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Selzer Named New Foundation President



Mike Selzer

The South Dakota School of Mines and Technology Foundation welcomed Mike Selzer (EE 74) as its new president on December 1, 2011.

Selzer assumed leadership from acting president and chairperson of the board, Lorin Brass (MetE 75), who had volunteered to stand in since June 30 when Rod Pappel (ME 77) stepped down.

"I am honored to be selected by the Executive Committee to serve as the next president of the South Dakota School of Mines and Technology Foundation," said Selzer. "I'm excited to put my skills and experience to work to enhance the Foundation's and the University's ability to achieve their

strategic goals. This is an exciting time for the University and for national STEM (Science Technology Engineering and Mathematics) education in general. It's also an opportune time for me to give back in some meaningful way to the place that ultimately shaped my career."

Selzer has extensive financial, operating, marketing, and development experience across a wide spectrum of large and small, public and private businesses, both in the role of an executive leader and as a board member. He has worked with several medical device and technology companies to effectively develop significant, sustainable, and valuable businesses. Selzer began his career at Motorola, Inc. and quickly moved to Medtronic, Inc. where he rose through the ranks to lead corporate technical operations and the neuro-stimulation business. From there he served as CEO of Urologix, Inc. and has also been the founder and/or CEO of several private, venture-backed companies. He currently serves as a board member of CyberOptics Corp. and two private, technology companies.

"The SDSM&T Foundation's work is critical to securing private gifts that help the School of Mines achieve our strategic priorities and provide the framework for continued scholarship,

development and innovation on our campus," said Dr. Robert A. Wharton, School of Mines president. "I am pleased to have Mike at the helm of the Foundation and am confident that under his leadership, we will be increasingly successful in the future."

Selzer's primary responsibility will be to collaborate with alumni, faculty, staff, community and business leaders, corporations, and other university stakeholders to enrich students' lives and ensure their success. This includes both establishing and managing the required resources to provide exceptional intellectual, professional, and personal development opportunities.

"We are excited to have Mike's leadership for the School of Mines Foundation. His talents, background and personal skills make him an excellent choice," said Brass. "I've greatly enjoyed my time with the Foundation and the quality of people that I have been privileged to work with, and I am confident that he will find the same."

Selzer earned a bachelor's degree in electrical engineering from the School of Mines. He also holds an MBA in marketing and finance from Arizona State University. He is married to Vickie Selzer, and they have three grown children.

Distinguished Alumni Award 2011

The 2011 Distinguished Alumni Awards honored five graduates who have pursued excellence in their careers by making outstanding contributions in their professions and to the South Dakota School of Mines and Technology. The awards are co-sponsored by the SDSM&T Alumni Association and the SDSM&T Foundation. This year's Distinguished Alumni Award recipients include:

D. Sherwin Artus (GeolE 60)

D. Sherwin Artus is a native of Belle Fourche, South Dakota. He earned a bachelor's degree in geological engineering and a master's degree in mining engineering from the School of Mines in 1960 and 1962, respectively. During his career in the oil and gas industry, Artus rose to the level of senior executive with more than 49 years of experience. He has held assignments of increasing responsibility in geosciences, engineering, research, operations, and management, culminating with the position of president and CEO for Whiting Petroleum Corporation.

Artus began his professional career in 1962 with Shell Oil Company field operations in Montana and Colorado. His responsibilities and experience with Shell progressed during the mid-1970s through various geological and petrophysical evaluation assignments in Texas. From 1972-1974, he held the position of division operations engineering manager. In this role, Artus was responsible for managing a staff of approximately 50 engineers and support personnel for Shell's West Texas and New Mexico producing properties including the Denver Unit in the Wason field, which included one of the largest CO₂ flooding operations in the United States.

After a short time with Wainoco Oil and Gas Corporation in the late 1970s, Artus formed Sherwin Artus Inc., a petroleum consulting firm that provided engineering, formation evaluation, and property management services to oil and gas operators. As consulting opportunities increased, the company grew its staff and acquired part ownership and management of Petroleum Supervision and Management, a consulting firm based in Casper, Wyoming. One of Artus's most memorable projects during this time was working with Dr. J. P. Gries at the School of Mines to evaluate the potential of the Madison Formation as a geothermal water source for utilities at St. Mary's Hospital in Pierre, South Dakota.

In the 1980s, Artus co-founded and served as executive vice president for Solar Petroleum Corporation. Through acquisition of producing properties and a limited amount of exploration drilling, Solar Petroleum grew to include producing properties in nine states, principally in the Mid-Continent and Rocky Mountain areas. Artus's career culminated with his joining Whiting Petroleum Corporation in 1989, where he progressed from vice president of operations to president and CEO and continues to serve as a member of the Board of Directors.

Throughout his prolific career, Artus remained active in various professional societies and community organizations. He established the D. Sherwin Artus Scholarship for students enrolled in geological engineering at the School of Mines, and he was recognized with the Centennial 100 Award as one of the top 100 graduates in the first 100 years of the School of Mines.

John W. Goth (MetE 50)

John W. "Jack" Goth is a native of Clark, South Dakota. He received his bachelor's degree in metallurgical engineering from the School of Mines in 1950, his master's degree in engineering from McGill University, Montreal, in 1951,



2011 Distinguished Alumni Larry Pearson, Tom Zeller, Jack Goth, and Sherwin Artus. Maynard Raasch was not present.

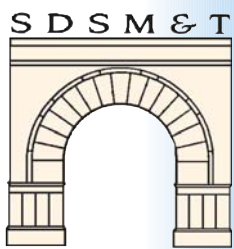
and attended the Advanced Management Program through the Harvard Business School. He received an honorary doctorate in business administration from the School of Mines in 1981.

Goth spent the majority of his professional career (1954-1985) with AMAX Inc., rising to the position of senior executive vice president and member of the Executive Office. During his career with AMAX, Goth had extensive experience in foreign markets, especially Western Europe and Japan. After living in Paris from 1965-68, he spent the next 20 years in Connecticut, during which time he traveled frequently to Europe, Japan, Australia, and South Africa. He established successful direct business relationships with the heads of business, procurement, banking, and communications in most of the countries in Europe and throughout the United States, Canada, and Australia.

Goth directed AMAX's successful worldwide introduction and marketing of metals and metal products including molybdenum, nickel, tungsten, gold, silver, magnesium, and copper, and he helped build these businesses to achieve peak annual pre-tax earnings of \$400 million and assets of \$2.2 billion. He led all activities of the nine divisions of AMAX's more than \$1 billion global Metals Group, and he maintained markets, customers, and prices and maximized revenues during a precipitous down turn of all markets.

Since his retirement from AMAX in 1985, Goth has been engaged primarily as a corporate director in the mining industry with minor activity as a consultant. He is presently a director of Behre Dolbear Inc. and the Colorado Mining Association Education Foundation. Goth has authored several papers including annual reviews for the mining industry of the status of production and markets for the molybdenum industry. He has spoken before such groups as the National Association of Recycling Industries Forum, the London Metal Bulletin Forum, the American Metal Market Symposium, the American Mining Congress, the American Institute of Mining, Metallurgical, and Petroleum Engineers, the Colorado Mining Association, and the Japanese Metallurgical Society.

Goth was a charter member of the SDSM&T Palmin Society and was named one of the School of Mines Centennial 100 Award recipients in 1985. Goth is a longtime contributor to the Hardrock Club and the SDSM&T Foundation, was inducted into the Hardrock Hall of Fame in 2009, and served as the SDSM&T Alumni Association President in 2002. Jack and his wife, Ree, have also established an athletic scholarship at the School of Mines.



AMP Students Join Together to Win Awards



The SABO award is a statue of a Zulu warrior

Like most others on campus, students from the Arbogast Advanced Materials Processing and Joining Center (AMP) have had a hectic semester with classwork and in the lab, but they have also been busy accepting awards.

The award winning began this past summer when a group of AMP students participated in the Scott Fire-fighter Combat Challenge relay

held in downtown Rapid City on July 16. Local firefighters participate in the relay event as do teams from the community. The local teams competed in 100-degree heat and dressed in regular firefighting clothes. They were assigned to a challenge event that simulated what a firefighter could encounter in the line of duty, and the AMP students ended up winning the competition. The team included Tim Johnson, Lars Faller, Todd

Curtis, Matt Carriker, and Tim Pine.

Soon after classes began in the fall, Johnson, a senior metallurgical engineering major from Raton, New Mexico, and a Navy Veteran, went on to win another award. Johnson brought home the South African Ballistics Organisation Award for best poster presentation at the 26th International Ballistics Symposium held in Miami, Florida, on September 12-16. Johnson's poster presentation centered on a paper, "Evaluation of the Response of Friction Stir Processed Panels under Ballistic Loading," which was co-authored by Johnson, Brandon Hinz, Michael West, Marius Ellingsen, Christian Widener, Bharat Jasthi, and Karim Muci-Küchler. This research work was a collaborative effort between AMP and the Experimental and Computational Mechanics Laboratory (ECML) at SDSM&T. Muci-Küchler and Hinz conduct blast and impact-related research at the ECML, and they helped advise Johnson on his poster presentation.

Johnson stated that he was one of only a few undergraduates at the symposium, and he competed against about 150 others in the presentation. Johnson added that this is the first time that this award has been presented to an individual from the United States.

A third award, the "Image of Welding" award, sponsored by the American Welding Society, was bestowed on the Black Hills student chapter of the American Welding Society (chartered by



The Second SABO award was presented at the 26th ISB Miami by Izak Snyman to Tim Johnson

AMP), a group that has been active on the School of Mines campus for the past three years. The chapter is comprised of student members from both the School of Mines and Western Dakota Technical Institute. Johnson, who was president of the student chapter last year, went to Chicago earlier this fall to accept the award on behalf of the student chapter.

Johnson stated that the award is based on community involvement, specifically getting young people involved and interested in welding. The student chapter was actively involved in the community, made repairs to displays at Storybook Island, participated in a motorcycle build project, and partnered with the summer REU and SD GEAR UP programs held during the summer at the School of Mines.

