South Dakota School of Mines and Technology

SOUTH DAKOTA SCHOOL OF MINES & TECHNOLOGY

THE HARDROCK™

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

FALL 2009

School of Mines Women p. 16

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...and much more!

INVENT TOMORROW

125th Anniversary

1885–2010

Perspectives

Dear Alumni and Friends,

Thank you for making this past year, my first year as president at Mines, remarkably positive. The vision, talents, resources, and dreams invested in the School of Mines by alumni, regents, corporate partners, community, state, and congressional supporters, building upon those of our faculty, students, and staff form our foundation for success. My confidence in our upward trajectory and pride in being a Hardrocker continues to grow.

Our teaching excellence continues, and nearly $21 million in research and development funding was awarded to the School of Mines this past fiscal year. This achievement more than doubles our success in 2008 and marks a new high point. Dr. Ronald White, our new vice president for research, is strengthening our foundation for success with the addition of his leadership and vision.

We have three important partnerships to celebrate:

- A donation from Black Hills Power will create a facility for our students and faculty researching wind and solar power that places wind turbines and photovoltaic panels on campus.
- A new company, Black Hills Nanosystems Corporation (BHNC), is creating new internship opportunities for our students. Dr. James Sears, Chief Technology officer of BHNC, is just one of the many talented and productive researchers at the School of Mines.
- The John T. Vucurevich Foundation continues its sixteen years of invaluable support for our students by giving scholarships to support South Dakotans becoming scientists and engineers. Native American students, in particular, will be assisted by the Vucurevich Foundation's generous support.

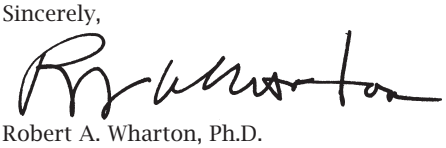
We are reminded of the remarkable achievements of our alumni in the recognition that Mr. Stacy Phelps will receive the Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring, presented by President Obama at the White House. Please join me in extending congratulations to Mr. Phelps.

Leadership developments are moving the university forward. Dr. Duane Hrncir has assumed the role of interim provost and vice president for academic affairs. Dr. Michael Gunn has joined the team to fill a new position of associate provost for enrollment management. Ms. Tamara Martinez-Anderson will renew our emphasis on enrollment management as our new director of admissions. Thanks to a very generous gift to the Hardrock Club, we have a full-time athletic director, Dr. Dick Kaiser, whose leadership and expertise will be a boon to Hardrocker athletics.

This year the Mines Medal was created as a means of fostering relationships with outstanding researchers, enriching and publicizing our leadership role in recognizing such scholars' role in promoting science and engineering. The 2009 Mines Medal was awarded to deep-water researcher and scientist, Dr. Cindy Lee Van Dover, of Duke University. The ceremony was held in Rapid City to promote the School of Mines' serious commitment to *inventing tomorrow.*

As we look forward to our 125th anniversary, we can take pride in knowing that the nation relies on us more than ever to educate and foster leaders in science, engineering, and technology. We know that the daily efforts of our faculty and staff advance solutions to the nation's most critical challenges, and we celebrate our many Mines achievements.

Sincerely,



Robert A. Wharton, Ph.D.
President

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

South Dakota School of Mines and Technology
THE HARDROCK
FALL 2009

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On the cover:

Cover Photo: The School of Mines is developing strategies to increase the number of women recruited and retained at South Dakota institutions in science and engineering fields. *Story p. 16*

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Perspectives

Greetings Hardrockers!

As my initial year as your president comes to a close, it is time to reflect. I had the opportunity to interact with many of you at 16 area gatherings and four board meetings, resulting in a rare opportunity to reconfirm what most of us have known since our first day on campus: The students, faculty, administration, and alumni from the School of Mines are in a league of their own in terms of support, genuine commitment to excellence, and desire to continually build upon a strong tradition. Confirmation that the School of Mines and its Alumni Association are truly unique came in many forms, including a formal "benchmarking" project, involving the evaluation of responses to 23 questions from eight alumni organizations affiliated with engineering colleges and universities, as well as a simple question from a non-Mines graduate, "Why are School of Mines alumni gathering in Pittsburgh?" Our benchmarking project revealed several examples of "comparative separation" from these other associations, including our weekly E-News, semi-annual *Hardrock* magazine, 20-30 annual area meetings, being 100 percent self-funded, and our 5-Year Reunion.

Another way to express the merit of our Alumni Association is that "We run on fumes!" Whether it is the organization of area meetings by approximately 40 vice presidents, serving as a board member for three consecutive years, traveling on weekends to attend alumni functions, assisting with award programs and 5-year reunions, volunteering for a month on a special project, or awarding more than 30 School of Mines scholarships at high school ceremonies, our Alumni Association has been providing much "gratis" energy since its inception 75 years ago. As your Alumni president, I am uniquely positioned to "drive" this well-lubricated piece of machinery and observe first-hand the "inner" workings . . . . It truly has been a privilege! I look forward to another year as your president and hope for a duplication of the last 12, months, including numerous interactions at area meetings and an opportunity to evaluate and implement initiatives to improve our association.

I certainly cannot list all of those who have offered their time and resources to promote our Alumni Association in so many ways. However, I want to formally thank the four outgoing board members who have served for the past three years — **Scott Rausch** (EE75), **Dale Skillman** (ME73), **Nayyer Syed** (Geol94), and **Gene Woodle** (ChE70). In addition, I want to provide an excellent remembrance of volunteerism among our alumni — his name is **Jack Meeker** (EE47/ME48). As most of you know, Jack passed away in July, just shortly after his wife, Elinor, 83, died in May (please see their memorials later in this issue). Fortunately, I met Jack at our June area meeting in Seattle. I found him quite engaging — not only because of our conversation but also because of his reputation as a tireless volunteer, including being a two-term Alumni Association president. During my travels this past year, I had the opportunity to observe many "Jack Meekers" whose dedication has developed our association into one that stands out among so many others. Our hope is that each of you seeks a way — through volunteering, participating, and/or contributing — to promote our Alumni Association and the School of Mines in the spirit of the many "Jack Meekers" out there.

In closing, I want to encourage you to "Save That Date" (July 7-11, 2010) to attend our 5-Year Reunion in Rapid City. It is fitting that the School of Mines will be celebrating two gems at this reunion next July — our "Diamond" or 75th anniversary of the Alumni Association and the "Diamond + Gold" or 125th anniversary of our alma mater. Given these two anniversaries, numerous reunion events, and retelling of old stories, there should be no shortage of reasons for the anticipated 2,000 attendees to celebrate and enjoy these five days . . . . I hope to see you there!

All the best to you and yours,

Ralph Wagner (CE75)
2009 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 climate change, bioenergy, mineral extraction and processing, advanced materials, environmental quality, 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 continuous quality improvement.

2009-10 Enrollment:
2,177 students from 40 states and 35 countries

Costs and Fees:
A School of Mines education has never offered a better return on investment. 2009-10 annual undergraduate costs for tuition, fees, books, room, board, and supplies (including a TabletPC) total approximately $13,860 per year for South Dakota residents and $15,240 for non-residents.

Placement:
Starting salary offers to School of Mines graduates average approximately $56,000. Ninety-eight percent of graduates find jobs in their career fields or continue on to graduate or professional programs within one year of graduation.

Research:
Researchers conduct high-tech research that benefits the state, region, and nation through advances in technology and economic development. In Fiscal Year 2009, researchers received nearly $21 million in funding for 92 projects. Funding agencies included the Department of Defense, NASA, National Science Foundation, Department of Energy, State of South Dakota, 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. The faculty to student ratio is 1:14.

Honors and Awards:
- One of America's 100 Best College Buys® for 12 consecutive years
- 2008 Carnegie South Dakota Professor of the Year
- G.I. Jobs Military Friendly School

Bachelor of Science Degrees
Chemical Engineering
Chemistry
Civil Engineering
Computer Engineering
Computer Science
Electrical Engineering
Environmental Engineering
Geological Engineering
Geology
-Applied Geology
-Earth System Science
-Paleontology
Industrial Engineering and Engineering Management
Interdisciplinary Sciences
-Atmospheric Sciences
-Pre-Professional Health Sciences
-Science, Technology, and Society
Mathematics (Applied and Computational)
Mechanical Engineering
Metallurgical Engineering
Mining Engineering
Physics

Master of Science Degrees
Atmospheric Sciences
Biomedical Engineering
Chemical Engineering
Civil Engineering
Construction Management
Electrical Engineering
Geology and Geological Engineering
Materials Engineering and Science
Mechanical Engineering
Paleontology
Physics
Robotics and Intelligent Autonomous Systems
Technology Management

Doctor of Philosophy Degrees
Atmospheric and Environmental Sciences
Biomedical Engineering
Chemical and Biological Engineering
Geology and Geological Engineering
Materials Engineering and Science
Mechanical Engineering (pending)
Nanoscience and Nanoengineering
Physics (pending)

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Golden Nuggets

School of Mines holds presidential investiture and 159th commencement

The School of Mines held its presidential investiture and 159th commencement May 9, 2009, and awarded degrees to more than 200 undergraduate and graduate students. In addition,

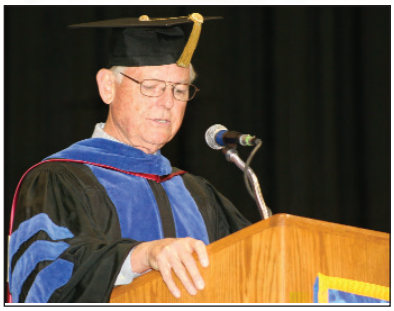
Class of 1959

The School of Mines held its 159th commencement May 9, 2009

25 alumni from the class of 1959 attended the ceremony and received certificates commemorating the 50th anniversary of their graduation.

During the ceremony, School of Mines President **Robert A. Wharton**, Ph.D., was formally invested as the 18th president of the university. South Dakota Board of Regents President Terry Baloun performed the investiture and Michael C. Gallagher, Ph.D., past president of Mesa State College, gave the investiture address.

*School of Mines President **Robert A. Wharton**, Ph.D.*



Investiture speaker Michael C. Gallagher, Ph.D.

Jeffrey Wadsworth, Ph.D., joined the School of Mines as commencement speaker. Wadsworth currently serves as president and CEO of Battelle, the world's largest non-profit research and development organization, executing $5 billion of work annually and employing approximately 21,000 people. He currently leads Battelle's Global Laboratory Operations business, where he oversees the management or co-management of eight laboratories. Six are national laboratories for the U.S. Department of Energy, representing more than $3 billion of annual business: Pacific Northwest National Laboratory, Brookhaven National Laboratory, National Renewable Energy Laboratory, Oak Ridge National Laboratory, Idaho National Laboratory, and Lawrence Livermore National Laboratory. He also leads the National Biodefense Analysis and Countermeasures Center, a laboratory for the Department of Homeland Security. The eighth is a laboratory in Kuala Lumpar, Malaysia, which is being designed, built, and operated for the private sector.

Commencement speaker Jeffrey Wadsworth, Ph.D.

Melanie Jeppesen (IS09) represented the student body. While attending the School of Mines, Jeppesen was directly involved in campus leadership, completing a term as student association president and serving on the School of Mines' Presidential

Student representative speaker Melanie Jeppesen

Search Committee. She was an active advocate for the School of Mines, serving as a student ambassador, testifying before the legislature, and appearing before the Board of Regents. In 2008, she was appointed to the South Dakota Board of Regents as the student regent and is a formal member of the board.

The School of Mines also honored **Kenneth G. May** (CE61) with the Guy E. March Medal. As a former treasurer of the Alumni Association, May was instrumental in the transfer of $1 million in funds held by the Endowment Association to the newly-formed SDSM&T Foundation. May served two terms as president of the Alumni Association, was the co-chair of the 2000 All-School Reunion, a past member of the Alumni Relationship Committee, and is a current member of the Alumni Investment Committee.

Guy E. March Medal recipient ***Kenneth G. May*** *(CE61)*

Feathering Ceremony honors Native American graduates

The School of Mines held a Feathering Ceremony this spring to honor graduating Native American students. Traditionally, a child receives his or her first feather or plume as a baby and continues to earn them with great accomplishments. The program also included an Honoring Song, an introduction of Hunkapi tradition and ceremony, a blessing and tying of the feathers, and a meal of buffalo stew, wojapi, and fry bread. The students: **Quana Higgins** (CE09) and **Myrna Littlewolf** (IE09).

Feathering Ceremony honorees ***Myrna Littlewolf*** *(IE09) and* ***Quana Higgins*** *(CE09)*

School of Mines wins DAC Scholars Award

For the fifth consecutive year, the School of Mines is the recipient of the Dakota Athletic Conference (DAC) Scholars Award. Jamestown College tied with the School of Mines for the recognition for 2008-09.

The award is presented annually to the school with the highest percentage of student-athletes honored as DAC Scholar-Athletes. During the 2008-09 academic year, the School of Mines received 64 DAC Scholar Athlete honors.

In order to be recognized as a DAC Scholar-Athlete, a student-athlete must have a cumulative grade point average of 3.25 or above out of 4.00 and have earned 12 or more credit hours for a semester in which he or she participates in a conference sponsored sport.

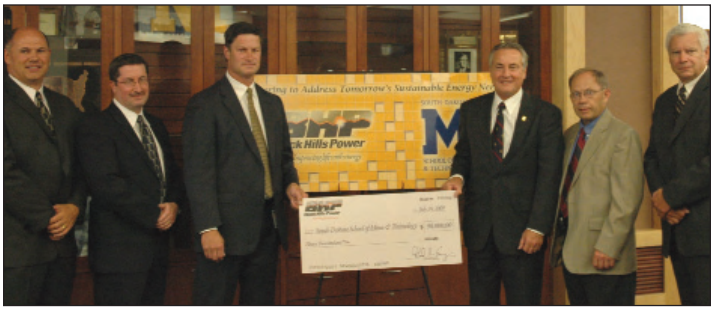
School of Mines and Black Hills Power establish sustainable energy partnership

Officials from the South Dakota School of Mines and Technology and Black Hills Power announced an exciting partnership for a renewable energy research facility on the School of Mines campus.

"The debate and interest in energy security and

Artist rendering of the location for the sustainable energy facility on the old Smelter Hill looking south.

sustainability has continued to grow, and it is certainly one of the prominent issues facing our region, the state of South Dakota, our nation, and the planet," School of Mines President **Robert A. Wharton**, Ph.D., said. "I believe the biggest impact the School of Mines can have on the future is to prepare our students with the tools they will need to tackle this issue with future technology and discoveries that are yet unimagined."



*(L-R) Mike Fredrich, director of engineering services, Black Hills Power, Chuck Loomis, operating vice president, Black Hills Power; Dave Emery, chairman, president, and CEO, Black Hills Corporation; Robert A. Wharton, Ph.D., president, School of Mines; Dr. **Larry Simonson** (EE69), associate dean for advancement, School of Mines; and Dr. Duane Hrncir, interim provost and vice president for academic affairs, School of Mines.*

> "I believe the biggest impact the School of Mines can have on the future is to prepare our students with the tools they will need to tackle this issue with future technology and discoveries that are yet unimagined."
>
> **President Robert A. Wharton, Ph.D.**

The project, funded through a $90,000 donation from Black Hills Power, consists of three components: one 20 kW ReDriven wind turbine, one 2.4 kW Skystream 3.7 wind turbine, and three EnPhase photovoltaic panels. The facility will provide modern technology for researching wind and solar energy opportunities.

Enrollment Management Leadership

STRATEGIC FOCUS AREAS

1. Optimizing enrollment
2. Securing resources
3. Growing graduate education and the research enterprise
4. Continuous quality improvement

After taking the helm of the South Dakota School of Mines and Technology in July 2008, President **Robert A. Wharton**, Ph.D. identified four strategic focus areas to guide the university in the coming years. Guided by these far-reaching strategic foci, the School of Mines is strengthening its status as one of the nation's premier science and engineering universities.

The first and primary focus area for the university is optimizing enrollment. The School of Mines, with unique, cutting-edge programs of study, continues its ascent as a first choice for the best and brightest students from across the nation and around the world. Building upon the university's history of excellence, the School of Mines can — and does — consistently attract those who wish to pursue a high-quality education in engineering and science and leave with in-demand, marketable skills.

As part of its renewed emphasis on enrollment management, the School of Mines recently created the position of associate provost for enrollment management. **Michael C. Gunn**, Ph.D., was selected to lead this endeavor.

Dr. Gunn holds a B.A. in anthropology from Wake Forest University, an M.A. in anthropology from the University of Nebraska — Lincoln, and a Ph.D. in anthropology from Columbia Pacific University. Dr. Gunn also holds an M.S. in national security studies from The National Defense University and he is a graduate of the Program for Executives in Logistics and Technology from the Kenan-Flagler School of Business of the University of North Carolina — Chapel Hill.

Dr. Gunn has authored more than a dozen publications and holds a Green Belt in Lean/Six Sigma. Prior to his retirement from the Army, he held the rank of Colonel, and his distinguished career included tours in Operation Enduring Freedom as Senior Logistics Manager, Bagram, Afghanistan and in Operation Iraqi Freedom as Commander, U.S. Military Operations, Port of Umm Qasr, Iraq.

"Sustaining our tradition of greatness requires careful attention to the quality of our student body as well as to its size. As we grow our enrollment and shape a strong and diverse student body, strategic enrollment management is the top priority for the School of Mines," President Robert A. Wharton, Ph.D., said. "Dr. Gunn's wealth of experience, leadership skills, and ability to develop innovative solutions will be vital in developing an ever-increasing culture of focused enrollment management."

Reporting to the provost and working directly with the senior leadership team, Dr. Gunn will have responsibility for the Offices of Admissions, Financial Aid, Retention and Testing, Student Information Services, Registrar, the Tech Learning Center, and Women in Science and Engineering (WISE).

"This is the most important thing we can do for the future of the university. Admissions, retention, academic services, faculty — everyone has to work together to achieve the university's long-term goal," Gunn said. "Together, we can achieve and exceed the university's goal of increased numbers of quality students receiving

a world-class education from some of the finest staff and faculty found anywhere."

As Gunn looks to the year ahead, he sees the university setting the framework for its direction over the next three to five years. "We look to set both short-term and long-term plans with strategic focus," he said. "We need to set the stage to gain students, but we also need to plan to sustain that growth over time."

Part of setting the stage for this growth means expanding current recruiting areas. The pool of graduating high school students is shrinking in the Midwest, and South Dakota in particular is leading that demographic trend. Because this area is the university's historic market, Gunn looks to broaden the areas from where the School of Mines recruits students.

"We have to reach out to places we haven't been before — California, Texas, Arizona, Pennsylvania," Gunn said. "We need to find those students that want to come here, but just don't know it yet."

As the School of Mines enters new recruiting markets, there are a few well-earned badges of success to bring to the table. The university was recently named one of America's 100 Best College Buys for the 12th consecutive year, a distinction that identifies universities that provide students with the highest quality education at the lowest cost.

School of Mines 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 2009 Education and Salary Report ranks the School of Mines 11th among Midwestern universities and 15th among engineering colleges by salary potential. According to the report, the mid-career median salary for School of Mines graduates is $92,300 (average of 15.5 years experience).

In a time of economic uncertainty, with costs rising and jobs disappearing, these kinds of outcomes provide students with a solid return on one of the most important investments of their lives. As Gunn and his team look to the future, having this kind of leg up on the competition can only be an asset.

The South Dakota School of Mines and Technology is pleased to welcome Tamara Martinez-Anderson to campus as the director of admissions. Martinez-Anderson holds a B.A. in American studies from Utah State University and completed graduate studies in women's history, history of the American west, and labor history at the University of Michigan.

Martinez-Anderson has many years of experience in student recruitment, having served in various admissions roles at Michigan State University, Oklahoma City University School of Law, Gonzaga University School of Law, and the University of Idaho. Her knowledge of strategic analysis, creative marketing, and student recruitment have led to her meeting or exceeding enrollment, profile, and revenue goals at her various posts.

With the School of Mines' renewed emphasis on enrollment management, Martinez-Anderson will report to the associate provost for enrollment management, Michael Gunn, and the admissions team will work in partnership with the other units in enrollment management, the faculty, staff and students to recruit, retain, and graduate an academically strong and diverse student body. Martinez- Anderson's experience in professional and graduate programs will also be valuable in partnering with the dean of graduate studies to increase master's and doctoral student enrollments.

"Increasing the size and diversity of our student body is one of the areas of strategic focus that will help us achieve our goal of becoming one of the premier technological universities in the country," President Robert A. Wharton, Ph.D., said. "Tamara Martinez-Anderson's varied enrollment experiences and her creative approach to marketing and recruitment provide our admissions office with the leadership and guidance necessary to meet the recruitment goals required to meet this objective."

New admission standards, implemented in fall 2005 for the fall 2006 class, have aligned admission requirements with the expectations students will encounter when they arrive on campus. The new standards have resulted in well prepared, academically strong, and ethnically, as well as geographically, diverse groups of incoming students. Enrollment data confirms the expected impact of the new requirements, namely that quality and diversity are increasing. First to second year and second to third year retention rates have risen markedly since the implementation of the new standards. This trend is expected to continue in the coming years, with fall 2009 enrollment up nearly 6 percent over fall 2008, and first-time freshman enrollment up more than 14 percent. Inquiries for fall 2010 are up 96 percent .

New Faces of Hardrocker Athletics

Dick Kaiser, Ph.D., took the reins as the South Dakota School of Mines and Technology's athletic director (AD) on July 1, 2009. Kaiser, a native of Boulder, Colorado, came to the School of Mines from Defiance College in Defiance, Ohio, where he was the AD for the past decade.

During the past 25 years, Kaiser has served as an AD at Defiance, Olivet College, Western Oregon University, and Willamette University. He began his career in collegiate athletics nearly 35 years ago, when he worked as a football graduate assistant while earning a master's degree in educational administration at South Dakota State University (SDSU). Following coaching stints at SDSU, Dodge City (Kansas) Community College, and Southwestern Oklahoma State University, he was advised to pursue a doctorate in athletic administration, and enrolled at Brigham Young University (BYU), where he coached under the tutelage of legend LaVell Edwards.

After completing his doctorate, Kaiser left BYU for Idaho State, where he coached for two years before heading to Willamette in Salem, Oregon, in 1983. After serving for five years as both AD and defensive coordinator, he decided to leave coaching and become a full-time administrator.

Kaiser has received a number of honors and awards from athletic organizations, such as the National Association of Collegiate Directors of Athletics (NACDA), National Collegiate Athletic Association (NCAA), National Association of Intercollegiate Athletics (NAIA), and others. Kaiser's interest in the AD position at the School of Mines stemmed from his respect for the university's strong academic reputation, the challenges the position presented, and his interest in the geographic location of the university.

"Athletics has always been considered a major activity at the School of Mines, and we look forward to applying Dick Kaiser's expertise in growing this important facet of campus life," School of Mines President **Robert A. Wharton**, Ph.D., said. "Having a full-time athletic director will allow us to devote the resources necessary to taking our athletics program to the next level. The School of Mines is grateful for the gift to the Hardrock Club that helped make this goal a reality."

As AD, Kaiser will be responsible for leading the athletics program through all phases of development and fostering an environment of quality instruction and high scholarly and athletic achievement. He will also play a key role in athletic fundraising and continuing to build and maintain relationships with boosters and community leaders. He will oversee all operations in the athletic department, including intercollegiate athletic sports; recruitment, selection, development, and retention of coaches and staff; health of student-athletes; and leadership and management of daily operations of the athletic department. Kaiser will also be responsible for ensuring compliance with all NAIA, conference, and university rules and regulations.

"I am absolutely delighted to receive this opportunity to be the athletic director at the South Dakota School of Mines and Technology. I feel very privileged that the university has shown this much confidence in my abilities as an athletic administrator," Kaiser said. "I look forward to working with all of the talented coaches, administrators, and various athletic staff members that make up Hardrocker athletics. My ultimate goal is to continue to enhance the overall athletic experience student-athletes discover at the School of Mines while maintaining the highest level of integrity and academic standing the college has so famously established."

New Faces

Name: **Tiffany McCampbell**
Position: **Volleyball Head Coach**
Coaching history: Two years in St. Joseph, Missouri, at NCAA Div. II Missouri Western State University.

"I've always wanted to coach student-athletes who are very academically-minded, athletic, and have great character," McCampbell said. "And that already goes with the philosophy of the students who are here. They have a high academic standard and already have a great work ethic."

Name: **Dan Dieringer**
Position: **Football Offensive Coordinator**
Coaching history: Dieringer brings a wealth of knowledge to the 'Rocker staff with 19 years of coaching experience at the college level. Dieringer has coached at NCAA Div. II, Div. III, and NAIA levels as an offensive coordinator and offensive line coach, most recently at Dodge City Community College in Kansas.

"Years ago when I was at Chadron State, the School of Mines was a program that would maybe win two games a year. Coach Kratzer has taken things to this point, where it is a .500 type program — which is awesome," Dieringer said. "Now our goal has to be to get the program over that .500 mark and make the School of Mines recognized on a national level."

Name: **Charlie Giangrosso**
Position: **Football Defensive Coordinator**
Coaching history: More than 20 years as a football coach and defensive coordinator, most recently at Bethany College in West Virginia as the defensive coordinator.

"I like being at a school with this type of academic integrity," Giangrosso said. "You have good kids here and they play hard. Academics are important to them — they know that there is life after football."

Name: **Steve Johnson**
Position: **Assistant Track and Field Coach**
Coaching History: Most recently served as assistant coach at the University of Mary in Bismarck, North Dakota. Also had stints in Washington at Lakewood, Tacoma, University Place, and Pullman.

