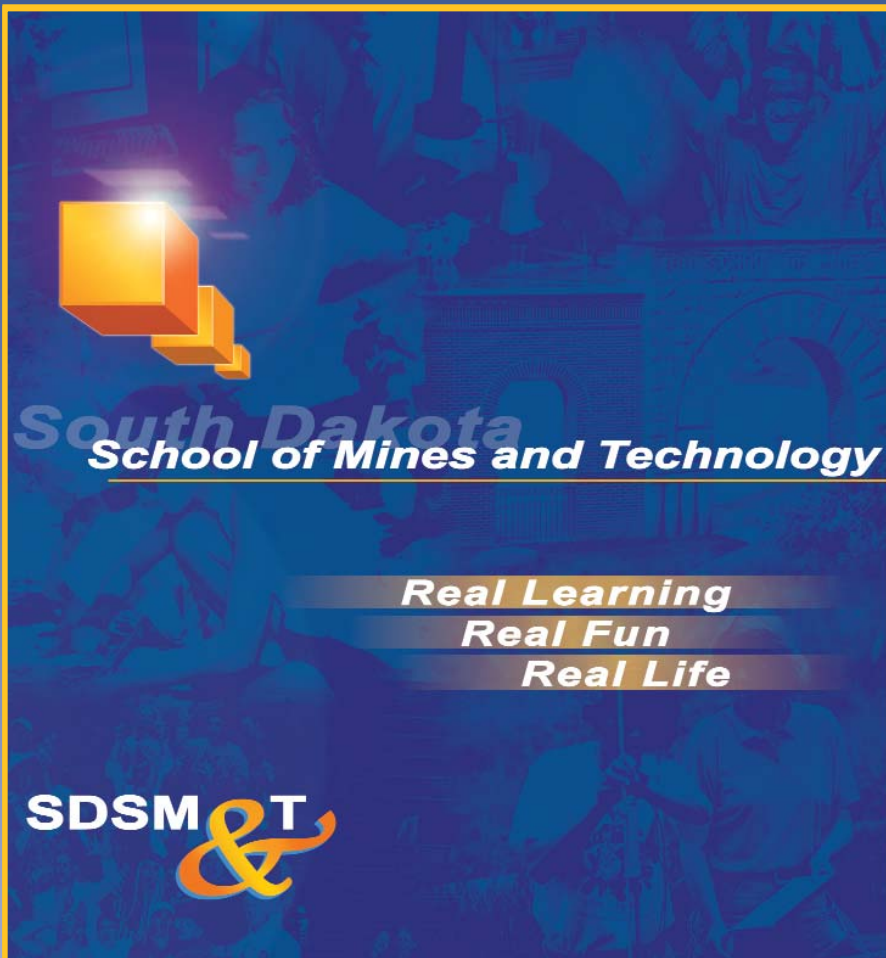


MAGAZINE

SOUTH DAKOTA SCHOOL OF MINES AND TECHNOLOGY

FALL 2002



SDSM & T

SDSM & T



“This CD will now allow Tech
to be accessible 24/7
around the world.”

Joe Mueller, director of Admissions

A PUBLICATION OF SDSM&T



Dear Friends,

The South Dakota School of Mines and Technology is beginning a year of transition in preparation for new leadership with my retirement in June 2003. During the next year, we will continue the evaluation of our programs and academic organization.

We are pleased with the growth in enrollment of nine percent during the past five years. This summer we welcomed new students in orientation sessions, and those students helped overall enrollment increase almost one percent from last year. The welcomed increase in student enrollment has brought new focus to the need to improve the facilities serving students.

During the past year, student leaders worked closely with other student groups and the university student services staff to identify a vision for a new student life complex. We will move their vision toward reality beginning with the replacement of the present March-Dake residence hall with a new facility connected to the Surbeck Student Center. Additionally, an extensive renovation of the Surbeck Student Center will complete the first phase of a new student life complex by the fall of 2004.

During the next year we will also renovate the King Athletic Center to provide a new student wellness and physical fitness facility. Improvements will also be made in locker rooms and handicapped access and services. An Athletic Hall of Fame addition will also be made to King Center. The Athletic Department embarked on its first major fund raising program to provide additional scholarships and support for the intercollegiate athletic programs.

The Board of Regents has authorized the development of a new Mining Engineering and Management major to replace the old mining engineering degree. The new program is being planned with the guidance and fiscal support of the many alumni and corporate sponsors of the mining engineering program.

The development of the new Advanced Materials Processing Center is proceeding with the installation of the laser additive manufacturing equipment this fall. The installation of the friction stir welding equipment center will be completed in the winter.

Thank you for your continued interest and support for the South Dakota School of Mines and Technology. I would be pleased to have your comments and suggestions as we enter the transition and development phase in preparation for leadership changes next summer.

Sincerely,

Richard J. Gowen, President

SOUTH DAKOTA SCHOOL OF MINES AND TECHNOLOGY MAGAZINE FALL 2002

President

Dr. Richard J. Gowen

Assistant to the President

Alicia Stubbs

Academic Affairs

Dr. Karen L. Whitehead, Vice President

Business and Administration

Timothy G. Henderson, Vice President

Student Affairs

Dr. Patricia Mahon, Vice President and
Dean of Students

University and Public Relations

Julie A. Smoragiewicz, Vice President

SDSM&T Foundation

L. Rod Pappel, President

College of Earth Systems

Dr. Sangchul Bang, Interim Dean

College of Interdisciplinary Studies

Dr. Sue Shirley, Interim Dean

College of Materials Science and Engineering

Dr. Jan A. Puszynski, Dean

College of Systems Engineering

Dr. Wayne B. Krause, Dean

Graduate Education and Research

Dr. Sherry O. Farwell, Dean

Faculty Advisory Council

Dr. Michael A. Langerman, Chair

SDSM&T Quarterly is published by the Office of
University and Public Relations.

Editor

Julie A. Smoragiewicz

Writer and Photographer

Stephen G. Buchholz

Graphic Design and Layout

Melinda A. Poyourow

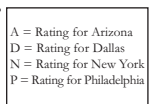
Administrative Support

Ruth A. Golabiewski

For additional information contact:
South Dakota School of Mines and Technology
Office of University and Public Relations
501 E. Saint Joseph St.
Rapid City, SD 57701-3995
(605) 394-2554 • (800) 544-8162 ext. 2554
e-mail: julie.smoragiewicz@sdsmt.edu

Features

- 2 **Presidential Transition**
Retiring president leaves lasting legacy
- 4 **Defense Partnerships**
Tech to play a role in meeting military needs
- 5 **Cycle Green**
Salvaging economic opportunities
- 6 **Riding Dinos**
Childhood passion pays off
- 8 **Here and Now**
Installation creates abstract reality
- 10 **Carbon Sequestration**
Carbon Sequestration
- 12 **Children's Science Center**
South Dakota has its Hands On Science
- 14 **Speaker Series**
McGillycuddy series brings leaders to Tech
- 16 **Cementing Concrete Opportunities**
Rama lab secures home for research
- 20 **Interactive CD-ROM**
Real learning. Real life. Real fun
- 21 **Football Formulas**
Professor uses sports to engage students
- 22 **Dilbert Effect Derailed**
Project brings engineers and technicians together
- 23 **Two Minute Warning**
Hardrockers call for new recruits
- 18 *SDSM&T Reaching Out*
- 26 *Student Spotlight*
- 29 *Campus Briefings*
- 30 *Research Notes*
- 34 *Personnel Changes*
- 36 *You Are Invited...Calendar of Events*



CAMPUS

Profile

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

Tech has diversified to meet the needs of engineering and science throughout the world. South Dakota Tech's intellectual environment was shaped a century ago by the ingenuity and rugged individualism of pioneers in science and technology. Tech's present day pioneers provide inspiration and remain on the cutting edge in the fields of engineering and the sciences.