Close-Ups

Dr. Adam French joined the Department of Atmospheric Sciences in the fall of 2011 as an assistant professor. He holds a bachelor's degree in meteorology from Valparaiso University, Valparaiso, Indiana, and master's and doctoral degrees in atmospheric science from North Carolina State University, Raleigh, North Carolina.

His major research interests are severe storms, mesoscale meteorology, numerical modeling, and forecasting. He has co-authored papers concerning convective systems and presented papers at several conferences. French has served as a reviewer for *Monthly Weather Review* and *Weather and Forecasting* publications of the American Meteorological Society. He participated in the VORTEX2 field experiment in 2009 and 2010, and he completed a student internship with the National Weather Service in Raleigh.

During his undergraduate and graduate studies, he was active in the Northwest Chapter of the National Weather Association, and he participated in the National Weather Center Research Experience for Undergraduates. French was inducted into Chi Epsilon Pi, a national honor society for meteorology students, in 2003 and is

currently a member of the American Meteorological Society.

Christy A. Horn recently joined the South Dakota School of Mines and Technology as vice president for University Relations. With experience in higher education, non-profit leadership, the private sector, and as an entrepreneur, Horn came to the School of Mines from the University of North Alabama in Florence where she was the director of corporate and foundation relations. She earned her bachelor's and master's degrees from Ball State University in Muncie, Indiana.

Dr. Roger Johnson (professor, Department of Mathematics and Computer Science) recently had his article, "'Toss Up' Strategies," accepted for publication in the journal *The Mathematical Gazette*. The article analyzes possible strategies for playing a dice game.

Johnson has also stepped down as editor of the journal *Teaching Statistics* after serving a four-year term. This international journal, based in the United Kingdom, publishes "light and readable" articles on statistics pedagogy for teachers of learners to about age 19. The journal has published three times a year since 1979, and the last issue that Johnson presided over was the journal's 100th edition. He will continue with the journal as a member of its Editorial Board.

Dr. Jennifer Karlin (associate professor, Industrial Engineering) received the Distinguished Service award from the Engineering Research Methods division of American Society of Engineering Education (ASEE) at this year's Frontiers in Education (FIE) conference.

Karlin was recognized for this national award based on her contributions to Engineering Education and Engineering Education Research. She has served as chair of the Faculty Apprentice Grant program, general chair for FIE 2011, board member of the Educational Research and Methods Division, and past member of the FIE Steering Committee.

Karlin's accomplishments have brought national recognition to her, to the department, and to the School of Mines.

South Dakota School of Mines head football coach **Dan Kratzer** retired at the end of the 2011-12 season. Kratzer served at the helm of the Hardrockers football program for seven years. While leading the Hardrockers, Kratzer amassed a win-loss record of 22-48 (.314). During that time, Kratzer turned a program that had finished near the bottom of the Dakota Athletic Conference from 2001-2006 into a team that had two consecutive .500 seasons followed by a very successful 2010 campaign where the Hardrockers delivered their best performance in 26 years, posting a 7-3 record and competing for a DAC Conference title. The Hardrockers were also nationally ranked for most of the 2010 season in the NAIA Coaches' Top 25 poll and ended the year ranked 20th, just missing out on a berth to the NAIA Football Championship Series Playoffs.

For the last five years, **Dr. Rajesh Sani** (assistant professor, Department of Chemical and Biological Engineering) and his group at the School of Mines have been working on extremophiles. These microorganisms can thrive and survive under extreme conditions and are present in the biosphere of the Homestake Gold

Mine (also known as DUSEL) in Lead, South Dakota. These extremophiles can possess unique enzymes such as cellulases, xylanases, lipases, and proteases that can be used for industrial applications.

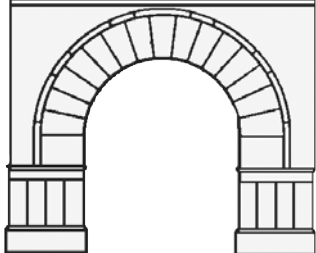
A reporter for Discovery News (the website for the Discovery Channel) interviewed Sani about these DUSEL extremophiles. The full story can be seen at <http://news.discovery.com/earth/extremophiles-energy-110912.html>.

According to Sani, six publications have been published so far on these extremophiles. They include: 1) Kumar, S.; Bhalla, .A; Shende, R.V.; and Sani, R.K. 2012. Decentralized Thermophilic Biohydrogen: A More Efficient and Cost Effective Process. *BioResources*. 7(1), 1-2.; 2) Zambare, V.P.; Bhalla, A.; Muthukumarappan, K; Sani, R.K.; and Christopher, L.P. 2011. Bioprocessing of Agricultural Residues to Ethanol Utilizing a Cellulolytic Extremophile. *Extremophiles*.15: 611-618.; 3) Rastogi, G.; Osman, S.; Kukkadapu, R.; Engelhard, M.; Vaishampayan, P.A.; Andersen, G.L.; and Sani, R.K. 2010. Microbial and Mineralogical Characterizations of Soils Collected from the Deep Biosphere of the Former Homestake Gold Mine, South Dakota. *Microbial Ecology*. 60: 539-550.; 4) Rastogil, G.; Bhalla, A.; Adhikari, A.; Bischoff, K.M.; Hughes, S.R.; Christopher, L.P; and Sani, R.K. 2010. Characterization of thermostable cellulases produced by *Bacillus* and *Geobacillus* strains. *Bioresource Technology*. 101: 8798-8806.; 5) Waddell, E.J.; Elliott, T.J.; Vahrenkamp, J.M.; Roggenthen, W.M.; Sani, R.K.; Anderson, C.M.; and Bang, S.S. 2010. Phylogenetic evidence of noteworthy microflora from the subsurface of the former Homestake gold mine, Lead, South Dakota. *Environmental Technology*. 31: 979-991.; and 6) Rastogi, G.; Muppidi, G.L.; Gurram, R.N.; Adhikari, A.; Bischoff, K.M.; Hughes, S.R.; Apel, W.A.; Bang, S.S.; Dixon, D.J.; and Sani, R.K. 2009. Isolation and characterization of cellulose-degrading bacteria from the deep subsurface of the Homestake gold mine, Lead, South Dakota, USA. *Journal of Industrial Microbiology & Biotechnology*. 36:585-598.

In addition, Rajneesh Jaswal, Sani's Ph.D. student, won third prize on uranium research in the poster presentation at the AIChE Annual Meeting held in Minneapolis in October 2011. The poster, "Effects of Fe(III)(hydr)Oxides On Transport of Bioreduced Uranium Under Sulfate Reducing Conditions," was presented on October 17, 2011. Authors included Rajneesh Jaswal, Sudhir Kumar, Gursharan Singh, Emily Squillace, Ravi Kukkadapu, Alice Dohnalkova, Brent Peyton, Nicolas Spycher, Timothy R. Ginn and Rajesh Sani.

Dr. Keith W. Whites hosted the winter meeting of the Air Force Research Laboratory's Material Measurement Working Group at SDSM&T on October 26-27, 2011. This group of engineers, scientists, and researchers from the Air Force, industry, and academia meets twice a year to discuss the electromagnetic material measurement and characterization needs of the Air Force. Nearly 40 participants from across the United States met in Rapid City for this two-day meeting.

S D S M & T



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The Foundation Update shall be used as a forum to advise alumni and friends of important events occurring on campus and within the Foundation. I extend thanks to the individuals who have contributed news reports to the Foundation Update and to the Rapid City Journal, our publisher.

Sandy Carlson, Editor

Quadra FNX Mining Ltd. Scholarship



This year's Quadra FNX scholarship recipients are Jennifer Ward, a senior mining engineering major, and Clinton Koch, a junior geology major.

Quadra FNX Mining Ltd. (through its subsidiary Robinson Holdings (USA) Ltd.) recently established the Quadra FNX Mining Ltd. Scholarship fund at the School of Mines.

Two scholarships will be awarded each year to sophomores, juniors, or seniors who demonstrate superior academic achievement. The first scholarship will be awarded to a mining or geological engineering major. The student who receives this scholarship will also have the opportunity to hold a summer internship with Quadra FNX Mining Ltd. The second scholarship will be awarded to a student in the geosciences, preferably a student

majoring in geology who has demonstrated an interest in the mining industry.

Quadra FNX Mining Ltd. is a leading mid-tier copper mining company with corporate offices in Vancouver, British Columbia and Toronto, Ontario. Quadra FNX produces copper, gold and platinum group metals from its operating mines: the Robinson mine in Nevada, the Carlota mine in Arizona, Franke mine in northern Chile, and the McCreedy West, Levack (which includes the Morrison Deposit) and Podolsky mines in Sudbury, Ontario. The company possesses several advanced development projects, including the Sierra Gorda copper-molybdenum project in Chile, the Victoria Project in Sudbury, and the Malmbjerg molybdenum development project in Greenland.

Quadra FNX is driven by an entrepreneurial spirit and values these qualities in its employees. Quadra FNX offers a dynamic, fast-paced environment that encourages employee growth and development.

Quadra FNX values:

- We are committed to **Zero Harm** for our employees, our communities and the

environment. We believe that the best mines are the safest mines.

- We are **Results Driven** and accountable for our results. We are skilled at problem solving and ready to take on new challenges to grow our company.
- We achieve **Success Through Teamwork**. We build trust, act with respect and welcome constructive debate. We promote a collaborative work environment where we continuously learn and adjust.

Quadra FNX Mining Ltd.'s intention is to grow our business by pursuing both internal and external growth opportunities. We have a strong combined history of making smart, entrepreneurial acquisitions and will continue to explore opportunities. We will also advance our promising pipeline of development projects while supporting our operating mines. The combined skills and expertise of Quadra FNX people will be a central component of our future growth.

Please take a moment to visit our website www.quadrafnx.com for more information about opportunities we have for students and new graduates and Quadra FNX.

DISTINGUISHED ALUMS

From Page 1

Larry V. Pearson (ME 72)

Raised near Wausa, Nebraska, Larry V. Pearson received his bachelor's degree in mechanical engineering from the School of Mines in 1972. He later received a master's degree in business administration from Creighton University in 1981.