"Bigger is the goal. We want to boost the programs — especially on the women's side," Johnson said. "Recruiting will help us to regain some of that competitiveness (in the conference) on both sides in track and field and cross country."

Name: **Dustin Thomas**
Position: **Football Defensive Line Coach**
Coaching history: Thomas is a new coach, but has extensive experience with the Hardrockers, as he was a member of the football team from 2000-2005.

"Both working and going to school at SD School of Mines have been great experiences. The people here are great, and the atmosphere is second to none," Thomas said. "Having the opportunity to be involved with the Hardrocker football team and Hardrocker athletics, is a very rewarding, and I'm really looking forward to this upcoming season."

Name: **Greg Hodgin**
Position: **Football Running Back Coach**
Coaching history: This will be Hodgin's first opportunity to coach at the college level.

"I am excited for the opportunity to help the Hardrockers in any way I can and I am glad to be here at South Dakota School of Mines," Hodgin said.

School of Mines Welcomes Vice President for Research

With the start of the new fiscal year, the South Dakota School of Mines and Technology was pleased to welcome **Ronald J. White**, Ph.D., as the university's new vice president for research.

White earned a bachelor's degree in chemistry from the University of Louisiana at Lafayette and a Ph.D. in physical chemistry from the University of Wisconsin, Madison. He has a substantial record as a researcher and administrator in academia and with the National Aeronautics and Space Administration (NASA).

Since 2003, White served as a senior fellow in the Division of Space Life Sciences with the Universities Space Research Association Center for Advanced Space Studies and also as a senior scientist for the NASA Human Research Program, where he was responsible for developing and maintaining the Science Management Plan, coordinating peer review of research proposals and multilateral activities related to biomedical countermeasures, and more.

From 1996-2003, White served as professor of otorhinolaryngology and communicative sciences at the Baylor College of Medicine and also as the associate director of the National Space Biomedical Research Institute. In addition, he has held positions as chief scientist of the Life Sciences Division at NASA Headquarters; research professor of physiology at the Uniformed Services University of the Health Sciences; manager of biomedical research, analysis and planning at the General Electric Company; and professor of mathematics and director of honors at the University of Louisiana at Lafayette.

"Dr. White will play a major leadership role in guiding and supporting initiatives at the School of Mines that help us achieve our institutional priorities," School of Mines President **Robert A. Wharton**, Ph.D., said. "His many experiences in working with federal agencies and multi-disciplinary programs will be essential to our focus in building our dynamic research enterprise and strengthening our status as one of the nation's premier science and engineering universities."

As vice president for research, White will provide administrative oversight, leadership, and mentorship in the development and implementation of campus-wide research and graduate studies that are integrally linked to the university's mission. His experience with management of research activity at the federal and institutional levels and with strategic planning will be key as the university looks to growing its research platform.

"The School of Mines is a vigorous institution with an impressive research portfolio and a long tradition of academic excellence. I am very pleased and honored to join the first-rate administrative team that Dr. Wharton has assembled," White said. "I am excited by the prospect of contributing, at this particular time, to the imminent future growth of the university's dynamic research enterprise."

The School of Mines has a long tradition of excellence in teaching, and White looks to harness those historical strengths as he develops the research plan for the future.

"Research strengthens traditional education by providing students with insight into how knowledge is created and how it is applied in the real world," White said. "Research as a facet of education is a critically connected component as we grow our research program."

Research Funding Nearly $21 Million

School of Mines investigators have been awarded nearly $21 million in research and development funding during Fiscal Year 2009, the highest amount in the history of the university and more than double the $10.1 million received in Fiscal Year 2008.

During the 2009 fiscal year, researchers received 92 awards averaging approximately $227,000 from federal and state agencies, corporations, and direct Congressional appropriations. The awards represent 23 departments, centers, or laboratories and have been awarded to 42 principal investigators. More than half of all proposals submitted were funded. The National Science Foundation's average funding rate was 25 percent in 2008. Individual awards ranged from $2,000 for the collection of fossil vertebrates to $3,392,600 to study advanced materials and processes for future combat systems.

"Our focus is to expand the size and scope of our research enterprise and strengthen our status as one of the nation's premier science and engineering universities. This growth is impressive and shows that we are well on our way to realizing these goals," School of Mines President **Robert A. Wharton**, Ph.D., said. "This milestone is a clear indication of the stellar level of our faculty and researchers on our campus."

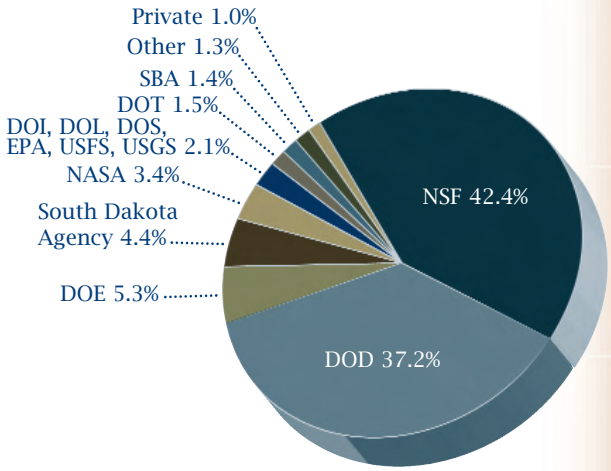
Wharton has identified growing the research enterprise as one of four strategic key focus areas that will guide the university, with the specific goal of reaching $25 million within five years. In Fiscal Year 2004, the School of Mines was awarded $11.9 million. Five years later, with funding at nearly $21 million, this impressive growth makes $25 million a goal well within reach.

Since 2001, the School of Mines has received approximately $80 million in Congressional appropriations for research and development including $3.2 million in the 2009 Defense spending bill.

"I am proud to have the campus engaged in research that advances scientific knowledge and also has real-life applications that are relevant to national defense. These awards generate economic development opportunities and impact for our region, South Dakota, and our nation," Wharton said. "U.S. Senators Tim Johnson and John Thune, and Representative Stephanie Herseth-Sandlin continue to champion applied research initiatives that support the security of our nation and the safety of our soldiers."

External Source of FY 09 Project Funding

Source	Amount
National Science Foundation (NSF)	$8,863,130
U.S. Department of Defense (DOD)	$7,797,367
U.S. Department of Energy (DOE)	$1,109,213
National Aeronautics and Space Administration (NASA)	$710,397
U.S. Department of Transportation (DOT)	$321,642
U.S. Small Business Administration (SBA)	$282,000
U.S. Geological Survey (USGS)	$140,000
U.S. Environmental Protection Agency (EPA)	$83,000
U.S. Department of State (DOS)	$75,000
U.S. Department of Labor (DOL)	$58,396
U.S. Department of the Interior (DOI)	$38,930
U.S. Forest Service (USFS)	$25,875
Federal Total	$19,504,950
South Dakota Agency	$919,941
Private	$203,000
Other	$278,057
Grand Total	**$20,905,948**



Honoring the Past, Looking to the Future

1876

1876
Fred and Moses Manuel and partner Hank Harney make Homestake claim.

1877

1877
George Hearst buys Homestake claim for $70,000.

1930's

Early 1930s
Homestake prospers; during Depression, sets shorter workweek with higher wages and gives bonuses.

1942

1942
Gold mining suspended by War Production Board. Homestake foundry and machine shop produces goods needed for war effort.

1965

1965
Dr. Ray Davis begins installation of neutrino experiments 4,850 feet underground at Homestake.

2002

2002
Homestake Mine officially closes after more than 125 years.

NSF sponsors the International Workshop on Neutrinos and Subterranean Science, during which scientific groups showcased the wide variety of science that would be enabled by an underground laboratory.

Dr. Ray Davis wins Nobel Prize for Physics, confirming the importance of underground science.

Barrick Gold Corporation purchases Homestake Mining Company.

The DOE/NSF Nuclear Science Advisory Committee releases its Long Range Plan. The Plan strongly supports the development of an underground laboratory.

Congress approves a $10 million U.S. Department of Housing and Urban Development grant to be used for reopening the shafts and installing pumping equipment to remove water from the lower levels of the Homestake mine.

2006

2006
Water level rises to 5,600 feet. Governor Rounds announces a three-phase plan to dewater the mine and to ready the mine for science at the 4,850 foot level.

The Homestake Collaboration holds a workshop in Lead, South Dakota, on potential experiments and education and outreach at the laboratory, with more than 100 people participating in this workshop.

Barrick Gold Corporation donates Homestake Gold Mine to the South Dakota Science and Technology Authority. This includes 186 surface acres, numerous facilities, and 370 miles of tunnels reaching more than 8,000 feet below the surface.

T. Denny Sanford donates $70 million to the Homestake project, creating the Sanford Underground Science and Engineering Laboratory. The gift includes $20 million for a Sanford Science Education Center.

2007

2007
National Science Foundation selects the Homestake site for the development of the proposed Deep Underground Science and Engineering Laboratory.

2008

2008
Pumps begin removing water from mine. The DUSEL Experiment Development Coordinators (DEDC) — in conjunction with the South Dakota School of Mines and Technology, the South Dakota Science and Technology Authority, and the Homestake DUSEL project team — organizes a workshop in Lead, South Dakota, to provide guidance and assistance for researchers interested in preparing projects to be conducted in the DUSEL. More than 350 scientists, science educators, and science administrators attend.

Geoscience and geomicrobiology experiments begin.

Dr. Dennis Kovar, associate director of the Office of Science and High Energy Physics at the Department of Energy (DOE), says that Homestake is a top priority for his office and program.

2000

2000
Homestake Mining Company announces mine will close. Scientists immediately look to the site for possible future experiments.

2001

2001
The Bahcall Committee, co-sponsored by the National Science Foundation (NSF) and the Department of Energy, evaluates the feasibility of creating a national underground science laboratory and calls for the creation of a deep national underground science laboratory; favors Homestake to become the site of the laboratory.

2003

2003
Homestake Mining Company turns off underground pumps and mine begins to fill with water. Company seals the Yates and Ross shafts.

Governor Michael Rounds establishes Homestake Laboratory Conversion Project. Dr. Richard Gowen, then president of the School of Mines, named interim executive director.

2004

2004
South Dakota Legislature creates South Dakota Science and Technology Authority and commits $14.3 million to the Homestake project.

2005

2005
National Science Foundation names Homestake one of two possible sites for the Deep Underground Science and Engineering Laboratory. Homestake Collaboration receives $500,000 to study site feasibility.

South Dakota Science and Technology Authority and Homestake Collaboration propose interim laboratory at 4,850 feet.

South Dakota Legislature approves $19.9 million to develop 4,850 interim laboratory.

Homestake Collaboration solicits letters of interest from scientists for experiments at Homestake.

2009

2009
Early Implementation Program of physics experiments begin.

2010 (projected)

2010
A DUSEL Design Project Status Review by the National Science Foundation to be held at the University of California, Berkeley.

2012-2013

2012-2013
Construction begins.

2018-2020

2018-2020
Construction completed.

The South Dakota School of Mines and Technology is proud to be a leading partner in bringing the Deep Underground Science and Engineering Laboratory (DUSEL) from an extraordinary vision to a phenomenal reality. The longstanding connections between the School of Mines and the Homestake Mine began in 1885 when the university was established to meet the growing research needs of the mining industry, led by Homestake. These connections continued when nearly a decade ago, the School of Mines helped champion the conversion of the mine into a national laboratory. Today, as we continue to prepare leaders in engineering and science, we are collaborating with our colleagues to transform Homestake into a world-class laboratory to further exceptional research and discoveries not yet imagined.

A Campus Makeover

In 2009, the South Dakota School of Mines and Technology began construction on two new buildings that will forever transform the educational and research landscape at the School of Mines.

All of the more than 2,000 students that attend the School of Mines each year will take classes and labs in the **Chemical and Biological Engineering/Chemistry Building (CBE/C)** at some point in their educational career. The 45,000-square-foot facility, when fully completed, will transform an aging building into a state of the art educational facility for academic laboratory instruction.

The new facility will be linked to the existing Chemical Engineering/Chemistry Building, adjacent to the central campus quad. In addition to the new construction, existing spaces will be renovated to create learning environments that are higher quality, safer, more flexible, and more conducive to contemporary teaching methodologies.

The CBE/C Building will incorporate graduate and undergraduate research space. The layout of the laboratories provides for innovative ways to conduct collaborative and multi-disciplinary research. This building will have modern laboratory space that will serve as the vehicle for conducting research for the enhancement of undergraduate and graduate education while affording the potential for economic development for Rapid City and the state of South Dakota.

Construction site of the CBE/C building.

This new facility will foster the growth of rapidly-emerging technologies, such as ethanol and alternative fuel production, food and agricultural processing, and environmentally-friendly plastics and coatings. Equally important is that the building will be a campus showpiece that will aid in the recruitment and retention of students and faculty.

"The School of Mines is committed to leading 21st century engineering and science education, and one way we achieve that is by providing students with the best facilities possible in which to learn," School of Mines President **Robert A. Wharton** said. "Maintaining up-to-date facilities will always be a challenge for a university whose mission places it on the cutting edge of technology and research. Our students need to be educated for 21st century jobs and be comfortable with the same type of laboratory and research facilities where they will be working after graduation. These buildings will fit that need."

Funding for the nearly $19 million project is from the 2008 State Laboratory Bond Bill and the Higher Education

Facilities Fund. More than $1 million in private donations has been contributed to make the project a reality, from the Rollin M. Gerstacker Foundation, the Charles J. Strosacker Foundation, Dow Chemical USA, Cargill, Incorporated, and Maynard S. Raasch, a 1937 chemical engineering graduate of the School of Mines.

The April 2009 groundbreaking ceremony for the 33,000-square-foot **Paleontology Research Center** signaled a new future for one of the world's finest fossil collections. Paleontology at the School of Mines has been an integral part of the university for more than 100 years. Currently, the Museum of Geology houses about 300,000 fossil specimens, one of the largest collections in the United States and some of the best scientifically documented in the world. The collections support education and research for the university's faculty and students, and researchers around the world. The center will serve as an important academic resource to the School of Mines' paleontology master's program, the only one of its kind in the United States.

Paleontology Research Center groundbreaking ceremony April 2009.

The center will provide a safe, environmentally-controlled location for the Museum of Geology's fossil, geological, and archival collections, ensuring the protection of this rich heritage. In addition, the center will house laboratories for the preparation, preservation, and geochemical research involving the collections. A key feature will be open viewing of the laboratories so the public can see the steps needed to take a fossil from the ground to a museum exhibit.

Paleontology Research Center in progress.

"This is a great opportunity to showcase the efforts of South Dakota paleontologists who are working with a world-class collection of fossil specimens," South Dakota Governor Michael Rounds said.

School of Mines Women

Serving under-represented populations is an integral part of the vision of the South Dakota School of Mines and Technology. To move this vision to reality, the university has taken a renewed interest in increasing and maintaining diversity. In recent years, one diversity component that has been getting a closer look, both on campus and in the engineering and science community as a whole, is women.

On a national level, interest from high school students in science, technology, engineering, and mathematics (STEM) fields — which have been traditionally male-dominated — has fallen, raising the possibility of the United States lagging behind its international competitors in technological advancement in the future. American global preeminence in STEM fields can only be achieved by fully tapping the intellectual capital women have to offer, and the School of Mines is dedicated to addressing this ongoing concern.

The nation is seeing a continually widening gap between the number of STEM graduates and the number needed in the workforce. The solution to this problem requires not only enlisting more students in these fields, but also increasing the number of traditionally underrepresented students, thus providing a larger pool from which to recruit.

An important facet in increasing the representation of women in STEM fields is growing the presence of female faculty and administrators who can serve as role models and mentors. However, the face of STEM academics is predominately male. The percentage of female faculty in these areas is still lower than the percentage of women students or professionals in these fields.

Dr. **Andrea Surovek**, associate professor, civil and environmental engineering; Dr. **Jennifer Karlin**, associate professor, industrial engineering; and Dr. Sid Goss, professor, social science, have been awarded a National Science Foundation (NSF) ADVANCE IT Start Grant — funding that will support research to understand the status of women faculty in academic science and engineering.

The primary goal of this award is to determine the social, environmental, and attitudinal factors affecting the recruitment, retention, and advancement of women faculty in engineering and science at the School of Mines and other institutions of higher learning in South Dakota. From this data, Sorovek, Karlin, and Goss plan to develop strategies to increase the number of women recruited and retained at South Dakota institutions in science and engineering fields. As part of the ADVANCE IT Start Grant and in partnership with the provost's office, a workshop on best practices for search committees will be offered in the spring.

The workshop is designed to help search committees develop the strongest possible pool of talented applicants from which to hire new faculty and administrators. The workshops will also illuminate unintentional biases shared by both genders that can affect the hiring process.

"By better representing the workplace, and by providing more role models in diverse areas and at multiple levels of academic responsibility, there is a better opportunity to increase the number of science and engineering students and professionals simply by increasing the number of women who enter these fields of study," Surovek said.

Dr. **Karen Whitehead**, former provost and vice president, academic affairs, agrees that these types of role models can serve as inspiration. Whitehead recently retired from the School of Mines after a distinguished 28-year tenure in which she achieved the distinctions of serving as the university's first female department head, first female dean, and the first female vice president.

"In many cases, we look to people who are similar to us in some way for those role models and we feel more comfortable in approaching those who we feel might understand our experiences," Whitehead said. "For some women students, having female role models and knowing there are women professionals they can talk with is important. A campus climate that is simultaneously supportive and challenging, sensitive to differences, and fostering inclusion requires everyone's efforts."

As a source of support in reaching these goals, the School of Mines created the Women in Science and Engineering program (WISE), which focuses on recruiting, retaining, and advancing women students, faculty, and staff. The program, which was initially created to develop peer mentoring among women students, has expanded to promote interaction between students and those already in their careers, such as faculty, staff, alumni, and community professionals, providing the students with tools and support to be successful in academic and professional pursuits.

"Mines women of today have learned what it takes to be successful scientists and engineers," **Royia Decker**, WISE director, said. "The role modeling and mentoring that the faculty, staff, and community professionals offer enables our students to have the confidence to advance in their chosen professions."

Vucurevich Scholarships

The John T. Vucurevich Foundation has long had a reputation in Rapid City and beyond for its commitment to providing resources to the Black Hills region. The foundation, established in 1989 by John T. Vucurevich (Hon92), provides support to non-profit organizations in South Dakota that focus on arts, education, health and human services, housing, and transportation. The foundation also provides scholarships for critical shortage professions and retention of South Dakota's best students.

Over the years, the South Dakota School of Mines and Technology has been one of the fortunate benefactors of the generosity of both Mr. Vucurevich and the foundation through tremendous support for academic scholarships for School of Mines students. This tradition of support began in 1993, when Mr. Vucurevich established the John T. Vucurevich endowment, providing scholarship support for junior or senior students from South Dakota with a 3.00 or higher GPA. The endowment is providing support to 40 students in the 2009-10 academic year.

Although Vucurevich died in 2005, his legacy of educational support lives on at the School of Mines. In 2008, the John T. Vucurevich Foundation funded a number of additional scholarships, including $13,000 to support two of the best and brightest junior students selected by the School of Mines President. The foundation also funded $60,000 in additional scholarships, including $30,000 for South Dakota students and $30,000 for Native American students.

2009-10 Vucurevich scholarship recipients l-r: ***Derek Bankston*** *(ME, Aberdeen),* ***Dawn Henderson*** *(Sci, Rapid City),* ***Tully O'Leary*** *(ME, Eagle Butte),* ***Dakota Young*** *(IS, Rosebud), and* ***Matthew McGee*** *(IS, Butte, Mont.). Not pictured:* ***Russell Brehmer*** *(ME, Dupree).*

"Our Board of Directors places a great importance on education, especially in the STEM fields, and understands that scholarship funding is important to help students get their degree, especially in these economic times," Sandy Diegel, John T. Vucurevich Foundation executive director, said. "We are pleased to partner with the School of Mines to achieve these goals."

The support for Native American students echoes the renewed focus the School of Mines has placed on increasing diversity. Serving under-represented populations is an integral part of the university's vision, and to move this vision to reality, financial support is necessary. Native American students historically have higher financial need, and these scholarships significantly increase available resources and give these students the opportunity to pursue their educational goals.

The foundation will continue funding all scholarship programs in the 2009-10 academic year. The students receiving these scholarships for 2009-10 are **Derek Bankston** (ME, Aberdeen), **Russell Brehmer** (ME, Dupree), **Dawn Henderson** (Sci, Rapid City), **Matthew McGee** (IS, Butte, Mont.), **Tully O'Leary** (ME, Eagle Butte), and **Dakota Young** (IS, Rosebud).

"We are grateful to the Vucurevich Foundation for their support," **Rod Pappel** (ME77), SDSM&T Foundation president, said. "Their scholarship support helps all students, especially the under-represented populations, which in turn, increases campus diversity."

Students GEAR UP for an Exciting Future

A summer fixture on the South Dakota School of Mines and Technology campus, the South Dakota Gaining Early Awareness and Readiness for Undergraduate Programs (SD GEAR UP) Honors Program, returned in 2009 for the 17th consecutive year.

The purpose of this program, previously known as SKILL and NASA Honors, is to prepare Native American students to be successful in the college setting. During the six-week residential program, students live, eat, and attend classes on a campus, providing them with a true college experience.

School of Mines alumnus **Stacy Phelps** (ME96), GEAR UP project coordinator, has been involved in this program since its inception and was honored as a School of Mines Outstanding Recent Graduate in 2003. For his work with this program and other efforts, in 2009 Stacy was awarded a Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring (PAESMEM) from President Obama.

In 2009, the program grew to serve more than 220 students in grades 9-12 and several college students. Nearly two-thirds of the students were female, and approximately 85 percent of the students were Native American, with many of the students as potential first-generation college students. Of those students who graduate from the program, virtually 100 percent also graduate from high school, 87 percent attend college, and 9 percent enter the military. A middle school component had students in grades 6-8, along with their parents, visit for a few days to tour campus and learn about the programs available.

Students must apply to enter the competitive program and are selected based on academic achievement and teacher recommendations. Students represent all nine tribes in South Dakota: Cheyenne River, Crow Creek, Flandreau-Santee, Lower Brule, Oglala, Rosebud, Sisseton-Wahpeton Oyate, Standing Rock, and Yankton.

"SD GEAR UP provides students and their families a unique opportunity to participate in a rigorous and comprehensive college experience that has proven to be very successful with our target population. SD GEAR UP uses engaged experiences, partnerships, and curriculum to ensure students utilize their high school experience as a bridge to college," Phelps said. "The School of Mines continues to be a full partner in providing access to facilities, staff, and faculty that has become a cornerstone to providing a quality and enriching experience that improves the future of our students and our communities."

The rigorous curriculum includes math (algebra, trigonometry, pre-calculus, and college algebra), science (physical science, biology, chemistry, and physics, including laboratories), English, computers, and life skills (goal setting, leadership, study skills, personal finance, and college preparation).

In addition to hosting the program, the School of Mines interacts with the program in several ways. Faculty, staff, researchers, and administrators offer daily seminars to present topics on career exploration and

Continued on page 28

Black Hills Nanosystems

This summer, South Dakota School of Mines and Technology students scattered in search of real-life experience, working for more than 100 employers in 29 states, Europe, and Africa. However, many students — 41 percent, in fact — chose to stay in South Dakota to complete their co-ops and internships.

One company that has enticed several students to stay right here in their Rapid City backyard is a new addition to the city's business landscape, Black Hills Nanosystems, Corp. According to Robert Demersseman, managing director, the School of Mines serves as an important resource for the company.

"It's a great opportunity for Black Hills Nanosystems to be able to hire students from the School of Mines," Demersseman said. "The school educates their students to be able to go right into industry and hit the ground running, and it has been a successful partnership for us."

Gaining this hands-on experience also leads to success for the students. At Black Hills Nanosystems, they get to participate in work that is not only in demand by industry, but also guards the lives and safety of soldiers.

The company is in the business of developing nanotechnology-based safe-and-arm devices, which improve the safety and effectiveness of munitions. These devices currently cost $100 each or more, and Black Hills Nanosystems aims to cut the cost to three to five dollars each through innovative manufacturing and production processes, allowing these life-saving devices to be installed in more weapons.

In addition to hiring students, Black Hills Nanosystems has deeper ties with the university. Dr. **James Sears**, director of the Additive Manufacturing Laboratory at the School of Mines, serves as the company's chief technology officer. He has extensive experience in developing the technology behind the company's manufacturing processes and brings strong ties with United States Army and Navy contractors who support the development of these technologies.

Demersseman, former president of Rapid City Economic Development Partnership, points out another benefit the company brings to the table. By generating high-tech, well-paying jobs, Black Hills Nanosystems can entice graduates to stay in the area and attract others to relocate to the area. Through expenditures like housing, food, entertainment, and transportation, these employees and their families can infuse more money into the local economy.

"I'd like to be able to stay in the area, so working here is a great opportunity," School of Mines student **Kyle Krajewski** (ME, Rapid City) said. "The School of Mines has done a good job in giving me the foundation I needed to be able to actually apply what I learned, so this has been an easy transition for me."

For more information on Black Hills Nanosystems, Corp., visit <http://blackhillsnano.com>.

Students and alumni employed by Black Hills Nanosystems Corp:

Todd Aldren (ME, Rapid City)
Paxton Alsgaard (EE09)
Brandon Eisenbraun (ME, Yankton)
Nicholas Swanson (ME, Chaska, Minn.)
Kyle Krajewski (ME, Rapid City)
Korey Kelly (EE, Rapid City)
Alex Drewitz (ME, Summerset)

BLACK HILLS Nanosystems Corp.

School of Mines Awards First Mines Medal

Cindy Lee Van Dover, Ph.D., has been named the 2009 recipient of the South Dakota School of Mines and Technology's prestigious Mines Medal. The Mines Medal was established by School of Mines President **Robert A. Wharton**, Ph.D., to bring tribute and recognition to a leader in engineering or science.