Academic Program: SDSM&T is a state-assisted university providing graduate and undergraduate degrees in science, engineering, and interdisciplinary studies.

ACADEMIC PROGRAM: SDSM&T is a state-assisted university providing graduate and undergraduate degrees in science, engineering, and interdisciplinary studies, as well as an associate of arts degree in general studies.

BACHELOR OF SCIENCE DEGREES

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

MASTER OF SCIENCE DEGREES

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

DOCTORATE OF PHILOSOPHY DEGREES

Atmospheric, Environmental, and Water Resources
Geology and Geological Engineering
Materials Engineering and Science

ENROLLMENT: The University has a diverse enrollment of approximately 2,447 students from 39 states and 27 countries. Our 13 departments offer degree programs in engineering and science disciplines at the baccalaureate, masters, and doctoral levels. Students enter the university with the highest ACT composite in the state and more than half graduating within the top 25% of their high school.

COSTS AND FEES: Annual undergraduate costs for tuition, fees, room, and board total less than \$8,300 per year for South Dakota residents, less than \$8,700 for Minnesota residents, and less than \$9,300 for residents of Alaska, Arizona, California, Colorado, Hawaii, Idaho, Iowa, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oregon, Utah, Washington, and Wyoming. Annual total costs for all other undergraduates is less than \$12,600 per year.

RESEARCH: High quality research is conducted in departments and in our research institutes.

FACULTY: The School of Mines and Technology employs 112 faculty members. Nearly 85 percent hold the doctorate or other appropriate terminal degree.

Retiring president leaves lasting legacy

When Dr. Richard Gowen retires June 30, 2003, as president of the South Dakota School of Mines and Technology, he will leave behind an impressive legacy of change and improvements at the university.

File Photo



Dr. Richard Gowen announces his retirement.

Gowen announced his retirement February 26, 2002, after serving as Tech's president since 1987.

"We've accomplished a lot here at Tech since 1987," Gowen said. "I want to thank the faculty and staff for all their hard work. A year ago, I said 'We did it' when we announced that Homestake was chosen as the site for a national underground science laboratory. I'm saying that again, we did it."

Gowen is Tech's 16th president. During his tenure, he has been instrumental in the development and implementation of Internet technologies designed to provide opportunities for individualized learning. These technologies have proven effective in the business world. His vision and technical expertise have been valued assets to other leaders in the state as South Dakota has led

the challenge of providing Internet access to computer technologies to every K-12 school through the state's Wiring the Schools program.

Gowen has provided tremendous leadership to the university in many arenas. He led Tech through its first ever capital campaign, major building and renovation efforts, and the implementation of computer technologies. He positioned Tech as a technology leader in the state and region. Under his leadership, Tech has received numerous national academic recognitions.

Gowen worked with leadership in the state to make it possible for South Dakota to be eligible for additional research funding through the National Science Foundation with designation as an EPSCoR state, bringing increased research dollars to Rapid City and the entire state. He also worked closely with the current and former governors to enhance economic development by providing technical assistance to some 80 companies. Numerous companies made it through their early years and later flourished because of his personal support.

He has demonstrated his commitment to future generations of science and technology leaders through the establishment of a number of outreach programs. These programs include:

The Scientific Knowledge for Indian Learning and Leadership (SKILL) Program, designed to enhance the college preparedness of under-served populations, principally American Indian students in grades 4 through 12.

Math and science based on-campus childcare and science camps for the children of students, faculty, staff, alumni, and other community members

The Children's Science Center that provides hands-on learning in math, science, and technology for children of all ages, was established under his leadership.

Gowen also served as Vice President for Tech from 1977 to 1984 and as President of Dakota State University in Madison from

1984 to 1987. There, he led a mission to integrate computers and information systems throughout the curriculum.

Prior to joining the higher education system in South Dakota, Gowen served as an officer in the United States Air Force from 1957 to 1977. His service to the Air Force included 15 years as a member of the permanent faculty of the U.S. Air Force Academy. He also served as the Director of the joint NASA-Air Force Space Medical Instrumentation Project and as a member of the NASA Astronaut Medical Research Launch and Recovery Team.

Gowen earned a bachelor's degree from Rutgers University in 1957, a master's degree in 1960, and a doctorate in 1962. All the degrees are in electrical engineering.

Gowen's professional service has been extensive. He served as a board member for ETA (supercomputer company); Institute of Electrical and Electronics Engineers (and served as their centennial president in 1984); American Association of Engineering Societies; Co-President for the National Science Foundation All Nations Alliance for Minority Programs; Team Chair, Consultant



File Photo

Being president of South Dakota Tech isn't all sitting behind a desk making important decisions. Once in a while, you get to paddle a concrete canoe in a celebrity race.

Evaluator Corps, North Central Association of Colleges and Universities; Eta Kappa Nu, (electrical engineering national honorary); Triangle Coalition; Recyclights; the Rapid City Area Chamber of Commerce; and the Congressional Web Based Education Commission.

The South Dakota Board of Regents is conducting the search to find a new university president. Twelve people have been appointed by the South Dakota Board of Regents to serve as a Campus Advisory Committee to aid in the search.

"The Campus Advisory Committee will work closely with the Board's search committee throughout the process," said Regent Pat Lebrun of Rapid City, who chairs the search. Other Regents serving on the search committee are James Hansen of Pierre; Shane Penfield of Lemmon; and Harvey Jewett of Aberdeen, ex officio member.

Named to the Campus Advisory Committee and the constituencies they represent are:

Community - H. Edward "Ed" Yelick, director of the Rapid City Area Chamber of



File Photo

Commerce Board

SDSM&T Foundation - Pat Burchill, regional president of US Bank in Rapid City

Alumni - Dan Landguth, president and CEO of Black Hills Corporation

Exempt Employees - Deb Sloat, director of human resources

Career Service Employees - Carolyn Brich, secretary in the Electrical and Computer Engineering Department

Administration - Jan Puszyński, dean of College of Materials Science and Engineering

Faculty - Dr. Alvis Lisenbee, Department of Geology and Geological Engineering; Dr. Michael Langerman, Department of Mechanical Engineering

Students - Abe Kean, computer engineering senior; Marci Medalen, chemistry junior.

At Large - Dr. Antonette Logar, chair of Department of Mathematics and Computer Science

Institutional Collaboration - Dr. Thomas Flickema, president of Black Hills State University

"These committee members were chosen for their diversity and range of interests and experiences," Lebrun said. "We are pleased to have their input as we select new leadership for the School of Mines and Technology."

File Photo



Thousands of graduates have gone on to great things while Dr. Gowen served as Tech president. Gowen handed a diploma to every one of those graduates, and wished each well in their future endeavors.