Pearson began his career in energy with Peoples Natural Gas and worked in various engineering and sales positions in Omaha, Nebraska, and Rochester, Minnesota. In 1978, he transferred to the parent company, Northern Natural Gas, where he held several regulatory compliance management positions and in 1983 was named vice president of regulatory affairs. In 1985, Northern Natural Gas became part of Enron Corp., and Pearson was named vice president of gas supply. Later he was named executive vice president of Enron Gas Supply Company in Houston.

Pearson left Enron in 1988 and joined start-up cogeneration development company Tenaska Inc., where he worked as a member of the senior management team until his retirement in 2009. Pearson started at Tenaska as a vice president, managing all of the natural gas-related aspects of the company's operations and playing a key role in the growth of Tenaska and its affiliated businesses. In 2002, Pearson was named president and CEO of Operations, and executive vice president of Tenaska. Due in part to Pearson's efforts, Tenaska has grown over the years to become a respected, major independent power company, one of the top ten natural gas marketers in North America, and a leader in the marketing of electricity and biofuels. Now retired, Pearson continues to consult for and serve on the board of Tenaska. He and his wife, Linda, reside in Bennington, Nebraska, in the summer and in Rio Verde, Arizona, during the winter.

Larry and Linda Pearson established the Pearson Chair in Mechanical Engineering, which began as the Pearson Professorship, in 2008. Pearson has served on the SDSM&T Foundation Board of Trustees since 2005, has been part of the Executive Committee since 2009, and served on the Mechanical Engineering Industrial Advisory Board since 2006. He was vice president of the Omaha chapter of the Alumni Association for more than 20 years and president of the SDSM&T Alumni Association in 2003. He has been a member of the board for the Methodist Health System in Omaha since 2005; a board member for the Boy Scouts of America's Mid America Council since 1999; and an active member and leader for St. Luke's Methodist Church in

Omaha since 1977.

Maynard S. Raasch (ChemE 37)

Originally from Watertown, South Dakota, Dr. Maynard S. Raasch received his bachelor's degree in chemical engineering from the School of Mines in 1937. He then ventured to Ohio State University to continue his education, earning a master's degree in chemistry in 1938 and a Ph.D. in chemistry in 1941. After completing his doctorate, Dr. Raasch began his prolific and successful 39-year career with the DuPont Company.

Raasch joined the Central Research Department of the DuPont Company at the Experimental Station in 1941, where he became a member of a wartime team developing an anti-radar coating for airplanes under the auspices of the U.S. Naval Research Laboratory and U.S. Office of Science and Technology. Both inquisitive and adventurous, Raasch dedicated much of his life to research and the pursuit of new and exciting opportunities. Even though he retired in 1980 at the age of 65, he returned to work in 1985 as a consultant. He spent four months at Stetson University in 1984 and three months at the University of Alabama in 1987 as a research scientist. Raasch is an emeritus member of the American Chemical Society and has authored 34 articles, 33 patents, and 2 book chapters in the field of organic chemistry.

Raasch served as president of the Society of Natural History of Delaware from 1956-1959, secretary of the Delaware Academy of Science from 1992-1995, and member of the fish and wildlife committee of the First State Resource and Development Project from 1972-1977. As a world explorer, Raasch has visited 165 countries and colonies, Antarctica, and the geographic and magnetic North Poles.

Raasch established the Maynard Raasch Fund to support the recently-completed addition to the Chemical and Biological Engineering and Chemistry (CBEC) building on the School of Mines campus. Part of this fund will be used to help finish instructional and research laboratory modules in CBEC that will provide state-of-the-art facilities for teaching and training in chemistry to students in all disciplines. Other portions of the Maynard Raasch Fund will be used to establish the Maynard Raasch Endowment Fund, which will support two areas – on-going maintenance and continuous improvement of the Maynard Raasch Laboratory in CBEC and Maynard Raasch Scholarships that will be awarded to chemistry students at the School of Mines.

Thomas J. Zeller (ME 70)

Thomas J. Zeller, a native of Miller, South Dakota, earned a bachelor's degree in mechanical

engineering from the School of Mines in 1970 and an M.B.A. from the University of Wyoming in 1973. Most of his 36-year professional career was spent with RE/SPEC Inc., a technical consulting firm.

Zeller began his career at RE/SPEC in 1975 as the manager of financial operations and treasurer. In 1985, he was named vice president of finance, and in 1994 he became president of the company. Zeller retired from RE/SPEC as CEO in August 2011.

During his career with RE/SPEC, Zeller was responsible for the financial management of the corporation assets including corporate finance, contract administration, insurance coverage, financial and government contract audits, and administration of fringe benefit programs, such as the ESOP, 401(k) plan and group insurance coverage. As president, he was responsible for all aspects of corporate governance, including business profitability, strategic direction, and acquisition of engineering companies. Zeller played a key role in RE/SPEC's development into a profitable and world-wide respected state-of-the-art technology company headquartered in Rapid City. In addition to publishing several technical papers in the late 1970s and early 1980s, Zeller collaborated on many proposals for technical work with national laboratories, government, and commercial clients.

Although Zeller recently retired from the Board of Directors of RE/SPEC, he remains active as a consultant to the firm. His professional memberships include the National Contract Management Association; the Society of American Military Engineers; the Society for Mining, Metallurgy, and Exploration; and the National Society of Professional Engineers. In 1991, the Black Hills Chapter of the South Dakota Engineering Society selected Zeller as Engineer of the Year. He was also the South Dakota Engineering Society State Engineer of the Year in 2002. He is a registered professional engineer in the state of South Dakota. Zeller is also on the board of Black Hills Corporation and also chairs a steering committee to raise funds to build a Newman Center close to the Mines campus. He previously served on the Rapid City Regional Airport Board, the South Dakota Cement Plant Commission, the Rapid City Economic Development Foundation board, and the Board of the Rapid City Economic Development Loan Fund. He was the president of the SDSM&T Alumni Association in 2004 and 2005. He has been a trustee of the SDSM&T Foundation since 2001, chair of the Investment Committee since 2002, and member of the Foundation Board of Trustees Executive Committee since 2005.

School of Mines Adds Men's Soccer Program

The South Dakota School of Mines is pleased to announce the addition of men's soccer as the newest varsity program to the Hardrocker Athletics Department starting in the fall of 2012.

Hardrocker Athletics Director Dick Kaiser plans to bring in a head coach during the first part of the spring semester and start building the program. SD Mines plans to roster approximately 30 student-athletes as the program begins to take shape. It will however be a non-scholarship program during the first season.

According to Kaiser, adding soccer will fulfill

multiple needs. There has always been a strong club emphasis in soccer on the Mines campus as well as a strong interest from the student body. Adding soccer will also provide the Hardrockers with a nature of compliance with Title IX as well as makes the SD Mines Athletics Department more desirable as they seek NCAA Div. II conference affiliation.

Kaiser hopes the program will attract new students but also provide an avenue for current students to be members of an intercollegiate sport.

A Hardrocker soccer schedule is currently

being formulated with the first season having a limited amount of contests. A full soccer schedule will be in place for the 2013 season.

The various soccer clubs and associations in the Rapid City community have shown support for the idea.

A decision as to where the Hardrockers will hold their home matches has yet to be determined, but Kaiser said there are many outstanding facilities within the Rapid City community which he hopes SD Mines will have the opportunity to use.

CBE Unit Ops Lab Back On-Line

“As an instructor, walking into the new Unit Operations Laboratory for the first time is like being a kid walking into a giant toy store,” said Dr. Teresa Kirschling, a temporary assistant professor in the Chemical and Biological Engineering Department. “All of the equipment is shiny and new, and exactly what you see walking out onto the floor of a processing facility (albeit slightly smaller). The instructional possibilities in such a great facility seem limitless.”

Other faculty members and students agree and seem to be equally excited about the newly refurbished Unit Operations Laboratory.

“As an alumnus who fondly remembers the ‘joys’ of running the ‘white elephant,’ it is a real pleasure to have experiments that are up-to-date, redesigned, and equipped with the latest instrumentation, data acquisition, and where needed, digital control,” said Dr. Dave Dixon, professor, Chemical and Biological Engineering. “The hands-on nature of the lab is still very much present, as is the need for critical thinking and troubleshooting, however, students are now working with equipment that is fully functional and more modern. This upgrade to the UO Lab is truly a positive step change for enhanced student learning.”

According to Dr. Robb Winter, department chair, Chemical and Biological Engineering, the program uses the Unit Operations Lab extensively to enhance the theory and skills presented in the classroom and to provide students hands-on

experience in operating a pilot scale operation. The lab houses mini-plant equipment such as a pumps, a distillation column, evaporators, heat exchangers, a rotary dryer, gas absorbers, a variety of measurement instruments, and data acquisition and control.

Renovations to the Unit Ops Lab took nearly two years to complete. At the end of 2009, the old lab had been decommissioned and experiments had been removed, and in the spring of 2010, the lab had essentially been gutted. In the fall of 2010, the lab was being rebuilt, and for the first time in 50 years, it had air conditioning. The lab also received upgraded ventilation, and new lighting, walls, and windows were installed.

In January of 2011, the reconstruction and installation of all experiments began. Ivan Filipov, laboratory specialist, Jon Warner (ChemE 10), temporary laboratory assistant, a team of undergraduate and graduate students, and piping and electrical contractors started the task of installing new and renovated experiments. Shake down occurred late in late summer, and the lab was ready for use for the fall 2011 semester. During the fall 2011 semester, the Unit Ops Lab supported its first three labs, and reactions to the newly refurbished space have been overwhelmingly positive.

Winter said, “At the recent 2011 AIChE Annual meeting, I attended a session on the Design, Construction and Operation of Unit Operation Labs and Pilot Plants. It is clear that we have created a very competitive learning environment which meets the needs of industry and students.”

Kirschling agreed, saying, “The new lab operates very smoothly. We ran for an entire semester without any equipment mishaps. This gave the students far more hands on time with the equipment and allowed them to explore each system in depth.”