"This award honors an individual for his or her exceptional, meritorious, or prestigious contributions toward understanding and resolving the technological challenges that impact society," Wharton said. "Dr. Van Dover's decades of deep sea research provide both a legacy of knowledge and a blueprint for further exploration and study. Her fearless exploration of the unknown makes her an ideal candidate for the Mines Medal."

Van Dover earned a bachelor's degree in environmental science from Rutgers University, a master's degree in ecology from the University of California, Los Angeles, and a Ph.D. in biological oceanography from the Massachusetts Institute of Technology and Woods Hole Oceanographic Institution.

Since 2006, Van Dover has served as chair and professor of Duke University's Division of Marine Sciences and Conservation and director of the Duke University Marine Laboratory. Prior to joining Duke University, she held positions at the College of William & Mary, the University of Oregon's Institute of Marine Biology, West Coast National Undersea Research Center, the University of Alaska Fairbanks Institute of Marine Science, and Woods Hole Oceanographic Institution. Van Dover also was a Fulbright Research Scholar at the French Research Institute for Exploitation of the Sea Centre located in de Brest, France.

Van Dover has conducted seminal research leading to the discovery and characterization of a geothermal source of light at deep-sea hydrothermal vents and the isolation of obligate photosynthetic organisms living on the seafloor. These discoveries have led to a new view of the potential for life elsewhere in the universe, as well as a new appreciation for previously unrecognized modes of photosynthetic life in both the deep sea and midwaters on this planet. Recently, she has contributed to the understanding of environmental consequences of potential offsets with respect to the mining of deep-sea minerals around hydrothermal vent sites in Southeast Asian waters. Van Dover also has the distinction of being the first and only woman to complete the rigorous training necessary to be an Alvin submarine pilot, diving to depths of more than 3,600 meters.

Van Dover has authored more than 100 peer-reviewed publications and has communicated her discoveries to the non-scientific population through magazine articles, radio, television, a podcast series detailing an ocean-borne expedition to Antarctica, and her autobiographical book, *The Octopus's Garden*. Van Dover is a Fellow of the American Association for the Advancement of Science and a member of the American Geophysical Union, the Oceanographic Society, and founder and international steering committee member of the Census of Marine Life.

"I commend the School of Mines for having the foresight to establish this special honor," South Dakota Governor Mike Rounds said. "It is admirable to recognize and reward those people who have distinguished themselves as national leaders in the fields of engineering and science."

The award was presented at a ceremony in Rapid City on October 14, 2009. The award medal was designed by the School of Mines and includes one ounce of gold. The award also includes a privately funded cash honorarium. For more information, visit <http://mines-medal.sdsmt.edu>.

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.

Aero Design West Competition

The School of Mines team captured fourth place overall at the competition. They also took first place in the design presentation and second place in report.

The team members: **Camdon Depaolo** (ME, Casper, Wyo.), **Matt Friederich** (ME, Parkston), **Andrew Hartman** (ME, Dickinson, N.Dak.), **Sam Hjelmfelt** (Phys, Rapid City), **Eric Husmann** (ME, Gardena, Calif.), **Katie Kellogg** (ME09), **Megan Mallett** (EE, Fargo, N.Dak.), **Eric Musil** (ME, Huron), **Lyndsey Penfield** (ME, Olds, Iowa), **James Tomich** (MetE, Farson, Wyo.), **Michael Pyle** (ME, Rapid City), **Tyler Sargent** (ME, Fargo, N.Dak.), **Daniel Stiver** (ME, Chamberlain), **Nick Swanson** (ME, Chaska, Minn.), and **Blake Woodward** (ME09).

American Institute of Chemical Engineers ChE Car Competition

The School of Mines' ChE car finished in third place at regionals, qualifying the team for the national competition, held in November 2009.

The team members: **Benjamin Bangasser** (ChE09), **Aaron Blender** (ChE, Grand Island, Neb.), **Elizabeth Gores** (ChE/Chem, Sioux Falls), **Travis Hoon** (ChE, Aberdeen), **Nathan Huft** (MetE, Pierre), **Amber Jerke** (ChE, Madison), **Matt Ladenburger** (ChE, Rapid City), **Jacob Moehring** (ChE, Sioux Falls), **Kyle Ratzlaff** (ChE, Lakeville, Minn.), **Phillip Squillace** (ChE, Rochester, Minn.), and **Spenser Wagner** (ChE/Chem, Sioux Falls).

American Society of Civil Engineers Student Conference

The School of Mines chapter finished first of 15 schools at the regional conference. The steel bridge team finished in second place overall, which qualified them for the ASCE national competition. The team also placed first in construction speed and first in economy. The concrete canoe team placed first in finished product and fourth overall.

The team members: **Paula Barker** (CE, Casper, Wyo.), **Aaron Blender** (ChE, Grand Island, Neb.), **Victoria Borchard** (CE, Pierre), **Corey Coggins** (EE, Beresford), **Cassandra Groen** (CE09), **John Job** (ME, New Town, N.Dak.), **James Kliewer** (CE, Mountain View, Okla.), **Phillip Knodel** (CE09), **Tony Kulesa** (CE, Warner), **Anneka LaBelle** (CE, Sturgis), **Chelsey Larmie-Rhoades** (CE, Rapid City), **Laura Lindblom** (CE, Gillette, Wyo.), **James MacCormack** (CE, Ashland, Ore.), **Brent Morford** (CE, Brandon), **Jesse Morris** (CE, Black Hawk), **Terri Morris** (CE09), **Bryce Persinger** (CE, Remsen, Iowa), **Eric Persinger** (ME, Remsen, Iowa), **Michelle Redmond** (CE09), **Ben Sampica** (CE09), **R.C. Scull** (CE, Rapid City), **Teresa Serie** (CE, Mitchell), **Karen Schaefers** (CE, Miller), **Michelle Stadel** (CE09), and **Chelsea Wattier** (CE, Conde). Also, Serie received second place for her non-technical paper and presentation, and Kliewer tied for fifth place for his technical paper and presentation.

American Society of Mechanical Engineers Human Powered Vehicle Challenge

The School of Mines placed third in the utility race event. This was the team's first attempt at this event. They also placed 13th in sprint and

16th in endurance and design.

The team members: **Alex Baldwin** (ME, Rapid City), **Jenika Bishop** (ME, Rock Springs, Wyo.), **Owen Britton** (ME, Bismarck, N.Dak.), **Paul Cooney** (ME, Holstein, Iowa), **Tyler Engberg** (ME08), **Phil Gardner** (ME, Moorhead, Minn.), **Mike Hoyme** (ME, Pierre), **Andrea Kramer** (ME, Soda Springs, Idaho), and **Sam McBride** (ME, Spearfish).

American Society of Mechanical Engineers Student Competition

The School of Mines' rock retriever team placed second out of 28 registered teams during the competition.

The team members: **Don DeGooyer** (EE09), **Scott Quiett** (ME, Gettysburg), **Lisa Robinson** (ME, Gettysburg), and **Brandon Smith** (ME09).

Association for Computing Machinery (ACM) Regional Competition

Four School of Mines teams competed against more than 200 teams, placing 17th, 22nd, 28th, and 54th.

The team members: **Tony Amundson** (CEng/EE08), **Roderick Carroll** (CSc08), **Matt DesEnfants** (CSc, Clear Lake), **Melody Dodd** (Math, Rapid City), **Randy Foudray** (CSc, Box Elder), **Michael Janes** (CSc/Math, Torrington, Wyo.), **Josh Job** (CSc09), **Don Lampert** (M.S. CSci, Rapid City), **Jake Oursland** (CSc/Math, Rapid City), **Lisa Rebenitsch** (CSc09) , **Jordan Ritz** (CSc, Mandan, N.Dak.), and **Ben Swan** (CEng09).

Baja Society of Automotive Engineers Oregon Competition

The School of Mines' underclass vehicle placed fourth and the senior vehicle placed 11th overall against nearly 100 registered cars. The underclass team also placed second in design report and

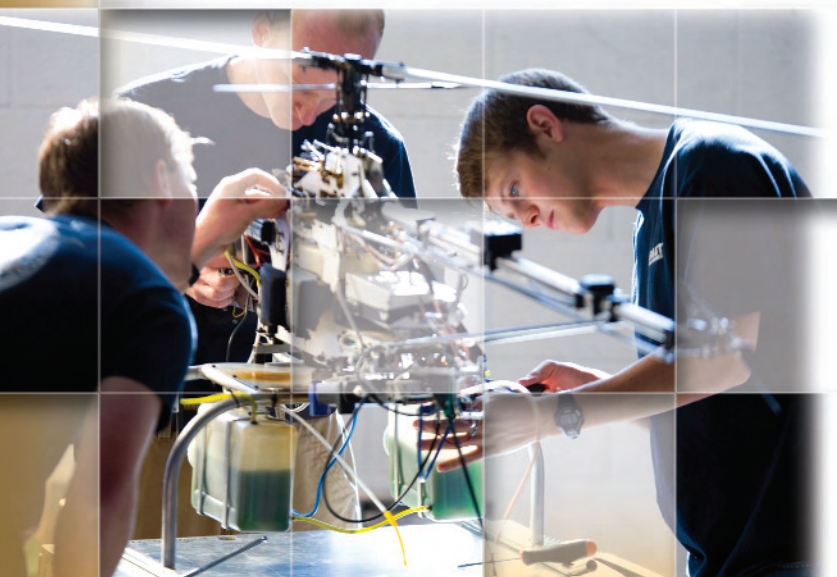
fourth in cost, and the senior team took fourth in design report, fifth in overall design, sixth in cost, seventh in acceleration, eighth in endurance, and ninth in presentation.

The team members: **Ayla Brausen** (MetE, Ipswich), **Bret Dahme** (ME, Aberdeen), **Cody Egle** (ME, McCook, Neb.), **Terrence Ernesti** (ME, West Point, Neb.), **Ben Franchuk** (ME, Dickinson, N.Dak.), **Chris George** (ME, Huron), **Shane Grimme** (ME, Yankton), **Mark Hughes** (ME, Huron), **Amery Kuhl** (ME09), **Mike Noteboom** (ME, Pella, Iowa), **Kris Olson** (ME, Snohomish, Wash.), **Ethan Reed** (ME, Pleasant Dale, Neb.), and **Cigi Steiger** (ME, Glenham).

International Aerial Robotics Competition

The School of Mines' unmanned aerial vehicle team finished in fourth place overall at the competition. They also received an award for best presentation and took second place in the journal paper and T-shirt design competitions.

The team members: **Raunaq Bhushan** (IE09), **Travis Ducheneaux** (ME, Marion), **Dan Halloran** (CEng, Grey Eagle, Minn.), **John Heiberger** (ME, Rapid City), **Adam Helmers** (EE, Rapid City), **Brian Jensen** (IE, Rapid City), **Erik Kaitfors** (ME, Spearfish), **Richard Murtland** (CEng, Pierre), **Jake Oursland** (CSc/Math, Rapid City), **Mason Pluimer** (EE,



Team Successes

Rapid City), **Thomas Simpson** (CEng, Box Elder), **Jamie Vickery** (EE, Luverne, Minn.), and **Justin Williamson** (M.S. ME, Yankton).

Institute of Electrical and Electronics Engineers Region 5 Competition

The School of Mines team entered two robots, eventually capturing sixth place overall out of nearly 30 teams.

The team members: **Tony Adams** (CEng09), **Brady Begeman** (CEng, Mahtomedi, Minn.), **Mark Cullison** (ME, Sioux Falls), **Ian Hibbard** (CEng, Sioux Falls), **Garrett Kirkpatrick** (EE, Chamberlain), **Ryan Kroetch** (EE09), **Colton Manville** (CSc, Lyman, Neb.), **Andrew McGuire** (CEng, Sioux Falls), **Scott Morris** (CEng, Belle Fourche), **Jeff Olsen** (CEng, Rochester, Minn), **Andrew Sell** (EE, Delano, Minn.), and **Joe St. Amand** (CSc, Waconia, Minn.).

Mathematical Contest in Modeling

The School of Mines team led South Dakota in the competition, receiving an honorable mention. More than 1,000 teams from more than 14 countries participated in the competition.

The team members: **James Haiston** (CSc, Rapid City), **Lara Heiberger** (Math, Hermosa), and **Mark Pengitore** (Math, Corsica).

National Timber Bridge Competition

The team matched up against 15 teams from across the United States and Canada during the competition, taking first place in most innovative design. The team also received second place in most aesthetic design.

The team members: **Stephen Perez** (CE09) and **Darrell Utter** (CE09).

National Workplace Innovation & Design (NISH) Competition

The School of Mines team received an honorable mention in the competition, which was founded by NISH to encourage the development of creative technological solutions for barriers that prevent people with disabilities from entering or advancing in the workplace. This is the second year that a School of Mines team has received national recognition in this competition.

The team members: **Jered Martin** (IE09), **Reid Sorenson** (ME, Yankton), **Chris Setera** (ME09), **James Pulaski** (IE09), and **Casey Ritz** (ME09).

SAE Clean Snowmobile Competition

The School of Mines' alternative fuel vehicle placed fifth overall at the competition. The team also took third place in the design paper event.

The team members: **Tom Clay** (ME, Rapid City), **Erik Engelmeyer** (EE, Alexandria), **Justin Griesinger** (IE, Apple Valley, Minn.), **Jake Kraemer** (EE09),and **Kyle Krajewsky** (ME, Rapid City).

Supermileage SAE Competition

The newest addition to the CAMP program, the Supermileage SAE team placed third in design report and tied for third place overall in design. The team placed 17th overall out of 45 registered teams.

The team members: **Brian Atnip** (ME09), **Jeff Comrie** (ME09), **Todd Curtis** (ME, Wall), **Trent Odenbach** (ME, Burke), and **Isaac Williams** (ME, Pierre).

Waste Energy Research Consortium National Environmental Design Contest

The School of Mines team participated in the competition, developing an innovative and cost effective methodology for pretreatment of inland brackish waters for eventual desalination.

The team members: **Ross Hardy** (EnvE09), **Dan Knispel** (EnvE09), **Janile Lewis** (EnvE, Spicer, Minn.), **Laura Porath** (EnvE09), and **Teal Tompkins** (EnvE/CE, Bremerton, Wash.).

School of Mines Celebrates 125 Years

INVENT TOMORROW

125th Anniversary

1885–2010

Founded in 1885, the South Dakota School of Mines and Technology has a proud heritage of excellence in preparing graduates to serve as leaders in engineering and science. In 2010, the university will reach an important milestone — 125 years of award-winning faculty, staff, and students collaborating to solve issues of critical importance to South Dakota, the nation, and the world. The School of Mines invites students, alumni, and the community to join us as we celebrate our legacy of educating the leaders of tomorrow.

The year of celebration will start with a Campus Kick-Off in January 2010 and continue with events throughout the year.

Please visit **<http://125.sdsmt.edu>** for more information on how you can participate.

Student Spotlight

Student Named AISES Representative

Adam Dell (IS, Rapid City) has been named the Region 5 Representative to the American Indian Science and Engineering Society (AISES). In this role, Dell is responsible for coordinating communication between the region's chapters and the national organization. Region 5 includes chapters from Canada, Iowa, Illinois, Upper Michigan, Minnesota, Nebraska, North Dakota, South Dakota, and Wisconsin. Founded in 1977, AISES aims to substantially increase the representation of American Indian and Alaskan Natives in engineering, science, and other related technology disciplines through financial, academic, and cultural support from middle school through graduate school.

Students Receive Grant To Fund Senior Project

Three School of Mines students have been awarded $25,000 to pursue a senior design project on multi-touch applications for K-12 education. The students, **Jaelle Scheuerman** (CSc, Rapid City), **Robyn Krage** (CSc, Aberdeen), and **Lori Rebenitsch** (CEng/Phys, Bismarck, N.Dak.), will work under the direction of Dr. **Antonette Logar** (CSc85), professor, mathematics and computer science, to construct a multi-touch system and develop a framework for educators upon which applications can be developed.

The project, "An Open Toolset for Creating Educational Tools for Multi-Touch Surfaces," is funded by Computing Research Associates — Women (CRA-W) and will provide support for the three students for the academic year as well as funding for equipment and travel.

Students Named Tau Beta Pi scholars

Nine School of Mines students have been named Tau Beta Pi Scholars for the 2009-10 academic year. All Tau Beta Pi Scholarships are awarded on the competitive criteria of high scholarship, campus leadership and service, and promise of future contributions to the engineering profession. The students: **Stephanie Allred** (IE, Meeteetse, Wyo.), **D'Ann Barker** (EE/Phys, Pierre), **Travis Ducheneaux** (ME, Marion), **Kyle Hansen** (CE, Rapid City), **John Heiberger** (ME, Rapid City), **John Heine** (CE, Hartington, Neb.), **Craig Oeding** (EE, Luverne, Minn.), **Patrick Satchell** (IE, Milford, Neb.), and **Evan Waddell** (ChE, Indianola, Iowa). In addition, **Brady Wiesner** (CE09) and **Josh Hammell** (ME09) have been selected to receive $10,000 graduate fellowships for the 2009-10 academic year. **Kathryn Kellogg** (ME09) has been named a Laureate by Tau Beta Pi. This program recognizes gifted engineering students who have excelled in areas beyond their technical majors.

Student takes trophy in national weather forecasting contest

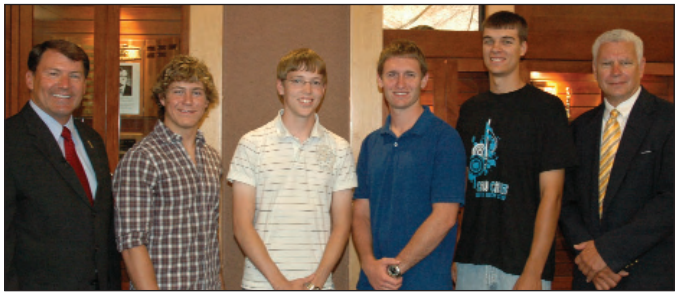
The Department of Atmospheric Sciences at the School of Mines has participated in the WxChallenge nationwide forecasting contest since 2006. WxChallenge, developed and managed by the University of Oklahoma, tests the forecasting skills of students and faculty from participating colleges and universities across the nation.

*Best Forecaster winner **Lisa Phillips** (IS ATM, White Bear Lake, Minn.)*

During the 2008-09 academic year, the School of Mines forecast team, consisting of seven undergraduate and graduate students and one faculty member, ranked 37th overall out of 78 participating universities. In addition, **Lisa Phillips** (M.S. ATM, White Bear Lake, Minn.) received an individual trophy for best forecaster in her division for New York City, New York.

Students at the DUSEL

Travis Hoon (ChE, Aberdeen) and **Tyler Vogel** (IE/Phys, Rapid City) are two of 11 students selected as Davis-Bahcall Scholarship recipients for 2009. These scholarships, funded by 3M, allow for a five-week study program that will take the students to the Sanford Laboratory at Homestake, Gran Sasso National Laboratory in Italy, and Princeton University in New Jersey.



*South Dakota Governor Michael Rounds, **Tyler Vogel** (IE/Phys, Rapid City), **Jeremy Simon** (EE, Aberdeen), **Travis Hoon** (ChE, Aberdeen) **Brandon Soulek** (CE, Armour) and School of Mines interim Provost and Vice President for Academic Affairs Dr. **Duane Hrncir**.*

Jeremy Simon (EE, Aberdeen) and **Brandon Soulek** (CE, Armour) were selected as recipients of the Summer Science Scholarship. Both visited the Sanford Laboratory at Homestake for one week, followed by weeklong visits to Brookhaven National Laboratory in Upton, New York, for Simon, and to Fermilab, near Chicago, for Soulek.

Campus Briefings

School of Mines Named Military Friendly School

G.I. Jobs magazine has named the South Dakota School of Mines and Technology a Military Friendly School for 2010. This honor ranks the university in the top 15 percent of all colleges, universities, and trade schools nationwide.

Professor Awarded Fourth Patent

Dr. **Vojislav Kalanovic**, professor, mechanical engineering, has been officially awarded Patent No. 7,501,603 B2 by the U.S. Patent and Trademark Office. The issued patent enables an ease of physical configuration of the Flexible Robotic Environment (FRE) systems. FRE is a robotic solution that combines mechanical and motor/drive components with proprietary hardware, software, and controls from Control Systems Technologies, LLC, a company owned and operated by Kalanovic. This recognition is the fourth consecutive U.S. patent awarded to Kalanovic in the area of robotics and automated manufacturing.

School of Mines Hosts Girls Day

More than 200 middle school girls participated in the Sixth Annual Girls Day at the School of Mines this spring. The special, school-day campus event was designed to introduce young women in middle school to careers in STEM (science, technology, engineering, and mathematics). Girls participated in hands-on activities as well as heard inspiring and encouraging messages about pursuing careers in these areas. School of Mines faculty and student volunteers helped participants build marshmallow bridges, learn about decorative blacksmithing and perpetual calendars, experience cryogenic chemistry, and more.

Professor Elected Fellow of Explorers Club

Dr. **James E. Martin** (Geol71), professor, geology and geological engineering and executive curator, Museum of Geology, has been elected as a Fellow of the Explorers Club. The Explorers Club is an international, multidisciplinary professional society dedicated to the advancement of field research and preserving the instinct to explore. As a Fellow, Martin is recognized for having made documented contributions to exploration or scientific knowledge. He was nominated by School of Mines President **Robert A. Wharton**, Ph.D., who is also a Fellow of the Explorers Club.

Professor Elected To Research Council

Dr. **Andrea Surovek**, associate professor, civil and environmental engineering, was recently elected to the executive committee of the Structural Stability Research Council (SSRC) for a three-year renewal term. SSRC was founded in 1944 and offers guidance to specification writers and practicing engineers by developing both simplified and refined calculation procedures for the solution of stability problems and assessing the limitations of these procedures.

Professor Selected For Workshop

Dr. **Damon Fick**, assistant professor, civil and environmental engineering, was chosen to participate in the 2009 ExCEEd (Excellence in Engineering Education) workshop at Northern Arizona University in July. ExCEEd workshops, offered by the American Society of Civil Engineering for the last 10 years, are a six-day practicum that provides engineering educators with an opportunity to improve their teaching abilities. The workshop focused on basic skills and included seminars addressing the principles of effective teaching and learning, learning styles, classroom assessment techniques, and more.

Professor Named ASEE Fellow

Dr. **Duane Abata,** executive director, Center for Bioenergy Research and Development, has been named a Fellow of the American Society for Engineering Education (ASEE). This honor is conferred upon active ASEE members of at least 10 years in recognition of their outstanding contributions to engineering or engineering technology education. Founded in 1893, ASEE is a nonprofit organization of individuals and institutions committed to furthering education in engineering and engineering technology.

Shuman Named Emerging Leader

Kelli Shuman, assistant director, human resources, has been named an emerging leader by the College and University Professional Association for Human Resources (CUPA-HR) and invited to attend the annual Association Leadership Program (ALP). Individuals invited to participate in the ALP

Campus Briefings

include incoming leaders from the national, regional, and chapter levels. In addition, one emerging leader selected by the region board is invited to attend. Shuman was nominated as an emerging leader in the Midwest Region by Nancy Grassel, director of Human Resources at Black Hills State University and incoming Chair-Elect for the Midwest Region.

School of Mines Professor Pamed AIChE Fellow

Dr. **Jan Puszynski**, professor, chemical and biological engineering, has been named a Fellow of the American Institute of Chemical Engineers (AIChE). The grade of Fellow identifies tenured AIChE members who have made significant contributions to the chemical engineering profession. They must have at least 25 years in the profession and have been a member of AIChE for at least 10 years.

GEAR UP
Continued from page 19

personal development. Mini-courses are taught on a wide variety of topics to interested students with a hands-on, engaging approach. Tours are provided in the many labs across the campus. Seniors participate in shadowing experiences with a professional in their fields of interest.

"The interaction between the program and School of Mines faculty and staff has grown considerably over the years — and there is virtually no upper limit to where that involvement can grow," Dr. **Carter Kerk**, professor, industrial engineering, and assistant to the provost for Native American initiatives, said. Kerk also serves as the School of Mines campus liaison for the SD GEAR UP program. "It is an honor to interact with these students and hopefully turn some of them into scientists, mathematicians, and engineers to solve the many challenges facing our society."

Sign up now for School of Mines news updates!

If you can't wait for the next issue of the *Hardrock* to get your School of Mines news, sign up to receive news and other updates through RSS feeds or by e-mail.

More information is available at <http://news.sdsmt.edu/rss/>

Research Awards

The South Dakota School of Mines and Technology 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 investigators received 92 awards totaling nearly $21 million during the 2009 fiscal year, the highest amount in the history of the university and more than double the $10.1 million received in Fiscal Year 2008. The funding came from many different agencies, including the National Science Foundation, Department of Energy, Department of Defense, NASA, State of South Dakota, and many more.

Dr. **Scott Ahrenkiel**, assistant professor, nanoscience and nanoengineering, received $15,000 in additional funding from the U.S. Department of Energy EPSCoR for the project, "Lattice-Mismatched III-V Epilayers for High-Efficiency Photovoltaics."

Dr. **Dimitris Anagnostou**, assistant professor, electrical and computer engineering; Dr. **Keith Whites** (EE86), professor and Steven P. Miller Chair, electrical and computer engineering; and Dr. **Thomas Montoya** (EE87), assistant professor, electrical and computer engineering, received $224,000 from the United States Department of Defense —Army Research Office for the project, "Acquisition of a Vector Network Analyzer for the Development of a Reconfigurable Antenna Measurement Platform."