Tech to play a role in meeting military needs

When President George W. Bush signed this year's defense budget, he helped solidify important partnerships between South Dakota Tech, government agencies, and private industry. These partnerships are designed to develop new materials and technologies that will prepare our military and boost defense-based economic development in the state.

The projects will help the United States military meet its goal of creating and using new and more advanced materials and technology for future combat systems. Those new materials and technologies will allow the military develop smaller and lighter, yet more deadly forces that can be deployed much faster than is currently possible. Future weapons systems will require the use of lighter materials that will still survive the rigors of battle.

"These kinds of partnerships create wonderful opportunities for School of Mines and Technology students to be involved with cutting-edge research, and allow the university to contribute to the defense of the nation," Dr. Karen Whitehead, vice president for Academic Affairs, said. "Involving local companies such as RPM will help create economic development in Rapid City. These partnerships have the potential of spurring additional economic benefits in South Dakota."

The programs involving Tech include:

- \$6 million for Laser Additive Manufacturing (LAM), a project that partners Tech with RPM and Associates of Rapid City and AeroMet Corporation of Eden Prairie, Minn. LAM is a free-form fabrication approach to the manufacture and repair of large-scale, high-quality aerospace structural components for military and commercial purposes. The process is a layer-by-layer buildup of a three dimensional solid object by completely

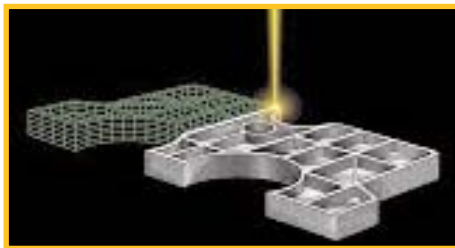


Illustration: Laser Additive Manufacturing.

melting and re-solidifying powdered metals including titanium alloy using a high power laser. Only minimal final machining is needed to finish the part. A key feature of LAM is that the process may save as much as 80 percent of the amount of material otherwise used to make a part. The project team estimates a savings of more than \$300 million to the Department of Defense during the next decade in the reduced cost of titanium alloy components for military aircraft. This represents an excellent return on investment for the federal government. The subsequent adoption of LAM by the worldwide commercial aircraft industry is expected to result in a demand for next generation additive manufacturing centers. That's where the potential for economic development exists. South Dakota could become a world leader through the establishment of one or more Rapid Aerospace Manufacturing Plants. On top of that, RPM and Associates, owned by Tech alum Rob Mudge (BS.MET '76, MS.MET '78), is working with industry customers to repair and create machine parts, creating more economic benefits to the state. Initially RPM will use the technology to repair damaged and improperly manufactured parts for military projects. RPM also will work with its current clients to use the LAM technology rather than traditional welds to repair parts used in the power and mining industries in the South Dakota and region. RPM eventually will expand its use of LAM to manufacture parts for the defense industry.

- \$2.8 million for Advanced Material Processing, which is a partnership between the Army Research Lab and Tech. Researchers from the Army Research Lab and the South Dakota School of Mines and Technology have partnered to employ new technologies and materials for the Army. Collaborative research efforts will provide both improved protection for our soldiers and weapons with increased lethality. During the past few years, the Army has made a commitment to becoming lighter and more rapidly deployable without losing significant survivability or lethality.

- \$1 million for the Lightweight and Novel Structures for Space project involving Tech and the Air Force Research Laboratory. The Air Force Research Lab and South Dakota Tech have established a partnership to meet several of the Air Force Research Lab's "Grand Challenges" presented by the Department of Defense. The plan is to develop innovative technologies to meet the Air Force's needs for new technologies and lightweight materials for use in space.

The partnerships were only possible through the dedicated support of South Dakota's Congressional delegation. Tech thanks Sen. Tom Daschle, Sen. Tim Johnson, and Rep. John Thune for their hard work in making these projects possible.

"We greatly appreciate the delegation's work and support in identifying and securing federal funding that will bring to campus and Rapid City new technologies and new economic opportunities," Julie Smoragiewicz, Tech's vice president for University Relations, said. "This is an exciting time at South Dakota Tech and in Rapid City."

The Department of Defense will also fund additional partnerships with the Edison Welding Institute and the Florida A & M University for advanced materials research.



Salvaging economic opportunities

A new start-up company will create up to 98 jobs in Sturgis in the next three years, thanks to the work of a South Dakota School of Mines and Technology professor and an alumni.

The business, called Cycle Green, will use a process patented by Dr. Ken Han, distinguished professor, Department of Materials and Metallurgical Engineering. The process will allow Cycle Green to remove metals such as platinum from used catalytic converters taken from cars and trucks.

"Cycle Green will give the Northern Hills area a much needed boost in employment opportunities, opportunities for good paying jobs," South Dakota Governor Bill Janklow said in announcing the company's creation. "This is truly an example of South Dakotans making good things happen for themselves and their neighbors."

One of the company's principles is a fourth generation South Dakotan whose family has been in the state for more than 100 years. Ron Ward (MET, '86), chief engineer, sees this project resulting from the cooperation of many groups.

"We've very fortunate to have such a wealth of resources to tap into. This project would not have been possible without the South Dakota School of Mines and Technology, the West River Business Center, the Sturgis Industrial Expansion Corporation, and the state itself," Ward said.

Two other Tech alums - Quintin Larson (ME '95) and James Brownrigg (MET '76) - also are involved with Cycle Green. Larson serves as lead process engineer and Brownrigg as material procurement manager.

Cycle Green is licensing technology from Tech to use in its recovery of platinum group metals from automobile catalytic converters. Presently, up to 80 percent of the catalyst material

collected in the United States is exported for final processing outside this country.

Ward credits the good, hard working, and experienced individuals in this region for this company's creation. The company started with an office on Tech's campus.

Ward moved the office to Black Hawk in November. He hopes to have the Sturgis office open by March 1.

"We're excited about Cycle Green coming to Sturgis," Mayor Mark Zeigler said. "It's a tremendous opportunity both for the company and the city. We've worked hard to create a very positive and progressive business climate here in Sturgis and the locating of this company is proof that our efforts are paying off."

The Sturgis Industrial Expansion Corporation (SIEC) is erecting a building that it will lease to the company.

"We see this company as being a benefit to the whole Northern Hills area," Dale Hansen, co-chairperson, SIEC, said. "We particularly like this company with its affiliation with the School of Mines. It is a good example of people working together - a real partnership among the School of Mines, the SIEC, the Governor's Office of Economic Development (GOED) and the West River Business Center that's worked well for us."

Cycle Green holds the exclusive United States license rights to a new metallurgical technology patented by the South Dakota School of Mines and Technology called the Halogen Salt



Tech President Dr. Richard Gowen signs a contract with tech alums Quintin Larson (ME '95), left, and Ron Ward (MET, '86), second from right. The contract allowed Cycle Green to use a process created by Tech Distinguished Professor Dr. Ken Han (right).

Precious Metal Recovery Process developed by Han. Due to the process' cost savings, environmentally friendly chemistry, and proven technology, the company looks to capture a sizable portion of the market.

Han believes that the process holds a gold mine in profits. Americans junk 50 million cars a year and every one has a catalytic converter. Each converter, which helps reduce polluting emissions, contains \$20 to \$30 in the metals, Han said. America's junkyards could hold a \$1.5 billion business waiting for someone to salvage.