Students are equally excited about the possibilities.

“The new lab was incredibly useful with up-to-date experiments, and I felt the instruments in the Unit Ops Lab were designed well in order to provide experience to students,” said



The completely refurbished Triple Effect, now fully instrumented and completely automated

Michael Nielson.

Chance Rieger added, “The new equipment is significantly better than the previous equipment, which is noticeable from the reduced amount of time required for students to complete a lab.”

“I always ask students to comment in their reports on how the experiments could be improved, and this semester there were very few comments on potential equipment changes,” said Kirschling. “Typically these comments revolve around fixing issues, but having first-class facilities challenges students to think about how they can improve their experimental methods as opposed to how they can fix equipment.”

Winter said the refurbished lab will foster new generations of innovators and leaders, and it will also be a place where K-12 students and teachers can learn about chemical and biological engineering and experience the excitement of chemical and biological engineering through hands-on experiments.

“We are constantly looking to upgrade and change the experiments in the Unit Ops Lab, and we look to industry and particularly our alumni for input and advice for upcoming unit operations,” said Winter. Comments, input, and suggestions and can sent to robb.winter@sdsmt.edu.

“If you are in the area please give me a heads up so that I can schedule a tour for you,” concluded Winter.



The completely new pressure drop experiment with new double pipe heat exchanger in the background

Kehms Endow Electrical Engineering Scholarship



Darlene and Roger Kehm

Roger (EE 50) and Darlene Kehm recently established the Roger and Darlene Kehm Scholarship at the School of Mines. This endowed scholarship will be awarded to junior or senior electrical engineering students who are natives of South Dakota. Preference will be given to honorably discharged veterans of the United States Armed Forces.

Roger was born in Shindler, South Dakota, and received most of his elementary schooling in a one-room country school. The family moved to Sioux Falls, and he graduated from Washington High School. While waiting to be inducted into the Armed Forces, he attended Augustana College for a year.

He was drafted in 1943 and was accepted in the U. S. Coast Guard. Because he had obtained an amateur radio license while in high school, he was sent almost immediately to three radio/electronics schools in New York and Connecticut. The last of the three was a LORAN school. He spent most of his service time in the South Pacific during WW II in operation of the then secret

LORAN navigation system stations. He holds Life Memberships in the Veterans of Foreign Wars and the Coast Guard Combat Veterans Association and is a member of the Department Homeland Security U. S. Coast Guard Auxiliary.

After discharge from the service he enrolled at SDSM&T, graduating in 1950. While in college, Kehm was active in the student chapter of IEEE and was a member of the nine-piece dance band – the Sophisticated Swingsters. During the junior and senior years, he was a member of Sigma Tau and a founding member of Eta Kappa Nu on the campus.

Upon graduation he was employed for three years by Great Lakes Pipeline Co., first as an inventory engineer and later as the system-wide electronics engineer. For another three years, he was a production engineer for Jordan Millwork Co. Roger retired in 1985 from a thirty-year career with Northern States Power Co. as division engineer covering southeast South Dakota and southwest Minnesota for the Sioux Falls Division.

His post-employment activities include the past president offices of the Siouxland Chapter of IEEE and the Dakota Chapter of the International Right of Way Association of which he was a founding member. He is a Life Member of IEEE. He has been a Red Cross advanced first aid and CPR instructor, a 20-year member of the National Ski Patrol, and a past president in a Kiwanis Club where he maintained perfect attendance for twenty years.

Roger holds 60-year memberships in his Masonic Lodge, the Scottish Rite, and Shriners International. He is a York Rite member, a member of the Order of the Eastern Star, and several other Masonic groups. He is a Past Master of his Lodge, Past Grand Commander of the Knights Templar in South Dakota, Past Grand Presiding Officer in the York Rite Chapter of South Dakota, and a Grand Line Officer in the York

Rite Council of South Dakota.

Darlene was raised on a farm at Parker, South Dakota, by her parents, John and Maxine Koller. Since she was six years old, she knew she wanted to be a nurse and as such graduated from the Sioux Valley Hospital School of Nursing in Sioux Falls. It was there that Roger and Darlene met while she was working in the hospital as a registered nurse. Her 32-year nursing career encompassed hospital nursing, 12 years as a school nurse in Sioux Falls, and several years in extended care at nursing homes. She is a 50-year member of the Order of the Eastern Star and a member of her alumni association. Darlene has been involved in church work and, since her retirement, has spent many hours in volunteer work at the hospital.

Roger and Darlene have been married for 58 years. The Kehms raised three children – a son and two daughters. Catherine Marie and Carol Louise are now both deceased. David is a practicing dentist in northwest Iowa, and his wife, Janet, is a clinical dietician for a hospital in Sioux City. They have two children, Sarah, a junior, and Brian, a sophomore, at Iowa State.

Roger is proud to be a Grubby. “Having attended all but two of the five-year reunions since graduation, it is always a pleasure to come back to enjoy the fun, see old friends, and observe the fine changes on campus,” said Roger. “The Mines is a wonderful school, has always had a commendable reputation and many, many great traditions.”

Whenever Roger asks the staff in the Mines Bookstore about slide rules, he is promptly told, “They’re over in the museum with the rest of the dinosaurs.”

The Kehms like to say that a bad day in the Hills is better than a good day on the flat lands. They have a home in Sioux Falls and spend five or six months of the year at their place on the Rochford Road in the Black Hills.

Fujitsu Establishes Scholarship



Fujitsu representative Slater Ohm, scholarship recipient Preston Oihus, and President Robert A. Wharton

The Fujitsu Scholarship fund was recently established by Fujitsu in appreciation of their business relationship with the School of Mines in which they have provided laptop computers for students since 2009.

This non-endowed scholarship will be awarded to students selected by the Information Technology Services (ITS) department based on a short essay that they write describing the benefits and impact of the Fujitsu laptop on their educa-

tion. Any full-time student will be eligible for the scholarship since every student uses a Fujitsu laptop computer.

This year's Fujitsu Scholarship recipients were Brandon Dike (sophomore, civil engineering, Norfolk, Nebraska), Travis Long Fox (freshman, mechanical engineering, Onida), Preston Oihus (junior, industrial engineering, Rapid City), Caine Shagla (senior, environmental engineering, Rapid City), and Brandon Weyer (senior, mechanical engineering, Sturgis).

"We as students learn to use everything at our disposal, especially computers, to solve problems – a quality our future employers will all appreciate. Our jobs may depend on the knowledge we gained by having this program in place," wrote Oihus. "It's easy to take having these machines for granted, but stepping back and realizing just how much we do on these tablets everyday really is amazing."

"In my opinion, the Fujitsu Tablet PC is the single-most valuable tool we have on campus," added Oihus.

Brandon Weyer agreed, writing "The Fujitsu

tablet and Tablet Central have saved me many hours of down time and paging through notes. It has not only helped my organization skills but has also reduced the load of material I need to carry to and from class. The Fujitsu tablet has been a valuable source to success in my scholastic career."

"[The Fujitsu Tablet PC] truly has limitless integration with regards to academic endeavors," added Caine Shagla. "Thanks, SDSMT, for having the program and thanks Fujitsu for making such a wonderful product!!"

Fujitsu is a leading provider of ICT-based business solutions for the global marketplace. With approximately 172,000 employees supporting customers in 70 countries, Fujitsu combines a worldwide corps of systems and services experts with highly reliable computing and communications products and advanced microelectronics to deliver added value to customers.

Headquartered in Tokyo, Fujitsu Limited reported consolidated revenues of 4.5 trillion yen (\$55 billion) for the fiscal year ending March 31, 2011. For more information, please see www.fujitsu.com.



SDSM&T to Host AIChE Rocky Mountain Regional Conference

The American Institute of Chemical Engineers (AIChE) is a professional organization for chemical engineers which has over 40,000 members. Because of its diverse divisions and forums, AIChE sets up many technical meetings for networking and affiliation for top engineers across the country in the various disciplines of chemical engineering.

Besides professional chapters, AIChE also has student chapters at universities including the South Dakota School of Mines. Each year, one university hosts the student chapter conference meeting which attracts students from across the country, and this spring, the School of Mines will be that host. Students and other attendees of the AIChE Rocky Mountain Regional Conference will celebrate the chemical engineering profession through networking, career information sessions, competitions, and social events at the event to be held from March 30 to April 1. All schools in the Rocky Mountain Region will be invited to this conference, and an estimated 130 students will

attend.

During the two-day conference, two banquets and a mixer will be held to increase the potential for networking between the students and professionals attending the conference. Workshops and presentations will allow students, industry leaders, academic leaders, and AIChE representatives to present information on the diverse field of chemical engineering. A graduate school/career fair will also be held in which companies and universities will have the opportunity for recruitment of top students from the Rocky Mountain region.

Along with these events, the Chem-E-Car Competition will be held. During this competition, student teams will compete with cars that run on a chemical reaction. Winning teams will be selected by how well they calibrate and control the reactions in their design. A Chem-E-Car Poster Competition will display car designs from each team for review.

In addition, a student paper competition will present the research findings of undergraduate

students for review and discussion, and ChemE Jeopardy will provide a fun forum to test the factual knowledge of the attendees.

In addition to all of the other events, tours of the School of Mines, its research facilities, and the Rapid City area will also be hosted.

The AIChE student group is looking for sponsors for the conference. Sponsors will be present at the graduate school/career fair and at company sponsored events, and they will have the opportunity to present a workshop. Other forms of sponsor promotion will include advertisement from banners, posters, brochures, t-shirts, announcements, and welcome bags.

For more information about the levels of conference sponsorship or to become a sponsor, visit <http://alumni.sdsmt.edu/aichesponsor>.

For additional information, contact one of the AIChE Regional Conference Co-Chairs: Yuriy Makar at Yuriy.Makar@mines.sdsmt.edu or Daniel Hines at Daniel.Hines@mines.sdsmt.edu



School of Mines Holds 164th Commencement

The School of Mines held its 164th commencement on Saturday, December 17, 2011, in the Rushmore Plaza Civic Center Theatre. Nearly 100 graduates received associate's, bachelor's, master's, or doctoral degrees.