William Arbegast, director, Advanced Materials Processing and Joining Laboratory (AMP); Dr. **Antonette Logar** (CSc85), professor, mathematics and computer science; and Dr. **Michael West**, assistant professor, materials and metallurgical engineering, received $8,000 in additional funding from the National Science Foundation for the project, "Friction Stir Processing Industry/University Cooperative Research Center."

Arbegast also received $89,833 in additional funding from the Friction Stir Processing Industry/University Cooperative Research Center Memberships for the project, "Design, Analysis, and Performance of 'Built-Up' Aluminum Friction Stir Welded (FSW) and Friction Stir Spot Welded (FSSW) Structures;" $345,936 from the South Dakota Board of Regents for the project, "Repair, Refurbish, and Return to Service — Applied Research Center (R3S-ARC);" and $50,166 in additional funding for the project, "Intelligent Process Control System Algorithms for Aluminum and Steel Friction Stir Welding."

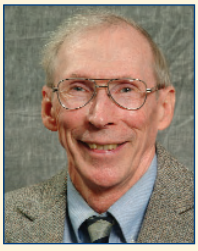
Dr. **Sookie Bang**, professor, chemical and biological engineering, and Dr. **Sangchul Bang**, professor, civil and environmental engineering, received $7,939 in additional funding from the National Science Foundation for the project, "Microbial Dust Suppression/National Science Foundation."

Dr. **Lew Christopher**, director, Center for Bioprocessing Research and Development, received $500,000 in additional funding from the Board of Regents for the project, "Center for Bioprocessing Research and Development."

Dr. Christopher and Dr. **Rajesh Sani**, assistant professor, chemical and biological engineering, received $37,510 from the U.S. Department of Energy — Energy Efficiency & Renewable Energy for the project, "Transforming and Densifying Biomass in Regional Biomass Processing Center (RBPC)."

Dr. **William Cross** (MetE84), associate professor, materials and metallurgical engineering, received $27,397 from the National Aeronautics Space Administration for the project, "Development, Characterization, and Evaluation of Lunar Regolith and Simulants/National Aeronautics Space Administration."

Dr. **Arden Davis** (GeolE79), professor, geology and geological engineering; Dr. **David Dixon** (ChemE78), professor, chemical and biological engineering; and Dr. **M.R. Hansen** (CE69), professor, civil and environmental engineering, received $12,131 from the U.S. Geological Survey for the project, "Acidic Leaching Tests to Determine Arsenic Mobility from Concrete-Encapsulated Limestone Waste."



Dr. **Andrew Detwiler**, professor, Institute of Atmospheric Science, received $51,589 from the National Science Foundation for the project,

"Intergovernmental Personnel Act Assignment — Detwiler."

Dr. **David Dixon**, professor, chemical and biological engineering, and Dr. **Duane Abata**, executive director, Center for Bioenergy Research and Development, received $99,000 in additional funding from the National Science Foundation for the project, "I/UCRC Center for Bioenergy Research and Development."

Dr. **Edward Duke**, manager of analytical services, Engineering and Mining Experiment Station, and professor, geology and geological engineering, received $50,000 in additional funding from the National Aeronautics and Space Administration (NASA) for the project, "South Dakota Space Grant Consortium." Duke also received $50,000 in additional funding from NASA for the project, "South Dakota NASA EPSCOR Research Infrastructure Development Program."

Dr. **John Helsdon**, dean, graduate education, received $45,500 in additional funding from the National Science Foundation for the project, "Graduate Research Fellowship Program."

Dr. **Stanley Howard**, professor, materials and metallurgical engineering; Dr. **Haiping Hong**, research scientist III, materials and metallurgical engineering; and Dr. **Andre Petukhov**, head and professor, physics, received $190,003 from the South Dakota Board of Regents for the project, "2010 Center for Ultra-low Background Experiments."

Dr. **Scott Kenner (CE77)**, professor, civil and environmental engineering, received $6,000 in additional funding from the West River Water Development District for the project, "Lower Cheyenne River, TMDL Assessment Project."

Dr. **Carter Kerk**, professor, industrial engineering and engineering management, and Dr. **Stuart Kellogg** (EE82), head and Pietz Professor, industrial engineering and engineering management, received $15,000 from the National Science Foundation (NSF) for the project, "Bridges to Success." Kerk also received $12,200 from the NSF for the project, "All Nations Louis Stokes Alliance for Minority Participation — SDSM&T Liaison."

Dr. **Charles Kliche** (MinE74), professor, mining engineering and management, and **Shashi Kanth** (M.S. MineE93), head and instructor, mining engineering and management, received $58,396 from the United States Department of Labor — Mine, Safety, and Health Administration for the project, "Mine Safety and Health Administration (MSHA) State Grant 2009."

Dr. **Donna Kliche** (M.S. Mtro90), research scientist III, Institute of Atmospheric Sciences, received $82,562 from the National Science Foundation for the project, "EAGER: Preliminary Work for the Development of the Next-Generation Storm-Penetrating Aircraft."

Dr. **James Martin** (Geol71), professor and paleontology program coordinator, geology and geological engineering, and curator of vertebrate paleontology, Museum of Geology, received $24,999 from the U.S. Department of Army — U. S. Army Corp. of Engineering for the project, "Paleontological Work on Lake Francis Case/Fort Randall Project." Martin also received $2,000 from the United States Department of Interior — Bureau of Land Management for the project, "Fossil Lake Specimen Collection and Study."

Dr. **Dana Medlin**, Nucor Professor, materials and metallurgical engineering, and Dr. **Jon Kellar** (MetE84), head and Fuerstenau Professor, materials and metallurgical engineering, received $92,997 in additional funding from Radiance Technologies, Inc. for the project, "Advanced Electronic Rosebud Integration (AERI) Research and Development Program."

Dr. Medlin also received $20,303 from Radiance Technologies for the project, "Assessment of Reballing Methods for Ball Grid Array (BGA) Devices/Radiance Technologies."

Dr. **Todd Menkhaus**, assistant professor, chemical and biological engineering, and Dr. **Hao Fong**, associate professor, chemistry, received $12,000 in additional funding from the National Science Foundation for the project, "Fabrication and Bioseparation Studies of Adsorptive Nanofelts Made from Electrospun Cellulose and/or Carbon Nanofibers."

Dr. **Henry Mott** (CE73), chair and professor, civil and environmental engineering, received $97,500 in additional funding from the U.S. Geological Survey for the project, "USGS National Water Quality Assessment Project in South Dakota."

Dr. **Andre Petukhov**, professor and head, physics, received $15,000 in additional funding from the National Science Foundation for the project, "Spintronic Devices Enabled by Semiconducting Boron Carbide."

Dr. **Jan Puszynski**, professor, chemical and biological engineering, received $24,563 from United States Department of Defense — Office of Naval Research for the project, "Coating of Temperature Sensitive Crystals or Particles with Aluminum." Puszynski also received $3,000 from Black Hills Power and Light for the project, "HydroTech Hill City Well Arsenic Testing."

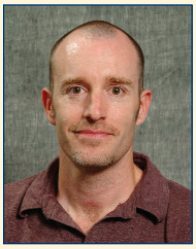
Dr. **William Roggenthen** (GeolE69), professor, geology and geological engineering, received $5,230,370 in additional funding from the National Science Foundation for the project, "Deep Underground Science and Engineering Laboratory (DUSEL) Site Selection and Technical Design Development."

Dr. **Rajesh Sani**, assistant professor, chemical and biological engineering; Dr. **Lew Christopher**, director, Center for Bioprocessing and Development; and Dr. **David Dixon**, professor, chemical and biological engineering, received $25,875 from the KL Energy Corporation for the project, "Development of a Thermostable Enzyme Cocktail for Rapid Release of Fermentable Sugars from Lignocellulosic Materials/KL Energy Corporation."

Sani also received $156,333 in additional funding from the U.S. Department of Energy for the project, "Biogeochemical Mechanisms of Nanocrystalline Uraninite Oxidation by Fe(III)-(hydr)oxides."

Dr. **James Sears**, director, Additive Manufacturing Laboratory (AML), received $127,175 from the Black Hills Nanosystems Corporation for the project, "Safe-and-Arm Devices for the U.S. Army." Sears also received $50,000 from Lockheed Martin Aeronautics for the project, "Deposition Technique Development," and $24,731 from the National Science Foundation for the project, "Rock-Rapid Optimization of Commercial Knowledge for Army Vehicles."

Sally Shelton, collections manager, Museum of Geology, and instructor, geology and geological engineering, received $14,700 from the U.S. Department of Interior — National Park Service — Badlands National Park for the project, "Curatorial Backlog of Museum Specimens, Badlands National Park."



Dr. **James Stone**, associate professor, civil and environmental engineering, received $22,603 in additional funding from the U.S. Environmental Protection Agency for the project, "Statewide Mercury TMDL Assessment Project."

Dr. **P.V. Sundareshwar**, assistant professor, Institute of Atmospheric Sciences, received $10,000 from the State of Oklahoma — University of Oklahoma for the project, "31P NMR Analyses of Playa Wetlands."

Dr. **Michael Terry**, assistant professor, geology and geological engineering, received $10,900 from the West River Water Development District for the project, "Preparation of a Geological Map and Fracture Analysis of Major Rock Types Using the Laser Scanning Technique, Rochford Quadrangle, (1:24,000), Pennington County, South Dakota."

Dr. **Michael West**, assistant professor, materials and metallurgical engineering, and Dr. **Jon Kellar**, head and Fuerstenau Professor, materials and metallurgical engineering, received $220,500 from the National Science Foundation for the project, "REU Site: Back to the Future."

Dr. **Keith Whites**, professor and Steven P. Miller Chair, electrical and computer engineering; **Anthony Amert** (EE04), research engineer II, electrical and computer engineering; and Dr. **Dimitrios Anagnostou**, assistant professor, electrical and computer engineering, received $6,000 in additional funding from the National Science Foundation for the project, "Multi-Scale Artificial Dielectric Materials and Their Applications." Whites and Amert also received $70,000 from BerrieHill Research Corporation for the project, "An Integrated Computational/Measurement Technique for Accurate Electromagnetic Characterization of Materials."

Dr. **Zhengtao Zhu**, assistant professor, chemistry, received $40,000 from the Research Corporation for the project, "Probing the Interactions Between Conjugated Polymer and ZnO Nanostructure Through Nanostructure Surface Engineering."

Sioux Falls and Mitchell, South Dakota — Master Chorale

Dr. James Feiszli, director of music at the School of Mines, conducted the student Master Chorale on the road last spring for a few performances, including alumni events in Sioux Falls and Mitchell. Alumni President **Ralph Wagner** (CE75) and Executive Vice President **Paul Gnirk** (MinE59) joined the entourage, along with Foundation Representative **David Gnirk** (ME74) and Alumni Director **Tim Vottero** (Chem84).

Master Chorale in Mitchell. Front row (l-r): ***Michelle Kringen*** *(IE, Big Lake, Minn.),* ***Victoria Looyenga*** *(Chem, LeMars, Iowa)* ***Emily Lawin****, (IE, Long Prairie, Minn.),* ***Taylor Longville*** *(IS, Rapid City), and* ***Jessi Mysliwiec*** *(IS, Sturgis); rear (l-r):* ***Ryan Hopfinger*** *(EE, Aberdeen),* ***Joseph Cass*** *(CSc/Math, Sturgis),* ***Evan Hoglund*** *(ME, Lakeville, Minn.),* ***Garrett Monson*** *(CE, Lake Crystal, Minn.), and* ***Christopher Weyer*** *(CEng, Sturgis)*

Mitchell alumni, guests, and Master Chorale students

We appreciate the efforts and arrangements made by **Jim Belbas** (MetE90) in Sioux Falls and **Keith Beck** (EE90) in Mitchell. Special thanks go to the students of the Master Chorale for giving up their weekend to entertain alumni and friends across the state. School of Mines music ensembles have received national and international recognition with their appearances at professional music conferences, music competitions, and festivals, and at such venues as the National Cathedral in Washington, D.C.

Jim Belbas *(MetE90),* ***Paul Gnirk*** *(MinE59), and* ***Ralph Wagner*** *(CE75) in Sioux Falls*

Hilton Head, South Carolina — Lady Hardrocker Reunion

Twelve Lady Hardrockers met March 25-29, 2009, in Hilton Head, South Carolina, for a rockin' weekend. The ladies enjoyed great food, sand between their toes, bike rides, and wonderful memories.

Lady Hardrocker Reunion. Front row (l-r): ***Karen (Janovy) Willett*** *(EE96),* ***Erin Cihak*** *(IE94),* ***Barb (Spriggs) Multari*** *(IE95),* ***Trisha (Langely) Ludeman*** *(MetE95), and* ***Steph Law*** *(ChE93); middle row (l-r):* ***Darci (Birkeland) Schweitzer*** *(IE94) and* ***Kate (Lidke) Pauly*** *(GeolE94); back row (l-r):* ***Paige (Marshall) Hilton*** *(ChE95),* ***Jody (Russ) Titze*** *(CE94),* ***Maria (Fossum) Cadwallader*** *(IE96),* ***Leah Novicki*** *(CE96), and* ***Beth (Kramer) Stafford*** *(ChE96)*

Rapid City, South Dakota — West Hills Village

West Hills Village invited School of Mines President **Robert A. Wharton**, Ph.D., to an informal social and to present information regarding the status of campus activities. Several residents of West Hills, including alumni and interested guests, gathered to meet President Wharton and other representatives from campus. Afterward, there was a question and answer time when residents inquired about our students, tuition and fees, construction, and higher education in South Dakota. There are many residents of West Hills active in the community and this was a great opportunity to bring some news from campus.

School of Mines students, alumni, and friends at West Hills Village

Phoenix, Arizona — Mines Masters

In 50 to 100 years, School of Mines alumni may reflect on this fateful April day in Phoenix when the inaugural "Mines Masters" was first played. Its beginning, although with a limited field in keeping with the "Masters" tradition, may be considered small and humble by some standards, but may well mushroom into one of the most prestigious golf events in all of Mines history.

Mines Masters players and gallery

Many thanks go to the efforts of a three-time NAIA national golf participant, Hardrocker Hall-of-Famer, and esteemed alumnus **Mark Lux** (MinE80) and his Iowa-born spouse, Jan. They negotiated great rates for golf and dinner, drafted an announcement, made several phone calls, organized the silent auction (raising four figures for the Hardrock Club), housed and fed the Alumni Association president (at no charge), devised and conducted a closely-contested event, took photos, and awarded the winning team their "Green T-shirts" (in keeping with the Masters tradition).

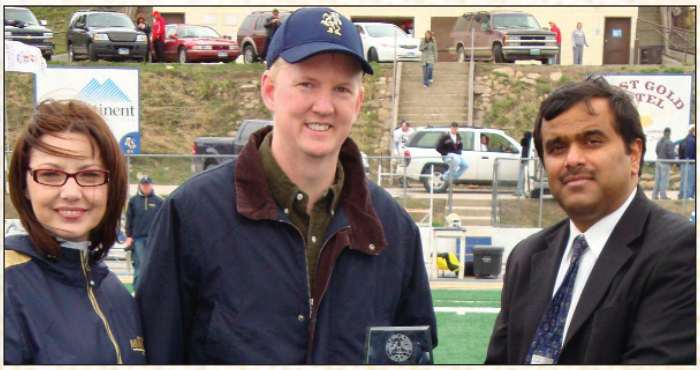
Rapid City, South Dakota — Alumni Weekend

Despite a spring snow squall (one of several in April), the Alumni Weekend was another success in welcoming back graduates and friends for several events on campus. The School of Mines football team forced seven turnovers to post a 28-0 defeat of the Mines alumni team at the annual spring alumni game. Forty-year-old linebacker **Ron Williams** (CE92) has been playing on the alumni team since graduating, and he and the rest of the defense played a hard-fought game against the younger, larger varsity squad. In addition, 2009 Hardrocker Hall of Fame inductee **Lance Mriden** (ME84) has also been instrumental in supporting the annual alumni/varsity game, having never missed the event since his graduation as well. Another 80s graduate, **Randy Baker** (MinE86), was in the mix for festivities. So, thanks to program chair **Shashi Kanth** (M.S. MinE93) and nominator **Larry Simonson** (EE69), Randy's 2008 Distinguished Alumni Award was presented during halftime on the field, since he could not attend graduation in December to receive the honors.

***Ralph Wagner** (CE75), **Duff Erickson** (MinE55), and Chuck Wagner*

*"Four Horsemen" — **Mike Mueller** (ME85), **Al Baue** (MinE82), **Rick Wass** (IS96), and **Ralph Wagner** (CE75)*

Alumni and coaches braving the snow (in April!)



*Dottie and **Randy Baker** (MinE86) receiving his Distinguished Alumni Award from **Shashi Kanth** (M.S. MinE93)*

The annual Spring Concert and "After Hours" also welcomed alumni guests to this wonderful performance of music and song. The School of Mines Concert Choir and Symphonic Band performed at the Rushmore Plaza Civic Center, and the "After Hours" performance included a special tribute to retiring Provost Dr. **Karen Whitehead.**

Alumni take a commanding lead (or not) with some scoreboard help

*Spring Concert — "After Hours" tribute to Dr. **Karen Whitehead***

During the concert, it was also announced that a scholarship was established at the Foundation in her name. This weekend continues to be a great annual gathering of alumni and friends coming back to campus for a few days of fun.

Pierre, South Dakota — Annual Smelt Hunt

Pierre alumni and friends gathered for the annual smelt hunt, including alumni from the South Dakota Department of Environment and Natural Resources, despite the presence of rain and snow on a mid-afternoon during a late April weekend. Once Mother Nature finished with her precipitation, she decided to provide a calm cool night. As the night progressed, approximately 70 adults and children sat around the fire, played on the beach, and visited while they devoured onion rings, barbecued buffalo, pork loin, shrimp, antelope, pheasant, stuffed

*Pierre 'potato peeler' **Dan Painter** (CE90)*

Pierre Annual Smelt Hunt — now that's a fire!

mushrooms, buffalo wings, salads, vegetables, and deer, mutton, and elk chislic.

The actual smelt hunt was not fruitful, but allowed several individuals to taste them. Saturday morning greeted the campers with sunshine, and before everyone headed home, they satisfied their hunger with breakfast burritos, coffee, juice, and milk. See you next year!

Rapid City, South Dakota — Class of 1959 Reunion and 159th Commencement

Each year, we welcome back alumni who graduated a half-century ago for their 50-Year Class Reunion as part of the spring commencement ceremony. From an original graduating class of 169, there are 139 surviving members, and 29 members returned for their reunion. The graduates and their spouses and guests began their reunion with a welcome social at the Alex Johnson Hotel. They met for breakfast on Friday in the Surbeck Ballroom proceeded by a campus tour, followed by a lunch in the Christensen Hall of Fame. Friday's activities culminated with a dinner in their honor at the Alex Johnson Hotel Ballroom. Most of the returning alumni joined commencement on Saturday as honored guests.

The 1959 alumni in attendance included **Dale Allen** (CE), Bend, Oregon.; **Ernest Baresch** (EE), Wichita, Kansas; **Barry Bradshaw** (ChE), North Port, Florida; **David Brost** (ME), Murdo; **Skip Bush** (CE), Puyallup, Washington; **Bill Coddington** (GenE), Perrysburg, Ohio; **Veryl Eschen** (MetE), Hillrose, Colorado; **Terry Fiechtner** (ChE), Titusville, Florida; **Virgil Friebel** (MetE), Longmont, Colorado; **Paul Gnirk** (MinE), New Underwood; **David Grow** (EE), Rapid City; **Bob Howe** (MetE), Arlington, Virginia; **Bruce Johnsen** (CE), Monterey, California; **Boyd Klingler** (GeolE), Mesa, Arizona; **Emmett Kotrba** (CE), Gregory; **Harold Lundberg** (MinE), Wilmette, Illinois; **Rick Maki** (MetE), Hibbing, Minnesota; **David Malthouse** (GenE), Louisville, Kentucky; **Jan Matousek** (MetE), Englewood, Colorado; **Wayne MCollam** (CE), Bismarck, North Dakota; **Lyle Monsees** (EE), Brookings; **Lyle Mudge** (ChE), Rapid City; **Bill Richardson** (ME), Tucson, Arizona; **David Riesland** (EE), Dickson, Tennessee; **John Shoemaker** (CE), Payson, Arizona; **Edward Tegland** (GeolE), Parker, Colorado; **Bert Thomsen** (GeolE), Scottsdale, Arizona; **Ren Whitaker** (ChE), North Fort Myers, Florida; and **Jerome Zimmerman** (GenE), Tucson, Arizona.

As part of their reunion, the Class of 1959 was recognized at the 159th Commencement ceremony — Saturday, May 9, 2009 — held at the Rushmore Plaza Civic Center Arena. More than 200 graduates received associate's, bachelor's, master's, or doctoral degrees, thus becoming new School of Mines alumni. **Melanie Jeppesen** (IS09) represented the student body and Dr. **Jeffrey Wadsworth** (HON90) was the commencement speaker. Dr. Wadsworth currently serves as president and CEO of Battelle, the world's largest non-profit research and development organization. Additionally, **Ken May** (CE61) received the Guy E. March Medal commemorating his exemplary service to students, alumni, and our alma mater in the spirit of **Guy E. March** (EE22).

Spearfish Canyon is one of the oldest and most miraculous canyons in the west. Located in the northern portion of the Black Hills National Forest, the canyon spans 20 miles along a scenic and unique State and National Scenic Byway. Less than a mile wide, the canyon is always 'close and upward', dwarfing the one million annual visitors.

Photo by Chad Coppess
www.travelsd.com

Class of 1959 and guests at March Dake Plaza

***Paul Gnirk** (MinE59) welcomes his classmates of 1959*

***Ren Whitaker** (ChE59) with **Lyle Mudge** (ChE59) and Lois Mudge*

Hailing from Rapid City, Ken May has demonstrated his unselfish service and dedication to the South Dakota School of Mines and Technology and its Alumni Association for more than 40 years. An army veteran, May's professional career in Rapid City included leadership positions with numerous local companies. May served two terms as president of the Alumni Association, was the co-chair of the 2000 All-School Reunion, a past member of the Alumni Relationship Committee, and is a current member of the Alumni Investment Committee.

***Jay Brink** (EE56), **Howard Peterson** (GeolE50), and **Dave Malthouse** (GenE59)*

*Alumni staff **Dee Raymond** and **Mike Grave** (ME09) ready to greet the Class of 1959*

Class of 1959 tour the CAMP Lab

Additionally, in 1998, May was a strong supporter of the effort by the Alumni Association to create the Distinguished Alumni Award. He rarely misses

***Rob Winter**, head and professor, chemical and biological engineering, leads graduates and guests through the chemical engineering lab*

***Barb Felderman**, chair of physical education and head women's basketball coach, talks about the Christensen Hall of Fame*

attending a quarterly meeting of the Board of Directors, and he, wife Nancy, and their three children regularly attend numerous campus and alumni events and activities.

Pittsburgh, Pennsylvania

Several Pittsburgh alumni and guests gathered at Cain's Saloon and Restaurant in Dormont, Pennsylvania, in the South Hills of Pittsburgh. Area Vice President **Susan "Booty" Banks** (GeolE75) arranged a wonderful, informal evening complete with Yuengling specials, appetizers, and an informal dinner of ziti, salad, and hoagie rings. Susan completed the evening with matching Penguins hats for Alumni President **Ralph Wagner** (CE75) and Alumni Director **Tim Vottero** (Chem84). The Pittsburgh hospitality filled the room and the day thanks to Susan, the folks at Cain's, and the hardy alumni in attendance.

Alumni pose with Booty's "SD Tech" projected license plate

Washington, District of Columbia

The Washington Golf and Country Club in Arlington, Virginia, was once again the prestigious location for this year's Washington, D.C. area alumni event. This historic venue welcomed School of Mines Alumni President **Ralph Wagner** (CE75) and others as the guests of our gracious hosts Nancy and **Bill Tucker** (GeolE56). We were also fortunate to have a special guest speaker, Ken Walsh, dean of the White House correspondents,

***Bill Tucker** (GeolE56), Ken Walsh, and **Ralph Wagner** (CE75)*

The audience enjoying Ken Walsh's presentation

who presented to the group on President Obama's first 100 days in office. Walsh has covered five presidents since 1986 and is assigned by U.S. News & World Report to cover the White House. "The All-American Buffet" provided ample food for everyone to enjoy and the day cooperated with wonderful spring weather.

Houston, Texas

Thanks to Ian and **Breanne Lundin** (ChE06), Houston alumni and guests enjoyed one (or both) events in late May — a casual wine and cheese social and a genuine Texas barbeque. The "Vineyard on the Square" in Sugarland harvested an evening of great food, drink, and company, including Alumni President **Ralph Wagner** (CE75) and wife Debbie.

After a Sunday morning thunderstorm, the sunshine welcomed another group of alumni and their families to the "Goode Company BBQ #3" in north Houston. Piping hot Texas barbeque, pecan pie, and School of Mines memories filled the room, and everyone enjoyed news from campus. Alumni in attendance spanned six decades of graduation years, and stories stretched across the years for all to enjoy.