"We see this company as a good opportunity to diversify our industry mix in the Sturgis industrial park," Ron Rosenboom, executive coordinator of the Sturgis Industrial Expansion Corporation, said. "This is an exciting project that is possible only because of the partnerships between the SDSM&T, the GOED, the SIEC, private industry and the West River Business Center."

The company is scheduled to move into a 9,600 square foot facility in the Sturgis Industrial Park in March 2003.

Photo by Steve Buchholz



Childhood passion pays off

As a 4-year-old, Andy Farke went on a trip that has guided his education and aspirations.

"Ever since my parents took me to a concrete dinosaur park, I have devoted myself to a career in vertebrate paleontology," the South Dakota Tech student said.

Farke (GEOL, Armour) studied and researched paleontology in high school and came to Tech in 1999 to continue his investigations and to pursue a degree in Geology. His educational and research efforts have earned him a Barry M. Goldwater Scholarship. Farke received one of the 309 Goldwater Scholarships awarded for the 2003-2003 academic year. Four South Dakota students received the scholarships.

The Goldwater Scholars were selected on the basis of academic merit from a field of 1,155 mathematics, science, and engineering students nominated by the faculties of colleges and universities nationwide. One hundred seventy-nine of the Scholars are men, 130 are women, and virtually all intend to obtain a Ph.D as their degree objective. Twenty-four Scholars are mathematics majors, 198 are science majors, 27 are majoring in engineering, four are computer science related majors, and 56 have dual majors in a variety of mathematics, science, engineering, and computer disciplines.

The scholarships cover tuition, fees, books, and room and board up to a maximum of \$7,500 a year.

Goldwater Scholars have very impressive academic qualifications that have garnered the attention of prestigious post-graduate fellowship programs. Recent Goldwater Scholars have been awarded 44 Rhodes Scholarships (six of the 32 awarded in the United States in 2002), 39 Marshall Awards, and numerous other distinguished fellowships.

The Goldwater Foundation is a federally endowed agency that was established in 1986. The Scholarship Program honoring Senator Barry M. Goldwater was designed to foster and

encourage outstanding students to pursue careers in the fields of mathematics, the natural sciences, and engineering. The Goldwater Scholarship is the premier undergraduate award of its type in these fields. The Foundation, in its history, has awarded 3,632 scholarships worth approximately \$36 million. Foundation trustees plan to award 300 scholarships for the 2003-2004 academic year.

Farke's educational resume is impressive. The 1999 graduate of Armour High School was named a United States Department of Education Presidential Scholar, a National Merit Scholar, and has received a Tech Presidential Scholarship, Tech's Sophomore Science Academic Achievement Award, and the American Association of Paleontology Suppliers Scholarship.

He graduated high school with a 4.0 grade-point average and has maintained

those same perfect grades at Tech. He plans to pursue a doctorate degree at a major research university, and use his education and experience to find a research position at a museum or university.

"I would like to stay active in public outreach, communicating the latest scientific information to the general public," he said. "My long-term aspiration is to apply my background in geology and paleontology toward a better understanding of our evolutionary heritage."

Farke credits high school science fairs and a supportive family for helping him get this far.

"Science fair competition was one of the most important activities that led me to a career in scientific research," Farke said. "Through four years of science fairs, I interacted with professional scientists, developed and tested original scientific hypotheses, and honed my communication



Photo by Steve Buchholz

Andy Farke works in the paleo lab at South Dakota Tech. Farke's dedication to paleontological research and studies earned him a Barry M. Goldwater Scholarship. The scholarship covers tuition, fees, books, and room and board up to a maximum of \$7,500 a year.

skills. Science fairs also taught me to think as a scientist. I realized that it is not enough to have a good idea - you also need to make a concerted effort to find evidence that will support or negate the hypothesis."

Farke grew up on a small farm, and relied on community and family support, even though financial and educational resources were limited.

"I have never considered these limitations to be a serious problem," he said. "They have allowed me to grow as a person and a scientist, and I always give my best effort to overcome any obstacles in my pursuit of science."

Carrie Herbel, instructor and collection manager in the Museum of Geology, has had Farke in two of her classes.

"His enthusiasm, knowledge, and most importantly, good nature, makes him a joy to work with both in the field and in the laboratory," she said. "During his heavy course load and his work in the laboratory, Andy conducts scientific research on his own with other vertebrate paleontological colleagues. His research is equal to or exceeds that of most graduate students and many professionals that I have worked with. I am continually amazed at his insights within various subjects that he addresses through his scientific endeavors."

Herbel recommended that the committee select Farke, whom she described as "a true scholar."

"His sincerity is genuine and he is well liked by others around him, both in the classroom and research laboratory," she said. "His willingness to learn and to grow is remarkable and often copied by those working around him. He is innovative and generous in sharing his ideas. He is articulate in expressing ideas and theories as well as carrying out casual conversation."

"I am thoroughly convinced that Andy will succeed in his chosen profession and will be a great asset to the science now and well into the future."

Dr. James Fox, chair and professor, Department of Geology and Geological Engineering, also recommended Farke for



Photo by Steve Buchholz

"My long-term aspiration is to apply my background in geology and paleontology toward a better understanding of our evolutionary heritage."

-Andy Farke

the scholarship.

"Andy has already made significant contributions to paleontology, his chosen career field," he said. "His research record dates back to early high school when he began studying sexual dimorphism and species differentiation in Triceratops. He has already published several papers."

"Andy is a truly exceptional individual, having achieved so much at this early stage of his education," Fox said. "He ranks at the top of my list of undergraduate students, having the most scientific career potential, among all that I have known in 25 years of higher education experience."



Installation creates abstract reality

Walking into the Apex Gallery in April and May was like walking into Bizarro World, where up is down, Superman is a bad guy, and the sun rises in the west. That may be a stretch, but something strange did happen inside the Apex once “Sandy Skoglund: Here and Now” opened.

“I believe that many others like it because the installation is based upon taking reality and changing a key element – color,” Apex director Deborah Mitchell said. There is also the fact that with installations, the audience becomes part of the artwork.”

Walk along the path painted gamma green – kind of a subdued neon. The path quarter-moons through a plush carpet of crumpled gamma green paper. The alternating angles make it difficult to see where one piece ends and another starts. In this world, objects sprout like mushrooms through the carpet. The objects – all painted gamma green – wouldn’t make sense being together anywhere else than in a Skoglund exhibit or in your eccentric aunt’s yard sale. A mannequin with no head wears

a catcher’s helmet and headphones. Green on green toy soldiers fight a motionless battle. A naked Barbie doll rests comfortably.

“I consider the Apex an educational gallery, and I try to bring exhibitions into the Apex that challenge students to think,” Mitchell said.

“Here and Now” does that. The first visit to the exhibit can be disconcerting, but it makes you look, kind of the way a car wreck attracts your curiosity. Details hide. More soldiers crouch amongst the crumpled gamma green walls. A bowl of painted green mush that may have been oatmeal at one time waits for a too-hungry visitor.

The exhibit is a milestone of sorts for the Apex. It is by far the most expensive exhibit the gallery has brought in, and it was built with the help of a class of Rapid City fourth-graders.