Dr. Patricia D. Galloway was the commencement speaker, and Lukasz M. Dubaj (CE 11 and IS 11) represented the student body.

Dr. Patricia D. Galloway, P.E., CPEng, PMP, MRICS, CFCC, is the chief executive officer of Pegasus Global Holdings Inc., an international management consulting firm providing services to the energy and infrastructure industries, and past vice chair of the National Science Board.

Dr. Galloway has been instrumental in advancing both project management and risk management tools and programs in industry sectors including infrastructure, power, process, and oil and gas. She has been a global leader in the development of engineering and construction management standards, and has authored many papers, articles, and books on these subjects. Dr. Galloway has assisted clients worldwide in the development of project management policies, procedures, and systems. She is particularly recognized for her development and refinement of the application of lessons learned from one project to the next.

As a leader in the field of engineering and construction, Dr. Galloway is regularly consulted by private and public organizations and the international financial community on trends in the industry; the media regarding current topics and events; universities seeking input on university curricula, mentor programs, engineering education, and diversity issues; and professional societies relative to topics of interest to their membership.

Dr. Galloway is a licensed civil engineer in

Australia (CPEng), the United States (P.E.), and Manitoba, Canada. She is a past president of the American Society of Civil Engineers and the first woman to have held the position of president in that organization's 155-year history. Dr. Galloway is a fellow of the UK Institution of Civil Engineers, Engineers Australia, the American Society of Civil Engineers, and a member of the Japan Society of Civil Engineers. She was inducted into the U.S. National Academy of Construction and the Pan American Academy of Engineering.

Dr. Galloway is also a member of the project management and risk management directorates of the Royal Institute of Chartered Surveyors (MRICS) and a member of the Academy of Experts. She is a certified Project Management Professional (PMP) of the international Project Management Institute, a member of the Board of Advisors of the Construction Industry Institute, and a member of the National Association of Corporate Directors. She is a Certified Forensic Claims Consultant (CCFC) and regularly serves as an expert witness on standards of engineering and construction, project management, and execution issues.

Lukasz M. Dubaj is originally from Warsaw, Poland. He moved from Poland to the Rapid City area in 1994. His transition to the United States was challenging initially because he did not speak English prior to his arrival. After graduating from Central High School in Rapid City in 2006, he enrolled at the School of Mines. He joined student organizations and accepted leadership roles that included the position of freshman class representative to the Student Association Senate. Lukasz also participated in the Peer Advising Program and served as a dedicated member of the Leadership Development Team and as co-chair of

Freshman Orientation. He was inducted into the Leadership Hall of Fame in 2011.

Dubaj's extensive role in student government includes terms as public relations chair, vice president, and president of the Student Association Senate. In 2010, he was selected as executive director of the South Dakota Student Federation, which carries the responsibility of representing more than 37,000 students at South Dakota's six public high education universities to the Board of Regents and Legislature. He also represented students as a member of the South Dakota Board of Regents Executive Director Search Committee, School of Mines Provost Search Committee, Post-Secondary Tobacco Free Task Force, Student Success Conference Coordinating Committee, Mobile Computing Implementation Team, and Desire 2 Learn Implementation Task Force.

Dubaj's many community service activities in the Rapid City area frequently saw him in costume: he was the Water Wizard at the School of Mines' annual Water Festival, he donned a beard and red suit to play Santa Claus at Storybook Island several times, and he impersonated a life-sized chipmunk to trick or treat for canned goods for the charity Feed South Dakota.

While completing his studies, Lukasz engaged in rewarding work as a teaching assistant in the Civil Engineering Department. In this role, he assisted students in learning the drafting software AutoCAD and in statics, one of the most fundamental courses in engineering. In addition, he participated in the School of Mines' M-Week celebration first as a chair of the M-Week Committee and later as Homecoming King.

Upon graduation, Lukasz plans to begin employment with Kiewit. He intends to pursue graduate degrees in engineering and law.

SDSM&T Foundation Around and About



Wichita, Kansas: *From left: Jim (ME 01) and Katie Morgan, Erin (ME 01) and Leah Lachman, Cameron (IE 06) and Kat Anderson, Dennis Clary (ME 01) and Tara Shaffer, and Tom Severson (ME 05) and Brooks Kancel.*



Dallas, Texas: *From left: Paul Ching (MS GeolE 73), Mark Scott (GeolE 72), and Chuck Enze (CE 75).*



Richardson, Texas: *From left: Justin Kasemodel (EE 06), Craig Prascher (EE 70), Lisa Kasemodel (Geol 06), and Dick (Chem 70) and Jeanette (Chem 69) Salverson.*



Sun City, Arizona: *Jo Owens, Gordy and Ellen Olson [grandparents of Mark Olson (EE 11)], and Gregg Owens (Math 69).*



Shoreview, Minnesota: *Seated from left: David Stechmann, Kathy Stechmann (Math 69), and Diane Hammond (Math 69). Standing from left: Mike (ME 65) and Shirley Doyle, Lowery (GeolE 51) and Mary Ann Smith, Chris Danisch (EE 07), Linda and Dennis (EE 70) Olsen, David Hammond (GeolE 69), Gary (EE 93) and Jackie (CE 93) Hansen, Don (EE 68) and Marian Orton, and Larry Simonson (EE 69).*



Knoxville, Tennessee: *Ev Bloom (MetE 63), Kay and Joe (ME 54) Hansen, Dana (Chem 67) and Dr. Sally Peterka, and Larry Simonson (EE 69).*



Blue Bell, Pennsylvania: *Dr. Reed Lang (ChE 36) and daughter Karen Black.*



Rapid City, South Dakota: *Majid Alsayegh (CE 79) meets former teachers Boots Newstrom (French) and Don Thorson (CE 44).*



Durango, Colorado: *Football player parents and SDSM&T Alumni – Fort Lewis College.*



Albuquerque, New Mexico: *Left to Right: Vince Humann (ME 68), Marv Larsen (ME 74), Bob Sacrison (MinE 51), Drs. Kathryn Knowles and Frank Hansen (CE 73), Ron Kidner (EE/CSc 85), Jerry Pekarek (ChE 66), Norm Kolb (EE 71), and Morten Palmgren (EE 95).*



Santa Fe, New Mexico: *Tomasita's: Left to Right: Front Row: Jerry Landt (EE 64) and Jean and George (ChE 64) Callaghan. Back Row: Kay Rogerson (CE 74) and Chris Miller (EE 06).*



Los Alamos, New Mexico: *Central Avenue Grill: Left to Right: Rusty Gray (MetE 76), Jerry Hale (Phys 63), Tom Keenan (Chem 49), Justin Griffin (ChE 96), and Bill Kass (Chem 63).*

Chandlers Establish Scholarship

The Chandler Family Scholarship Endowment fund was recently established by John (MinE 79) and Hayley Chandler. This endowed scholarship will be awarded to a School of Mines student from Lead, South Dakota, and can be awarded to freshmen based on their college entrance exams scores or to sophomores, juniors, or seniors based on their grade point average. If no students from Lead meet the academic requirements, the scholarship will be awarded to a student from western South Dakota.

John Chandler graduated from Lead High in 1974 and then graduated from SDSM&T with a degree in mining engineering in 1979. His working career has been in the oil and gas business with the longest employment (24 years) with Western Gas Resources located in Denver, Colorado. He held a variety of positions in the company, and when Western was acquired in 2006, he was the Chief Operating Officer. John says he had the pleasure of working for another SDSM&T graduate, Lanny Outlaw (GenE 58), and over the years, several other SDSM&T graduates were at Western. After the acquisition, the original founders of Western and John formed a new private oil and gas company, Flatirons Resources, along with several other partners. John is an owner and managing director of Flatirons.

John and his wife, Hayley, who is an attorney, have three children, Fisher (6), Maxwell (4), and Jocelyn (8 months). John’s parents and brother are still living in the beautiful Black Hills, and John and his family visit the area several times each year.

John stated, “We decided to establish the scholarship in the name of the Chandler Family to help other individuals attend a very fine university and to give back to the school and the family for all the support and opportunities that opened up to me by getting an excellent education and a positive outlook on life.”

Scholarship in Memory of McIntire



Russell McIntire

The family of Russell McIntire (EE 50) recently established the Russell McIntire Memorial Scholarship in his memory. This non-endowed scholarship, funded with memorial gifts, will be awarded to two sophomore, junior, or senior level students majoring in electrical engineering. Preference will be given to students with financial need.

Russell was born on December 13, 1925, by a midwife in Belle Fourche, to James and Laura (Tetreault) McIntire. He was raised and attended elementary school in Fruitdale and graduated as valedictorian from Belle Fourche High School in 1943. After graduation, he attended SDSM&T until his schooling

was interrupted by World War II, where he was a driver for an Army Major.

After returning from the war, he married Betty Alice Wharton in June of 1949. He was able to return to SDSM&T and graduated with a degree in electrical engineering in 1950. He worked for General Electric Company but returned to Fruitdale to take over his father's beekeeping business, which he ran until his retirement when his son, Greg, took over.

Russell was a member of St. Paul's Catholic Church and later St. Joseph's in Spearfish. He was a member and past Grand Knight of Belle Fourche Council of the Knights of Columbus. He was always active in the Fruitdale Community Club and was on the board of directors for the new Belle Fourche Hospital in the 1970s. Russell learned how to ski on his 50th birthday and remained an active skier for 30 years. He enjoyed building and flying radio controlled model airplanes in his retirement. He also delivered Meals on Wheels for the Spearfish community for many years.

Russell McIntire passed away on October 2, 2011, and his wife, Betty, passed away on December 23, 2011. Memorial contributions to the Russell McIntire Memorial Scholarship may be sent to the School of Mines Foundation.



