol66) shared, "I'm still working for USDA as a civil rights manager. I've clocked 29 years with the government. I'm starting to think about retirement in a couple of years. We have nine grandchildren to visit in four states."

A note from **Francis Reuer** (ME65) shares that "After graduation, I

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worked for the South Dakota Health Department for 18 years. A transfer was made to the Wyoming Health Department in 1983. After eight years, I finished working for the United States Department of Health and Human Services in Denver, Colorado (1991-2008). I presently reside in Cheyenne, Wyoming."

Terry Sankey (ME67) wrote, "After seven years in Las Vegas and six months in Boston, Massachusetts, is it great to be back home in 'God's Country'."

The South Dakota Engineering Society (SDES) held its 48th Annual Conference in Rapid City, April 23-25, 2008. During this conference, the 2007 SDES Engineer of the Year was awarded to **Rich R. Schwanke** (CE69). Rich received his bachelor of science degree in civil engineering from the School of Mines. He is a registered professional engineer and land surveyor. In 1984, he co-founded JSA Consulting Engineers & Land Surveyors, Inc. in Sioux Falls. Rich has served in the United States Army and saw active duty in Vietnam. He is still a very active member of the Sioux Falls VFW. His engineering career of 38 years has been very beneficial to the City of Sioux Falls and surrounding communities with numerous street, utility, and drainage improvement projects. He is also a member of the National Society of Professional Engineers, South Dakota Professional Land Surveyors, and American Public Waterworks Association. SDES is the state society of engineers from all disciplines that promotes the ethical and competent practice of engineering, advocates licensure, enhances the image of its members, and advocates legislation and public policy for the betterment of human welfare and the profession. Thanks go to **Tracy Painter** (CE91), SDES Awards Chairperson for sending the story.

A note from **Howard Weissner** (ME61) shared, "I have enjoyed the past 14 years since I retired from Becton Dickinson Company in Columbus, Nebraska. My hope is that the economy will become more favorable

soon so that I can continue retirement without part-time employment."

1970's

Minnesota Gov. Tim Pawlenty announced the reappointment of **William D. Arockiasamy** (M.S.CE71) to the board of architecture, engineering, land surveying, landscape architecture, geoscience, and interior design. Arockiasamy, of Eden Prairie, is the principal engineer with Engineering Evaluations, Inc. in Minneapolis. He has been a practicing civil and structural engineer for more than 35 years, and has been a registered civil and structural engineer in Minnesota for more than 32 years. Arockiasamy is a member of the American Society of Civil Engineers, American Concrete Institute, and American Institute of Steel Construction. He earned his master's degree from the School of Mines and his bachelor's degree in civil engineering from the P.S.G. College of Technology in Coimbatore, India. Arockiasamy, who has been a member of the board since 2004, was reappointed as a representative of professional engineers.

Paul Bachman (EE74) wrote, "I just moved back to South Dakota after a seven-year engagement in Minnesota as director of engineering for a fiber-based telecommunication Transport Company. Latest challenge is to build a Power Services Consulting group in Sioux Falls, South Dakota with Ulteig Engineers. Dianne and I are really glad to be home again."

Ruth and **Dean Benson** (former faculty) of Kennewick celebrated their 65th wedding anniversary with 25 relatives and friends on a dinner cruise on the Columbia River June 29. They also celebrated at the First Christian Church, Kennewick, at fellowship time on July 6, 2008. They were married July 6, 1943 in Monroe, Louisiana and during the war lived in Denver, Salt Lake City, and Galveston. Then Dean was put on inactive reserve and was sent to Newport News, Virginia where he worked for NACA, later becoming NASA. After

the war Dean got his M.A. and Ph.D. in mathematics at Iowa State College, Ames, Iowa and taught at Sioux Falls College in South Dakota, Chico State College in California, and retired in 1981 as head of the mathematics department at the South Dakota School of Mines and Technology in Rapid City, South Dakota. Ruth got her B.A. in mathematics at Yankton College, South Dakota and taught math one year at Custer, South Dakota before marriage. Later she returned to teaching mathematics and retired in 1981 after 19 years of teaching in Rapid City, South Dakota. After retirement they moved to Twin Lakes Village and later lived in Hayden, Idaho until four years ago when they moved to Kennewick. They both enjoyed fishing and hunting, and for 19 years spent six months each year in Yuma, Arizona. They have a son Richard in St. Paul, Minnesota, a daughter Kathy in Richland, two granddaughters, and one great-granddaughter.



Ruth and Dean Benson celebrating their 65th wedding anniversary

Dennis Bryan (GeolE70) wrote, "I have gone back into business for myself and busier than ever. The mining industry is booming!"

John Chandler (MinE79) emailed, "I started an independent oil and gas exploration and production company, called Flatirons Resources LLC, (<www.flatironsllc.com>) with several partners based in downtown Denver.

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We have established some production in North Dakota, Kansas and Arkansas. After doing the large public company "thing" for so long this is a great change! On the personal front I have another son, Maxwell who is now seven months old. His brother is Fisher and he is three years old, so Hayley and I have our hands full. We still get back to the Black Hills several times and we stay at our cabin in Spearfish Canyon. I see quite a bit of other grads, **Lanny Outlaw** (GenE58) and **Bobby Schmitz** (CE80).

An update from **John DeYoe** (EE71) included, "Our first granddaughter was born to our son Jonathan and his wife Katie DeYoe on September 29, 2007. Our third grandson was born to our son David and his wife Judy DeYoe February 28, 2008. Both my wife Karen and I are contemplating retirement. More time to spoil the grandchildren! I will be offering my services as a planner/economic development consultant to small towns and communities to help save their Main Street or prepare them for impending growth."

An update from **Mark Fiegen** (ChE79) shared, "Our daughter Jane is in her first year of graduate school at Washington University in St. Louis studying history. Ann is in her second year at Xavier University in Cincinnati studying biology. Karen is a high school sophomore and wants to study fashion design in New York. We attended two School of Mines grad weddings last summer. **Bridget Fiegen** (ChE07) married **Evan Mohr** (ME07) in LaCrescent, Minnesota in June 2007; and second cousin **Devon Burke** (ChE07) married Hanne Wold in July Rapid City."

Joel Grace (MinE73) wrote, "Life is great! Business is booming! We have two granddaughters in Greely, Colorado and one on the way Hastings, Nebraska. Love spending time with them and looking forward to retirement to spend more time

with them."

Peabody Energy announced that **John C. Hull** (MinE77) has been named director of sales and western transportation for its COALSales subsidiary, effective Aug. 15, 2008. Hull will be responsible for managing all transportation functions, including contracts, projects, and communication with rail and transportation services for Peabody's seven Western mines in Arizona, Colorado, New Mexico, and Wyoming. Hull joined the company in May 2007 as director of sales and marketing. Prior to that, he held numerous positions with Rio Tinto America and Kennecott Utah Copper in their sales and marketing, business development, operations, engineering, and financial management areas. Hull has 30 years of experience in the mining industry. He has also earned an MBA from Nova University in Florida. Also of note, **Jeane Hull** (CE77) is Peabody's senior vice president of engineering and technical services. COALSales is the nation's largest coal marketer and serves more than 340 electric generating stations and industrial customers. Peabody Energy is the world's largest private-sector coal company, with 2007 sales of 238 million tons of coal and \$4.6 billion in revenues. Its coal products fuel approximately 10 percent of all U.S. electricity generation and two percent of worldwide electricity.

A note from **David Jackson** (ME70) shared, "I returned to the School of Mines this past November and attended a volleyball game and two basketball games. I saw **Jim Konst** (ChE73) and Coach Ward at the Hall of Fame where I was honored by the school with a plaque that was put into the Hall of Fame. I learned 'the rest of the story' from Coach Ward how Doug Schlep broke my single game scoring record."