***Ralph Wagner** (CE75) addresses the Houston barbeque gathering)*

*Houston social. Seated (l-r): Sheri Wilson, **Jim Konst** (ChE73), **Bill Jensen** (EE70); standing (l-r): Debbie and **Ralph Wagner** (CE75), Casey Wise, **Lee** (EE88) and **Karen Swindler** (ChE88), Mike Wise, Nancy Jensen, **Candace Krebs** (GeolE74), **Tim Vottero** (Chem84); back middle (l-r): Paula and **Mark Stoebner** (ChE69), Phyllis and **Mike Owens** (GeolE51), Tami Vottero, **Tim Ryerson** (Chem74) and Carolyn Ryerson, **Pete Vossos** (Chem56), Ian and **Breanne Lundin** (ChE06), and **Ernest Anoma** (MinE78) and sons Solomon and Ernest Jr.*

*Houston barbeque group. Seated (l-r): Barb Christianson, **Breanne Lundin** (ChE06) holding Maelle, Ross, Alice, Lydia, and **Nathan Van Farowe** (EE90), **Dave Hogue** (MetE72) and Bobbie Hogue, **Lorraine Padden** (EE83) and Robert Chin, **Carlos Meyers** (MetE80) and Cherry Carter; standing (l-r): **Harold "Doc" Christensen** (EE52), Jonathan Vottero, Barbara and **Richard Hasner** (CE74), **Ian Lundin** (baseball cap), **Gary Bertelson** (CE77), **Holly Guillaume** (CE02) holding Abby, **Joel Guillaume** (ChE97), **Mark Stoebner** (ChE69), **Ralph Wagner** (CE75), Debbie Wagner, Robert Brewer, **Brett Brewer** (ME, Katy, Texas), **Sven Raugstad** (M.S. TM), Sue Gilyard, Brenda Brewer, Mary Gilyard, and Tami Vottero*

Tri Cities, Washington

Thanks go to **Ken Simon** (CE81) for e-mailing **Marlene Nelson** (ME74) and suggesting a Tri Cities wine-tasting event as part of other June events in the Pacific Northwest. Ken organized the event and did a great job! Marlene reported "it was great to catch up, find new connections to people we know and experiences we have had, and to drink some wine together. Hopefully, we also persuaded Kelly Hanlen to cast her fate along with ours through a School of Mines engineering degree ... it served most of us quite well."

Tri Cities group: (l-r): Rich and Kelly Hanlen (prospective student), ***Ken Wells*** *(ChE87),* ***Marlene Nelson*** *(ME74),* ***Marv Olson*** *(ME69),* ***Ken Simon*** *(CE81),* ***David Nelson*** *(EE65) and Joan Nelson,* ***Bob Apa*** *(ChE72),* ***Doug Broz*** *(EE89) and Christy Arden, Ann and* ***Gerry Morgan*** *(ME74), Grace and* ***Scott Nelson*** *(ME89),* ***Bill Rausch*** *(MetE77),* ***Larry Simonson*** *(EE69), and Curt Chenoweth*

Seattle, Washington

The Seattle Museum of Flight welcomed alumni and friends to a brunch and tour in June. Joining the group was Alumni President **Ralph Wagner** (CE75), all the way from Las Vegas, Nevada, and Foundation Representative **Larry Simonson** (EE69) bringing news from campus. Unbeknownst to attendees, this was the last Alumni Association event attended by longtime Seattle Area Vice President **Jack Meeker** (EE47/ME48) before his passing the following month. Jack and wife Elinor represented the School of Mines with distinction and dedication for decades (please see memorials later in the issue).

Museum of Flight group. Standing: (l-r): Joel Heiman, Michael Wagner, Julie Wagner, ***Ralph Wagner*** *(CE75), John Meeker,* ***Bob Standstrom*** *(CE80), Emily Meeker,* ***Geir Vik*** *(EE86),* ***Larry Simonson*** *(EE69),* ***Ken Schaffer*** *(ME88),* ***John Weber*** *(EE01),* ***Charlie Chambers*** *(ME69), Gavin Abild,* ***Robert Worl*** *(EE05), Pat Abild,* ***Marlene Nelson*** *(ME74), and* ***Brady Wiesner*** *(CE09); seated (l-r):* ***Jack Meeker*** *(EE47/ME48),* ***David Frerk*** *(ME61) and Rosemary Frerk,* ***Vernon Abld*** *(EE50),* ***Skip Bush*** *(CE59), and* ***Dennis Schnabel*** *(Phys72)*

Many of this group attended the Seattle Mariners vs. the Minnesota Twins baseball game at Safeco Field later that day. The Mariners posted a one-run win (2-1) in another of their one-point victories for this season. Special thanks go to **Steve Morgenstern** (ME83), Marlene Nelson (ME74), and **Robert Worl** (EE05) for their efforts in arranging these events.

Mariners game attendees (l-r): Beth and ***Jake Donnelly*** *(EE08),* ***Will Kindle*** *(EE08) and Sarah Kindle,* ***Brady Wiesner*** *(CE09),* ***Pat Schaefer*** *(CSc06),* ***Susan Larkin*** *(EE08), and* ***Larry Simonson*** *(EE69)*

Twins fans **Ralph Wagner** (CE75) and Beth and **Jake Donnelly** (EE08)

Rapid City, South Dakota – RESPEC 40th Anniversary

RESPEC held a 40th anniversary reception on Friday afternoon, June 12, 2009. The company was incorporated on June 11, 1969 by five professors from the South Dakota School of Mines and Technology and one Rapid City attorney. Present at the reception were two of the founders, Dr. **Paul Gnirk** (MinE59), School of Mines professor emeritus, and Michael DeMersseman, the attorney who filed the papers for incorporation. **Tim Vottero** (Chem84), director of the SDSM&T Alumni Association and **Rod Pappel** (ME77), President of the SDSM&T Foundation, were in attendance to represent the School of Mines. In all, there were 26 alumni from campus in attendance, 19 being current RESPEC employees or directors. The next planned open house will be July 9, 2010 during the all-school reunion, and during the School of Mines 125th anniversary year. Hope to see you here!

*RESPEC reunion alumni (l-r): **Ev Bloom** (MetE63), **Leo VanSambeek** (MinE72) (hidden behind), **Rod Pappel** (ME77), **Jason Love** (CE97) (hidden behind), **Gary Callahan** (ME70), **Sally Kenner** (GeolE83), **Rodger Arnold** (ME01), **Seth Kenner** (CE09) (back row), **Dave Berg** (ME73), **Todd Kenner** (CE83) (hidden behind) **Paul Gnirk** (MinE59), **Natalie Eslinger** (CSc80) (in front of), **Tom Zeller** (ME70), **Kerry DeVries** (ME87), **Don Stoup** (GeolE82), **Vicki Franzen** (MinE85), **Paul Nelson** (GeolE84), **John Osnes** (ME75), **Andrew Brosnahan** (ME09), **Nils Skaug** (ME95), **Walt Jones** (EE75) (hidden behind), **Lacy Pomarleau** (CE06), **Joel Nieland** (ME85), **Marv Truhe** (ME67), **Tim Vottero** (Chem84), and **Kirby Mellegard** (EE72)*

Portland, Oregon

Jim and **Michelle Vondenkamp** (CSc89) hosted a group of Portland alumni and their families for a wonderful backyard barbeque. Their home was the perfect place to gather, and included a great School of Mines cheer by daughter Claire and perfectly cooked burgers by Chef Jim.

*Portland group. Seated (l-r): Victoria Fox and **Roy Fox** (CE43); standing (l-r): **Larry Simonson** (EE69), **Michelle Vondenkamp** (CSc89) and Jake, Claire, and Jim Vondenkamp, **Jim Barth** (EE82) and Jean Barth, JB and **Jon Anderson** (ME60), **Marlene Nelson** (ME74) and Curt Chenoweth*

Thanks also go to **Larry Simonson** (EE69) for news and updates from campus, from his many interfaces across the country, and for the special Black Hills jelly! The continuity of alumni is incredible — from **Roy Fox** (CE43) to **Jon Anderson** (ME60) to **Marlene Nelson** (ME74), who had more than one instructor that they all knew from their years at Mines.

Los Angeles, California

Kudos go to **Holly Maudsley** (ChE95) for getting the Los Angeles chapter going again with two summer events — a picnic at Griffith Park and a brunch in Marina Del Rey — on the last weekend in June. Alumni President **Ralph Wagner** (CE75) drove up from Las Vegas, Nevada, for the weekend and to bring news from our alma mater. We especially want to acknowledge **Arlyn Boekelheide** (EX45) for hanging in there with all other the alumni though the years. Arlyn attended Mines about one-and-a-half years, before being drafted into the Army in 1945. He also shared, "it holds a soft spot in my heart."

Griffith Park alumni (l-r): ***Travis Gorsuch*** *(ME97),* ***Tammy (Rudnitski) Gorsuch*** *(IE96),* ***Sheri Soldatke*** *(CE96),* ***Holly Maudsley*** *(ChE95),* ***Roy Appleby*** *(EE54),* ***Arlyn Boekelheide*** *(EX45),* ***Lyle Clark*** *(ME52),* ***Angie Monheim*** *(EE98),* ***Jim Erpenbach*** *(CE66), and* ***Ralph Wagner*** *(CE75)*

Brunch at Shanghai Red's in Marina Del Rey (l-r): ***Jay Cass*** *(CE88),* ***Sheri Soldatke*** *(CE98),* ***Henry Smith*** *(ME73),* ***Holly Maudsley*** *(ChE98),* ***Angie Monheim*** *(EE98), and* ***Kevin Brady*** *(GeolE84) – Nice hat, Kevin!*

Sioux Falls, South Dakota — Ordination Ceremony

A recent ordination ceremony also resulted in an unofficial School of Mines alumni gathering. **Greg Lehr** (ME91) was ordained as assistant pastor at Zion Lutheran Church in Sioux Falls on July 19, 2009. Greg left his nine-year job as a fire sprinkler designer in Sioux Falls in 2005 and, with the support of wife Renee and daughter Regan, began a second career by enrolling at Concordia Seminary in St. Louis. He served as vicar at his home church (Zion) in Sioux Falls during his last year of studies. Following graduation in May (master of divinity), Greg was called back to Zion as assistant pastor.

In attendance were **Mark Koepke** (ME89), **Mark Forsstrom** (EX83), **Steve Sundet** (CE84), **John Schwartz** (ME89), **Marvin Heck** (CE48), **Jim Bump** (CE57), and **Vern Bump** (GeolE61). Greg is the son-in-law of Vern and Gloria Bump.

Pre-ordination celebration at Champps (l-r): ***Steve Sundet*** *(CE84),* ***Mark Forsstrom*** *(EX83),* ***Vern Bump*** *(GeolE61),* ***Mark Koepke*** *(ME89), and pastor* ***Greg Lehr*** *(ME91)*

Minneapolis, Minnesota

Minneapolis alumni welcomed School of Mines President Robert A. Wharton, Ph.D. Alumni

Minneapolis Famous Dave's crew. Standing (l-r): ***Jerry Takle*** *(EE64),* ***Jake Jacobson*** *(ChE81),* ***Laurie Chamberlin*** *(ChE75),* ***Brad Johnson*** *(EE92),* ***Ralph Wagner*** *(CE75),* ***Scott Pekarek*** *(EE86),* ***Doug Johnson*** *(ChE83), Loralie Chamberlin,* ***Manalee Johnson*** *(Chem82),* ***Bart Eddy*** *(ChE81), Rebecca Eddy,* ***Charlie Murray*** *(IE03), Bob Wharton,* ***Mark Fiegen*** *(ChE79) (standing behind),* ***Kathy Stechmann*** *(Math69), Barbara Zell,* ***Olav Maehle*** *(ME70),* ***Lawrence Dugdale*** *(GenE47), Arlene Dugdale, and* ***Paul Gnirk*** *(MinE59); seated (l-r):* ***Eric Stechmann*** *(EE70), Barb Jacobson (kneeling),* ***Gene Rye*** *(EE84),* ***Rose Pekarek*** *(CSc86) (kneeling),* ***Michael Sherrill*** *(ChE82) and Sandra Sherrill,* ***Damon Powers*** *(GeolE86) (kneeling middle),* ***Rich Hardegger*** *(ChE91) and Kate Hardegger,* ***Jay VanHove*** *(CE97),* ***Scott Fritz*** *(IE04) (kneeling middle),* ***Keith Graham*** *(Phys51), Roberta Takle,* ***Melanie Fiegen*** *(CE79), Pat Mallow,* ***Ray Dennis*** *(CE77) (seated front),* ***Mark Kemper*** *(GeolE81) (kneeling), and* ***Jack Mallow*** *(ME63). Attending, not pictured:* ***Doug Turbak*** *(ME70)*

President **Ralph Wagner** (CE75), Alumni Executive Vice President **Paul Gnirk** (MinE59), and Foundation Vice President **Brad Johnson** (EE92) to a casual evening event at Famous Dave's BBQ and Blues in Calhoun Square. A few dozen alumni and friends gathered at this mixer to meet the 'Presidents,' reminisce about old times at the School of Mines, and hear current news from the campus. Special thanks go to **Scott Fritz** (IE04) for volunteering to lead the Twin Cities chapter.

Sioux Falls, South Dakota — 12th Annual Golf Tournament

The Sioux Falls alumni chapter held their 12th Annual Golf Tournament and Social Saturday, August 15, 2009, at the Spring Creek Country Club in Harrisburg. The four-person scramble encouraged golfers of all skill levels and the post-outing social was open to all. **Jim Belbas** (MetE90) organized the event and reported that **Brad Stensaas** (ME90) won "longest drive" and Alumni President **Ralph Wagner** (CE75) won "closest to the pin" as shown in the photo below with **Jason Lamont** (CSc02) and **Travis Soldatke** (CE99).

The golf tournament was won by the defending champion Delta Sig alumni **Lance Mriden** (ME84), **Tim Renner** (CSc86), **Tom Reiger** (CE80), and **Keith DeLange** (GeolE87). Through a collection of green fees, mulligans, and the **Larry Ayres** (CE64) Challenge, the Sioux Falls alumni generated close to $1,000 for Sioux Falls area scholarships. Thank to all who made this annual event another success!

*The pin prize — **Jason Lamont** (CSc02), **Travis Soldatke** (CE99) and **Ralph Wagner** (CE75)*

*(l to r): **Louis Rensch** (ME73), **Ralph Wagner** (CE75), **Auston Schultz** (ME03) **Tim Eggebraaten** (ChE95), and **Scott Schmidt** (ME02)*

*We are **planning** to see you next year!*

Planning for the 5-year Reunion – **July 7-11, 2010** – is underway and we look forward to seeing thousands of alumni and friends on campus next year. The 2010 Reunion co-chairs **Gary Callahan** (ME70) and **Monte Dirks** (MetE78) are leading the effort to make this a memorable and fun reunion. The event also coincides with our alma mater's 125th Anniversary (1885-2010) and will see several new and renovated buildings on campus.

INVENT TOMORROW 125th Anniversary 1885 2010

For general information, please contact us at the Alumni Office.

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class NOTES

1930s

Ralph O'Neill (CE36) sent an update. "I am good for my age of 101, living in my house, doing some house work and a little yard work, and still drive my car some. I attend some Masonic meetings, but fixing up picture books, stamp collecting, and barbwire collecting keeps me busy. I also belong to the Custer, South Dakota, Community Church."

1940s

John Babcock's (CE43) daughter, Sandy, writes, "John has Alzheimer's, but still loves to hear from friends. He still enjoys the *Hardrock* magazine and looks forward to reading updates."

Bea and **Clair Brich** (EE49) sent us their new email address, <brich1945@gmail.com>, and let us all know that they "are doing fine." They added, "Had a trip to Pierre, [South Dakota,] a couple of weeks ago and hope to get to Des Moines, [Iowa,] in a couple of weeks. Time goes so fast anymore. Our grandson says time is broken."

Walter Johnson (EE45) advises that it has not been a good year so far. They lost their middle child, Eric, of Reno, Nevada, to a massive heart attack on January 24, 2009, at the age of 58. Sincere condolences go to Walter and his family.

Bob March (MetE44) called to let us know that his beloved wife, Adrienne E. March, passed from this life in JFK Hospital's emergency room after suffering a heart attack on Valentines Day 2009. She had been in ill health (failing to thrive) for more than a year but was recovering. She was born in Brookline, Massachusetts. As a girl in New York, she attended private schools, taking French at Madam Titlesnes Academy, academic studies at Scovill School, and ballet with Albatina Rasie, ultimately becoming a premier ballerina. She married Bob in 1964 and resided in New Jersey until moving to Florida in 1984, after Bob retired from a career in the Bell System, and became active in civic and condo affairs. She gave generously of her time, love, and compassionate efforts in helping others. All those who knew her loved her from the first moment, especially for her wit and sense of style. She also was an avid baseball fan, attending many games with Babe Ruth and family as her best friend was Babe's daughter, Julia. Bob and Adrienne enjoyed 45 years of marriage together.

We all knew **Jack Meeker** (EE47/ME48) as a smile and a twinkle and having an unrequited fascination with life. We knew that he was "one tough old man," as voiced by the firefighters who pulled him from a house fire nearly two years ago and revived him. We mourned with him and his wife, Elinor, after the loss of their son last year and were saddened to hear of Elinor's passing on May 26, 2009. In addition, we knew that he would recover from his recent cough and be with us for a few more years, though maybe not the 144 years to which he aspired. However, he was diagnosed with light pneumonia that got progressively worse until suddenly his heart failed, and despite several attempts to revive, he died on July 3, 2009. Jack Meeker was truly a one-of-a-kind alumnus and friend. His close connection with the School of Mines and the Alumni

***Jack Meeker** (EE47/ME48) and Elinor*

Association culminated when he received the Guy E. March Medal at the May 2006 commencement. Please read the memorial for both Elinor and Jack later in this issue of the Hardrock (page 61). Their efforts, hospitality, and dedication on behalf of the School of Mines were exemplary. They both will be greatly missed.

C. Dean Starr (MetE43) sadly reports the recent loss of his beloved wife, Barbara, on June 20, 2009. "Barbara passed away because of her lung problem. They had deteriorated to the point that she had extremely difficult time breathing. She did get excellent care and her pulmonary physician, whom Barbara and I knew for years, told me there was no hope for her. My daughter, Julie, had already given me the same advice, so we let her go into the New World to be with the Lord. Unfortunately, she never got to live in our new apartment in Wernersville. Barbara will not have to hurt anymore; we are honoring her wishes and have arranged for her cremation." A note from Julie also advises "Dad was holding her hand when she peacefully passed away. Please know that dad is doing okay and he is not alone."

class NOTES

1950s

Vernon Abild (EE50) sent a great family photo from last year's Christmas letter showing them enjoying warm weather at Mt. Rushmore. Their letter included, "We are doing fine! Always stay busy with the 'to dos' — just maintaining ourselves, the house, and our five acres (lots of mowing in the spring and summer) — and also making trips to the Seattle area for time with Rocky and family, for the necessary medical appointments, and for visits with friends. We also participate in many First Lutheran Church activities and frequent the American Legion for dinner and music on Friday evenings. We work at least one Sudoku and one crossword puzzle per day. Pat is struggling with learning to count to 15 by twos (cribbage). Her teacher used to be a pro in his college days. Rocky and Diana, Gavin (nine-plus), and Gabrielle (six) find every day jam-packed with schedules and activities involving their Elite Martial Arts School TKD (Tae Kwon Do), which fortunately has so far maintained student numbers in spite of the present economy. One of the reasons the school is holding steady is that Rocky and Diana have an excellent program and they are spending a lot of time 'marketing' their TKD services. Gavin and Gabrielle are home-schooled, and then there are piano lessons and practices for Gavin and orthodontist appointments. So they are a family on the go all of the time."

***Vernon Abild** (EE50) and family*

Myron Andersen (GenE56) shared tidbits of his travels to Menlo Park, California, to visit Dana and to make an appearance at cousin Marvell's, 90th birthday last year. He stopped in Idaho to see son, Eric, and his new Challenger SRT for a very nice trip.

John Barger (EE54) says, "We are happily retired in Lake Havasu City, [Arizona]. Hilde just celebrated her 83rd birthday; Arizona Jack will be 82 in March 2010. We are in good health and can be reached at 4260 Sponson Dr., Lake Havasu City, AZ 86406-9274. We lost our son, Craig, in 1978. Sons Scott and Guy live in California, Kurt lives in Eau Claire, Wisconsin, and son Tim lives in Arnold, Massachusetts.

Bernard Biberdorf (EE50) expressed, "I was saddened to hear about the passing away of classmate **Tom Bolger** (EE50). Tom and I shared many classes together at the Mines. We both received our EE degrees after the fall semester of 1949, but were considered to be a part of the class of 1950."

Vernon Holt (ME51) reminisces, "Wow! I am older than the Alumni Association! Thank you so much for the quarter sector of a 62 cm diameter crystal cylinder with the Hardrocker mirror image etched on the back with 'In appreciation for your Lifetime Contribution to the SDSM&T Alumni Association Vernon E. Holt (ME51).' It projects largely on the wall with focused back lighting, catching the attention of our grandchildren for a moment. Maybe they will consider the Mines in another 10 years. We are the oldest grandparents in New Jersey with all grandchildren under seven years old. Visiting Mines in 1961 after Korea and grad school, **Guy March** (EE22) was busy talking to someone on the west end of the campus, so I waited until Guy waved me over. He and **Homer Surbeck** (MetE24) shared enthusiasm about Surbeck Center plans — completed two years later in 1963 and updated in 2009. I soon became a Lifetime Member of the Surbeck Center and incubating Alumni Association. This had an impact on me because there was no student center or even dormitory when I showed up on the Chicago and Northwestern with my belongings in two cardboard boxes tied with binder twine for a long walk to campus. I knew NO one in 'West River Territory.' Connolly Hall construction was delayed, so half of the freshman class of mostly WWII vets (a tough bunch) spent half the year in double- and triple-deck Army and Navy cots in the old gym with limited facilities. Yes, we all smelled. Ruby Mauch and Anne Connelly kept the 'study hall' (library) open until 2 a.m., when the vets went to anchor. I am the only one in small town Rockham to go to the School of Mines. I owe it to Leighton R. Palmerton, who traveled South Dakota looking under rocks for good students, admitting me at 16, plus the South Dakota State Cement Plant working seven days a week, 6 a.m. to midnight, for 88 cents per hour for chief chemist, **Bob Mower** (ChE47). Tuition was only $112.50 per year. My father died when I was three years old, but somehow mother kept us together with ADC. I never

understood why she loved the flat rubble left by the Wisconsin Ice Age. All four of us went to college, as did our four children. This is not a unique story. All the Mines demanded was pursuit of knowledge and a modicum of behavior while not taking oneself too seriously when harassed a bit. Though I tried hard, English professor Leslie Boyd would still grade this with an 'F.' Finally, any provincial student who complained about the professor's diction would be fortunate to take math from Ralph Klopfenstein or chemistry from the eminent Dr. Carl Schilz. Soon we were glad we did. Sort of my motto or mantra…"

James Hoskovec (GeolE52) and wife, Ethel, have three great grandchildren — Katie, Kristin, and Joshua. James has passed number 82 now and is doing quite well.

James Hye (CE51) says all is going well in their family, including seven grandchildren. They spent the winter in San Diego, California, as usual and came home to snowstorms in Colorado. They are hoping to see everyone at the reunion in 2010!

Richard Maki (MetE59) updates with "Expecting second great-grandchild in November. Still working, representing Magnitation Inc. with marketing iron reclaimed from old tailing basins."

David Malthouse (GenE59) mentions, "I enjoyed the functions associated with the 50-year celebration of our graduation of 1959. It was a pleasure to once again see classmates, some of whom we had not seen since our graduation. Thank you to all Alumni Association staff for a fantastic job!"

A note received from **John Mohr** (EE56) shared, "We had a great trip to Southern Africa in November. We saw lots of animals from the beautiful impalas to the ugly warthogs."

David Papcke (GeolE58) says "Still kicking and running the Forest Farm in the Black Hills! No retirement yet!"

Robert Paullin (ME50) states, "How time flies. It seems like only yesterday that **Guy March** (EE22) guided me as only he could do to receive my B.S. ME degree, not the 58 chronological years that have passed. The significance of time really struck me on October 10, 2008, when more than 100 family members and guests gave me an 80th birthday party. Have you ever entered a grand ballroom and had so many people shout 'SURPRISE'? People from all over the country came and wished me well. The entire affair was executed in secrecy, as only my loved ones could do. I'm looking forward to the homecoming events in 2010, when I'll be a member of the '60s' group. See you then!"

Peter Vossos (ChE56) shares he is expecting the fifth grandchild in June — a grandson. "With three sons and four grandsons, the Vossos name lives on."

Ren Whitaker (ChE59) updates "Now full-time resident of North Fort Myers, Florida."

An update from **Ward Zimmerman** (ME50): "Elynor received a Ph.T. in 1950, along with the wives of other husbands who graduated that year. We have 19 grandchildren and 23 great-grandchildren. Our oldest great-grandson, Alexander, was born October 16, 1992, and our youngest, born October 6, 2008, is Zachary. Elynor and I celebrated our 60th wedding anniversary by spending a day and night in Valentine, Nebraska, which was our original honeymoon destination in 1948. It wasn't the same!"

1960s

Daniel Booth (ME67) mentioned that their "son, Jason, spent his freshman year at the School of Mines before receiving an appointment to the Air Force Academy at Colorado Springs. He just graduated with a B.S. in ME and 2nd Lt. Commission and will take pilot training at Laughlin A.F.B."

James Gross (ChE68) "keeps busy since retiring in April 2007 from Buckeye Technologies, Inc., in Memphis, Tennessee, finishing his career in research with 40 U.S. patents."

A family update from **Bashir Master** (ME67). "We celebrated our 40th wedding anniversary this May 31. Our eldest daughter, Maria, has an M.D. in psychology from Cornell University Medical School. Our second daughter, Tara, has her M.D. in sports medicine. Our son, Yousef, is a graduate of the Wharton School of Business. Ben is engaged in a Ph.D. program in education at Stanford University in California and has a B.S. from Brown University, and daughter Sarah is graduating with an M.B.A. from Dartmouth University.