L-3 Communications Partners with the School of Mines

L-3 Communications is an industry leader in communications for military and intelligence applications. Communications Systems West is a division of L-3 that is based in Salt Lake City, and this division has hired many School of Mines graduates over the years. L-3 has been a valuable supporter of the new master’s program in Robotics and Intelligent Autonomous Systems (RIAS), and they are close to finishing their commitment to donate \$100,000 to help support the RIAS program. This commitment involves donations in equipment, cash donations to support the RIAS lab, and money to support graduate student fellowships. The check presentation above is related to a \$6,000 donation to support a senior design project that will pay for equipment and student labor devoted to a project that L-3 is helping to direct.

Pictured in front row are Jen Jacobsen (mechanical engineer); Dr. Duane Hrcir (provost/vice president for Academic Affairs); June Knight (CSc 96, director of software development); CiCi Compton (senior human resources business partner). Pictured in back row are Stephen Eiting (vice president of operations); Roger Su (director of operations); Dr. Kyle Riley (department head and associate professor, Mathematics and Computer Science Department); and David Poulsen (manager system software).

Engineers Make Great Entrepreneurs



Back row (l to r): Carl Johnson, Tom Lunzman, Preston Oibus, Sean Bestgen, Derrick Schell, Terry Rock. Front row (l to r): Jessie Allard, Kalie Friedel, Jenny Haberer, Shashi Dulal

Another group of entrepreneurial-minded students from the School of Mines recently participated in the highly anticipated eighth annual Engineers Make Great Entrepreneurs Speaker Series and Scholarship Competition. The program, targeted at students with an interest in possibly starting their own businesses someday, is primarily funded by Terry Rock (ME 70).

Rock initially established the Terry Rock Entrepreneurial Scholarship at the School of Mines, but he wanted a way to evaluate the entrepreneurial qualities of SDSM&T students and reward the students with the best entrepreneurial character accordingly. Rock’s idea evolved into the Engineers Make Great Entrepreneurs (EMGE) Speaker Series and Scholarship Competition, a highly esteemed student competition that has created a venue for entrepreneurs from across the nation to share their stories of struggle and success with students from a variety of engineering and science disciplines.

The seminar series, which is advertised and open to all SDSM&T students, hosted 17 individuals who had to qualify themselves by completing an application form and agreeing to attend all four Monday evening sessions. At these meetings, a variety of speakers including alumni, local business leaders, and entrepreneurs presented information covering topics related to their personal experiences, struggles, and successes in their respective businesses.

The first event was held at the Black Hills Business Development Center located on the School of Mines campus. The students were welcomed and introduced to the services of the business incubator by Jim Mirehouse, chief executive officer of Rapid City Economic Development. The following two Monday evenings’ meetings were hosted by the local facilities of Symcom, Inc. and RPM & Associates. Wheeler Manufacturing Company was also a sponsor.

Throughout the eight years of the program, many business leaders have provided candid, real-world discussions with over one hundred School of Mines students regarding starting and succeeding at business in South Dakota and worldwide. In addition to Terry Rock, speakers and hosts this year included: Kip Larson (EE 87), president, Symcom, Inc.; Jim Meyer, founder and president, Quarq; Rob Mudge (MetE 76/MS MetE 78), owner and president, RPM & Associates; Mat Peabody (ChemE 72), Peabody Management and Technology; Larry Schmalz (CE 79), president and CEO, A2L Technologies Inc.; and Ron Van Horssen (ChemE 73), senior vice president, The Camden Group.

The culmination of the speaker series was held on November 1, 2011. The event, which took place at the Christensen Hall of Fame in the King Center, allowed students the privilege of hearing an address by Terry Rock. At this same meeting, students gave a two-minute oral presentation detailing what they learned about being an entrepreneur and about their own personal entrepreneurial attributes, and top finalists were chosen. Several local business leaders and campus faculty attended.

A panel of judges made up of the sponsors and the speakers from the series selected top students based on their initial application, their participation at all events, their response to two essay questions, and their final oral presentation. First place (\$1,000 scholarship) was awarded to Preston Oihus, a junior industrial engineering student from Rapid City. Second place (\$750 scholarship) was awarded to Carl Johnson, a senior interdisciplinary studies student from Rapid City. Four third place prizes (\$500 scholarships) were awarded. Third place winners included Jessie Allard, a junior civil engineering student from Rapid City; Kalie Friedel, a freshman chemical engineering student from Atkinson, Neb; Tom Lunzman, a civil engineering graduate student from Gretna, Neb; and Derrick Schell, a sophomore mechanical engineering student from McIntosh. All other students who completed the necessary components of the program received a \$250 scholarship for their participation. Over one-hundred students have received scholarships through this program since its inception in 2005.

As in past years, students participating in EMGE along with other SDSM&T students will be encouraged to participate in the Governor’s Giant Vision business plan competition in April. www.southdakota-giantvision.com

About Terry Rock: Terry Rock, a prominent high tech industry spokesperson, has extensive experience in the venture capital business, and he believes that the best new business ideas almost always come from engineers. Rock grew up in Kadoka, South Dakota, and attended the School of Mines, graduating with a degree in mechanical engineering in 1970. After graduation, he took a job with Texas Instruments in Dallas and spent 12 great years there, primarily in Austin. In 1983, Rock formed a start-up company, Convex Computer Corporation, and moved back to Dallas. In 1987, he took Convex Computer Corporation public, and he ended up on the New York Stock Exchange and running the company. He sold the company to Hewlett-Packard in 1995. In 1996, Rock started a venture capital firm, CenterPoint Ventures, and he has been in the venture capital business ever since. Rock also co-founded the STARTech Technology Incubator in the Telecom Corridor near Dallas, and he is the managing general partner of the STARTech Seed Fund.

Russell and Caroline Buyse Scholarship Endowment



Russ and Carolyn Buyse at a dinner celebrating their 50th anniversary

The Russell and Caroline Buyse Scholarship fund has been established by Russ (EE 63) and Carolyn Buyse. This endowed scholarship will be awarded to junior or senior level students majoring in electrical engineering with a minimum cumulative GPA of 3.0. Russ received financial assistance through the GI Bill while attending SDSM&T, and both are keenly aware of the financial burden that can result while obtaining a college degree.

Russ and Carolyn both grew up in South Dakota but didn't meet until Russ was home from leave from the Navy. He was 19, and

Carolyn was 18 at the time. Russ enrolled at SDSM&T after his honorable discharge from the Navy in 1959. He received an MBA from the University of South Florida in 1974.

Russ and Carolyn were married in the summer of 1961 between Russ's sophomore and junior years. Russ lived at March Hall during his freshman year and at the Delta Sigma Phi house during his sophomore year. His grades significantly increased in his junior and senior years – fewer distractions, he guesses. While in the Navy, he obtained a first class FCC license which allowed him to be hired by one of the local TV/radio stations as a technician during his college years.

After college, he accepted a position with Honeywell as an electronic engineer. One of his early and most interesting assignments was a transfer to California where he worked at Area 51 (Nevada test site) as a flight test engineer supporting the Inertial Navigation System on the A-12 Mach 3 spy plane. After five years in California, he was transferred back to Florida to assume a management position. He remained in Florida and retired as the director of Quality and Logistics in 1997. Carolyn had her own firm in the property management field. They both

worked part-time for another five years at which point they decided to graduate into full-time retirement in 2002. Russ did consulting for his previous employer, Boeing, the local school board, and a national bank during the five years after his retirement.

Russ and Carolyn have held season tickets for the Denver Broncos since 1997. During their first two years as season ticket holders, the Broncos won the Super Bowl. The Broncos winning percentage and number of playoff games have been mostly downhill since then, but they still love going to the games in Denver. They have seats with Randy Parcel (MinE 67) and his wife, Tracy. Their tickets are on the first level, 30 seats above the field at the 25-yard line.

Russ and Carolyn have no children. In retirement, other than attending Bronco games, they enjoy traveling and have visited a number of countries and each of the seven continents. Some of the more interesting places were the Galapagos Islands, Antarctica, and eastern Africa. For their 50th anniversary this year, they went on a three-week African safari and viewed many animals including the big five – lion, leopard, rhino, buffalo, and elephant.

Saluting Veterans

The School of Mines community recently participated in two different veteran recognition events to demonstrate the campus community's support and gratitude for veterans and the men and women who are currently serving in the armed forces. The first, a Veterans Recognition Day and Veterans Resource Center Open House, was held on campus on November 10, 2011. This is the fifth year that this recognition event has been held. The event began with a presentation of colors and remarks and included the viewing of a patriotic video featuring SDSM&T students, staff, faculty, and family veterans and a photo wall of remembrance.

The second event, the Remembrance Day National Roll Call, was held in downtown Rapid City. During this national event, volunteers at 175 schools in 50 states read the names of the more than 6,300 casualties of Operation Enduring Freedom and Operation Iraqi Freedom. The School of Mines represented the state of South Dakota for this event.

In addition to these recent events, the School of Mines has been designated by G.I. Jobs magazine

as a Military Friendly School for the third consecutive year. This award honors the top 15 percent of colleges, universities and trade schools in the nation that do the most to recruit and support America's veterans. The School of Mines also received distinction as a veteran-friendly school by ranking eighth nationally in the category of four-year colleges on the Military Times Edge magazine Best for Vets: Colleges list. This is the university's second consecutive year on the list.

According to Cathy Payne, Veterans Resource Center coordinator, "The Best for Vets: Colleges list, Military Times Edge was looking to find those universities that offer not just one or two services, but rather a full spectrum of support for military personnel. Our university-wide commitment to active-duty military and veteran students at the School of Mines, and our close partnership with the Veterans Upward Bound program at Western Nebraska Community College put us in league with much larger institutions as a top choice for men and women who serve in the Armed Forces."

The School of Mines had 152 active duty and

veteran students enrolled for the 2010-2011 academic year and had six staff members dedicated solely to supporting active-duty students. Campus support personnel available specifically for veterans include an on-campus registration officer and Veterans Affairs certifier, and a manager of the Veterans Resource Center. Support services also include a partnership with Western Nebraska Community College Veterans Upward Bound, a program funded by the Department of Education to help veterans enter and succeed in postsecondary education; a Veterans Club chapter of the Student Veterans of America organization; annual Veterans Day celebrations; and a Veterans Orientation each semester.