An update from **Roger McCambriege** (ME77) included, "In 2007 my employer WPS Resources merged with Peoples Energy Corp to form the Integrys Energy Group. Integrys holds five gas utilities and two electric

utilities located in Wisconsin, Michigan, Minnesota, and Illinois, plus a non-regulated energy company with offices across the United States and parts of Canada. I am a director of gas engineer for the Integrys Energy Group, providing engineering support for our five gas utilities. We have employees based in Green Bay and Chicago. Our son, Colin, graduated from the University of Wisconsin - Madison this spring with a double major in computer engineering and computer science and is presently exploring the job market. Daughter Kaisa graduated from Bay Port High School in June and is heading to Madison this fall to study business."

School of Mines alumnus and professor **Henry Mott** (CE73) wrote, "My wife Marty is a second-year math teacher at Central High School here in Rapid City, South Dakota. She is teaching inquiry-based math - everything is a story problem. I think it's a great way to educate. Our son Harrison has just been accepted to Harvard Graduate School to work on his Ph.D. in physics/biomedicine. We're pretty proud!"

Ken Petersen (ME70) wrote that he's "seen two oil embargoes, a natural gas moratorium, two different bases of operation, threats of a global ice age, and indications of global warming. But for Ken Petersen, one thing has remained constant - an open door. Petersen recently announced that he will be retiring from his current position as general manager at Barron Electric Cooperative effective January 1, 2009. It will be the end of an era for both Petersen and the cooperative, as Petersen is credited with developing the cooperative's current philosophy - that BEC is the members' cooperative. It hasn't always been a smooth road for the 1970 graduate of the engineering program at South Dakota School of Mines and Technology in Rapid City, South Dakota. After an innocuous 19-year stint with Northwestern Public Service in the Mitchell, South Dakota area, Petersen came to Barron to work for Barron Electric. After

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serving BEC for slightly more than three years as an engineer, he was chosen to succeed as general manager of the cooperative in 1984. That, Petersen chuckles, is where the fun began. 'The co-op was embroiled in lawsuits in 1983 involving herbicide treatment of right of ways, membership lists, and brush-spraying expenses,' Petersen recalls. 'There was a lot of conflict at the time.' Petersen set up a plan of action to deal with the controversy. By organizing meetings with members and installing what he calls an 'open-door' policy-with increased access to the general manager and the cooperative's facilities-Petersen says the cooperative was able to avoid most of the legal actions. With petroleum prices continuing to increase, and both the east and west coasts looking for power solutions, Petersen says the next 20 years will be 'an interesting time' in the formation of United States energy policy. After fostering unprecedented communication with members, shrewdly analyzing the changing nature of energy production, and presiding over the building of the cooperative's new facility on Hwy. 25 near the Barron County Justice Center in 2006, Petersen says it's time to close the door on his career."

Doug Stewart (MinE74) wrote, "Recently my wife Judy and I had a new home built in the Denver area near Franktown, Colorado. Although we have a home in the Denver area my job requires constant travel, some to several countries other than Venezuela. I'm still employed with Gold Reserve Inc. as vice president of project development. I'm currently working on development of a \$700 million gold and copper mining project in Venezuela."

Craig Willan (MetE76) recently donated a 16-foot trailer to the materials and metallurgical engineering department that was beneficial in helping the department to obtain a \$150,000 National Science Foundation Research Grant focused on course, curriculum and laboratory improvement (Back in Black: A Multifaceted Curriculum and

Laboratory Plan). Willan donated a new trailer - The Brent "Steel is Real" Willan Metallurgical Engineering Recruiting Trailer - to the MetE department in memory of his brother, Brent Willan. The trailer will be used to outfit a traveling blacksmith and metallography laboratory for student recruitment at middle and high schools throughout the region. School of Mines faculty and students will give blacksmithing demonstrations and direct hands-on activities for pre-college students in an effort to introduce young students to the field of metallurgical and materials engineering and the broad career opportunities available in the field today. The old-world mysteries of blacksmithing are explained to students with modern-day scientific and engineering principles and interrelated to current engineering issues and opportunities in nanomaterials, biomaterials, processing technologies, alloy development, fusion technologies, etc. The National Science Foundation is interested to see if hands-on activities (kinesthetic skills) combined with basic scientific explanations of modern-day engineering issues will have improved retention and recognition of scientific principles on undergraduate students and also if it improves recruiting efforts for the materials and metallurgical engineering department. Over the last two summers faculty and students have given on-campus

blacksmithing demonstrations and technical explanations to middle and high school students involved in the Science-Technology-Engineering-Preview (STEPS) Camps, Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR-UP) for American Indian students, and the Youth Engineering Adventure (YEA) Camps. The Brent "Steel is Real" Willan Trailer will allow the MetE department the opportunity to take their blacksmithing and modern technology recruiting story on the road. Special thanks go to Craig for this wonderful opportunity!

Clyde Yancey (M.S.Geol78), the vice president of exploration for Uranium Energy Corp., began his career with USGS -Uranium and Thorium Resources Branch in the late 1970s. After dedicating more than 11 years in exploration for industry-leading companies, including Moore Energy and Mobil Oil, Yancey redirected his efforts to reclamation investigations at various uranium mill tailings sites throughout the southwestern United States. Yancey earned his B.S. in geology from Trinity University in San Antonio, Texas and his M.S. in geology from the South Dakota School of Mines and Technology.

1980s

Randal (Randy) Wayne Baker (MinE86) was appointed president and CEO of Case IH Agricultural Equipment Inc. after serving CNH as senior vice president for logistics and supply chain from October 2005 until October 2006. From 2004 to 2005, as vice president North America marketing, Baker directed the CNH agricultural marketing, parts and service operations. His background includes 20 years in the construction and mining industry, and he has operational experience in marketing, service and customer support, quality systems, and domestic and international sales.



2008 Middle School STEPS Camp girls next to the Willan Trailer

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A note from **Clay Gross** (MetE84) shared, "I've been moving around a little for the past three years, but we've (wife Kate, boys Maxwell, Solomon, and Elliot, and our little princess Annabelle) finally settled in Northwest Arkansas with MacSteel (soon to be Gerda). We have one of your students, **Stephen Christiansen** (MetE01) working in the Met department."

Joe Henning (Chem84) emailed, "We took over the Black Hills Inn & Suites motel in Deadwood in December. We are hoping for some growth in the Lead-Deadwood area, with the slime plant project and DUSEL, among others. Our current contact information is: Joe and Nadya Henning, 206 Mountain Shadow Lane, PO Box 328, Deadwood SD 57732, ph (605) 920-8592. Our mailing address needs to have the PO Box listed as the post office here is nitpicky about not putting mail in our box if the address is not exactly listed. Welcome to the Black Hills, huh? Quite a spring we are having ..."

Zane Huffman (MetE89) wrote, "We just relocated to Houston for my work and are trying to get used to the humidity. Enjoying the summer so far and looking forward to the warm winters down south."

"My husband Brian passed away July 13, 2007 from cancer just two months before the birth of our second child, a son named Iver August Iverson. Although losing Brian was a terrible tragedy, it was tempered by the new baby. We are adjusting to life without him and I will be returning to work soon."
Sheila (Ogden) Iverson (CE90)

Karleene (ChE86) and **Scott James** (CSc86) wrote, "Life is always busy! We can't believe our oldest son is a senior in high school, [and now a freshman at the School of Mines!]. Please check out our blog at <www.xanga.com/smjkkj85>, it keeps everyone up on life at the James house!"

Chemtura Corporation has appointed **Diana Peninger** (ChE86) to vice president, Global Consumer Industry. Peninger is responsible for the new consumer products industry, which includes all additives important to products created for consumer markets. Peninger's role is aligned with Chemtura's new corporate structure, designed to be more customer-focused: closer to the final-product industries to drive value and identify opportunities for both Chemtura and its customers. Peninger previously served as Chemtura's global business director, PVC additives. Prior to Chemtura, she spent 18 years at Celanese in increasingly responsible positions, most recently as director, glass fiber business, emulsion polymers. She led the development of strategies to improve profitability and to increase the business' presence in China. Peninger also successfully integrated a team of 35 sales managers after a \$350 million acquisition. She also worked in strategic marketing, engineering, and procurement, in the United States and Europe.

Cindy (Clenn) Salfrank (Ex80) wrote, "I am married with three children. Work for a biopharmaceutical company. I have lived on the east coast for the past 19 years and we love being near the ocean."