Marvin McMaster, Jr. (ChE60) earned a Ph.D. in organic

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chemistry from the University of Nebraska, Lincoln in 1966. "I have done research with DuPont and Kraft Foods; sales experience with Waters Associates, Bachman, and Pharmacia; MacIntosh networking specialist with Teknivent and Washington University Medical School (St. Louis). Retired. Five books published with John Wiley & Sons, Inc. My latest is 'LC/MS: A Practical User's Guide.' Wife Eunice is a RN/ home care case manager. Daughter Melissa is a certified therapeutic massage therapist in Leawood, Kansas."

A report sent from **David Novotny** (Math65) reads, "I retired and have a part-time job working for a company that has contracts with various states to score the high school achievement tests. I score math tests."

Howard Noziska (CE67) mentions that he "is still enjoying his work at Encompass as a forensic engineer. Wife Mary Ann continues to teach first grade at St. Huberts in Chanhassen. Daughter Kathy, her husband, Jim, and son, Hunter, moved to Kalamazoo, Michigan with a recent job change for Jim from Marshall, Minnesota. Daughter Kris, her husband, Dan, two daughters, Julia and Molly, and son, Ben, recently moved into their new home in East Union, Minnesota (southwest of Minneapolis)."

Charles Schmidt (MetE63) updates that retirement is great, except his golf game has declined precipitously! Travel these days appears to focus on kids and grandkids (currently have five). Fortunately, they live in great vacation spots — Florida, Arizona, and Oregon. Still get out to the Northern Black Hills at least once a year, as there are siblings that live in the Belle Fourche area.

Brian Tucholke (GeolE68) shares, "Anita and I have both retired. However, I am continuing to pursue my research in marine geology and geophysics as scientist emeritus at Woods Hole Oceanographic Institution. It's great to now have a free schedule for travel to see friends and family across the U.S. and overseas."

Kenneth Trompeter (ME62) quipped by saying he and fellow classmate, Jim Damm (EX62), spent a week in Hawaii playing golf (badly). Stories (lies?) about the School of Mines were "thick and fast!"

Gary Vaplon (MetE69) and wife, Sharon, are enjoying retirement in Payson, Arizona. "We live in the mountains and enjoy fishing, hunting, cycles, and ATVs. We are off to Alaska for the summer. Both of the kids live in San Diego, [California,] so we see them and the grand kids often."

Krishnakant Vernenkar (MetE64) sent this update: "I am still doing consulting work as usual and traveling all over the world. My wife is engaged in Lord & Taylor sales department. Son Vic, who is a doctor practicing in New York, is doing well. He has two boys, one who is seven and the other is two. Our second son, Prasanna, is a diplomat working in Washington, D.C. He is married to a girl from Belguim and they just delivered a baby girl in May. All is well, thanks. Kris"

An update sent from **Harold Wharton** (CE65) covered that "We survived the second hurricane in three years. Wind event in 2005 caused strictly external damage (Hurricane Rita), but tidal surge (Hurricane Ike) in 2008 left 6 inches of water through the house, 6 inches of black mud everywhere, and caused more than $250,000 in damages. We just moved back into the house in May after seven months in a motel. Furniture will come later. We plan to retire this year after 44 years service with Texaco/Star Enterprise/Metiva Enterprise at same Port Arthur, Texas, refinery. It is being expanded presently to 600,000 BBL/day to be largest in U.S. It is presently owned by a joint venture of Shell and Audi Aramco. Daughter is regional manager of Verizon Wireless for Texas-Louisiana."

Delbert Zambon (ME60) mentions, "Retiring in the Black Hills has proven to be one of our better decisions. Monitoring the conversion of the local Homestake Gold Mine into a national underground physics lab is interesting. To learn more go to University of California at Berkley website."

1970s

Dr. Greg Adel (MetE78), a 27-year veteran of the department of mining and minerals engineering at Virginia Tech, has become department head, effective April 25, 2009. He has served as the interim head for the past academic year. Adel will head a department of eight faculty members, including one member of the National Academy of Engineering. Approximately 160 undergraduates and 25 graduate students are enrolled. The research expenditures of the department are in excess of $3 million a year, and much of the technology developed has been

transferred to industry. Adel has served as chair of the Mineral and Metallurgical Processing Division of SME and as a member of the SME Board of Directors. He also has chaired and organized numerous technical sessions and symposia, and has more than 75 publications and five patents in the areas of image analysis, optical sensors, mineral and coal characterization, and modeling and simulation of mineral and coal processing operations. During his career, Adel has been involved in approximately $9 million in research with more than $3 million attributed as his personal share. Adel earned his bachelor's and master's degrees in metallurgical engineering from the South Dakota School of Mines and Technology in 1978 and in 1979, respectively. He received a doctorate in mineral processing from the University of California at Berkeley.

***Greg Adel** (MetE78)*

Mark Brown (ME79) e-mailed (via <Mark@markusproduction.com>) that he has moved his office out of downtown Denver to downtown Littleton, [Colorado]. "After almost 20 years of doing the 30-60 minute commute, the opportunity came to make a change, so we did. We're now only a 10 minute drive from the house." The new address is: Markus Production, Inc., 2100 W. Littleton Blvd., Suite 245, Littleton, CO 80120.

Dennis Bryan (GeolE70) declares, "I went to work for principal client, Western Lithium Corporation. Lithium is one of the hottest commodities, even in these difficult times. Lithium's future is in the future of hybrid and electron vehicles. Western Lithium has one of the largest potential deposits in the world!"

A report from **Suraj Chourdhury** (MinE78): "Enjoying all kinds of fundraising activities for Shriner's Hospital, local Shriner's Organization, circus, and East Dallas 1200 Blue Lodge. My wife, Mitra, is also busy doing similar activities. Best regards from Dallas!"

Steven Cooper (EE77) shares, "Our two children are grown and out of the house. Oldest Stephanie will remain in Germany working for the Army and Air Force Exchange Service as a retail floor manager in Heidelberg. Youngest Danny graduated with a B.S. in biomedical sciences (chemistry minor) at Texas A&M, Corpus Christi. He's moving to University of Texas at San Antonio to pursue a five-year doctoral program in cellular and molecular biology. The U.S. Army is relocating my wife and I back to the States after 10 years in Germany. In early July, I'll be at Aberdeen Proving Ground, Maryland,,, with the Communi-cations-Electronics Command Software Engineering Center Field Support Directorate."

Dan Daniels (ME72) announces, "Jane and I are now proud grandparents of three grandchildren: Kendall, Bevon Daniels, and Ellie Ahner. All three live in Fort Worth, Texas. So we need to do some traveling now!"

Proud **Walt Griffith** (CE79) shares that two of his three children are School of Mines graduates — **Matt Griffith** (EE08) and **Jessica Griffith** (ChE09).

Robert Heier (ME73) reports, "We plan and hope to be at the reunion in 2010. We make at least one trip to South Dakota every year to spend time with family and friends."

While currently a manager for a commercial real estate firm, **Kirk Heinemann** (CE71) has been married for 40 years to his high school sweetheart. They have three daughters, all married, and a total of eight grandchildren. They enjoy traveling three to four times a year, exchanging timeshares, and of course locally in their corvette convertible.

Joseph Jagodzinski (CE75) retired from Rapid City Public Works in May 2008, due to re-growth of a rare type of brain tumor that was first diagnosed in 2001. He went through radiation treatment, then for the past 12 months, he went through chemotherapy. He managed to remain a ski school trainer and instructor at Terry Peak during two weeks per month and felt ok. The tumor is in check now, but he goes through MRIs every three months. Their family has become good friends with retired Professor **Don Thorson** (CE44) and his wife, Ann Krane.

Lennis McClung (ME77) shares, "Being I am still single, I still spend all of my free time working on McClung genealogy and

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dancing. I originated in the highlands of Scotland; migrated to Galloway, Scotland; immigrated to Ireland for 200-300 years; immigrated to Canada; and then homesteaded in South Dakota. I took a half-month genealogy trip to Ireland last summer. Anyone know any McClung info? Thanks!"

Kathy (Chem74) and **Ken Miller** (CE75) emailed that they "have been building a home in Rapid City (on the Red Rocks golf course) since last fall." The new address is 6600 Maidstone Court, Rapid City, SD 57702. Kathy did sign a teaching contract for "at least one more year" with Campbell County High School and Ken will continue to work full time with Thunder Basin Coal Co. They still have a rental town house in Gillette, Wyoming for the workweek, which is a great location as it is a walking commute for Kathy as long as the weather is decent!

Dr. Terry Mudder (Chem74) and his wife, Dr. Karen Hagelstein, are living in Sheridan, Wyoming. They spent their careers traveling the world as environmental engineering consultants to the mining industry. Their daughter, Hanna, earned her degree as a veterinary technologist. She also is living in Sheridan with her husband, Steve — an engineering student, mechanic, and Iraqi Marine Veteran. Their son, Alex, is completing his second year at the University of Wyoming in dual degree programs of geology and natural resource science.

Jeffry Muffat (ME74) was elected president of the international Air & Waste Management Association at 3M. Upon graduation, Jeff went to work for 3M as a division engineer in the Traffic Control

***Jeffry Muffat** (ME74)*

Products Division. In 1975, he transferred into 3M's Environmental, Health and Safety (EH&S) Operations, and in 1990, he moved into the environmental regulatory affairs area of EH&S. In his current position, Muffat manages the Regulatory Affairs Group and is responsible for handling and resolving critical environmental issues for the company, coordinating 3M's participation in voluntary programs, and helping ensure corporate-wide compliance with all environmental regulatory requirements. In addition, Muffat manages 3M's Emission Reduction Credits program to maximize corporate participation in projects that are beneficial to the environment. He is also a past member of the Environmental Markets Association Board of Directors, which helps advance emissions trading protocols. Muffat has been extensively involved in implementing the U.S. Clean Air Act requirements since 1977 through his participation in the Maximum Achievable Control Technology standards regulatory development process, nonattainment provisions, New Source Review reform rules, Part 70 (Title V) permitting regulations, and most recently, the development of a Flexible Permit Rule. He is currently a member of the U.S. Environmental Protection Agency's Clean Air Act Advisory Committee, as well as a stakeholder member of the National Advisory Council for Environmental Policy and Technology. For the past two years, Muffat has been working extensively on climate change/greenhouse gas (GHG) issues. He was first appointed to the Minnesota Governor's Climate Change Advisory Group in 2007. Because of his work in that group, Muffat was appointed to the Midwestern Greenhouse Gas Reduction Accord Advisory Group in 2008 by the Midwest Governors to help develop a model cap-and-trade rule for a regional cap-and-trade program. Muffat continues to coordinate and manage 3M's involvement in state, regional, and federal climate change regulations and legislation to ensure the company implements sound programs to reduce its environmental footprint wherever possible.

Allen Ness (MetE74) has been named operations manager, responsible for the alumina and chemicals manufacturing activities at Alcoa Point Comfort Operations, Texas. Ness' career with Alcoa spans 28 years, beginning in 1981 at Point Comfort Operations as area production superintendent-clarification. He served in the same capacity in precipitation/calcinations as well as in digestion, until he became engineering manager for Alcoa's aluminum fluoride facility in Fort Meade, Florida. He was named Ft. Meade works production manager in 1990 and was promoted to plant manager in 1995. Ness accepted his first international

class NOTES

***Allen Ness** (MetE74)*

assignment with Alcoa World Chemicals (AWC) in 1998 as general manager, AWC-China. In addition to completing the licensing and staffing of the Huangdao tabular alumina regional processing center, he directed the facility's construction and start up, as well as managing the first of operations. Ness moved back to the U.S. in 2001 as operations manager for the adsorbents and catalysts manufacturing organization with responsibility for the Port Allen and Vidalia manufacturing facilities in Louisiana. Ness returned to China in November 2004 as director, manufacturing systems integration, and deputy general manager of Alcoa Bohai Aluminum Industries Company, Ltd. He was part of the leadership team that planned and executed the Bohai Joint Venture formation and integration. From 2007 until mid-year 2008, Ness led the integration team for the $280 million expansion of the Bohai sheet facility. He was appointed chemicals and raw materials manager — Point Comfort in July 2008. Ness and his wife, Melody, live in Victoria, Texas.

At a recent Triangle Fraternity Convention, **Stephen D. Newlin** (CE75) was inducted to the Triangle "Wall of Fame." During the Wall of Fame Luncheon, Steve was introduced by **Mike Selzer** (EE74), a 2007 inductee to the Triangle "Wall of Fame." Mike was also a panelist for the "2009 CEO Symposium," which was extremely well received by convention attendees. Also in attendance at the convention were **Harry Rossander** (CE81), member of Triangle's National Council; Dr. **Wayne Echelberger, Jr.** (CE56), member/Treasurer of the Triangle Education Foundation's Board of Directors; and School of Mines undergraduate Triangle members **Brian Davis** (IE, Lead), **Danny Harts** (IE, Yankton), and **Jason Miller** (CEng, Goodland, Minn.).

The Nebraska Hall of Agricultural Achievement, formed in 1916, has more than 200 members statewide dedicated to preserving and improving Nebraska agriculture. Each year, the group recognizes at least one honoree and elects new members. This year's new members included **Owen Palm** (GeolE75) of Gering, who serves as CEO of 21st Century Holdings, LLC, which includes six John Deere dealerships and 11 farm and ranch stores. This Panhandle-based agricultural company provides local goods and services to rural Nebraskans contributing to the vitality of rural Nebraska. Palm serves as president of the board of directors of Twin Cities Development, an economic development organization in Scotts Bluff County. He is the former vice president of operations for The Western Sugar Company. He is a 1975 graduate of the South Dakota School of Mines and Technology and a trustee of its Foundation. He also is a trustee of the Nebraska Chapter of The Nature Conservancy. He and his wife, Karen, are active in the community. Owen was also named the Star-Herald's Citizen of the Year in 2006.

A notation about the 37th anniversary of the tragic Rapid City flash flood of June 9, 1972, put into the weekly Hardrock E-News sparked the memory of **Joseph Roby** (Math74). He says "I have an interesting connection to the flood. I was the disc jockey on the air at KKLS when the flood hit. It was a part-time job while I attended the School of Mines. The floodwaters burst into the basement studio. We were lucky to make it to the third floor of the building, where we spent the night. I lost my car. My fraternity house (Delta Sigma Phi on Omaha Street) was severely damaged. I remember the damage to the library at the school, and I recall that the school lost at least one professor who drowned in his home. I later heard that people were listening to me when the studio flooded, and I said something like, 'The water is coming in and we are getting out!' It had been flooding for a while elsewhere, but at the station, we didn't have any idea how bad it was. We were giving out various warnings and advisories, but we continued to play music until the water burst in."

A report from **Robert Santee** (ChE71) reads, "We moved from Arizona in 2002 to be closer to our son's family who live just outside of New York City. The grandchildren are currently seven, 10, and 13. We thoroughly enjoy our visits, but I miss my Arizona golf outings!"

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Tary Schumacher (ME72) announced retirement after 37 years at Dow Chemical. They are staying in the Houston, Texas, area and will continue to work. Oldest son Brandon is finally getting out of the Army in January 2010. He is currently taking care of wounded warriors at Brooke Army Medical Center in San Antonio. Son Brett teaches and coaches in Austin. Son Kyle just finished his M.B.A. at Arizona State and works for Chevron. Daughter Marisa was married last August and works for BP in supply chain. "We have been blessed with three grandchildren and just learned one more on the way. I could not convince any of my children to be engineers, so I am already working on the grandchildren. I haven't been back to Rapid city since 1990, so we hope to make the 2010 reunion and see what the aging process has done to everyone's golf game!"

Craig Tieszen (ChE71) retired as chief of the Rapid City Police Department in July 2007 and was elected into a South Dakota State Senate position in November 2008.

Roger Walla (MinE71) shares by saying "My mining career of 37 years ended June 2007 when I was involved in an underground methane explosion in an Alabama coal mine. Since my recovery, my wife, Margaret, and I have made being tourists our full-time job. The explosion was a frightful experience as you can only imagine. No one was killed, but three of us were severely burned and traumatized. My therapy is still ongoing. I'm thankful the incident wasn't worse for there were more than 200 employees underground at the time of the explosion!"

The Alumni Association offers condolences to Board member **Gene Woodle** (ChE70) at the passing of his mother, Donna Mae Woodle, 89, of Rapid City. According to the memorial in the Rapid City Journal, Donna Woodle led an adventurous life, the amazing details of which continue to trickle down to her grandchildren and great-grandchildren in the form of fond remembrances. She was always prepared with a kind word or freshly baked cookie at hand, but frequently had both.

Daryl Zimmerman (EE79) advised that his next assignment takes him out of the Philippines and over to Ft. Lauderdale, Florida.

1980s

Tom Albrecht (EE87) e-mailed, "By the time you read this, I will hopefully have completed a cross-country bicycle trip from San Diego, [California,] number one 'bucket list' item. After deciding to make a career change last year and leaving Medtronic after more than 20 years, this was definitely the time to make it happen. One of the highlights of the trip was meeting School of Mines alumni along my route — **Melannie Hartman** (CSc86) in Colorado; **Tim Vottero** (Chem84) and **Larry Simonson** (EE69) in South Dakota; **Laurel** (EE87) and **Carl Meier** (EE87) in Minnesota; and **John Hartman** (CSc87), who rode with me from Cleveland, Ohio, to his home near Rochester, New York. Another highlight was riding the Mickelson Trail through the Black Hills and stopping in Rapid City to see how the campus has changed over the years. If you would like to read more about my trip or see a few pictures, you can check out my <www.offexploring.com/velovagabond> travel blog."

Tom Albrecht (EE87)

Richard Andrews (ME83) states, "Wow, it has been so long that I have been disconnected from Tinkerdom. Life is too darn short. I am reaching out to say 'Hey' to all the long-lost peers of Hardrock City. I have been in Seattle and with Autodesk for about 13 years now in various management roles from support to training development, usually for AutoCAD and related engineering tools. It was hard to leave South Dakota, but the need for change ruled out status quo comforts. I love Autodesk, but do miss the creative side of engineering and being a contributor to changing the world in hands-on ways. Hope to get back to it someday. No family, never married, but plenty of significant others along the path from then to now."

Michael Britton (GeolE82) tells, "All is well with us here in Tulsa, Oklahoma. We will be moving to Colorado Springs, Colorado, in the near future, as my wife, Cathy, has taken a job with El Paso Pipeline Company. I will continue my employment with

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Seminole Energy Services in a new office in Colorado Springs. My older daughter, Erin, is a junior in petroleum engineering at the University of Oklahoma in Norman. My younger daughter, Leanne, is a sophomore majoring in art, also at the University of Oklahoma. Some of my recent hobbies include wine collecting and cooking, so those of you who visit will be entertained with food and fare."

An update from **Charles Carda** (ME86): "I am in my 18th year at John Deere in Waterloo, Iowa. We recently adopted a boy, Nicholas, who we just adore. We make it back to South Dakota a few times a year over the holidays. It is always good to get back to the homeland!"

Dr. **Doreen Edwards** (Chem85), who has been associate dean of the Kazuo Inamori School of Engineering at Alfred University, became dean of the school effective July 1, 2009. She is the first woman to be appointed to the position. Edwards has been associate dean of the School of Engineering since 2007, and had been director of graduate engineering programs for the school from 2003-07. She joined the Alfred University faculty in 1997 as an assistant professor of materials science and engineering, earned promotion to associate professor in 2003 and to full professor in 2007. Edwards has received accolades for her teaching, including an Excellence in Teaching Award from Alfred University in 2002; the John F. McMahon Excellence in Teaching Award in 2004; and the State University of New York Chancellor's Award for Excellence in Teaching, also in 2004. As a researcher, Edwards' interests include materials for electrical, optical, and energy-conversion applications, such as solid-oxide fuel cells, batteries, sensors, thermoelectric devices, concentrated solar power, and solid-state lighting. Her work has resulted in more than 45 publications, numerous presentations, and two U.S. patents. Prior to coming to Alfred, Edwards was a research assistant and teaching assistant at Northwestern University of Chicago, where she earned a Ph.D. degree in materials science and engineering in 1997. After earning a B.S. degree in chemistry from the South Dakota School of Mines and Technology in 1985, Edwards was a research scientist at Gould, Inc., in Rolling Meadows, Illinois, from 1985-87, and then joined Northwestern University's Basic Research Laboratory as a research scientist for six years prior to entering the graduate program.

A note from **Peggy Ellwein** (ChE87), "After living in Taiwan for 2 years, we are very happily back in Texas!"

Karleen James (ChE86) and **Scott James** (CSc86) share that their son, Blake, just finished his first year at the School of Mines. Daughter Ashley starts driving this summer. She placed fourth in the state (Texas) in an academic competition in May. Karleen continues to enjoy the challenges of Ineos, and Scott is remodeling a bathroom and keeps the house from turning into total chaos (barely). "Look us up on Facebook!"

Alan Kennedy (EE80) has accepted the position of senior systems engineering manager at Sypris Electronics. As the senior systems engineering manager, Alan is responsible for the systems engineering function including requirements generation, systems integration, and validation/verification. Alan will be leading the continuous improvement of systems engineering process and re-certification to CMMI Level III. Alan also graduated from Pepperdine University with a master's of business administration. Prior to accepting this position, Alan worked for 28 years in the defense industry. Since 1993, Alan has held engineering management positions at US Army Tank and Automotive Systems Command, SAIC, General Dynamics, and BAE Systems. Prior to 1993, Alan held chief systems engineer and other engineering positions at Teledyne, Hughes, Northrop Grumman, and Boeing.

Robert Lee (CE87) sent this note: "In September 2008 I was elected executive director – treasurer for the Utah-Idaho Southern Baptist Convention. In July 2009 I will celebrate my 18th year with UISBC. I still do a lot of church-building consultations and assist building projects. Our boys are in fifth and second grade and love to camp and fish. I still get out to archery hunt and last fall shot a Utah bull moose with my bow."

Charles Logan (MinE83) and wife, Teresa, will be relocating this summer to Bremerton, Washington, where he will be relieved as commanding officer of USS Michigan (SSGN-727) (Blue) in a ceremony inboard the ship at the U.S. naval base in Guam on July 28, 2009.

class NOTES

Sandi McColl (Math88)

Courtesy of the Hot Springs Star, we have an update on **Sandi McColl** (Math88). "New teachers this fall in the Hot Springs School District include Sandi McColl, a high school math, pre-algebra, geometry, and calculus teacher. Sandi is a South Dakota native, growing up in the Kimball and Plankinton area. She graduated from Kimball High School and received her degree from the South Dakota School of Mines and Technology in Rapid City. She and her husband, Buck, a Fall River County deputy sheriff, have four children and enjoy the many entertainment opportunities available in the Black Hills. She encourages parents to be involved and concerned about how and what their children are doing."

Renita Mollman (CE88) announces that she recently relocated to San Diego, California, to take over as manager of Burns & McDonnell Engineering's southern California offices. "After 21 years at their headquarters in Kansas City, Missouri, this is quite the change. The weather is much better but the traffic is a lot worse. However, I will adjust. The opportunity to expand Burns & McDonnell's presence in southern California was just something I couldn't pass up. I will be working to expand all sectors of our business here, not just aviation, which has been my home for the last 21 years at Burns & McDonnell. Stop by and say hi if you are ever in the area! I look forward to alumni meetings in sunny southern Cali!

Linda (Athow) and **Brad Ross** (MinE80) e-mailed with "some history and news." Linda's grandfather, Cameron Athow, was the groundskeeper in the early 1950-60s. Although neither her mother nor late father attended the School of Mines, they ended up with quite a few family members that did, including **Harold Hayes** (EE32), **Dean Athow** (EE80), **Lana (Athow) VanBuskirk** (CSc83), **Brenda (Sewart) Athow** (CSc96), and **Mike Lee** (GeolE84). Karen added, "Essentially, the Athow kids graduated or married a Mines graduate. Now the next generation begins. Karen Ross is a junior in mining engineering, and Stephanie Athow (Dale and Brenda's daughter) entered the mechanical engineering program in the fall."

Robert Tridle (Chem81) shares, "I recently left my corporate position with Hecla Mining Co. and dusted the cobwebs off my consulting business — Environmental Technical Services. My specialty is in industrial water treatment technologies and water quality criteria/standards development. I am still in Coeur d'Alene, Idaho, but working part time in South Dakota. I have included a photograph of my new vehicle license plates!"

School of Mines marketed in Idaho

ENTRIX, Inc. released in January 2009 the appointment of **Todd Williams** (GeolE83) as chief executive officer and president for the professional environmental and natural resource management consulting firm. Williams has more than 25 years of experience in the environmental and natural resource management consulting business, including strategic management and technical consulting, business development, management, and operations. Williams assumed CEO responsibilities of this $100 million, 550-person firm at a time when the company is expecting significant growth in revenues, profits, and staff. ENTRIX operates more than 35 offices in the United States, as well as an office in Ecuador.

Colonel **Lisa Zacher** (Chem85) was recently named the new U.S. Army consultant to the Surgeon General for pulmonary medicine and respiratory therapy. Lisa added in an e-mail, "New job and a few more trips to D.C." It is a four-year appointment.

1990s

Andrea (Gross) Brickey (MinE99) e-mailed that she has "decided to go back to school and pursue an M.S./Ph.D. (one or both) and tackle a few personal endeavors." She and **Chris Brickey** (Phys99) still reside in Arvada, Colorado. Andrea's e-mail address is <andreabrickey@ymail.com> and Chris's is <chrisbrickey@hotmail.com>

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Kory Gill (CSc90) left Microsoft after 18 years to start Newline Software, Inc., with another ex-Microsoft employee, Marius Nita. Their company's first product is expected to release in the second half of 2009. The company plans to hire several people over the next year and positions will be posted on the company's website at <www.0xda.com>. Cory added "the family is doing great and we are all looking forward to the 2010 reunion!"

Nathaniel Marcoe (CE98) and his wife, Pamela, daughter, Eden (four years), and son, Simon (two years), live in Libby, Montana, where Nate works for the Kootenai National Forest as a supervisory civil engineer.