The Veterans Resource Center, an area for School of Mines' veterans to connect with each other and partake in educational resources, was also recently updated and remodeled thanks to the generous support from John (ME 67) and Cheryl Hoven. The Veterans Resource Center provides many resources to School of Mines veterans including college and study skills, tutoring, career services, counseling, and referral services.

Exhibit Features Mineral Donations

Dr. Clark Scovel of Mt. Juliet, Tenn., who grew up in Rapid City and whose family ties to the area go back generations, and Dr. Stephen Neely of Lebanon, Tenn., Scovel's friend and fellow mineral collector, together donated mineral specimens that represent one of the most valuable gifts the South Dakota School of Mines and Technology's Museum of Geology has received in its 126-year history.

The specimens originated from zinc mines in Smith County, Tenn., and feature dramatic combinations of calcite and fluorite crystals and barite spheres of unusual size and quality. The donation was unveiled for public viewing for the first time during a reception in December.

Scovel, who has been collecting minerals for about a decade after being introduced to the hobby by Neely, grew up in Rapid City and remembers going to the School of Mines' Museum of Geology as a child. During a trip to Rapid City last summer to visit family still residing in the area, including mother Sandy, a former Rapid City public school teacher, father Al, an attorney and former state legislator, and sister Kari, a psychologist, Scovel took his two daughters to the Museum. Scovel said that his own fond memories and his daughters' enjoyment of the Museum prompted him to choose the School of Mines' facility for his donation.

Neely, who had been considering gifting a por-

tion of his mineral collection, decided to join Scovel in donating to the Museum of Geology in order to keep the specimens, related by their place of origin, together.

Prompted by the value of the minerals, Scovel drove 1,390 miles from his home in Tennessee to personally deliver his and Neely's mineral donations to the School of Mines in August. School of Mines students created the exhibit that displays the minerals.

The Museum of Geology is open to the public Monday through Saturday. For hours and directions, please visit

<http://museum.sdsmt.edu/home/>

Oldest Living Alum on Campus

At 104 years old, Ralph O'Neill (CE 36) of Custer, South Dakota, is the South Dakota School of Mines and Technology's oldest living alumnus. O'Neill, a 1936 civil engineering graduate of Mines, visited with students, professors, and members of the public and presented a talk about his life and 60-plus-year professional career at an event held on the School of Mines campus in November.

O'Neill was born on a ranch in Folsom, South Dakota, in 1907 and grew up there. He went to country school and graduated from Rapid City High School in 1927. He enrolled at the School of Mines in 1928, but his studies were interrupted in 1930 because of economic conditions during the Great Depression. He returned in 1934 at the encouragement of Guy March, a professor and prominent figure in the early history of the

university, and completed his bachelor's degree in civil engineering in 1936.

After earning his degree, O'Neill took a position with the South Dakota Department of Transportation (SDDOT), where he worked for 38 years. His jobs included verifying and drawing all of the county road maps in South Dakota, assembling the information for and hand drawing the South Dakota State Highway Map in 1939, and analyzing bridges throughout the state.

After retiring from the SDDOT in 1974, O'Neill began working for the newly-formed Pierre engineering consulting firm Aaron Swan & Associates in 1975. There, he worked with the Bureau of Indian Affairs to inspect more than 700 bridges in 25 states. O'Neill acted in this capacity for more than 20 years and worked as a professional engineer for more than 60 years.

O'Neill has many interesting memories and stories about his work life, his family, the South Dakota landscape, and epic South Dakota weather events including floods and blizzards.

O'Neill is also a long-time supporter of the School of Mines student chapter of the American Society of Civil Engineers and of the Lady Hardrockers basketball team, which presented O'Neill with a signed basketball on his 100th birthday in November 2008. He continues to be active with the School of Mines and has attended parts of the last two five-year reunions.

O'Neill has also created the Ralph O'Neill Civil Engineering Scholarship at the School of Mines, and in November, he met his first scholarship recipient, Dylan Striebel, a civil engineering student from Black Hawk.

From the Desk of Tom Rudebusch

As we begin a new year, I would like to thank the hundreds of Hardrock Club contributors during this past year and say how grateful I am for your support. Many of you have stepped up as first time contributors, and we appreciate you and our long-time, loyal givers who continue to be the foundation of our scholarship program. Our scholarship budget for the 2012-2103 year will be approximately \$600,000.

Our Hardrock Club Rocker-Up for DII scholarship campaign has reached nearly \$1.6 million as of December 31, 2011. Our goal is \$12 million by the end of 2015, and we ask you to include us in your giving plans. We need current support as well as long-term gifts that may be included in your estate plans.

Our new football coach, Stacy Collins, is excited to be on campus and is anxious to meet and visit with supporters of the athletic program. Collins brings a wealth of experience as the new leader of the 'Rocker football team – along with some familiarity of the program and institution – as he was previously the defensive coordinator for SD Mines in 2002 under former head coach Darren Soucy.

As we move forward in our Rocker-Up for DII campaign, we are excited at what is ahead for Hardrocker athletics and the vision of being an NCAA DII institution.

Happy New Year!
Tom Rudebusch
Hardrock Club Executive Director



New head football coach, Stacy Collins

Lynd Awarded 2011 Mines Medal

Dr. Lee Rybeck Lynd was named the 2011 recipient of the School of Mines’ prestigious Mines Medal. Lynd, who is a professor of engineering and an adjunct professor of biology and of earth science at Dartmouth College; professor extraordinary of microbiology at the University of Stellenbosch, South Africa; and director and chief scientific officer of Mascoma Corporation, was presented the award at a dinner and ceremony held in Rapid City in September.

The Mines Medal, initiated in 2009, is a national award given annually by the South Dakota School of Mines and Technology to honor engineers and scientists who have demonstrated exceptional leadership and innovation. The award highlights the significant role these individuals play to ensure the United States’ global preeminence in engineering and science.

Lynd is an expert on utilization of plant biomass for production of energy, and his contributions span science, technology, and policy domains, and include leading research on fundamental and biotechnological aspects of microbial cellulose utilization. He has been instrumental in developing a breakthrough, cost-effective processing method called consolidated bioprocessing (or CBP) for the production of ethanol and other transportation fuels from inedible, cellulosic biomass.

As initiator and co-leader of the Role of Biomass in America’s Energy Future project and more recently the Global Sustainable Bioenergy Project, Lynd has played a leading role in identifying ways to reconcile large scale bioenergy production with feeding humanity and maintaining environmental quality.

In 2006, Lynd and his colleague Charles Wyman co-founded bioenergy startup company Mascoma Corp. to commercialize CBP technology. Mascoma has raised \$100 million in private investment and \$50 million in government funds, has partnerships with GM, Marathon Oil and Chevron, and is at the forefront of efforts to commercialize cellulosic ethanol plants.

Lynd has authored over 100 technical papers as well as widely cited reviews, book chapters, and numerous patents. A frequent presenter on the technical and strategic aspects of biomass energy, Lynd has testified before the United States Senate three times, and his work has been featured in both national and international media such as Wired, Forbes, Nova, and at the Nobel Conference.

Past Mines Medal recipients include Dr. Steven Squyres, Goldwin Smith Professor of Astronomy at Cornell University, and Principal Investigator for NASA’s Mars Rover Project; and Dr. Cindy Van Dover, chair and professor of Duke University’s Division of Marine Sciences and Conservation and director of the Duke University Marine Laboratory.

Casting Capers

For the eighteenth straight year, the Friends of Devereaux Library is presenting the Nostalgia Night film series. This year’s ten films are collectively named “Casting Capers.”

Movies in the “Casting Capers” series will be shown for ten consecutive weeks from January through March. Film titles include: *Dr. Strangelove Or: How I Learned to Stop Worrying and Love the Bomb; Kramer vs. Kramer; The Third Man; Close Encounters of the Third Kind; Born Yesterday; Two Mules for Sister Sara; Mr. Smith Goes to Washington; Carousel; Wait Until Dark;* and *Operation Petticoat.*

In January 1995, the Friends of Devereaux Library incorporated the Nostalgia Night film series at the Elks Theatre as a way to boost the success of the library. The Nostalgia Night series is now an eagerly anticipated event in the community and brings in a considerable amount of income on behalf of the Devereaux Library.

Funds raised from past Nostalgia Night proceeds have been used to create and improve the Downtime area of the library, purchase oak tables specially constructed and purchased for electronic reference resources, renovate the staff room, and purchase a new outside book return. Funds have also been used to purchase new study tables and chairs and to build a very popular collection of more than 500 classic films and educational videos on DVD for checkout and a collection of audio books. Additional projects include new furniture in downtime, and an electronic learning center named “i-hub” which includes a giant LCD television/computer monitor, DVD player, speakers, and furniture. New students and faculty and staff are welcomed to the library with a “goodie” bag from the library, courtesy of “The Friends.”

The Friends of Devereaux Library provided a custom made cabinetry to display one or the region’s precious artifacts. The original engineering drawings for the Crouch Line Railroad are now on display in the Devereaux Library. The drawings were completed by a School of Mines professor in the early 1890s and have been archivally restored and preserved.

Nostalgia Night sponsors include: Black Hills Regional Eye Institute; Brink Constructors, Inc.; Dean Kurtz Construction; Dick & Nancy Gowen; Family Thrift Center; (mostly) Schnauzer Station; Pet Pantry; RESPEC; SDSM&T Alumni Association; SDSM&T Foundation; Thrivent Financial for Lutherans; United Corporation; and West Plains Engineering.