Dr. Jeffrey E. Shield (MetE87) was awarded the Distinguished Teaching Professor of Mechanical Engineering, College of Engineering. Shield joined the faculty at UNL in 2001 after eight years on the faculty in the Department of Materials Science and Engineering at the University of Utah and one year as a scientist at Ames Laboratory of the United States Department of Education. Both undergraduate and graduate students are actively involved in his research program. Shield is a member of The Minerals, Metals and Materials Society (TMS), the Materials Research Society (MRS), and the American Society of Engineering Education (ASEE). The underlying theme of Shield's research is the microstructural development in materials during processing,

especially solidification. Particularly, he is involved in various aspects of nanoscale materials.

1990s

Lafarge Tulsa Cement Plant has named **James Bachman** (MinE93) as its manager. Bachmann will oversee more than 100 employees generating an annual payroll in excess of \$6 million. The plant produces 800,000 tons of cement a year in its 24/7 operations. He most recently was operations manager at the Lafarge Alpena Cement Plant in Alpena, Michigan, a position he took in 2004. A native of South Dakota, Bachmann grew up on a small farm. He then worked for more than 14 years in the mining industry in large underground and surface coal and gold operations across Wyoming, West Virginia, Nevada, and Alaska. In 2001, Bachmann led the design and startup activities for the True North/Fort Knox operations, a mid-size, complex gold mine outside Fairbanks, Alaska. While in Alpena, Bachmann and his wife, Michelle, were active members of St. Paul Lutheran Church, and he served as vice president for the local Exchange Club. He also was a member of the board of the local Habitat for Humanity chapter, and coached elementary and junior high basketball. The couple has a nine-month-old son, Benjamin.

John Bomgren (ME99) wrote, "I have relocated to Mankato, Mankato and taken a position with Taylor Corporation doing machine design in the printing industry."

Ward Dobler (ME92) said he has a dream job. He is able to combine his engineering expertise with his lifelong interest in guns and hunting. Dobler is director of technical services and head of engineering for Dakota Arms, a Sturgis company that makes high-end rifles and shotguns. Dakota Arms is part of the growing gun industry in Sturgis, mostly headquartered in the Sturgis Industrial Park off the Whitewood service road on the northwest edge

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of town. Dobler got his job at Dakota Arms almost by accident. Originally from Ashley, North Dakota, where he grew up hunting, he took a tour of Dakota Arms before he graduated from the School of Mines. He said, "It kind of just fell into my lap." Dobler is part of the team that helps design the guns, and he also helps make the guns by hand. The company makes 50-55 rifles and 40-45 actions per month for customers all over the world. About 95 percent of the guns it makes are custom built to customer specifications.

Martin Drefs (ME92) writes, "I am still at Navitaire which continues to grow and evolve as a business. Navitaire is now integrates into Accenture which opens new opportunities. I'm still traveling regularly both within the United States and around the globe. Kat and I headed to Spain at the end of February 2008. We also went to Anchorage with **Rickey Baruth** (CE92) in March to visit **Marc Piwko** (ChE92) for a few days. My twins are in kindergarten now. It's an adventure everyday it seems. Kat is still working part-time as a physical therapist. She also volunteers at our kid's school on her days off amongst other things that keep our household running. On the school front, I finished off my MBA at the University of Minnesota in December. Woohoo!"

Jodi Elliott (ChE96) shared that "Tim and I have four beautiful boys, Adam (12), Andrew (nine), Aaron (five), and



The Elliott family

Alex (three). Tim is employed by Hutchinson Telephone Co. as the technology manager and I work part-time for 3M as a project engineer. We enjoy all sports and spending time with family and friends. We are hoping to take a trip to Rapid City soon and show them the school. We are hoping to have some little engineers someday!

Brian Hass (Phys92) emailed, "I am still residing at the same address and am still employed at Jet. My employers have been treating me extremely well. On February 5, my 37-year-old brother, Kevin, passed away in Hawarden, Iowa. He and I were aware of the terminal nature of his medical situation for only a short time; so in many ways, I am still in a state of shock. He left behind a 13-year-old daughter named Alexandra. I moved to Beresford, South Dakota with my mom and brother in 1977. After that time, the only members of my household were my mom, my brother, and me; and, my Grandma Farley was often at the house on most days and was effectively a member of the household as well. When I decided to attend the School of Mines, those three people provided me with moral support and encouragement. And when I graduated, my brother was screaming out to me from the audience at the Rushmore Plaza Civic Center. Those three people were always there for me and now they are all gone. I still have my dreams and goals and I know that those three people will always be with me in spirit. But, I'll have to move forward without them."

Christopher A. Kinney (MetE97) emailed, "I would like to thank all of my past professors and fellow classmates for preparing me to succeed in the challenges I've faced throughout my career. I would also like to thank the Department of Materials and Metallurgical Engineering and **Dr. Jon Kellar** (MetE84) for nominating me for the 2008 Recent Outstanding Graduate Award. I was proud to have the support and be accompanied by my wife of three years, Ramona, and my parents Jim and Carol during the

February 21 ceremony. Thank you to all who wished congratulations and support but were not able to attend. It was truly an honor to be distinguished and receive such recognition for the past 10 years as many other graduates have had achievements, which deserved recognition as well."

Roger Kurtenbach (Chem99/MetE99) emailed, "I'm now with Special Metals in Huntington, West Virginia. We are in the midst of rebuilding our company, which is a leading producer of nickel based super alloys. In fact, we developed most of the common alloys when the plant was owned by International Nickel and called INCO. The company has a lot of needs as far as engineers since the company was purchased by PCC, Precision Cast Parts Corp, a couple of years ago. They are a worldwide producer of super alloys for applications like turbine blades and other elaborate parts designed for highly corrosive environments. Huntington is at the extreme edge of western West Virginia and a person can live in any of three states, West Virginia, Kentucky or Ohio. The country here reminds me of the Black Hills as everything is forested hills. Also, Huntington is roughly the same size as Rapid City, with the population being slightly over 50,000."

The South Dakota Engineering Society (SDES) held its 48th Annual Conference in Rapid City, April 23-25, 2008. During this conference, the 2007 SDES Young Engineer of the Year Award was given to **Jason T. Love** (CE97). Jason is a graduate from the South Dakota School of Mines and Technology with a bachelor's and master's degree in civil and environmental engineering. He is a registered professional engineer and is currently the manager for the Water and Natural Resource Division of RESPEC, Inc. in Rapid City. Jason is a contributing author to more than 14 publications. He is also an active member of Rapid

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Jason T. Love (CE97)

City's Young Professionals Group, the American Society of Civil Engineers (ASCE), and the National Society of Professional Engineers (NSPE). Thanks go to **Tracy Painter (CE91)**, SDES Awards Chairperson for sending the story and photo.

An update from **Daniel Machacek (ME97)** included, "My family and I have actually been over seas for the past eight years. We spent six years in Shanghai, China and now we are finishing our second year in Doha, Qatar. My wife's name is Angie and she is a middle school counselor. We have two kids. Our son Max is going on four and will start school next year. Our daughter, Mya, is going on two. We adopted her from China last April. We started the adoption process when we were living in China and were able to go back to China last April to get her. After graduating from the School of Mines, I spent a couple of years near Boston working as a sales engineer. In 1999 I took a job selling ERP (manufacturing software) in Naperville, Illinois at a company my brother **Sam Machacek (EE87)** is with. That is where I met my wife who was teaching at the local high school. Her parents were living and working in Shanghai and my wife got a job at the international school in Shanghai, so off we went. I worked as a business/sales consultant for a joint venture company. I studied

Chinese and traveled around China for a year doing that. The second year, I was offered a job to teach high school math (algebra I, geometry, algebra II). So I made a career change into teaching and have been doing it ever since. That also means I had to go back to school to get my teaching certificate and also earned my master's in secondary education. I am going to Spain with my family this summer to finish my second master's in leadership and administration so I can hopefully become an associate principal or principal. We are going to leave Doha at the end of the next school year (2008-2009) and looking for new job opportunities back in Asia somewhere. We go back to Florida every summer, except for this one. Angie's parents live in Windermere, so we use their address for our mailing address in the United States. My parents live out at Hart Ranch there in Rapid for the summers, so we plan on going there for the summer of 2009. We plan on being at the reunion the summer of 2010 as well. We actually are thinking about selling our rental home in Florida and buying a cabin up in the Hills so we can go back to Rapid during our summers. So that's a little bit about me and my family. Keep in touch!"