"Hello from Wisconsin," says **Dawn Recker** (Chem98). "In my travels to go to Iowa to see family, I came across a Grubby look-alike! He is missing a mining tool in his right hand though. The picture was taken outside of a restaurant in Shullsburg, Wisconsin. I guess there are lead mines in the area — hence the miner symbol outside the restaurant. I believe the mines are not operational anymore, but their current claim to fame is cheese making! Anyway, I thought you might like to know Grubby has a twin in Wisconsin. Take care!"

Grubby look-alike in Wisconsin

Lance (CE98) and **Jerilyn Roberts** (ChE99) are proud new parents to baby boy, Lucas Allen Roberts, as of June 3, 2009. He was born a healthy boy, weighing in at 7 pounds, 14 ounces and 20 inches long. Sister Olivia is big helper!

Olivia and Lucas Roberts

Heather Sanders (EE92) e-mailed, "When I returned to work at APX after maternity leave, they decided to eliminate my job and gave me a lateral move to a position that lacked the authority to achieve the established objectives. At that point, I began my job search. My new position is with the CAISO as the PM for renewables integration. We will be moving to Folsom into temporary housing while we buy a house."

Avery Schick (ME95) announces, "We relocated from Raleigh, North Carolina to Peoria, Illinois in June 2008 as I transferred from building construction products division to the mining division of Caterpillar. My family has settled in well and we enjoy living here. We've had the opportunity to reconnect with old School of Mines friends and fellow alumni as there is quite a contingent her at Cat and Illinois in general. All the best, Avery Schick."

An update from **Angelique Shawda** (Geol99) and **Jon Shawda** (ME02): Evelyn just turned one year old in early April. Work is going well for both of us. Evelyn and the three cats keep us busy, so many of the house projects have been put on hold, but it is fun to see the world through the eyes of a child. A box is never just a box, especially for an engineer's daughter!"

Sheri Soldatke (CE95) states, "After eight years working on the Pentagon Renovation Program, I decided it was time for a new challenge. In September I started working on the Exposition Light Rail Project in Los Angeles as the design manager for Parsons. We are part of a joint venture providing the design-build delivering of Phase 1. This new metro line will expand the system to Culver City under Phase 1 and eventually to Santa Monica in Phase 2."

Anthony Stender (Mtro96) shares, "I am back in school. This time I am working on a Ph.D. in chemistry at Iowa State. More importantly, I just published my first novel. It is a scientific thriller titled 'Ground State' and it is a project I started while I was a student at the School of Mines. It is the first in a series of novels that I'm working on.

class NOTES

2000s

Angela Bucholz (IS02) and husband, **Aaron Bucholz** (CE03), welcomed their second child, Abram Xavier, on January 21, 2009. Aaron is currently employed at Daktronics as a hardware design engineer and Angela enjoys staying at home with the boys and being extremely involved in Brookings, [South Dakota], community life.

Alexa Eike (EE00) and husband, Nick, celebrate the newest addition to their family. Cheyenne Elizabeth Eike was born April 28, 2009, at 8 pounds, 15 ounces and 21 inches long.

Cheyenne Elizabeth Eike

Jessica (ChE03) and **Jeff Hartman** (ChE02) emailed, "Jeff and I are moving (again)! We are part of the NWA/Delta Air Lines merger and are moving to the Atlanta, Georgia, area."

Christopher Heiser (CE06) and Ericka George announce their wedding. Chris is a 1991 graduate of Mitchell High School and 1996 graduate of South Dakota State University, Brookings, with a degree in civil engineering. He received his master's degree in structural engineering in 2006 at the South Dakota School of Mines

Ericka George and ***Christopher Heiser*** *(CE06)*

and Technology, Rapid City. He is a structural engineering leader with TSP, Inc. Ericka is a 1995 graduate of Woodbury Central High School, Moville, Iowa. She is a 1999 graduate of the University of South Dakota (USD), Vermillion, with a bachelor of science in business administration. She also holds a master's degree from USD in business administration. She is a valuation analyst with Ketel Thorstenson, LLP, in Rapid City.

William Mallory (ME05) says, "Lived in Denver since graduation and worked for Babcock & Wilcox since graduation — Tau Beta Pi."

Christopher Monson (ME04) proudly shares his recent great achievement. "Here is a picture of my 17-foot long, Guillemot Kayak's design — Great Auk — scratch built in my garage in Hermosa Beach, California. I had plans for the hull; all patterning is original. It took about six months and 500 hours of work."

Christie and **Eric Nelson** (MetE00) are somewhere between Mankota, Minnesota, and Tierro Del Fuego, Argentina! These 31-year-old high school sweethearts have quit their jobs, sold their stuff, and are generally pedaling in a southerly direction on a tandem bike named Jo-Jo with a single-wheel trailer since July 2009. Follow them via

Christopher Monson *(ME04) and Great Auk*

their blog at <www.ericand-christie.blogspot.com> where "Eric recalls a saying … a journey of a thousand miles begins with a single step (so translated for us I think it reads: a journey of 15,000 miles begins with a pedal stroke). We know this journey will have its highs and lows, but our focus is to live in the present, taking one pedal stroke at a time, and each moment as it presents itself." Christie adds, "It is incredibly freeing to put life in the hands of our creator and allow our hearts to be open to the unknown. As our back up defenses, we bring with us many powerful prayers from home, big smiles (not a gun as one random man in Fargo, North Dakota, highly suggested), a bright pink bike horn, GPS, and the SPOT.

class NOTES

Eric and Christie Nelson with Jo-Jo

Those interested can locate us at anytime by linking to the SPOT's web page by clicking on the link on the top right corner of [their] blog labeled "Spot tracking." At the SPOT website, it is neat to click on the satellite view in the top right corner, giving a true picture of the landscape. SPOT is a 4x3 inch device that uses satellite technology, so when we hit a button on it, you will be able to see our exact location with Google Earth. It also has the capability to send a message to emergency personnel in the area we are, which gives a bit of peace."

Robert Oliver (M.S. TM04) and wife, Becky (former Alumni Association staff), welcomed another grandchild — grandson Brenden Arlo Oliver — on April 30, 2009. He arrived four weeks early. Arlo's daddy is Nathan Oliver (MinE, Rapid City) and a current student at the School of Mines, expected to graduate this academic year. Pictured are Arlo and sister Aili Oliver. Bob and Becky are very proud parents and grandparents, and big sister Aili loves her new brother "Baby Brenden."

Aili holding baby brother Brenden Oliver

Melissa Pourier (IS06) expresses "I'm so proud to be a graduate from South Dakota School of Mines!"

Robert Sharpe (ME04) advises, "I'm now managing the engineering group for BJ Services in the Rock Springs district [Wyoming]. My wife, Camila, and I married in December 2006 and we are expecting our first child this December!

Courtesy of the Rapid City Journal: **Jeremy Thomas** (CSc02) has been showing a fair amount of guts for years, so it's little surprise that he's looking to tackle the 412-mile Gut Check 212 bicycle race across South Dakota in his latest athletic endeavor. Thomas, 30, has been a fixture for years in area outdoor sports circles, overcoming a traumatic injury 12 years ago that cost him the lower half of his left leg to compete in everything from triathlons and mountain bike races to skiing. When a long-time family friend was looking to begin a non-profit organization called Extreme Extremities to help children in need of prosthetics, Thomas felt he had should do whatever he could to help. Therefore, with the organization in its infancy, Extreme Extremities President Jessica Walker and Thomas will begin their quest to spread the word by riding across South Dakota together in the Gut Check 212, which is a timed event that traverses Highway 212 from the South Dakota-Wyoming border all the way to Minnesota. He also plans to compete in the Dakota 5-0 Mountain Bike Race near Spearfish later this summer — as he has for years — in addition to heading down to Tucson, Arizona, in the fall to take part in the 252-mile Cochise County Cycling Classic to help raise awareness for Extreme Extremities.

Lonnie Wright (IE04), a first-year student at the University of South Dakota School of Law, was elected to the board of the National Native American Law Student Association during the annual Indian Law Conference held April 2009 in Santa Fe, New Mexico. Wright will represent Area Eight during his one-year term on the national board. Area Eight includes Minnesota, Montana, Nebraska, North Dakota, South Dakota, and Wyoming. There are eight areas on the board, along with executive officers. A member of the Rosebud Sioux Tribe, Wright was raised in Ridgeview, South Dakota, on the Cheyenne River Sioux Tribe Reservation. While an undergraduate at Mines, he served for four years as the American Indian Science and Engineering Society president.

Memorials

CAROLYN MARIE BRICH

Carolyn Brich (electrical and computer engineering staff) 58, of Rapid City, passed away on May 28, 2009, at the Rapid City Regional Hospice House following a courageous battle against cancer. A mother, wife, beloved family member, administrative assistant, and very caring person, Carolyn's departure creates a void that will never be filled. Born in Watertown, South Dakota, Carolyn was the baby of the family. Both members of Watertown High School's Class of 1968, she united in marriage with Richard "Dick" Wallace Brich, agency integration specialist, registrar and academic services, on September 5, 1970, in Brookings, where she worked in the Office of Administration at South Dakota State University (SDSU). Following Dick's graduation from SDSU, and after short bivouacs in South Dakota and beyond, they relocated to Ogallala, Nebraska, for almost 20 years before returning to Rapid City and the beautiful Black Hills in December 1999. Carolyn began work as an administrative assistant for the electrical and computer engineering department at the School of Mines, where she "mothered" many an incoming freshmen and made them feel welcome and comfortable in their chosen major field. Over the eight year span of keeping a watchful eye over the department, Carolyn befriended dozens of students. While performing this "above and beyond duty" role, Carolyn was recognized by the students with the 2008 C.H.A.D. award, an esteemed honor that she cherished and valued greatly. With other awards, certificates, and honors too numerous to list, Carolyn featured prominently in the department's student wellness activities. Carolyn's "can do" attitude permeated her entire life, affecting students, coworkers, family, and friends with her infectious enthusiasm for excellence regardless of the task or activity. Sharing in the adventures of a very active outdoor-oriented family, Carolyn often remarked to "her boys" — husband, Richard, and sons, Sol (CE95) and Jed (CE00) — "If you shoot it, you clean it and eat it." Her superb skills in the kitchen were challenged occasionally as the fare covered the gamut of Nebraska and South Dakota waterfowl, fish, and upland and big game, along with an occasional rattlesnake or two. Carolyn was baptized and confirmed in the Lutheran faith, and she kept an active lifelong involvement in Bible studies, Sunday school, vacation Bible school, and particularly programs for youth. She was also involved in the Cub Scouts and the Ogallala High School Renaissance, a program encouraging excellence in academics. She is survived by her husband, Richard Brich, their two sons, and numerous family members and friends. Memorials have been established at the civil engineering department and electrical and computer engineering department at the School on Mines and Zion Lutheran Church in Rapid City.

SHERWOOD LAMSON CORNER

Sherwood "Woody" Corner (CE45), 86, died June 2, 2009, at Rapid City Regional Auxiliary Hospice House. Woody was born in 1922 in Sioux City, Iowa. The family moved to Sioux Falls, South Dakota, where Woody graduated from high school. Woody graduated from the School of Mines with a degree in civil engineering, enlisted in the Navy for two years, and returned to Rapid City to work for Hackett Construction Company. There he met Ep Howe and they started their own company, Corner and Howe Construction Company. They soon realized after building one house that they only wanted to build commercial buildings. They took on a new partner in 1953, Chris Lee, and became Corner, Howe and Lee Construction Company. In 1954, he met Lila Harms and they were married in 1955. They had three children: Mark, Brian, and Lisa. In 1972, when the children were ages one, three, and 10, the flood occurred. Woody's brother had died five years earlier and his brother's wife was killed in the flood. Their children, Candace, 16, and Rob (CE78), 18, were taken in by Woody and Lila. Woody loved hunting, fishing, golf, and tennis. He was on the board of the National Bank — now U.S. Bank — for 25 years. He was also very active in the Rapid City Jaycees, the Rapid Rotary Club, and service on a hospital board. In 1978, he and Lila bought their first place in Naples, Florida. They would go down there three times a year until 1989, and then started living there seven months out of the year. Woody loved living in Naples but he always enjoyed coming home to Rapid City in the summer. He built and owned four Howard Johnson Hotels. He and Gil Moyle started KEVN-TV, owning that for 10 years. Woody also built and owned Mr. Party Liquors. He loved the challenges of learning a new business and making success of it while still in the construction business. He will always be remembered as a hard working, honest businessman. He is survived by his wife of 54 years, Lila, their two sons, a daughter, and their families.

RAYMOND FRANCIS FERGUSON

Raymond Ferguson (MinE59) passed away of cancer in December 2002 according to an update recently received from Marlys Ferguson.

Memorials

WILLIAM ALEXANDER GRIFFITH

William "Bill" Griffith (MetE47), 87, of Hayden, Idaho, died April 30, 2009, at home. Bill was born in Sioux Falls, South Dakota, and was raised in the Sioux Falls and Canton area, graduating from Canton High School in 1940. He followed his degree from the School of Mines with a master's degree in metallurgy from the Massachusetts Institute of Technology in 1950. His education was interrupted by his military service during World War II. Bill served in the U.S. Navy Reserve from 1943 to 1946 as a Line Officer in the Amphibious Forces. He participated in the invasion and occupation of Iwo Jima, the invasion and occupation of Okinawa, served in the Philippines, and the initial landing of U.S. Occupation forces in Japan at Wakayama Honshu. He was honorably discharged as a Lieutenant in 1945. Bill's professional career included employment with New Jersey Zinc Company in Pennsylvania and Virginia, Rare Metals Corporation in Tuba City, Arizona, and Phelps Dodge Copper Corporation in Morenci, Arizona. He finished his career with Hecla Mining Company, retiring as president and chief executive officer. Following his retirement, he continued as a director of Hecla Mining Company. As a result of his professional accomplishments, Bill received an honorary professional degree from the Montana College of Mineral Science and Technology, an honorary doctor of business administration from the School of Mines, and an honorary doctor of science from the University of Idaho. He was also elected to the National Academy of Engineering. Bill was an active member of the Coeur d'Alene Rotary Club and St. Luke's Episcopal Church. He served as a past member of the Kootenai Medical Center Foundation Board, chair of Kootenai Perspectives, president of Idaho Association of Commerce and Industry, president of the Silver Institute, and chair of the Western Regional Council. He also served on the board of the Inland Northwest Blood Bank and the Idaho EPSCOR program. He was founding chairman of the board for Inland Northwest Bank and was a director of the Coeur d'Alene's Company. Bill is survived by his wife, Gratia Frances Hannan, who he married in 1949, three children, Georgeanne, Jim, and Wade, and their families.

WILLIAM SEATON HANNAN, JR.

William "Bill" Hannan, Jr. (MetE43) died on January 4, 2009, in Tucson, Arizona. He was born in Pierre, South Dakota, and grew up in various towns in South Dakota. As a teenager, he was active in debate teams, city bands, and DeMolay functions. He graduated from Pierre High School in 1940 and then graduated from the School of Mines in 1943. During his college years, he earned money by playing the trumpet with dance bands and other musical groups. After working briefly in mining in Colorado, he joined the U.S. Navy in 1944 and trained in Farragut, Idaho, and at Monterey and Treasure Island, California. He served as an electronics technician in the South Pacific abroad the Leland E. Thomas, a destroyer escort that was part of the seventh fleet, mainly providing escort for oil tankers. He also served on the LSM Caribbean before being honorably discharged in 1946. He obtained a master's degree in metallurgy from the Massachusetts Institute of Technology in 1947 and began his first job in Hanover, New Mexico. He spent his professional career as a metallurgical engineer with the New Jersey Zinc Company, Phelps Dodge Corporation, Mountain States Mineral Enterprises, and in semi-retirement worked as a consulting engineer. He fully retired in 1997. He and Nancy Baker McReynolds were married in Pulaski, Virginia, in 1954. Their married life was spent in Austinville, Virginia; Silver City, New Mexico; and Bisbee, Morenci, and Tucson, Arizona. He was active as a choir member and lay reader in the Episcopal Church throughout his life and served as a senior warden in churches in Silver City, Bisbee, and Morenci. During his retirement years, he was an active trumpet player with the Sabbar Shrine Band in Tucson. At various times in his life, he was also active with the Masonic Temple; the American Institute of Mining, Metallurgical, and Petroleum Engineers (AIME); and the Rotary Club International. Bill is survived by his wife, Nancy; son, Paul; daughters, Elizabeth and Barbara; in addition to his grandchildren and extended family.

PHILIP M. HASSENSTAB

Philip "Phil" Hassenstab (CE62), 62, of Mason City, Iowa, died February 1, 2008, at Mercy Medical Health Center-North Iowa after a sudden illness. Phil was born in Seattle, Washington. He moved with his family to Minnesota and graduated from Tracy High School in 1958. He married LaDonna Jean Foster in Walnut Grove, Minnesota, in 1961. He joined the Iowa Department of Transportation in 1962, starting his engineering career in Denison, Marengo, and Council Bluffs, Iowa, before moving to Mason City in 1974. He retired from the DOT in 2002. Phil was active in the River City Barbershop Chorus for more than 30 years and was honored as Barbershopper of the Year in 1987. He served several roles with the chorus, including president and most recently chorus

Memorials

librarian. He was also a long-time member of the St. James Lutheran Church and a friend of First Congregational Church. He enjoyed participating in the activities of the Saint James Saints and was also a member of the Mason City Noon Kiwanis. He enjoyed music, reading, traveling, cooking, sports, and first and foremost, his family. He was an amazing husband, father, and grandfather. He is survived by his wife of 46 years, LaDonna, five children, five grandchildren, many nieces and nephews and great-nieces and nephews. His beloved wife LaDonna says "He was proud of being a School of Mines grad. He was much respected in his professional and private life. We miss his loving devotion and good humor."

VERNE J. HODSON

Verne Hodson (CE32) passed away on January 24, 2009, after a short illness in Ojai, California. He was 99 years old at the time of death. He always had fond memories of the School of Mines and he utilized his education during his entire working career, according to a note sent by his son, Craig Hodson.

EVERETT RALPH KJERULFF

Everett Kjerulff (EE58) of Redmond, Washington, died on June 30, 2009. Everett was born in 1936 in Arlington, South Dakota, and was raised in Watertown, South Dakota. After high school graduation and earning his degree at the School of Mines, he attended the University of Southern California, earning bachelor's and master's degrees. In August 1957 he married his high school sweetheart, Anthea Peterson. They lived in Southern California from 1958 until 2005. Since then, they spent their summers in Washington and winters in Arizona. Everett was a civil engineer, specializing in land development and public works. Everett expressed his deep and steadfast faith in God by active roles in his church and by living the life of a true Christian man. Hobbies throughout his life were sailing, tennis, photography, model trains, and most recently, golfing. Everett is survived by his wife, Anthea; his daughters, Lisa and Elaine, and their families including five grandchildren, a sister, Jo Ann; and a brother, Dale Kjerulff (ME60) and their families, including two nieces.

KERMIT ALLEN KROGSTRAND

Kermit "Kay" Krogstrand (Phys49), Clarksville, Iowa, died March 30, 2009, of natural causes at a community nursing home.. Kay was born in 1923 on the family homestead near Hilland, South Dakota. His twin brother, Orien Michael "Mike" Krogstrand, was born minutes before him. He was the last of six children born to Norwegian immigrants. He and his brother completed elementary school in Hilland, then two years later, moved to Rapid City to attend high school while living with their sisters, whom the brothers grew to know and respect. After graduating from Rapid City High School in the summer of 1942, Kay and his brother helped their ailing father on the farm, who died in 1942 from cancer. Kay enlisted in the Army Air Corp in December 1942, ending up as a radioman/waist gunner in B-24 bombers. His active duty during WWII was primarily out of southern Italy with bombing runs to including to Ploesti, Romania — a well-defended oil refinery area. He served in the 15th Air Force, 450th Bomb Group, receiving the Air Medal five times. He served in the National Guard and in South Dakota and Nebraska. Upon returning to the United States, Kay attended the School of Mines and received degrees in physics and mechanical engineering in 1949. He worked for Standard Oil of Indiana (Amoco, now BP), living in North Platte, Grand Island, and Omaha, Nebraska; Des Moines, Iowa; Overland Park, Kansas; and Roseville, Minnesota. He retired in 1980. Kay married June Nordin in 1947. They welcomed two daughters — Kristen and Diana. After retirement, June and Kay settled in Mountain Home, Arkansas. June's untimely death two years later left his focus on being a grandpa. Later, he married Katherine (Gibson) Tyler, a Canadian high school classmate (niece of Dr. Jackson, Rapid City). They were married in Burnaby, British Columbia, and lived at Glacier, Washington, until Katherine's death. He then lived near both daughters, surrounded by grandchildren and volunteering as a mentor for his church's pre-school. Kay was an active member of his Lutheran churches and his lifelong faith sustained him. He was also a volunteer and coordinator for the Food Bank in Whatcom County, Washington, for 17 years. He enjoyed woodworking, gardening, birds, golf, playing cards, fishing, football, and arguing with his nephew about baseball. He was preceded in death by his beloved wives, June and Katherine, and his four sisters. He is survived by his twin brother, Dr. Orien Michael Krogstrand, and extended family.

DARRIN ANDREW LIPP

Darrin Lipp (CE04), 28, of Gillette, Wyoming, and formerly of Scottsbluff, Nebraska, passed away July 25, 2009, at Rochester Methodist Hospital in Minnesota, due to complications from a liver transplant. Darrin was born in Rapid City, South Dakota, and attended Cleghorn Elementary, North Junior High, and graduated from Rapid City Central High School in 1999. While attending high school, he was a member of

honors society and ran track and cross country. After high school graduation, he attended and graduated from the School of Mines in 2004. At the time of his death, he was employed by Simon Contractors of Gillette as an area manager. Darrin had a lifelong passion for cars, trucks, and motorcycles, having raced motorcycles for many years with the Jackpine Gypsies and having been an active member of the 4x4 community as a member of the local Toyota Land Cruisers Association Chapter, The Dakota Territory Cruisers. He will always be remembered for having a great smile and sense of humor. He will be greatly missed by many friends and family which include his parents, Ken and Karen of Rapid City, and his brother, Clyde John Lipp (CE97) and wife, Pauline, of Las Vegas. Clyde so graciously donated a portion of his liver for the transplant. He was preceded in death by his sister, Lelena Lipp, who was lost at sea in 1995, and by both grandfathers. He is remembered and missed by many family members.

ELINOR CLARICE MEEKER
JACK ARDEN MEEKER

Elinor Clarice "Noren" Meeker, 84, beloved wife, mother, and friend, passed away on May 26, 2009, after a long battle with celiac disease. **Jack Meeker** (EE47/ME48) followed Elinor into eternity on July 3, 2009, after a sudden case of pneumonia that got progressively worse until his heart failed. Elinor was born with her twin, Elaine Carol, in Pierre, South Dakota. The births were premature and Elaine died after eight months. Elinor watched her older sister practice piano, then copied her and soon played everything. She went to Lincoln Elementary, and then a civil engineer named **Eugene Meeker** (CE27), Jack's father, moved to Pierre with his two daughters. Elinor befriended the Meeker daughters and met their brother, Jack, who was four years older, when he rode his one-speed bicycle 180 miles from Rapid City to Pierre, just to meet Elinor. Thus began a relationship that lasted through her graduation from Pierre High School in 1943 while Jack attended the School of Mines. Jack was born in 1921 in Rapid City and married Elinor in 1945 at Pierre's First United Methodist Church. Jack graduated in 1947 and 1948 with degrees in electrical and mechanical engineering, respectively, and taught at the School of Mines from 1951-55. Jack also did a stint in the Navy for four years during World War II. Elinor earned a reputation as a talented accompanist and piano player, and then attended Stephens College when Jack joined the Navy for World War II. Jack wrote enough letters to make her coed friends jealous and persuaded her to become his wife when he returned home. Elinor bore three children as Jack earned his degrees from the School of Mines. Their first child died of a skin ailment after just two weeks, but then they had two healthy sons, John Stewart in 1947 and Paul Eugene in 1948. In 1951, the family moved to Seattle, Washington, where Jack took a position with Boeing. Elinor became a church pianist and organist and supported music and the arts in Seattle. She was a very active supporter of the Republican Party and an election judge. Jack started with Boeing in 1951 and worked in the aerospace division for 34 years until 1985. He worked on projects like the lunar lander, the "Dinosaur" (which became the Space Shuttle), and received a commendation from Edward Teller for his solution to an "early burst" problem at Lawrence Livermore Lab. He also was chairman of the Boeing Employees Coin Show, and until this year, was very active in many area coin groups and activities. Jack also volunteered at the Puyallup Fair for several years. After Jack retired from Boeing in 1985, they had many travel adventures together. They saw Halley's Comet on a special plane ride in 1986, traveled to Europe when he was the president of the SDSM&T Alumni Association, traveled on the Victoria Clipper in 1996, cruised to Alaska, and went to Fiji and Australia. On Jack and Elinor's 25th anniversary, they both wore their original wedding attire, which was a satin wedding gown and Navy uniform. Jack also received the prestigious Guy March Award from the School of Mines in 2006. He holds the distinction of serving as SDSM&T Alumni Association president for two consecutive terms in 1992-93 and 1993-94, which is a term of service matched by only 13 other alumni presidents, including his father, Eugene Meeker (CE27). To this day, the Seattle Area Alumni Chapter owes its ongoing activity to Jack and Elinor's efforts during the past several decades. Their efforts, hospitality, and dedication on behalf of the School of Mines were exemplary. The past two years were very trying for Jack and Elinor, with the near death of Jack in a tragic house fire and the death of their son, Paul, who died in a motorcycle accident prior to Elinor's death. Their surviving son, John, has been a stalwart spirit for the many family members and friends who knew and loved Jack and Elinor. They will be sorely missed by all that knew them. May you both rest in piece together, forever.