“I want as many people to be involved with the Apex as possible,” Mitchell said. “One of the reasons I invited Gerry Renner’s fourth-grade class was that she had brought her class to other events that the



File Photo

When finished, the exhibit created a gamma green world. The Sandy Skoglund installation brought the work of an internationally known artist to the South Dakota Tech campus.

Gallery had sponsored, so I knew that she was interested in expanding her students’ experiences. In addition, I have always appreciated the way that young children often have more open minds than adults when it comes to art.”

Mitchell’s Art History 320 class also helped with the installation.

“I have that class involved with creating an exhibition or artwork in some capacity each spring,” she said. “I hope that student involvement in art will illustrate that many of the processes they are involved with in other classes have similarities.”

Skoglund arrived on campus a few days before the exhibit opened to supervise the installation and the arranging of the items. She delivered a public lecture the day “Here and Now” opened.

Skoglund is an internationally known artist. She was born in Quincy, Mass., in 1946, and studied studio art and art history at Smith College in Northampton, Mass., in Paris, France, at the Sorbonne and Ecole Du Louvre, and at the University of Iowa.



File Photo

A student from Wilson Elementary School in Rapid City paints a bicycle gamma green for display in the “Sandy Skoglund: Here and Now” exhibit for the Apex Gallery on South Dakota Tech’s campus.

She moved to New York in 1972, and started working as a conceptual artist, dealing with repetitive, process-oriented art production. In the late 70's, Skoglund's desire to document conceptual ideas led her to teach herself photography. This developing interest in photographic technique became fused with her interest in popular culture and commercial picture making strategies, resulting in a series of food still lifes in 1978, including "Luncheon Meat on a Counter" and "Peas on a Plate."

Since 1981, when *Revenge of the Goldfish* and *Radioactive Cats* appeared at the Whitney Biennial Exhibition, Skoglund has achieved a leading position in revolutionary photography. Museums and universities around the world have commissioned many of her installations. In 1987, the photograph and installation "A Breeze at Work" was commissioned by the Walker Art Center in Minneapolis, Minn. The Centre Georges Pompidou in Paris, France, commissioned "Fox Games" in 1989 for an exhibition entitled "The

Invention of an Art," a history of photography celebrating the 150th anniversary of the invention of the medium.

Since then, universities and museums around the country have commissioned pieces. This year was Tech's chance to join the list.

"It isn't often that there is funding for an internationally known artist to come to small communities such as Rapid City," Mitchell said. "Any small city can feel culturally isolated and when an opportunity arises to bring culture to us, then the impact will be felt by many people, hopefully for years to come. I have had people who have heard of her work before writing wonderful things in the guest book, asking to bring their students for a tour, or telling about their experience in the Gallery. This kind of feedback makes all the effort well worth it."

The Skoglund exhibit helps the Apex meet the role Mitchell has established for it.

"What I hope that Apex's role is on campus is to give students a small taste of diversity and different ways of seeing the



File Photo

world," she said. "We are increasingly confronted with situations where we must find a common ground."

The Apex Gallery Schedule

Leah Hardy: Enshrined Dreams and Metaphors

Ceramic shrines and objects of exquisite beauty by the Wyoming artist, Leah Hardy. November 22 - January 4 2003

Ted Waddell: Western Visions

Ted Waddell is a well know artist whose artwork is inspired by his life as a rancher. He is also the juror for the exhibition, New Art of the West at the Dahl Fine Arts Center in Rapid City January 10 - February 15

Termespheres: The Geometry of Visual Space

February 14 - March 21



File Photo

Wilson Elementary School students help complete the installation of "Sandy Skoglund: Here and Now" exhibit in the Apex Gallery. The exhibit, the most expensive the Apex has ever hosted, created a one-color reality designed to challenge traditional views of reality.



Children's Science Center

South Dakota has its Hands On Science



Story by Sara Cox

"The object of education is to prepare the young to educate themselves throughout their lives."

--Robert Maynard Hutchins

Science keeps the world guessing. From a child looking through a kaleidoscope for the first time or trying to figure out how a light bulb works, to an adult first turning on a computer, to the scientist discovering the latest in medical technology. Science is ever changing in the world around us.

The question asked at the South Dakota School of Mines and Technology was "how do we get people, children first and foremost, interested?" The answer here, and across the country, is science centers. Science centers have been created all over the world to give the public an opportunity to discover, learn, and create all aspects of science.

South Dakota is no different. South Dakota Tech opened the Children's Science Center in Rapid City four years ago. The South Dakota Discovery Center and Aquarium in Pierre has been in existence for 13 years. Both were created to provide children with interactive activities and to share excitement about every area of science, math, and technology.

Now, the two centers have established a new way to attract people and make them aware of the science around them. That new way is Hands-On Science for South Dakota. The collection of five traveling interactive exhibits was established in order to give children, families, and educators across South Dakota access to professional quality hands-on science exhibits and informal science education programming.

"We have pooled our knowledge and partnered our resources together," Julie Smoragiewicz, vice president of University Relations at South Dakota Tech, said. "That really helped get this project going."

Kristie Maher, executive director of the South Dakota Discovery Center and Aquarium, agrees. "The mutual enthusiasm from both science centers has contributed to the success of this project" she said. "We know Hands-On Science for South Dakota will bring fun, science education to thousands of people across the state."

Four of the exhibits - Light and Color, Dinostories, Bugs Eye View, and Animals as Architects - were produced by the Oregon Museum of Science and Industry. They all will rotate between the two science centers and travel to libraries, schools, and other community centers across South Dakota. The fifth exhibit -- VISION - was created by the National Eye Institute. Funding to bring these exhibits to South Dakota was provided by South Dakota NSF EPSCoR, the South Dakota Community Foundation, the Northern Plains Eye Foundation, Pierre/Fort Pierre Rotary, Pierre Health Center, and many area businesses, individuals, and service organizations. Each exhibit will stay at one of the two centers for four months. Teachers will have the chance to bring their classrooms in and learn about the aspect of science each exhibit demonstrates through touching, sensing, listening, and education programs. The education programs reflect the standards established by the state of South Dakota's Department of Education, and they will be fun and exciting, inspiring the children to want to learn more.

Liliane Wood, mother, educator, and present Education Coordinator for the Children's Science Center, is very excited about Hands on Science for South Dakota. "Students and visitors are entertained and educated by these exhibits," she said. "We really see these exhibits having a far-reaching impact on everyone who visits."

There will be many activities, resources, and concepts for the teachers to take back to the classroom and keep the learning going even after they have left the exhibits. The science centers are developing hands-on activities for each exhibit and, they also are developing outreach programs. They will set

File Photo



The exhibit, Light and Color, was the first of five exhibits that are part of Hands-on Science for South Dakota to arrive at the Children's Science Center. Light and Color helped children understand how light and color interact.



File Photo



up demonstration programs for students, as well as teacher workshops, where the teachers can learn more about the exhibits and how to utilize them to their fullest extent.

"The children will enjoy the exhibits, but we also want the teachers, school officials, and parents to see how effective hands-on science is," Maher said. The education and outreach programs will have a big role in allowing this to happen.

To give the exhibits' educational value an artistic stroke, the Children's Science Center is working with the Dahl Fine Arts Center in Rapid City to design programming that will relate to both science and art.

The goal of that collaboration is to "integrate art activities into the hands-on science so students can discover how art and science can work together," Smoragiewicz said. Both centers hope to bring the exhibits into the communities starting this fall, and are working on the details with groups in the surrounding areas. One way to ease the expense of transporting them to the outlining communities is through support and donations.