2000s

A note from **Jolisa Bahr (EnvE06)** shared, "I am now working for the Health Service Department of Environmental Health and Engineering. I'm in Rhinelander, Wisconsin. I love my new job. I work with several different reservations and I primarily design drain fields. I do lots of office work but love it here. I plan on taking the F.E. at Michigan Tech. I think a lot about my education at the School of Mines and I really want to return to school for my master's. I'm not sure where I will pursue my master's degree. Your encouragement and instruction has impacted me greatly and I would like to thank you for educating me."

Congratulations to **Dennis Clary (ME01)** of Boeing, for being named the Kansas Leukemia & Lymphoma

Society 2008 Man of the Year. Dennis raised \$60,476. The candidates were judged solely on a philanthropic basis. The Man and Woman of the Year are those who raise the most funds. The Leukemia & Lymphoma Society is the world's largest voluntary health organization dedicated to funding blood cancer research and providing education and patient services. They offer a wide variety of programs and services in support of our mission: cure Leukemia, lymphoma, Hodgkin's disease and myeloma, and improve the quality of life of patients and their families.

Chris Dougherty (IE04) emailed, "My wife (Christine) and I have moved from Wisconsin to North Dakota. Our new address is: 4161 18th Ave SW #111, Fargo, ND 58103. I took a position as manufacturing engineer with Infinity Windows. I will be writing again within the next couple weeks with the addition of our first born."

Alan Gertonson (ChE01) wrote "We've been back in Amarillo with Savage Services for about a year now. Things are going well. Busy, but very well. We have done a lot of things in the last year. We have started our own business leasing and managing office space and we have become foster parents. Robin is attending class full-time working toward her degree in business. Between all of that, church, work, and family, we keep active. Stop by if you're ever in the area."

Nick Newell (CEng04) details in a short film - available for viewing on the Internet - his troubles trying to get into what he characterizes as an undemocratic Democratic National Convention in Denver. "You heard the guy in the film," Newell said in an interview with the Havre Daily News via e-mail. "I have a better chance of winning the lottery." Newell, who works for EchoStar in Denver, tells in the film, "Sold Out," how he has tried to gain admission to the national convention in Denver, where the Democratic candidate for the 2008 presidential election will be

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nominated. In the film, Newell says he has tried to buy a ticket, volunteer to work at the convention, and tried to gain admission as a filmmaker. Newell put his film in a contest at Cinemocracy, where people can view films and vote for them online. The top 25 vote-getters in the contest [were] screened at a public event during the Democratic Convention, Newell said, and will be shown at <www.denverfilm.org> through January 31. The makers of the 10 top-ranked films also will introduce their films at the Cinemocracy Film Festival public screening in Denver. Newell works in Denver as a computer programmer for the satellite and digital television company EchoStar as a computer programmer. He started making films while in college; writing, starring in, and making "The Snooze." That is a feature-length film about a man who discovers the cure for cancer while living his life "in a series of snooze dreams," Newell said. Since then, he has made a short film called "Square One," which he submitted to Steven Spielberg's reality television show "On the Lot." The film wasn't selected for the show, but Newell said he plans to submit another this year, and is working on a sequel to "The Snooze" and another short film titled "The Other Side." (On the net: "Sold Out" at the Cinemocracy Web site<<http://www.cinemocracy.org/video/sold-out>>.)

Sarah (IS02) and **Steve Radabaugh** (CSc02) sent a note that "Steve loves his job working as the only computer guy at the local high school and running his own computer business on the side. Sarah graduated valedictorian from Northwestern College of Chiropractic with her doctor of chiropractic degree in April and loves being a small-town doctor."

Lisa Schlink (MetE04) had a Little League thrill of sorts this summer. No, she did not travel to Williamsport, Pennsylvania as part of the Canyon Lake All-Stars at the Little League World Series. However, she, son Caden, and family experienced the next best thing - a T-ball game on the South Lawn of the White House!!



Caden, Lisa (holding Thomas), and Larry Schlink

Caden, age six, who also has two older brothers, Matt and Jake, and one little brother, Thomas, was selected to play in a T-ball game on the South Lawn for a team of players who are all dependents of active military personnel. Lisa and her family live in Casa Grande, Arizona, where she works for Freeport-McMoRan. Caden's father, SFC Larry Schlink, has almost 18 years service in Active, National Guard and Army Reserves. He served in both Iraq wars as a combat medic, and he now serves as a Drill Sergeant at Ft. Knox, Kentucky. Little League



Caden receiving a signed baseball from President Bush - September 7, 2008

International (<www.littleleague.org>) also sponsored a luncheon at the Marriott Metro Center and co-sponsored a picnic with the White House on the grounds following the game.

Sam Tlustos (MetE08) emailed the MetE department that he is "out at Barrick Goldstrike and it's a fast-paced job. I'm using most of my extraction classes and the physical metallurgy material I learned was used to diagnose a heat-affected mixing globe. There is a strong need (like everywhere) for seasoned Mets (~10 years experience), and my boss is looking for a few. I hope to return in the fall for the career fair. We'll see how things go. Best wishes for the duration of the summer that remains and good luck with the coming school year."

Barbara Toews (IS06) wrote, "We finally moved into a new house here in Gardner, and I started a new job with Marshall Miller and Associates in Lenexa, Kansas. David is recovering well from a stroke he suffered in November, and is finally getting back to work. Our son will be starting first grade in the fall, and loves school already (who knows, maybe a third generation Hardrocker here!)"

Congratulations to the following newlyweds:

Devon Burke (ChE07) married Hanne Wold in July 2007 in Rapid City.

Bridget Fiegen (ChE07) married Evan Mohr (ME07) in LaCrescent, Minnesota in June 2007.

Courtney McFarland (GenSt06) and Galal Fischbach (GenSt06) were married on July 16, 2007 at Piedmont Valley Lutheran Church. Courtney is a dental assistant for Dr. Richard Schmid in Sturgis, South Dakota. Galal is a pipe layer for Mainline

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Memorials

RAY DONALDAPPLEBY

Ray Appleby (ME57) passed away March 2008 in Katy, Texas. He worked for Conoco Oil Co. for 34 years and retired in 1992. He is survived by his wife Betty, six children, 15 grandchildren, and three great grandchildren.

LESTER GEORGE BASHAM

Lester Basham (MetE34), 98, of Grants Pass, Oregon died April 2008 at Fair View Transitional Health Center. He was born in October 1909 in Fulton, South Dakota. He attended schools in Woonsocket, South Dakota, and was valedictorian of his graduating class. From 1928 to 1934, he attended the South Dakota School of Mines and Technology. After the death of his father, he took over the family business for a year and then sold the business to his uncle. He completed engineering school with a bachelor's degree in metallurgy in 1934. From 1928-1932, he served in the South Dakota National Guard. He worked for the South Dakota planning board in 1935 and for Gold Inc. Mine in Deadwood, South Dakota as an assayer and plant boss from 1936-1941. In 1941, he moved to California and went to work for the Lockheed Aircraft Vega factory in Burbank, California, until 1945. He moved to Cave Junction in 1945 and bought land on Caves Highway, where he built a home. After moving to Oregon, he worked for the Forest Service, for the Josephine County School District at Illinois Valley High School, and in the radio and television business. He retired in 1975. He married Clara Christine Schoenfelder in 1932, who passed away in 1983. In 1984, he married Mildred Scallin Dowdell, who died in 1977. He was a 50-year member of the Masonic Lodge, Belt Lodge No. 18, for which he served as past master and received the Hiram Award. He also was a

member of the Civil Air Patrol since 1989 with a major rank. Survivors include a daughter, Kathleen "Kathy" Williamson; a son, Christopher "Chris" Basham; a brother, Marvin Basham (EX39); and several grandchildren and great-grandchildren.