CRAIG ALLEN MEYER

Craig Meyer (ME86) died at his home in Highlands Ranch, Colorado, on May 1, 2008. He was born and raised in Cedar Falls, Iowa. He graduated from the

Memorials

School of Mines in December 1986 and worked for Ford Motor Company. He is survived by his parents, Cal and Alice Meyer; brother, **Steven Meyer** (ME79); sister, Kathy Fry; and a niece and three nephews.

EUGENE LYLE MILLER

The Alumni Association recently was informed that **Eugene Miller** (GenE50) passed away in Oklahoma City in September 2002.

WILLIAM CALVIN MILLER

William "Bill" Miller (EE51), 81, of Maumee, Ohio, passed away May 21, 2009, at Hospice of Northwest Ohio, Perrysburg. He was born in Custer, South Dakota, grew up in the Black Hills on a tiny ranch near Mount Rushmore, and attended school in Hot Springs. He left high school for the Air Force and served during the last year of WWII. He was trained as a radio operator stationed in Bermuda known to Bill as the "Battle of the Rock." Bill's group relayed information between Europe and Washington D.C. from a receiver site in the moat of an old Spanish Fort. He attended the University of Nebraska while still in the service and later went to the School of Mines for his electrical engineering degree. Bill was employed by a small firm in Jackson, Michigan, and for Sun Oil. He then went on to Owens Illinois (O.I.) joining the newly formed engineering department of which he was an original member. Bill represented O.I. in many construction projects in South Jersey, New Orleans, and Central Florida, and served as plant engineer in Brockport, New York, and Lakeland, Florida. Returning to Toledo, he supervised the service and technology assistance to plant engineers in Eastern and Western United States. Retiring at age 60, Bill still completed many projects for O.I. in Auburn, New York; Los Angeles, California; Santiago, Chile; and Asti, Italy. Bill and Carlaine traveled extensively in the U.S. and abroad touring Alaska, Hawaii, Canada, Greece, Mediterranean ports, Sweden, Norway, Galapagos Islands, and New Zealand. Bill is survived by his wife of 51 years, Carlaine, whom he married in March 1958.

DONALD BUCKENTIN MUCKLER

Donald Muckler (MinE38), 94, of Virginia, passed away at his home April 20, 2009. He was born in Morris, Minnesota, where he spent his childhood, and also lived in Dell Rapids and Rapid City, South Dakota. He graduated from the Rapid City High School in 1932 and went on to study at the School of Mines, while also working in the Black Hills at the State Game Lodge. Upon graduation in 1936, Donald accepted an engineering position at the world's largest copper mine in El Teniente, Chile. With the outbreak of WWII, Donald returned to the United States and went to work for the Oliver Mining Co. and U.S. Steel, where he would remain until retiring in 1976. Donald married Virginia native Shirley Donna Mae Schultz in 1943 and together they enjoyed 58 years of happy marriage, raising three children, spending summers at their cabin on Lake Vermillion, and traveling extensively. He was an active member of the United Methodist Church, member and former Ruler of Virginia Elks Lodge 1003, Greenwood Cemetery board member for many years, and enjoyed hunting, fishing, and cooking. Sharp and talkative until the end, Don loved nothing more then visiting with his many friends and family. He was a devoted and loving father and grandfather who will be greatly missed by many. He was preceded in death by his beloved wife, Shirley, and daughter, Pamela Rodby.

GENE RALPH PECKHAM

The Alumni Association was recently informed by family members that **Gene Peckham** (MinE49) died on October 6, 2008.

HOWARD RUSSELL SHANKS

Howard Shanks (Phys65), 71, of Ames, Iowa, died April 14, 2009. Howard was born in 1937 in Floyd County, Iowa, and graduated from Nora Springs High School in 1955. He then received a bachelor's degree in physics from Iowa State University in 1959 and a master's degree in physics from the School of Mines in 1965. Howard married Laura Irene DeGraw in 1956 and they were blessed with three children — Kevin, Brent, and Kimberly. By vocation, he worked for 45 years as a research physicist in the Ames Laboratory and at the Microelectronics Research Center. During this time, he particularly enjoyed mentoring graduate students and junior scientists. His career focused on thermoconductivity in metal alloys, amorphous semiconductors, and materials for use in solar energy and GPS systems. His research resulted in numerous papers and patents. By avocation, he was a historian, a paleontologist, a mineralogist, a genealogist, and a "tractorologist." He was a member of the Floyd County Historical Society, the Nora Springs Historical Society, the Ames Rock and Mineral Club, the Midwest Federation of the Gemological Society, the Iowa Genealogical Society, and the Cedar Valley Engine Club. Most recently, he had been working with the Mesalands Community College in Tucumcari, New Mexico, to donate his lifelong collection of fossils to the Mesalands Dinosaur Museum. He also was committed to his community. As a member of Collegiate United Methodist Church, he served as a trustee and as a member of other committees. He also was an active member of the Golden K Kiwanis Club, the

Friendship Force of Central Iowa, the Iowa State University Alumni Association, and the Dutch Oven coffee group. He is survived by his wife, Laura, two sons, one daughter, one brother, and their families, including 11 grandchildren.

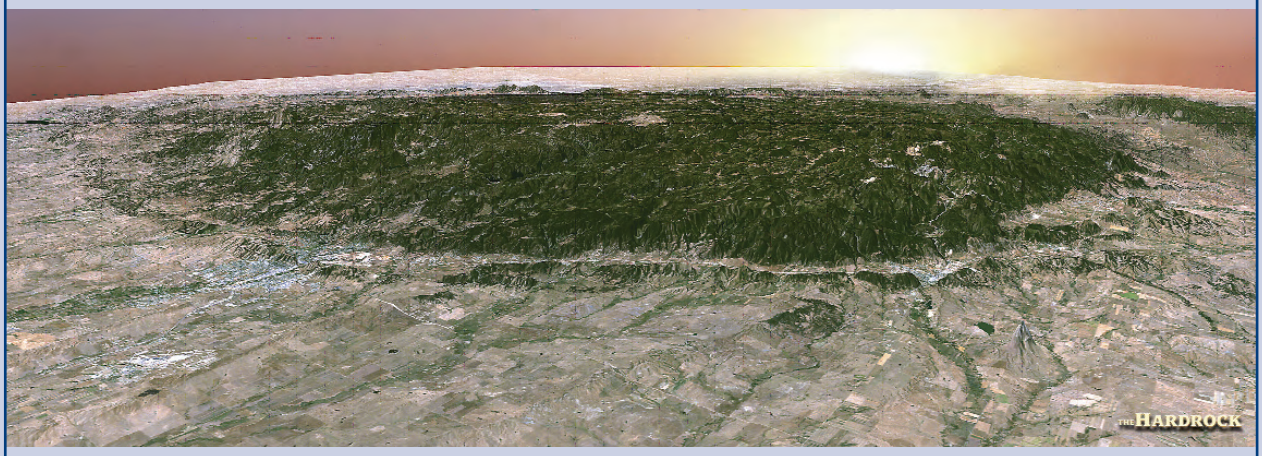
CHRISTOPHER FRANK SOELZER

Capt. **Christopher Soelzer** (ChE00) graduated from Sturgis High School in 1995 and graduated from Kemper Military Junior College in 1997, earning a commission as 2nd LT. He was a platoon leader and detachment commander for Bravo Company, 153rd Engineers. After graduating from the School of Mines with a degree in chemical engineering, he was commissioned as a Captain in March 2003. Chris enjoyed hunting, especially antelope. He loved the ranch and never tired of helping his dad, whether it was building fences, stacking hay, or working cattle. When he e-mailed home, his first question was always, "How are the cows?" Discipline defined Chris's life in both his job and his personal life. His faith was important to him, and he demonstrated it through the care and concern he showed for others. He loved his family, he never missed an opportunity to be together, and would travel hundreds of miles for a family gathering. He particularly enjoyed showing up unannounced on a family member's doorstep. Chris was devoted to his many friends. He was an encourager and made anyone he was with feel special. He had a great sense of humor, and he enjoyed laughing, four-wheeling, riding horseback, and caring for his animals. Chris believed in what he was doing and was proud to serve his country. Chris was killed in action doing his part serving the Army for Operation Iraqi Freedom, in Balad, Iraq. He was 26 years old.

FRANCIS WAYNE STRATTON

The Alumni Office received notice through the SDSM&T Foundation that **Francis Stratton** (ME56) died in December 2008 at the Alma Manor in Alma, Kansas. Francis retired from the Kansas Department of Transportation. He spent half his career with Boeing (Wichita, Kansas) and the other half with the Kansas Department of Transporation. He attended the School of Mines from Sioux City, Iowa.

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 and 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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Rapid City, SD 57701-3995

*For orders shipping to outside the U.S., please e-mail <alumni@sdsmt.edu> for additional shipping and handling rates to international destinations.

Personnel Changes

as of 8/24/2009

Welcome:

Laurie J. Gehner, exempt, contracts coordinator and administrative staff supervisor, DUSEL office, Lead, SD (8/24/09)

Kelsey R. Freidel, CSA, admissions counselor, admissions (8/24/09)

Dennis G. Aldinger, faculty-adjunct, instructor, mathematics and computer science (8/22/09)

Dr. Xinhua Bai, faculty, assistant professor, physics (8/22/09)

Dr. Richard J. Crilly, faculty-adjunct, professor, biomedical engineering (8/22/09)

Dr. John R. Dreyer, faculty, assistant professor, social sciences (8/22/09)

Dr. Marius D. Ellingsen, faculty, assistant professor, mechanical engineering (8/22/09)

Dr. Brian Hemmelman, faculty-adjunct, electrical and computer engineering (8/22/09)

Dr. Randy C. Hoover, faculty, assistant professor, mathematics and computer science (8/22/09)

Val N. Manes, faculty-adjunct, instructor, mathematics and computer science (8/22/09)

Tamara D. Martinez-Anderson, exempt, director of admissions (8/22/09)

Dr. Marc J. Robinson, faculty, assistant professor, civil and environmental engineering (8/22/09)

Dr. Pradip M. Sagdeo, faculty, associate professor, mechanical engineering (8/22/09)

Steven P. Johnson, exempt, assistant track and cross country coach, athletics (8/16/09)

Logan Veath, assistant professor, military science (08/03/09)

Dr. Bharat Jasthi, exempt, research scientist II, R3S ARC/Advanced Materials Processing and Joining Laboratory (8/1/09)

Susan Von Stein, exempt, director of environment, health, and safety, DUSEL (8/1/09)

Dustin D. Thomas, exempt, assistant football coach/video coordinator, athletics (8/1/09)

Dr. Vasudeo P. Zambare, exempt, research scientist I, Center for Bioprocessing Research and Development (7/24/09)

Charles F. Giangrosso, exempt, assistant football coach-defensive coordinator/strength and conditioning coach, athletics (7/22/09)

S. Abena Songbird, CSA, program assistant I, Student Activities and Leadership Center/Office of Multicultural Affairs/Ivanhoe International Center (7/1/09)

Dr. Michael C. Gunn, exempt, associate provost for enrollment management, Office of the Provost/Vice President for Academic Affairs (6/29/09)

Dr. Scott J. Amos, faculty, professor and program coordinator for construction management, civil and environmental engineering (6/29/09)

Dr. Richard A. Kaiser, exempt, athletic director, athletics (7/1/09)

Dr. Ronald J. White, exempt, vice president for research, Office of Research Affairs (7/1/09)

James J. Farrington, exempt, hall director, residence life (7/1/09)

Wendy D. Zawada, exempt, project engineer for underground construction and excavation, DUSEL (7/6/09)

Bryce A. Pietzyk, exempt, project engineer for underground construction and excavation, DUSEL (7/6/09)

Susan A. Eason, CSA, senior secretary, Office of Technology Transfer (6/10/09)

Trevor R. Schmelz, exempt, campus chemical materials coordinator, campus environmental health and safety (6/1/09)

Jason C. Hower, assistant professor, chemical and biological engineering (5/28/09)

Michael J. Dowding, faculty, instructor, physics (6/1/09)

Michael J. Headley, exempt, deputy project manager for facility development, geology and geological engineering (5/11/09)

Darla K. VanZuidam, CSA, secretary, educational programs and professional conferences (3/26/09)
Tiffany J. Mastin, exempt, head volleyball coach and assistant Wellness Center Supervisor, athletics (3/10/09)

Daryl J. Dagel, exempt, research scientist I, nanoscience and nanoengineering (3/1/09)

Tyson Morgan, Army NG ROTC Recruiter, Military Science Department (1/12/09)

Farewell:

Dr. Sang-Bok Lee, exempt, mechanical engineering (7/21/09)

David A. Murphy, CSA, mining engineering and management (7/17/09)
Krista Tyler-Raye, exempt, financial aid (7/17/09)

Dr. Gerald Grellet-Tinner, faculty, geology and geological engineering (5/21/09)

Dr. Jaysankar De, exempt, chemical and biological engineering (6/21/09)

Dr. Chi-Ming Lo, exempt, Center for Bioprocessing Research and Development (6/21/09)

Dr. Nian Zhang, faculty, electrical and computer engineering (6/19/09)

Roxanne Hammond, CSA, electrical and computer engineering (6/24/09)

Dr. Gurdeep Rastogi, exempt, chemical and biological engineering (6/29/09)

D. Hugh Welsh, exempt, athletics (6/30/09)

Cartier Walker, exempt, athletics (6/30/09)

Dr. Karen Whitehead, exempt, academic affairs (6/30/09)

Stacy Hook, exempt, environmental health and safety (7/3/09)

Dr. MD Shameem Hasan, exempt, chemical and biological engineering (5/21/09)

Dr. Brijes Mishra, faculty, mining engineering and management (5/21/09)

Mitchell Ruedebusch, faculty, Office of the Deans (5/21/09)

Dr. Brian Hemmelman, faculty, electrical and computer engineering (5/21/09)

Dr. Melvin Klasi, faculty, civil and environmental engineering (5/21/09)

Val Manes, faculty, mathematics and computer science (5/21/09)

Ronald Marshall, exempt, civil and environmental engineering (6/1/09)

Dr. Randall P. Benson, exempt, Institute of Atmospheric Sciences (5/5/09)

Personnel Changes

Barbara A. Hansen, exempt, admissions (5/8/09)

Craig Miske, CSA, provost and vice president's office (4/9/09)

Change:

Deborah K. Tompkins, from CSA mechanical engineering to CSA Electrical and Computer Engineering.

Dr. Karen Braman, from faculty, assistant professor, mathematics and computer science, to faculty, associate professor, mathematics and computer science (7/1/09)

Dr. Jennifer Karlin, from faculty, assistant professor, industrial engineering, to faculty, associate professor, industrial engineering (7/1/09)

Dr. Travis Kowalski, from faculty, assistant professor, mathematics and computer science, to faculty, associate professor, mathematics and computer science (7/1/09)

Dr. Karim Muci, from faculty, associate professor, mechanical engineering, to faculty, professor, mechanical engineering (7/1/09)

Dr. Pallaoor Sundareshwar, from faculty, assistant professor, Institute of Atmospheric Sciences, to faculty, associate professor, Institute of Atmospheric Sciences (7/1/09)

Patricia Casey, from CSA, secretary, Surbeck Center, to CSA senior secretary, Surbeck Center (7/17/09)

Dr. Karen Bramen, from faculty, assistant professor, mathematics and computer science, to faculty, associate professor, mathematics and computer science (6/22/09)

Dr. Jennifer Karlin, from faculty, assistant professor, industrial engineering and engineering management, to faculty, associate professor, industrial engineering and engineering management (6/22/09)

Dr. Travis Kowalski, from faculty, assistant professor, mathematics and computer science, to faculty, associate professor, mathematics and computer science (6/22/09)

Dr. Karim Muci, from faculty, associate professor, mechanical engineering, to faculty, professor, mechanical engineering (6/22/09)

Dr. Pallaoor Sundareshwar, from faculty, assistant professor, atmospheric sciences, to faculty, associate professor, atmospheric sciences (6/22/09)

Vickie (VJ) Hedrick, from CSA, computer support team leader, Information Technology Services, to CSA, computer support analyst, Information Technology Services (2/11/09)

Karmen Aga, from CSA, senior accountant, Office of Sponsored Programs, to CSA, accounting manager, Office of Sponsored Programs (1/6/09)

School of Mines

Community members visited the Museum of Geology during the first annual Rock I.D. and Swap to have students indentify their unknown specimens, swap old pieces for new, and even create their own pet rocks.

In May, the School of Mines welcomed more than 10,000 competitors and spectators to campus for the South Dakota State High School Track Meet.

During Summer 2009, the Hardrockers held a number of athletics camps on campus, hosting more than 600 participants.

Reaching Out

The School of Mines and the Sanford Underground Laboratory sponsored a community lecture revealing the real science behind the summer blockbuster "Angels & Demons", including antimatter, the Large Hadron Collider, and particle physics.

Each summer, the School of Mines welcomes youth to campus to learn about science, engineering, and many other fun and interesting topics. A new event for 2009 was a Distance Running Camp, taught by two-time Olympic medalist and Olympic coach Dr. Jack Daniels.

Featured Major

Robotics & Intelligent Autonomous Systems

The new master of science program in robotics and intelligent autonomous systems (RIAS) provides an interdisciplinary, research-oriented degree in an emerging technical area.

The curriculum covers the essentials of robotics, artificial intelligence, control, communications, sensors, and signal processing. It provides advanced knowledge in areas such as pattern recognition, computer vision, nonlinear control, digital signal processing, and communications.

Graduates will be able to participate in commercial, military, and NASA projects to design and build intelligent autonomous systems capable of interacting with the environment and performing complex tasks.

For more information, contact:
Graduate Education Office
(605) 394-2493
<http://rias.sdsmt.edu>

RIAS
Robotics & Intelligent Autonomous Systems

Hardrocker Athletics Schedule

Football

Nov. 8	at Dacotah Bank DAC Bowl	TBA
Nov. 14	vs. Trinity Bible College	1 p.m.

Volleyball

Nov. 4	vs. Black Hills State	7 p.m.

Women's Basketball

Oct. 31	vs. College of St. Mary	7 p.m.
Nov. 1	vs. Hastings College	2 p.m.
Nov. 6	vs. Dakota Wesleyan	5:30 p.m.
Nov. 7	vs. Mount Marty College	1 p.m.
Nov. 11	at University of Great Falls	6 p.m.
Nov. 14	at Rocky Mountain College	5:30 p.m.
Nov. 21	vs. Rocky Mountain College	5:30 p.m.
Nov. 27	vs. Mt. Mercy College	6 p.m.
Nov. 28	vs. St. Joseph Calumet	5 p.m.
Dec. 3	at Black Hills State	5:30 p.m.
Dec. 7	vs. Chadron State	7 p.m.
Dec. 11	at Johnson and Wales	5:30 p.m.
Dec. 29	at Biola College	TBA
Dec. 30	at Hope International College	TBA
Jan. 8	at Jamestown College	5:30 p.m.
Jan. 9	at Valley City State	4 p.m.
Jan. 15	vs. Dakota State	5:30 p.m.
Jan. 16	vs. Mayville State	4 p.m.
Jan. 22	at Minot State	5:30 p.m
Jan. 23	at Dickinson State	4 p.m.
Jan. 28	vs. Black Hills State	5:30 p.m.
Feb. 5	vs. Valley City State	5:30 p.m.
Feb. 6	vs. Jamestown College	4 p.m.
Feb. 12	at Mayville State	5:30 p.m.
Feb. 13	at Dakota State	4 p.m.
Feb. 19	vs. Dickinson State	5:30 p.m.
Feb. 20	vs. Minot State	4 p.m.

Men's Basketball

Oct. 30	vs. Rocky Mountain College	7:30 p.m.
Nov. 6	vs. Dakota Wesleyan	7:30 p.m.
Nov. 7	vs. Mount Marty College	3 p.m.
Nov. 11	at University of Great Falls	8 p.m.
Nov. 13	at Montana Tech	7 p.m.
Nov. 14	at Rocky Mountain College	7:30 p.m.
Nov. 21	at Metro State	3 p.m.
Nov. 27	vs. University of Great Falls	8 p.m.
Nov. 28	vs. Mt. Marty College	7 p.m.
Dec. 3	at Black Hills State	8 p.m.
Dec. 11	at Peru State	8 p.m.
Dec. 12	at Dana College	4 p.m.
Dec. 17	at Augustana College	3 p.m.
Dec. 29	at Perkins Classic (vs. MSU-W	5:30 p.m.
Dec. 30	at Perkins Classic (cs. UCCS)	5:30 p.m.
Jan. 2	vs. University of Sioux Falls	6 p.m.
Jan. 8	at Jamestown College	7:30 p.m.
Jan. 9	at Valley City State	6 p.m.
Jan. 15	vs. Dakota State	7:30 p.m.
Jan. 16	vs. Mayville State	6 p.m.
Jan. 22	at Minot State	7:30 p.m.
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Feb. 6	vs. Jamestown College	6 p.m.
Feb. 12	at Mayville State	7:30 p.m.
Feb. 13	at Dakota State	6 p.m.
Feb. 19	vs. Dickinson State	7:30 p.m.
Feb. 20	vs. Minot State	6 p.m.

Men's and Women's Cross Country

Nov. 6	DAC Championships, Rapid City	10 a.m.

Men's and Women's Track and Field

Dec. 3	BHSU Invite	TBA
Jan. 30	BHSU Invite	TBA
Feb. 4-5	Chadron State Invite	TBA
Feb. 13	Wayne State Invite	TBA
Feb. 19-20	DAC Meet in Spearfish	TBA
March 20	CU Invitational	10 a.m.
March 27	SDSM&T Bauer Invite	10 a.m.
April 9	Dickinson State Invite	10 a.m.
April 17	CSU Invite	10 a.m.
April 24	BHSU Invite	10 a.m.
May 7	DAC Meet in Rapid City	10 a.m.

Men's Golf

April 11-12	SDSM&T Invite	TBA
April 18-19	BHSU Invite	TBA
April 25-28	Dickinson Invite	TBA

Women's Golf

April 11-12	SDSM&T Invite	TBA
April 18-19	BHSU Invite	TBA
April 25-28	Dickinson Invite	TBA
May 24-28	NAIA Meet in Rapid City	TBA

Calendar of Events

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

October 23
Midterms

October 31
Halloween

November 7-8
Visit Mines

November 26-27
Thanksgiving Day Holiday — No Classes

December 1
Fall Band Concert — Surbeck Center Ballroom, 7:30 PM

November 30 – December 4
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 14-18
Final Exams

December 19
Fall Commencement — Rushmore Plaza Civic Center Theatre, 9 AM

December 25
Christmas Day Holiday

January 13
Evening Classes Begin

January 14
All Classes Begin

January 18
Martin Luther King Jr. Holiday — No Classes

February 9
Career Fair Surbeck Center Ballroom, 11 AM — 5 PM

February 15
President's Day Holiday — No Classes

February 15-19
Engineers Week

February 19-20
49th Annual Family Weekend

February 26
Health and Wellness Expo — Surbeck Center Ballroom, 10 AM — 3 PM

March 6-14
Spring Break

March 22-28
Greek Week

April 7
Honors Convocation — Surbeck Center Ballroom, 11 AM

April 2-5
Easter Break

April 17
Visit Mines <www.GoToMines.com>

April 20
Design Fair — Surbeck Center Ballroom — 9 AM — 2 PM

April 24
Spring Concert Choir/Symphonic Band — Rushmore Plaza Civic Center Theatre, 7:30 PM
After Hours Master Chorale/Jazz Band — Rushmore Plaza Civic Center LaCroix Hall, 9:30 PM

April 25
Leadership Awards Reception — Surbeck Center Ballroom, 3 PM

May 3-7
Final Exams

May 5
Cinco de Mayo Celebration Surbeck Center Ballroom

May 5
Employee Service Awards Surbeck Center Ballroom, 3 PM

May 7
Native American Feathering Ceremony Surbeck Center Ballroom, 2 PM

May 8
Spring Commencement — Rushmore Plaza Civic Center Arena, 9 AM

May 10
West River Math Contest
Payment Day

May 31
Memorial Day Holiday — No Classes

July 5
Independence Day Holiday — No Classes

July 7-11
5-Year Reunion

See page 69 for a complete listing of Hardrocker athletic events.

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

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Mines Memories

Did you know that…

The Dakota Territorial Legislature spent two years in negotiations to establish the School of Mines? In 1883, the bill passed in the House and the Council, but was vetoed by Governor Nehemiah Ordway. When Governor Gilbert Pierce succeeded Ordway in 1885, he expressed a strong desire to enlarge the territory's educational system, and that year, a successful vote awarded the fledgling School of Mines to Rapid City.

At the time, Gilbert Bailey, who was in charge of the development of the Harney Peak Tin Mining and Milling Company, predicted that the school, a "child of the territory," would become a "lusty giant" that would enrich the world of science. One hundred and twenty-five years later, Bailey's statement echoes the history, present, and future focus of the university.

Today, with the School of Mines on the cusp of its quasquicentennial, the university boasts a 98 percent job placement rate for its undergraduate students, with average starting salary offers of nearly $56,000.

The School of Mines is proud to be a leading partner in bringing the Deep Underground Science and Engineering Laboratory (DUSEL) from an extraordinary vision to a phenomenal reality. The longstanding connections between the School of Mines and the Homestake Mine began in 1885 when the university was established to meet the growing research needs of the mining industry, led by Homestake. These connections continued when nearly a decade ago, the School of Mines helped champion the conversion of the mine into a national laboratory.

Courtesy of South Dakota Science and Technology Authority

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