"We are seeking donations to help purchase trailers to store and transport the exhibits," Smoragiewicz said. "We want the outlining communities to enjoy what we have to offer and lowering the cost is going to help with that."

That ability to travel freely will bring a new era of science education to the state.

"We're excited about Hands-On Science for South Dakota and having the opportunity to bring these exhibits to children, families, and educators in South Dakota," Smoragiewicz said. "Getting children excited and interested in math and science at an early age will help them excel in those subjects later so that they are prepared to be our technology leaders in the future. That benefits them and the state of South Dakota."

For more information on the Hands on Science for South Dakota exhibits log on to www.hpcnet.org/sdsmt/csc/handsonscience



Hands-on Science for South Dakota exhibit schedule

Children's Science Center:

Animals as Architects: Now through January 31

VISION: March 1 - June 30, 2003

Bugs Eye View: July 1 - October 31, 2003

Dinostories: November 1, 2003 - February 28, 2004

For more information or questions about the exhibits, how you can bring them to your school, library, or community, what the centers have to offer, or how you can help with donations, please contact:

Kristie Maher, Executive Director
SD Discovery Center and Aquarium
805 West Sioux, Pierre, SD 57501
Phone: 605-224-8295
kristie@sd-discovery.com
Website: <http://www.sd-discovery.com>

Julie Smoragiewicz, Vice President of University Relations, SDSM&T
501 East St Joseph St, Rapid City, SD 57701
Phone: 605-394-5146
Julie.Smoragiewicz@sdsmt.edu



McGillycuddy Series Brings Leaders To Tech

It was a day that required an open mind and a willingness to have your beliefs challenged. Those who did that saw the first ever McGillycuddy Speaker Series for what it was - a chance to learn and grow.

"We wanted people to leave the sessions with something to think about and talk about," Julie Smoragiewicz, Tech's vice president for University Relations, said. "Judging by the conversations after each session and since that day, I think we were successful."

Tech brought important and relevant speakers from across the country to campus Oct. 2, for the first annual McGillycuddy Speaker Series. The speakers covered many topics, but each had a theme - leading through changing times and circumstances. Tech hopes the speakers taught everyone about how crucial leadership is when we face complex challenges and how we can take on leadership roles when needed.

"We designed the McGillycuddy Speaker Series to give us a venue to discuss

important topics affecting the region, the country, and our lives," Tech President Dr. Richard Gowen said. "We chose the theme of leadership because we believe we can all be better leaders. Our speakers helped us understand how we can do that."

Rex Alan Smith, local author and historian, and Eric Johnson, director of the Black Hills Community Theatre, began the day talking about McGillycuddy's life in western South Dakota and about his leadership qualities.

Drs. Frank and Deborah Popper, professors and researchers from New Jersey, talked about the challenges presented by depopulation

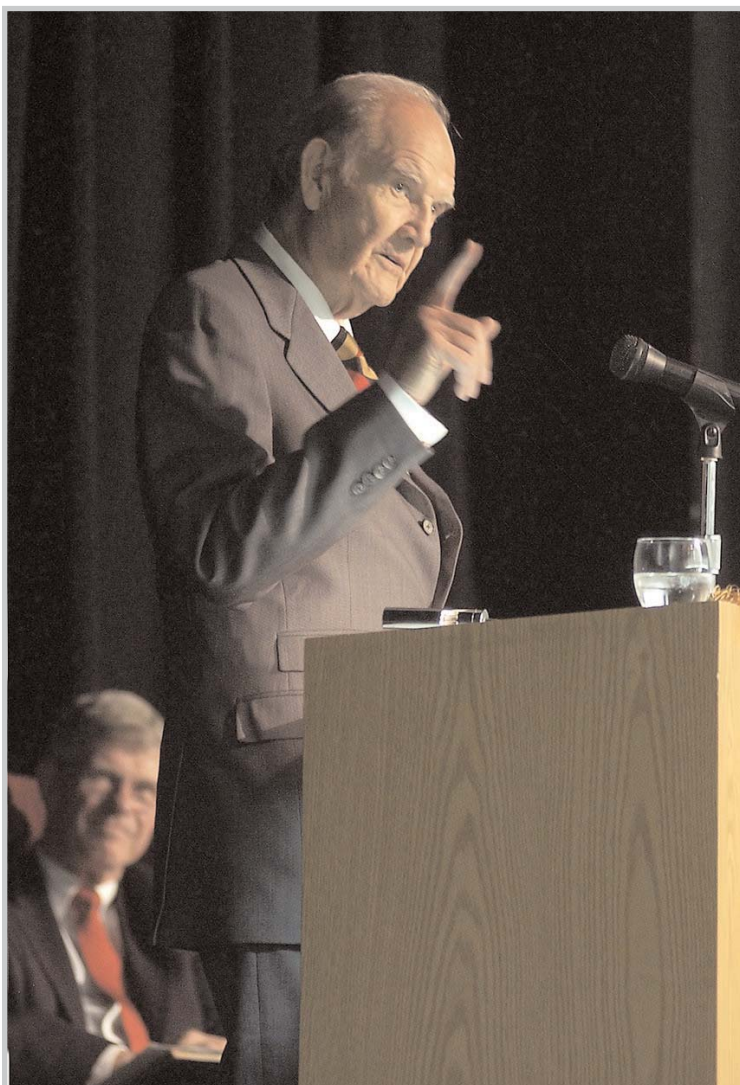


File Photo

Jodi Rave discussed the issues that face Native American leaders and how those leaders can react to those challenges to ensure they are dealt with in positive ways.

across the Great Plains and the idea of turning the middle of the country into a Buffalo Commons. Jodi Rave, a journalist from Nebraska discussed the issues facing the Native American community.

A panel of School of Mines and Technology faculty were assembled to describe some of the challenges that await on the horizon and how the university can continue to provide the vibrant, important, and relevant science and engineering education it has provided for more than 100 years. Dr. Roger Dendinger, assistant professor in the Department of Social Sciences served as the moderator for the distinguished panel that included Dr. Dan Dolan, professor in the Department of Mechanical Engineering and co-director of the Center for Advanced Manufacturing and Production, Dr. Sid Goss, professor in the Department of Social Sciences, Dr. Alvis



Former U.S. Sen. George McGovern talked about leadership and about current political issues during the keynote address of the first annual McGillycuddy Speaker Series.

File Photo



File Photo

Former U.S. Sen. George McGovern was very gracious before and after his speech, and talked to everyone who wanted to meet him. He signed many autographs, and stayed in the Surbeck Student Center until everyone had a chance to meet him.

Lisenbee, professor in the Department of Geology and Geological Engineering, and Dr. Jan Puszynski, dean of the College of Materials Science and Engineering and professor in the Department of Chemistry and Chemical Engineering.

Tech capped the event with its keynote speaker, former U.S. Senator from South Dakota and presidential candidate George McGovern. McGovern spoke about his life and about current political issues facing the United States. Listeners filled the Surbeck Student Center Ballroom to listen to McGovern. The crowd gave him several standing ovations.