RICHARD M. CLARKSON

The Alumni Association recently was informed that **Richard "Dick" Clarkson** (EE62) passed away several years ago (2003). Dick was born in Rapid City in 1934. While attending the School of Mines, he was involved in intramural sports and Delta Sigma Phi-National List.

ANTHONY JOSEPH DEPAOLA

Anthony DePaola (ChE52), a three-term Amherst mayor and former Amherst city councilman, died at New Life Hospice Center in Lorain, after a battle with pancreatic cancer. He was 79. DePaola, who was Amherst mayor from 1972 to 1983, was recalled as a man with a passion for his city and his family. He was also an engineer for U.S. Steel and held a patent on one of his inventions, according to his widow Patricia. The couple was married for 58 years. They shared distaste for big cities that took them from the East Coast to South Dakota, where Anthony DePaola earned his bachelor's degree from the South Dakota School of Mines and Technology in 1952. They traveled to Texas, where he worked for B.F. Goodrich, and to Lorain, where he was a chemical engineer for U.S. Steel. DePaola is survived by his wife, their four children and their spouses, seven grandchildren, and one great-granddaughter.

ROBERT MORGAN FETCH

Robert Fetch (ME48) passed away April 2008 at the age of 90. Since the Alumni Office was informed that there were no surviving family members, a memorial will be printed in a future issue if one

is received.

GERALD MAYNARD GOODWIN

Gerald "Jerry" Goodwin (ME63) of Phoenix, Arizona, died May 2008 at the age of 66. Mr. Goodwin was born in Austin, Minnesota. He attended Austin High School, where he was a member of the state champion basketball team in 1958. He attended the South Dakota School of Mines and Technology on a scholarship for basketball and track and field. He earned his mechanical engineering degree in 1963. He was a member of the Triangle Fraternity. After college he was employed with Eastman Kodak Company. He also worked for Sperry-Univac in Eagan for many years. He moved with his family to Phoenix in 1987, and worked for Honeywell in their space systems division for more than 20 years. Survivors include his wife of almost 37 years, Nancy; a son, Andrew; a daughter, Melinda (Jamie) Blanchet; and a sister, Carol Lewis. Memorial contributions are preferred to the South Dakota School of Mines and Technology Foundation.

WATSON ROBERT HANSCOM

Watson Hanscom (GeolE60), 71, died in June 2008, at the Victorian Healthcare facility in Rapid City. Watson was born in April 1937 in Kennebec, South Dakota. He married Mary Jo White of Edgemont in 1959 and graduated from the South Dakota School of Mines the following year. Through 1972, Watson worked as a geologist for the Homestake Gold Mine in Lead. After leaving Homestake, he had various adventures in motel ownership and the pet grooming business. He is survived by two sons Scott and Mitch Hanscom; three daughters Jodi Scott, Jill Popham, and Juli Thome; 11 grandchildren; and a sister. He was preceded in death by his wife, Mary Jo.

LYDELL BAYARD HANSEN

The Alumni Association recently was informed that **Lydell Hansen** (Chem58) passed away several years ago (2002) in Garland, Texas.

WALTER GEORGE HANSEN

Walt Hansen (CE53), 76, founder of a transportation planning consulting company, died of cancer in May 2008 at Inova Fairfax Hospital. He lived in Annandale. Mr. Hansen co-founded Alan M. Voohrees and Associates in 1961. By the mid-1960s, it was operating worldwide. It was acquired by Planning Research, later Ashland Technology, and finally AECOM Technology. He worked for each of those firms in executive positions, including chief operating officer. He retired in 1996. He was born in Watertown, Wisconsin, graduated from the South Dakota School of Mines and Technology in 1953, and then received a master's degree in 1959 in city and regional planning from the Massachusetts Institute of Technology. He began working for the Bureau of Public Roads, a predecessor of the Federal Highway Administration, until he started his firm. He was a member of the George Washington University National Council for Education and Human Development, the Institute of Traffic Engineers, and the Urban Land Institute. His wife of 45 years, Peggy Lee Hansen, died in 1998. His son Gregory P. Hansen died in 1992 and son Corey J. Hansen in 1994. Survivors include his wife of nine years, Marilyn Briggs Jackson of Annandale; a daughter, Danielle Briggs-Hansen; a stepson, Tyler Jackson; and a sister.

ELVIN GORDON HELLING

Elvin Helling (EE49) passed away peacefully at home in March 2008 in Bellevue, Washington. He was

born in Hanska, Minnesota, and married Beverly Browning in 1954. After serving in the United States Army during WWII in Europe, he graduated from the South Dakota School of Mines and Technology. In 1949, he joined the Boeing Company as an electrical engineer, then manager, until retirement 37 years later. Gordon was devoted to his family and loved skiing, travel, and lefse. He generously volunteered his time with many civic organizations. He is survived by his beloved wife of 53 years, Beverly; his children, Sue Flower, Don Helling, Bob Helling, Gary Helling, Keith Helling, Marian Wildgruber, and Richard Helling; his siblings, Georgene Lee, Betty Pflaumer, and **Robert Helling** (CE54); nine grandchildren; and a large extended family and circle of friends.

SHANNON LEE HOTHEM

Shannon Hothem (Ex96), 34, Belle Fourche, died June 2008 at his home in Sherman Oaks, California. Survivors include his parents, Dennis and Linda Hothem; one brother, Justin; one sister, Victoria Pickett; and many other family members that will miss him dearly.

RICHARD KENNETH LANGBEHN

Richard "Rich" Langbehn (CE74) was born March 1949 in Wosley, South Dakota. He graduated from Wosley High School in 1967 and from his beloved South Dakota School of Mines and Technology in 1974. He married the love of his life, Mary Gross, in 1970, in Huron, and in 1976 they were blessed with a son, Michael. Rich was lucky to work in professions he loved - farming, ranching, and construction. He worked for the Bureau of Reclamation as a civil engineer in Huron, South Dakota; Parker, Arizona; and Alamosa, Colorado. He was co-owner of several construction businesses - first in Alamosa, (Asphalt

Constructors, Inc.); then in Aberdeen, South Dakota, (Upper Plains Construction); and next in Huron, South Dakota, (Midland Contracting). Rich loved pheasant and deer hunting, fishing, and camping with family and friends. Many will remember Rich for his quiet demeanor, humility, integrity, and warm smiles. His happiest moments were spent outdoors - planting, combining, riding his John Deere, checking cattle, and comparing rain totals with the neighbors. Rich was an outstanding host and enjoyed holidays surrounded by his large extended family. Grateful for having shared his life are his wife of 37 years, Mary Wosley; son Michael and Sarah Langbehn; his mother; parents-in-laws; two sisters; one brother; two grandchildren; and many other relatives and friends.

HUGH WALTER "PAT" LEDYARD

Hugh "Pat" Ledyard (EE46), 86, died July 2008 in Glendale, Arizona. Pat was born in Sioux Falls, South Dakota. Pat graduated from Sioux Falls High School in 1939. He served 3.5 years in the Army Air Force during World War II. He graduated from the South Dakota School of Mines and Technology in 1946 with a bachelor of science degree in electrical engineering. Pat was employed by Westinghouse Electric Corporation as a sales engineer for 36 years, retiring in 1984. Many of his clients in the iron mining and paper-making industries became close personal friends, and he enjoyed those friendships long past his retirement. Pat married Esther Wiseheart in 1946; together they raised five children. During that time he was active in the First Methodist Church and Duluth Rotary. In 1973 Pat married his beloved wife Rosemarie "Rosi" Ledyard. Together they enjoyed golf, dancing, travel, and just

Memorials

relaxing by the pool. They moved to Arizona in 1988. He is survived by his wife Rosi; children, Bonny and Mike Headley Mense, Hugh and Linda Ledyard, Jane and John Crain, James Ledyard, and Mary Ellen and Roger Anderson; step-children, John Mottonen, Diane Frommes, and Cindy and Wes Dammer; and seven grandchildren.