Season tickets are available at the Devereaux Library, the Elks Theatre, and Bag Ladies. Tickets for individual films will be sold at the theatre the evening of the film on a space available basis. For more information, contact the Devereaux Library at (605) 394-1262 or visit their website at <http://friends.sdsmt.edu>

Van Nuys Receives Grant to Support Research



Frank Van Nuys

Dr. Frank Van Nuys, associate professor of history, Social Sciences Department, received \$3,054.00 in Hughes Grant funds for 2011-2012 to support his research on the history of predatory mammal control in the American West. Dr. Van Nuys is focusing on the 1840 to 1940 period, decades during which the bulk of the trans-Mississippi West was subjected to Euro-American conquest and territorial expansion, colonization, economic development, and processes of modernization. By 1940, the long-lasting and widespread predator control campaigns had seemingly achieved their objectives against the West’s three top-tier predatory mammals - bears, cougars, and wolves – which had been nearly eradicated or reduced to marginal numbers in some National Parks or extremely remote sections of the West. Dr. Van Nuys will be using the award to finance travel to state and federal archives for work in primary source materials.

Dr. Van Nuys is a graduate of South Dakota State University and earned his Ph.D. in history from the University of Wyoming, with specialties in the history of the American West and immigration. He has taught at the School of Mines since 2002. In addition to survey courses in Western Civilization and U.S. History, he has offered upper-level courses in such topics as History of the American West, Native American History, World War II, and the Sixties. He is the author of *Americanizing the West: Race, Immigrants, and Citizenship, 1890-1930*, published by the University Press of Kansas in 2002, as well as numerous journal articles and reviews.

Uzunlar is Mickelson Professor



Nuri Uzunlar

Dr. Nuri Uzunlar (Ph.D. Geol 93), associate professor, Department of Geology and Geological Engineering, and director, Black Hills Natural Sciences Field Station, is entering his fourth year as the John C. Mickelson Professor of Geology.

The Mickelson Professorship was established in 1984 by two of Dr. Mickelson’s children, John C. Mickelson, Jr. (ME 73) and Barbara Jo Mickelson (CE 76), to honor their father. The Mickelson Professorship is to be used to assist the Department of Geology and the Department of Geological Engineering by supporting and attracting distinguished faculty members.

Mickelson joined the faculty of the South Dakota School of Mines and Technology in 1961 as an associate professor of geology and served as head of the Department of Geology and Geological Engineering from 1968 until his retirement in 1979. He taught and counseled his students for 24 years, giving freely of his time, and he was a dedicated member of the faculty. Mickelson passed away on March 27, 2004.

Uzunlar was born in Trabzon, Turkey, and received a bachelor’s degree in geology and geological engineering from Black Sea Technical University and a doctorate in geology from the School of Mines. He has academic experience in teaching as a field camp coordinator, instructor, lecturer, and research scientist, and he has authored and co-authored numerous publications and presentations. Uzunlar has 20 years of international exploration experience and 12 years of project and company management experience including forming new companies and setting up field offices in more than 10 countries. He also has extensive knowledge on Homestake deposit and is a co-PI for NSF funded project titled “Coupled Thermal-Hydrological-Mechanical-Chemical-Biological Experimental Facility at DUSEL Homestake.”

Scholarship Established in Memory of Lien



Bruce Lien

Deanna Lien recently established the Bruce and Deanna Lien Scholarship in memory and honor of Bruce Lien (Hon 96). The Bruce and Deanna Lien Scholarship will create opportunities for incoming freshman students from South Dakota to earn a degree from the South Dakota School of Mines and Technology. Deanna established this scholarship in memory of Bruce, who passed away in 2007, because she wanted to be able to support a student for the duration of his or her education and because she said, “It was one of Bruce’s wishes... I wanted to do this for him.”

“I know that I’m accomplishing something and making a difference in the lives of our students by setting up this scholarship,” Deanna added.

Lien also said that it is important to her to be able to help recruit and retain some of the best and brightest students from South Dakota who will help solve world issues through the application of their engineering and scientific knowledge gained at the School of Mines. The Bruce and Deanna Lien Scholarship is a non-endowed scholarship with first preference going to a student from Rapid City’s St. Thomas More High School. Cody Trinter, a freshman metallurgical engineering and civil engineering major, is the first recipient of the Bruce and Deanna Lien Scholarship.

Born in 1927 in Waubay, Bruce Lien moved to Rapid City when he was nine years old and was a life-long resident of South Dakota. He graduated from Rapid City High School in 1945. Bruce was drafted as a high school senior, received his papers in June after graduation, and served in World War II from July 1945 until February 1947. He also served in the Korean Conflict from October 1950 until August 1951. He spent approximately three years of overseas duty in Korea,

Okinawa, and Japan. Although he attended classes at both the School of Mines and Black Hills State, he decided that he wanted to study business. After he was done with active duty in the Army, he received his bachelor’s degree from the University of Wyoming in 1953.

Bruce’s connection with Pete Lien & Sons, Inc. started in 1944 as a co-founder and employee. Beginning as a small rock quarry operation located on the foothills of the Black Hills near Rapid City, the company was founded by Pete Lien, and his two sons, Bruce and Chuck. From its beginnings and continuing today, the business has centered on mining, primarily limestone, and it has grown into a multi-million dollar corporation with holdings throughout an eight-state region. Bruce spent his entire career at Pete Lien & Sons. “It was his life,” said Deanna.

In addition to his work at Pete Lien & Sons, Bruce was actively involved in many professional societies including active involvement in the National Lime Association and the International Lime Association where he served in leadership roles. “Bruce’s many lime-producing friends were his extended family,” added Deanna.

Deanna and Bruce met when she was doing some accounting work for a friend who introduced them. They were married in 1978. Deanna remembers Bruce for his wonderful sense of humor and friendly personality. “He made everyone smile, he had lots of fun, and he was a friend to many,” said Deanna.

Throughout his life, Bruce was involved with the School of Mines. He spoke at the May 1996 graduation ceremony and received an honorary degree. During his speech, he spoke about the simple criteria that he used all throughout his life and business life. His decisions, actions, and activities had to be Ethical, Legal, and Fun (ELF), and as applied to business, make money. He told the class that these principles work best when people are held accountable for their actions.

Bruce was involved in many organizations and associations including a seven-year appointment to the Commission on Presidential Scholars by President Reagan in 1982. He served on the University of Wyoming Alumni Association Board of Directors and as President of the University of Wyoming Foundation. Bruce was part of the Cowboy Joe Club, a continuous support facility of the UW and its athletic department.

He was also involved in the Rapid City Community and served in many capacities



Deanna Lien and Cody Trinter, the first recipient of the Bruce and Deanna Lien Scholarship

for the Boy’s Club including as a president. He was co-founder of the Girls Club and was active in Big Brothers and the Salvation Army. He was involved with the United Way along with many other clubs including the Elks Club, Masonic Order, Shrine, Jesters, VFW, American Legion, and Korean War Veterans.

Bruce was also recognized with many awards over the years including the Distinguished Alumnus Award from the University of Wyoming’s College of Business in 1982 and the Distinguished Alumnus Award from the University of Wyoming in 1996. He received the Meritorious Achievement Award for Public Service from SDSM&T, the Cosmopolitan International’s Distinguished Service Award, and the George Award from the Rapid City Chamber of Commerce. He was also inducted into the South Dakota Athletic Hall of Fame.

Bruce was close to past presidents on campus, and both Bruce and Deanna had cherished relationships with many School of Mines students, many of whom went on to become employees of Pete Lien & Sons.

“We never wanted a single student to be alone for the holidays, and so it was not unusual for us to have students at our home, many times international students, to celebrate,” said Deanna. “We sometimes hosted large groups of students, and I remember well the fun we had.”

Deanna continues to be in contact with many of the students that she and Bruce hosted for holidays. “I still keep in touch with many of them. We are still friends... they are like an extended family.”

Over the years, the Liens made a difference in the lives of many School of Mines students, and with the establishment of the Bruce and Deanna Lien Scholarship, they will continue to make a difference in the lives of today’s students as well.



The Fluke Family Scholarship

Doug Fluke (ChemE 82) and his wife, Susan Frey Fluke, have established the Fluke Family Scholarship to honor Doug’s mother, Dr. Geraldean L. Fluke (Phys 48/Ph.D. AEWB 97), by providing a legacy reflecting her perseverance and determination.

The Fluke Family Scholarship will provide financial assistance to a student who demonstrates the same passion for education that Geraldean and her husband, Gordon, exemplified to their family and who by working while they attend school, exemplifies exceptional commitment to achieving his or her education at the School of Mines.

Geraldean and Gordon always placed a significant value on a quality education and upheld a strong work ethic. Geraldean, who spent a good part of her career working on rocket engines, was only the seventh female student to earn a degree from the School of Mines when she graduated in 1948 with a bachelor’s degree in physics. When she was in her early seventies, Geraldean went on to be one of the first students to earn a Ph.D. in environmental engineering from the School of Mines. She was awarded the SDSM&T Guy March Medal in 1989 and was inducted into the South Dakota Hall of Fame in 2010.

Although Geraldean spent much of her career working as a physicist and on rocket engines, when she and Gordon moved back to the Black Hills, she also taught math and science at Edgemont High School. Geraldean has always been an advocate of education and encouraged her students to continue their educations, especially in careers in math and science, after high school.

The first recipient of the Fluke Family Scholarship is Sarah Davis, a senior majoring in electrical engineering, who will graduate in May 2012. Sarah received an associate’s degree from Western Dakota Tech in drafting. After being out in the workforce for several years, she decided to enroll at SDSM&T and seek a bachelor’s degree in electrical engineering.



Roberta Evans, Doug Fluke, Geraldean Fluke, and Sarah Davis

Since Sarah has had to work to pay her way through school, balancing time for work and school has always been difficult. Sarah’s professors in the Electrical and Computer Engineering Department know how hard she has worked and how important earning this degree has been to Sarah, and when they heard of the Fluke Family Scholarship, awarded not for the very best grades, but instead to someone who has worked hard and persevered, they nominated Sarah.

“I can’t tell you how much I appreciate that someone was willing to look past my GPA and recognize and reward other attributes in a person. This scholarship has alleviated pressure and I am grateful,” said Davis.

To make the scholarship even more special, the Flukes, Geraldean, along with Doug and her daughter, Dr. Roberta Evans, were on hand to participate in bestowing the first award of the Fluke Family Scholarship to Davis.