Tech chose Valentine T. McGilycuddy as the Series namesake because he exemplifies important core values such as leadership. Throughout his life, he made choices that contributed to the well-being of others. He also was present at some of the most significant historical events of Dakota Territory in the late 1800s. He distinguished himself in such diverse occupations as physician and army surgeon, topographer and surveyor, Indian agent, mayor of Rapid City, university president and member of the State Constitutional Convention.

He tended the wounded after the battles of the Rosebud and Slim Buttes. He accompanied General Crook on his "horsemeat march" to Deadwood,

administered morphine to a dying Crazy Horse, removed Red Cloud from power and ministered to Wounded Knee survivors.

When he died June 7, 1939, at age 90, the flag at Pine Ridge flew at half-mast. A small box containing his ashes was buried at the top of Harney Peak. Sixty-five years earlier, McGilycuddy became the first white man to climb the peak.

The Speaker Series was possible because of a donation from Ray and Barbara Graham. The Grahams, of Rapid City and Albuquerque, N.M., have a long history of supporting arts-related activities.

"We appreciate Ray and Barbara's donation," stated Rod Pappel, president of the SDSM&T Foundation. "This event wouldn't be possible without their support. It gave an engineering and science university a chance to talk about issues that aren't discussed on this campus very often."

The support from the Grahams allowed Tech to make all the events free and open to the public, but seating was limited. Reservations and tickets were available according to a staggered schedule, giving priority first to Tech students, then to Tech faculty and staff, and then to the public.

Tech hopes to make the Speaker Series an annual event.

File Photo



Drs. Deborah and Frank Popper each spoke about different aspects of the theory of the Buffalo Commons, their idea about how the Great Plains can be inhabited in a sustainable manner.



Rama lab secures home for research

The state of South Dakota declared Sunday, Sept. 29, 2002, as Dr. Venkataswamy Ramakrishnan Day to honor Tech's Ramakrishnan, known as Dr. Rama, for his contributions to the state.

Rama is the Regents Distinguished Emeritus Professor of Civil Engineering at Tech. He retired from active teaching in May after 33 years of teaching. The official state proclamation reads, in part,

"Whereas, Dr. Ramakrishnan is world renowned for his teaching and research involving strength and high-performance concrete uses and emerging developments throughout the industry; he has authored three books in three countries and more

than 200 research papers and technical articles; and,

"Whereas, Dr. Ramakrishnan and his research brought prestige and distinction to the South Dakota School of Mines and Technology, and after 33 years as an educator, he retired to continue his lifework as a Research Professor; and,

"Whereas, It is fitting and proper for the Governor to make note of the tremendous impact that Dr. Ramakrishnan has made in advancing higher education and materials research as a South Dakota citizen, educator, and scholar who has made our state greater by choosing to live and work among us,

"Now, Therefore, I, William J. Janklow, Governor of the State of South Dakota, do hereby proclaim September 29, 2002, as Dr. Venkataswamy Ramakrishnan Day."

Rama is an international expert in the field of concrete and concrete structures. He has received numerous awards, and honors, has published more than 200 research papers and technical articles, presented at more than 200 international conferences, and submitted more than 300 technical reports on completed research projects.

He has focused his research on fiber reinforced concrete, concrete fiber composites, and high performance concrete. He recently has been involved in research with the South Dakota Department of Transportation Highway Administration in which he developed high performance concrete with 16,500-psi (pounds per square

inch) strength, far above typical concrete. A bridge girder using that concrete was built in Sioux Falls, marking the first time in the United States such a high strength concrete was used in bridge construction. Traditionally bridges are built using 6,000-psi concrete.

South Dakota Tech dedicated the Rama Materials Laboratory in the Civil/Mechanical Engineering Building last spring. It was 10 a.m. Friday, April 19, 2002. The smell of spring rain and snow hung in the air. The clouds made way for an occasional glimpse of the soon-to-be summer sun. It was an ordinary spring morning on Tech's campus; ordinary except for one extraordinary event.

A crowd of more than 100 faculty, staff, students, friends, and colleagues from around the world had gathered in the Civil/Mechanical Building to help Rama celebrate a special moment in time - the dedication of the new Rama Materials Laboratory.



Dr. Karen Whitehead, Tech's vice president for Academic Affairs, presented Dr. Rama with a plaque commemorating "Dr. Rama Day" in South Dakota.



A crowd of more than 100 faculty, staff, students, friends, and colleagues from around the world had gathered in the Civil/Mechanical Building to help Dr. Venkataswamy Ramakrishnan, Tech's Distinguished Emeritus Professor of Civil and Environmental Engineering, celebrate a special moment in time - the dedication of the new Rama Materials Laboratory and the announcement of Dr. Rama's upcoming retirement from teaching.

Photo by Steve Buchholz

Photo by Steve Buchholz

After brief introductions by Rod Pappel, Tech's Foundation president; Tech President Dr. Richard Gowen, and Dr. Terje Preber, former Chair and Professor, Department of Civil and Environmental Engineering, several special honored guests shared special memories and reflections of their relationships with Dr. Rama. These individuals shared stories of Dr. Rama's teaching, friendliness, acceptance, knowledge, hard work, and dedication. Some of the recurring words included instructor, friend, colleague, and mentor.

Those speaking included:

Dr. P. N. Balaguru, senior professor of Civil Engineering at Rutgers, The State University of New Jersey. Balaguru recently joined the National Science Foundation as program director of the CMS program in Washington, D.C. He spent one semester as a graduate student at Tech before going to Northwestern University for his Ph.D. He is the author of a book and numerous publications.

Terje Brandshaug, consulting engineer. Brandshaug received his bachelor's degree in 1976 and his master's in 1978, both from Tech. Brandshaug completed pioneering research using Bekeart Steel Fibers for his master's thesis. This paper is a standard reference in the field.

Clifford MacDonald. MacDonald received his bachelor's degree in 1976 and his master's in 1978 - both from Tech. MacDonald's career includes senior engineer, Braun Intertec Corporation, Minneapolis, Minn., and working at 3M where he was greatly involved in the development of the new polyolefin fiber. He is an acknowledged expert in fiber reinforced concrete and a speaker in American Concrete Institute seminars.

Dr. Ming L. Wang, professor of Civil Engineering, University of Illinois, Chicago. Wang earned his master's degree from Tech in 1980. He has a number of patents and is a world-known expert in bridge health monitoring. He is a consultant for countries around the world.

Dr. Srinivasa L. Iyer, professor emeritus

at Tech. Iyer received his doctorate degree in geological engineering from Tech in 1974. He then joined the faculty and taught for 26 years, retiring in 2000. In addition to teaching, he had administrative responsibility as director of economic development. He and his wife now live in Anaheim, Calif.

Dr. K. Thirumalai, chief engineer, Research and Special Programs Administration, U.S. Department of Transportation, Washington, D.C. Thirumalai previously served as the head of the Federal Research Lab in Minneapolis, Minn., program director at NSF, program director of the IDEA Program, and Transportation Research Board of the National Research Council. He has received numerous awards.

Dr. D. V. Reddy, professor and director, Center for Marine Structures and Geotechnique, Department of Civil Engineering, Florida Atlantic University, Boca Raton, Fla. Reddy is a world-known expert in applied mechanics and marine structures. He has authored a number of books and numerous publications and has received a number of awards.

In addition to these guests, two students, Chris Baer (CEE, Rapid City) and Thor Örjan Holt (MS.CEE, Norway), also spoke at the dedication ceremony.