RICHARD JAMES MONHEIM

Richard Monheim (EE66), 69, passed away August 2008 in Los Alamitos, after a most courageous battle with cancer. Richard was born in 1939 in Rapid City, and graduated from Rapid City High School in 1957 before attending the South Dakota School of Mines. He was employed by Honeywell, Inc. throughout his career, providing support to the United States Space Station Mission, the space shuttle program, and other aircraft guidance control systems. He served his country in the United States Navy from 1959 to 1963 as a Sonarman. The destroyer he served aboard was involved in the Cuban Missile Crisis of 1962. Richard loved the Black Hills and made frequent visits home to enjoy the Hills and family and friends. He was also an avid car enthusiast and enjoyed collecting and restoring 1957 Chevys. He is survived by a brother, Larry Monheim and his wife, Carol; a sister, Carol Ann Monheim Furiga; six nieces and nephews; and many dear cousins and friends. He is further survived by his former wife and dearest friend, Carole Batog Monheim.

RICHARD GEORGE SAUNDERS

Richard "Rich" Saunders (EE57), 73, of Dunnellon, Florida, died April 2008. He was born in 1934 in Newport News, Virginia. He was living in Pearl Harbor when he was seven years old when the Japanese attacked, making him a Pearl Harbor Survivor. Rich was a

retired United States Army Colonel with the Signal Corp. He served two tours in Vietnam and was a recipient of the Bronze Star. He retired in 1983 after 28 years active duty. He then served 17 years as a senior vice president of engineering and customer service at I.D.C.C. in King of Prussia, Pennsylvania. He was a member of M.O.A.A. of Ocala; and was an avid sportsman, including fishing, hunting, and shooting. He was a dog lover and was always accompanied by his dog Ginger. Rich volunteered at the Food Pantry at St. John the Baptist Church in Dunnellon. He is survived by his wife of 51 years, Doris Saunders; children Mary Jo and Steve Flinn, Richard, Jr. and Belinda Saunders, Michael Saunders, Sr. and John Saunders; and five grandchildren.

DUANE PAUL SMITH

Duane Smith (EE60) died February 2008 in Pinetop, Arizona. He was born in Sioux Falls, South Dakota in 1939. While attending the School of Mines, he was a member of Delta Sigma Phi, AIEE, IRE, intramural sports, and varsity golf his senior year. He received his Juris Doctor (JD) from University of Arizona College of Law in 1969. He resigned from the Superior Court in Tucson, Arizona in 1978 and went into private practice shortly thereafter.

JOHN CHARLES THAYER

John "Easy" Thayer (ChE68) was born in May 1946 and joined God's team of angels in August 2008 as a result of complications from cardiac bypass surgery. John was allowed to remain here with us many times in the past, overcoming health issues including cancer and a previous cardiac bypass, to fulfill God's plan for his life. He is survived by his loving children, Scott, a senior at Texas Tech, and Kara, a junior at Brazoswood High School; the

mother of his children, Terry Cummings; and his partner and sweetheart over the last three years, Kay Rainey. Serving, teaching, and leading in many aspects, John had a multitude of friends who will miss him greatly. John's greatest joys in his life were his children, Scott and Kara. John never missed any of their activities, from Boy Scout camping trips and treks to Philmont to years of soccer, softball, baseball, roller hockey, and football games to dance competitions and recitals. He glowed when interacting with his children. He was so proud of Scott earning his Eagle Scout rank and Kara being selected a Brazoswood Belle Military Officer for 2008-2009. John retired from Dow Chemical after 34 years of service. He enjoyed the outdoors and serving the community as a Master Naturalist, Boy Scout Leader (Troop 394), member of the Lake Jackson Parks and Recreation Board, and was active as a bird-bander through the Gulf Coast Bird Observatory. As a tireless volunteer John served as executive director of the Texas Ski Council, several positions with Space City Ski Club, and Z-Krewe. John loved volunteering at the annual Galveston Sand Castle competition and golf tournaments around the Houston area. He loved hockey games, geocaching, and birding. He was a beacon of light and sunshine for all who knew him, always jumping in to "be there" for whatever! Loving life and the journey he took, John will be remembered in our hearts always. John enjoyed wonderful school and college days filled with scouts, playing football, going to Boy's State, being selected to All-State Band, and honing a golf game, and a snow-skiing technique that was the envy of many. Scott, Kara, Terry, and Kay plan to travel to South Dakota, visit John's boyhood home, and

spread his ashes in the Black Hills, returning him to the earth in a way a master naturalist would surely appreciate.

ROSCOE VAN WINKLE

Roscoe "Rip" Van Winkle (ChE42) age 87 of Knoxville, Tennessee, completed his life's journey on September 3, 2008. Roscoe was a reactor-development engineer with Union Carbide and Martin-Marietta in Oak Ridge before his retirement. Born in Canton, South Dakota, he grew up in Fort Thompson, South Dakota, where he swam in the Missouri River as a child. He was the grandson of Norwegian pioneer sod-busters of North Dakota. After graduating from the School of Mines, he went on to the University of Michigan for his master's degree in chemical engineering. It was there that he met his future wife, Frances. During World War II, he assisted Enrico Fermi at the University of Chicago on the first nuclear reactor and was sent to Oak Ridge, Tennessee, to participate in the Manhattan Project, where he did his part to shorten the war. He later was in the first nuclear engineering class offered at the University of Tennessee and was awarded a second master's degree. As part of his achievements in his work, he earned three patents for valve design for reactors. Rip, as he was known to his friends, was notable for his honesty, ethics, and modesty. He was a quiet man, but he had a wonderful ability to carry on a conversation with just about anyone on just about any subject, and never forgot a name or face. As a classical music aficionado and lover of the arts, he enjoyed attending the Metropolitan Opera productions whenever he found himself in New York, and listened to the Met radio broadcasts regularly. His acute ear for intonation made him a discerning critic. Locally, he had season

tickets to the Knoxville Symphony for many years, until his illness made it difficult to get out. He was an avid reader and enjoyed his Great Books collection and daily read the Bible. As a lifetime Lutheran, he sang in the choir of Messiah Lutheran Church for 35 years. He also used his mellow baritone voice in the Knoxville Choral Society for numbers of seasons. His love of the outdoors was evident by the many camping trips and hikes throughout his adopted and well-loved East Tennessee, and vacations "out West" that he gave his family. His belief in the value of the Boy Scouts led to a stint as Scout Master of Knoxville Troop 16, and he was awarded the Order of the Arrow for his efforts. Roscoe leaves behind Frances, his wife of more than 60 years; daughters Elizabeth V. Farr and Susan V. Dunn and their husbands; sons John W. Van Winkle and Frederick P. Van Winkle; a daughter-in-law Carol K. Van Winkle; five grandchildren; and several great-grandchildren. He also leaves many well-beloved nieces and nephews, and many dear friends.

FRANKLIN D. WEBER

Franklin D. Weber (EE92), 52, of Mitchell, and formerly of Rapid City, died August 2008 in Deadwood. He was born in Kansas City, Missouri. He served in the U.S. Navy from 1979 to 1985 as an electrician. Franklin graduated from the South Dakota School of Mines and Technology in 1991 with a B.S. in electrical engineering. He then worked as an electrical engineer for Kennecott Utah Copper Mine with the generators for the largest mine in the world. Franklin enjoyed all outdoor activities and spending time with his dog, Lucky. Survivors include his parents; and two brothers, a sister, and their families.

KENNETH EMMANUEL WITT

Kenneth Witt (EE61) of Westlake, California, passed away June 2008 at his home and at the age of 68. Kenneth was born in Tyndall, South Dakota in 1939. He graduated from Tyndall High School in 1957 and the South Dakota School of Mines and Technology in 1961. He also attended the following schools: University of Maryland (European Division), University of Iowa Business School, Coe College, University of California, Los Angeles, and University of Southern California, where he graduated with a master's degree in business. He was a helicopter pilot during the Vietnam conflict. He was a member of the following organizations: SDSM&T Alumni Association; USC Alumni Association; Army Aviation Association of America; National Guard Association of the USA; Aircraft Owners and Pilots Association; and National Rifle Association. Survivors include his daughter, Amy Nicole and her family, including her husband Keith Foster and three children - Keith, Kristal, and Kyle Foster; two brothers; and a sister. Memorials can be directed to South Dakota School of Mines and Technology Foundation.



Personnel Changes

Welcome:

Stacy M. Hook, exempt, campus chemical materials coordinator, business and administration (8/15/08)

Reta J. Davies, CSA, secretary, mathematics and computer science (8/11/08)

Brenda J. DenOtter, CSA, secretary, business and administration (8/11/08)

Dr. Robert A. Wharton, exempt, president, Office of the President (7/1/08)

David A. Murphy, CSA, computer support specialist, mining engineering and management (6/2/08)

Kimberly K. Osberg, CSA, secretary, CAMP (6/2/08)

Dr. Lew P. Christopher, exempt, director, Center for Bioprocessing Research and Development (CBRD)/professor, chemical engineering (5/19/08)

Dr. Siva Kumar V. Kelekanjeri G., NFE, research scientist/engineer II, Center for Accelerated Applications at the Nanoscale (5/1/08)

Debra D. MacDonald, CSA, secretary, admissions (4/22/08)

L. Eric James II, exempt, director, sponsored programs (3/10/08)

Farewell:

Mary L. Maher, CSA, business and administration (7/27/08)

Dr. Gautam Pillay, exempt, Office of Research Affairs (7/18/08)

Dr. Charles Ruch, exempt, Office of the President (6/30/08)

Carolyn Brich, CSA, electrical and computer engineering (6/21/08)

Dr. Abul Hasan, faculty, electrical and computer engineering (6/21/08)

Violet Stoltz, CSA, Office of the Provost (6/21/08)

Kristina Grinnell, exempt, chemistry (6/2/08)

Christi Carter, exempt, admissions (5/30/08)

Cheryl Holt, exempt, residence life (5/21/08)

Arlene Lichtenecker, CSA, mathematics and computer science (5/21/08)

Dr. Lebert Alley, faculty, mathematics and computer science (5/19/08)

Dr. James Fox, faculty, geology and geological engineering (5/19/08)

George Wayne Douglas, faculty, materials and metallurgical engineering (5/19/09)

James Nelson, faculty, mathematics and computer science (5/19/08)

Jong-Hoon Han, faculty, humanities-music (5/19/08)

Ann Konechne, exempt, athletics (5/15/08)

Bruce L. Carter, exempt, Office of Multicultural Affairs (4/25/08)

Dr. Sherry O. Farwell, exempt, Institute of Atmospheric Sciences (4/4/08)

Dale E. Nickels, CSA, mining engineering and management (3/21/08)

Change:

Dr. Hao Fong, from faculty, assistant professor, chemistry to faculty, associate professor, chemistry (7/1/08)

Dr. Rodney Rice, from faculty, associate professor, humanities to faculty, professor, humanities (7/1/08)

Dr. James Stone, from faculty, assistant professor, civil and environmental engineering to faculty, associate professor, civil and environmental engineering (7/1/08)

Dr. Patrick Gilcrease, from faculty, assistant professor, chemical and biological engineering to faculty, associate professor, chemical and biological engineering (7/1/08)

Dr. Umesh Korde, from faculty, associate professor, mechanical engineering to faculty, professor, mechanical engineering (7/1/08)

Dr. Andrea Surovek, from faculty, assistant professor, civil and environmental engineering to faculty, associate professor, civil and environmental engineering (7/1/08)

Dr. Donna V. Kliche, from exempt, research scientist II, Institute of Atmospheric Sciences to exempt, research scientist III, Institute of Atmospheric Sciences (6/22/08)

Charles D. Claymore, exempt, director, admissions to exempt, associate director/senior recruiter, admissions (6/22/08)

Pamela M. Escott, from CSA, secretary, business and administration-business services to CSA, purchasing assistant, business and administration-business services (6/16/08)

Jamie M. Hillyer, from CSA, purchasing assistant, business and administration-business services to CSA, secretary, industrial engineering (5/5/08)

Tamara M. Moore, from CSA, secretary, admissions to CSA, secretary, academic and enrollment services (3/22/08)

Debra Renken, from CSA, programmer/analyst, academic and enrollment services to CSA, senior programmer/analyst, academic and enrollment services (3/22/08)

Bradley O'Brien, from CSA, computer support specialist, ITS to CSA, computer support team leader, ITS (2/22/08)

Debra Rowse, from CSA, senior accountant, business and administration to CSA, accounting manager, business and administration (2/22/08)



Featured Major

Chemistry

- School of Mines chemistry graduates received salary offers that average more than \$51,000
- 75 percent of graduates gain real-life experience through internships and co-ops
- Companies hiring chemistry graduates include 3M, Dow Chemical, Celanese, and Cargill. An undergraduate education in chemistry will give students the knowledge of chemical and physical phenomena at the molecular level. Students will gain the skills of critical thinking and chemical problem-solving in all five major sub-disciplines of chemistry: analytical, inorganic, organic, biochemistry, and physical chemistry.

A degree in chemistry opens an unparalleled number of doors for graduates. In addition to many job opportunities directly after graduation, many graduates in chemistry pursue graduate degrees to further their knowledge and skills in chemistry. Graduates in chemistry are also highly prized by dentistry, veterinary sciences, chiropractic, law, and medical programs, attesting to the centrality of chemistry and the critical role it plays in society.

For more information, contact:
Dr. Dan Heglund
Chair, chemistry
(605) 394-1241
Dan.Heglund@sdsmt.edu

Prepare for your successful career at the School of Mines

Co-ops and Internships


- Approximately 75 percent of School of Mines graduates have relevant work experience through co-ops and internships. That increases their marketability to employers.

Average Starting Salaries

- Starting salary offers for School of Mines graduates average nearly \$56,000. Consistently, approximately 99 percent of graduates find jobs in their career fields or graduate or professional programs within one year of graduation. This shows employers are looking for students with the kinds of skills School of Mines graduates possess.



School of Mines




Twenty middle school students from Rapid City's sister city, Nikko, Japan, joined with local students to tour campus and participate in hands-on activities.




More than 200 middle school girls built marshmallow bridges, created jewelry, experienced cryogenic chemistry, and much more during GIRLS (Girls Into Real Learning Succeed) Day at the School of Mines.




Reaching Out



South Dakota Governor Mike Rounds addresses the Summer 2008 South Dakota Gaining Early Awareness and Readiness for Undergraduate Programs (SD GEAR UP) Honors Program, serving to maintain a 16-year tradition of summer programs for American Indian youth. This year, the program attracted more than 200 students in grades 9-12 and several college students.



Each summer, the School of Mines gives youth the opportunity to learn about science and engineering. In summer 2008, the School of Mines hosted nearly 700 students during 37 class and camps.



More than 200 area students attended the annual CAMP Unveiling to see the full array of CAMP vehicles. The unveiling is the official start to the CAMP competition season.



During the annual Design Fair, the community browsed research projects supported by more than 400 students. Many projects are sponsored by private industry and government agencies.

Come Home to Walla Walla.



Rudy Sanchez and Ken Carambot grew up together, surrounded by breathtaking mountains in the subtropical valley of Medellin, Colombia. Eventually, Ken returned to the United States and lost contact with his childhood friend.

Many years later, in one of life's more stunning moments of serendipity, they found each other. Both studied engineering at Walla Walla University and then joined Key Technology, a global leader in process automation systems for food and pharmaceutical companies around the world.

Their diverse careers have paralleled the growth of Key and reflect the Company's commitment to developing exceptional talent. Today, Rudy is Manager of Technical Sales Support for Latin America. Ken is the Applications Engineering Manager for Key's exciting new pharmaceutical business.

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Our new recruiting effort is referred to as the School of Mines Alumni Recruitment Team, or SMART.

As a part of our expanded recruiting effort, we are looking for alumni assistance in various areas throughout the country. As an alum, your story of your experience can be one of the university's best recruiting tools. Through sharing your story of your education and life experience at the School of Mines, you can help paint a vivid picture of the potential experiences awaiting a bright young mind.

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SMART Coordinator Pete Roberts
pete.roberts@sdsmt.edu
(605) 941-2294 or (605) 498-0613



Student Spotlight Continued from page 26

The students: **Benjamin Bangasser** (ChE, New Hope, Minn.), **Andrew Brosnahan** (ME, Lead), Cody Fredricksen (ChE, Rock Springs, Wyo.), **Tom Fryslie** (EE/Phys, Rapid City), **Joshua Hammell** (ME, Evansville, Wyo.), **Shane Heier** (EE, Sioux Falls), **Amery Kuhl** (ME/Phys, Worthington, Minn.), **Lisa Rebenitsch** (CSci, Bismarck, N.Dak.), **Alexander Schmidt** (EE, Mandan, N.Dak.) **Kajda Stevens**, (ChE, Benson, Minn.), and **Brady Wiesner** (CE, Watertown).

Students Inducted Into Leadership Hall of Fame

Seven School of Mines students and one alumnus have been inducted into the university's Leadership Hall of Fame. The Hall of Fame recognizes students based on their contributions to the campus community. It's not about how many leadership positions the students list on their resumes. The award recognizes students who have made a difference.

The students: **Karl Barfuss** (IE08), **Kaycee Carson** (Math08), **Jason Fields** (ME, Milbank), **Jade Herman** (IS, Mission), **Mark Sauder** (IE04), **Fanariot Sefa** (ChE08), **Wes Snaza** (ME08), and **Melanie Vedvei** (IE08).

School of Mines Student Receives National Scholarship

Channing Thompson (Chem, Rapid City) has been named a Scholar of the American Chemical Society (ACS) Scholars Program.

Thompson, of Rapid City, is one of approximately 150 Scholars chosen nationwide. The goal of the scholarship program is to aid in building an awareness of the value and rewards associated with careers in the chemical sciences and chemical technology by assisting students in acquiring the skills and credentials needed for success in these areas.

LandSat 7 Image of the Black Hills South Dakota School of Mines and Technology Alumni Association



This high-resolution, full-landscape image ships digitally printed on 20"x40" matte finish paper. Prints are available for \$20.00 PLUS \$5.00 Shipping & Handling*, which includes a color description sheet denoting image landmarks, and ships in a 3" mailing tube. The SDSM&T Alumni Association thanks you for your support through your purchase of this panoramic print.

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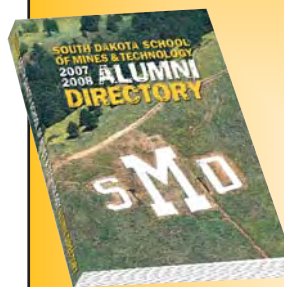
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KEEP IN CONTACT!!

The 2007-2008 SDSM&T Alumni Directory includes information on your classmates and friends from around the globe.



New in this edition are indices that include graduate's majors and years; alumni award recipients, and Lifetime Contributors.

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Calendar of Events

Visit the on line calendar for details:
<http://sdmines.sdsmt.edu/sdsmtcalendar>

For details about K-12 events:
<http://sdmines.sdsmt.edu/SDTechK-12>

For details about athletic events:

www.gorockers.com

For details about adult and professional
educational opportunities:

<http://sdmines.sdsmt.edu/learn>

November 7-8

Family Weekend

Meeting of the Mines

November 8

Fall Visit Mines

CommUniversity

November 27-28

Thanksgiving Day Holiday — No

Classes

December 4

Fall Band Concert — Surbeck Center

Ballroom, 7:30 PM

December 1-5

Parade of Trees

December 4

Children's Holiday Party — Surbeck

Center Ballroom, 6 PM

December 13-14

Christmas Concert Choir — Our Lady

of Perpetual Help Cathedral, 7:30 PM

December 15-19

Final Exams

December 20

Fall Commencement — Rushmore

Plaza Civic Center Theatre, 9 AM

December 25

Christmas Day Holiday

January 14

Evening Classes Begin

January 15

All Classes Begin

January 19

Martin Luther King Jr. Holiday — No

Classes

February 10

Career Fair Surbeck

Center Ballroom, 11 AM — 5 PM

February 16

President's Day Holiday — No Classes

February 16-20

Engineers Week

February 26

Health and Wellness Expo — Surbeck

Center Ballroom, 10 AM — 3 PM

March 7-15

Spring Break

March 22-28

Greek Week

April 6

Presidential Inauguration — Rushmore

Plaza Civic Center Theatre

April 7

Honors Convocation — Surbeck

Center Ballroom, 11 AM

April 10-13

Easter Break

April 25

Spring Visit Mines

May 4-8

Final Exams

May 9

Spring Commencement — Rushmore

Plaza Civic Center Arena, 9 AM

May 11

West River Math Contest

May 25

Memorial Day Holiday



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class NOTES

Continued from page 55

Construction in Rapid City. The couple resides in Rapid City, South Dakota.

Dickson Pongrekun (MetE04) married **Katie Randolph** June 2, 2007 at Rimrock Free Evangelical Church in Rapid City, South Dakota. The bride graduated from Colorado State University in 2004 and is a teacher. The groom graduated from the South Dakota School of Mines and Technology with a degree in metallurgical engineering in 2004. He is a metallurgical engineer and they live in Golden, Colorado.

Erin Vanneman (Chem06) married **Travis Schmidt** (MetE, Sioux Falls) March 15, 2008 in Rapid City. The bride works as an environmental program scientist for the Department of Environment and Natural Resources. The groom attends the School of Mines and works for RPM & Associates as an engineering intern.

Bruce Zavesky (CEng99) married **Jeanne Rothlisburger** on May 17, 2008 in Huron, South Dakota. Bruce received his master of information systems from the University of Phoenix in May 2008 as well. They currently reside in Huron, South Dakota.

Congratulations to the following proud parents:

Kent Hendricks, P.E. (EE90) wrote, "We are blessed again with the birth of our fourth child. Joshua David Hendricks was born on March 1, 2008, just missing Leap Day by a few hours. Next generation of Hardrockers - Class of 2030!"

Tyler Mickelson (ME04) and his wife **Jennifer** welcomed baby **Will** on June 12, 2005. Tyler and Jennifer were married on August 7, 2004.



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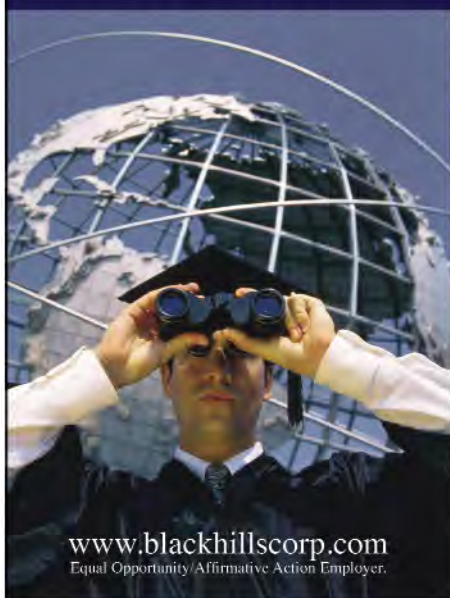
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Mines Memories

Did you know that...

• In the mid 1950s staff members from the museum of Geology spent the summers excavating the Badlands?

• It was here that J.R. Macdonald and Morton Green tried a new method of excavating fossil specimens that allowed them to recover two types of rhinoceroses, four kinds of horses, three kinds of dogs, cat, turtle, antelope, and beaver fossils.



• Today students not only attend fossil excavations with professors and Museum staff, but they are trained in the detailed process of digging, excavating, casting, identifying and archiving specimens. Students refer to specimens found over the years for reference, including the many fossils found by Macdonald and Green.



• The School of Mines is currently planning for the construction of the Paleontology Center, a new, state-of-the-art facility. This will house not only the large archives of fossils and minerals, but historical documents, photographs, equipment, more recent animal skeletons for historical comparison, as well as numerous books and maps.



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