After the honored guests spoke, observers and bystanders gathered around a blue curtain draped over the yet-to-be-unveiled plaque situated outside the Rama Lab. Gowen and Dr. Sangchul Bang, Dean of the College of Earth Systems, unveiled the plaque, and with a round of enthusiastic applause from the crowd, the Rama Materials Lab was officially dedicated.

A stately plaque reads "RAMA MATERIALS LABORATORY." Below this plaque is another encased in protective glass that has a line drawing and short biography of Dr. Rama. The plaque reads:

"The SDSM&T Foundation gratefully recognizes Dr. Venkatasawmy Ramakrishnan, Distinguished Professor. Dr. Venkataswamy Ramakrishnan established the Ramakrishnan Construction

Materials Laboratory Endowment to support laboratory facilities and material technology development for the Department of Civil and Environmental Engineering.

"Dr. Ramakrishnan is world-renowned for his teaching and research expertise involving strength and high performance concrete uses and emerging developments. His work has received international acclaim and has been utilized by industry in numerous applications. Establishment of this laboratory further recognizes and pays homage to Dr. Ramakrishnan who has committed his lifetime to education and serves as an everlasting reminder of his dedication.

"Dr. Rama established the Ramakrishnan Construction Materials Laboratory Endowment fund in 1999. The actual laboratory was created as part of the renovation to the Civil/Mechanical building in 1999-2000. This Rama Lab is named to honor Dr. Rama for his three decades of service to Tech and specifically to the Civil Engineering Department."

Rama retired from teaching in August 2002, but he will remain a regular figure on campus as he continues his world-renowned research. Tech students, faculty, and staff will miss having him as an instructor, colleague, and mentor, but people everywhere will continue to reap the benefits of his cutting-edge research.

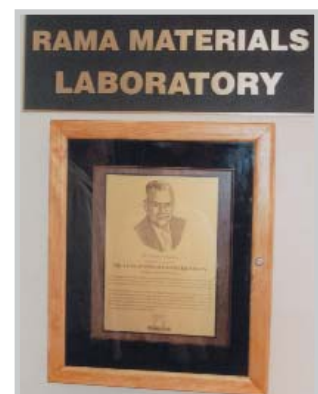


Photo by Steve Buchholz



The South Dakota School of Mines and Technology has a firm belief in partnering their faculty, staff, and students with communities, businesses, and K-12 educational organizations throughout the region.

Photo by Steve Buchholz



Kody Sharp envelopes a young visitor to the Children's Science Center annual Bubble Festival in a giant bubble. Children of all ages created bubbles of different colors, different sizes, and different shapes during the event.

Photo by Steve Buchholz



Rapid City middle school students learn about Germans of Russian heritage during Tech's multicultural expo held on campus. Several hundred students from across the Black Hills visited campus to learn about the world's people. Students from Tech and from National American University in Rapid City set up booths.

Photo by Steve Buchholz



Raising money can be for the birds, but a group of Tech students uses birds to collect cash for their organization. Circle K members are paid by a donor to place plastic, pink flamingoes in someone else's yard. That person then pays to have the gaudy birds shipped to another yard. Circle K members use the money to support their community service activities.

Photo by Steve Buchholz



The South Dakota School of Mines and Technology opened its doors several times to Black Hills residents displaced by forest fires this summer. Evacuees stayed in Tech's dorms or in the Surbeck Student Center Ballroom and ate meals provided by Dining Services. Tech staff answered the call every time they were needed to help.



Photo by Steve Buchholz

Ashley Nord, a student at Rapid City Stevens High School, walked away with the top prize during the 47th High Plains Regional Science and Engineering Fair held at Tech. Nord won the Intel International Science and Engineering Fair trophy with her project, "The Size and Distance of the Andromeda Galaxy."



File Photo

The Children's Science Center, an outreach program of South Dakota Tech, held a shark dissection class so students could learn all about the marine animal and what makes them tick.



Photo by Steve Buchholz

Jake O'Hara, (CENG, '02), left, and Dave Brecht (EE, '02) tweak their firefighting robot during Tech's Senior Design Fair. Students, community members, and economic development officials toured the fair to see the dozens of engineering projects on display.



File Photo

Jill Gray, right, former senior secretary in the President's Office, and Kristy Engle, payroll assistant in Human Resources, hand out treats to students during a Random Act of Kindness. The group Plug Into Positive Influences perpetrated the act. The group aims to create a student-centered campus through ideas and activities.

Real learning. Real life. Real fun.

Real learning. Real life. Real fun. Those three phrases tie together a brand new recruiting tool at the South Dakota School of Mines and Technology, an interactive CD-ROM that will be distributed to 15,000 prospective Tech students.

The new CD-ROM produced by the South Dakota School of Mines and Technology brings a high-tech approach to the university's recruiting efforts. The interactive CD-ROM combines music, video, photos, interviews, a virtual tour, and graphics into a presentation made to attract prospective students and entice them to seek more information about Tech and to schedule campus visits.

Tech's Admission Office staff is distributing the CD-ROM at college fairs across the Midwest and has mailed thousands of copies to prospective students based on ACT scores and student interest in engineering and science. Thousands of CD-ROMs have also been mailed to high school guidance counselors.

"This CD project gives our Admissions staff a great recruiting tool when we are speaking to prospective students nationally,"

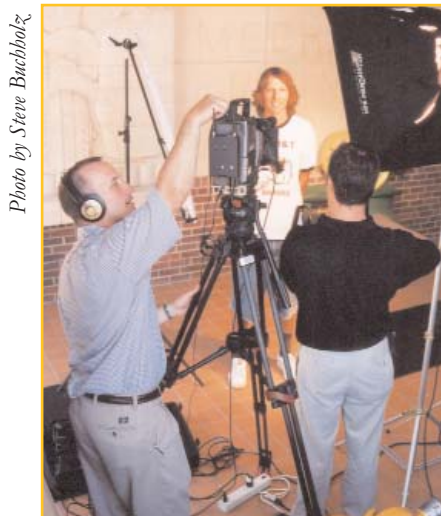


Photo by Steve Buchholz

Video Production:

A crew from James Tower traveled to South Dakota Tech in July to shoot interviews and other video for the CD-ROM.



Main Navigation:

This is the page CD viewers see after they watch an opening video. This page serves as a launching point to the three sections of the presentation.

Admissions Director Joe Mueller said. "By having a CD, Tech shows prospective students that we are recruiting with current technology."

"My first goal for the CD is to have a recruiting tool that reflects the rich tradition of SDSM&T has dating back to 1885," Mueller said. "My second objective is to increase awareness not only in South Dakota but also give our out-of-state prospects a way to see Tech. I feel the CD is accomplishing both of those goals."

Tech produced the CD with James Tower, a multimedia company based in North Mankato, Minn. The Tech team - Dr. Karen Whitehead, vice president for Academic Affairs; Julie Smoragiewicz, vice president for University Relations; Bill Jones, director of Academic and Enrollment Services; Joe Mueller, director of Admissions; Tiffany Smith, former publications manager; and Steve Buchholz, public information manager - worked with James Tower to produce a CD that appeals directly to the target market, high school students. The CD uses high-energy music, lots of pop culture references in the narration, and loads of photos and video.

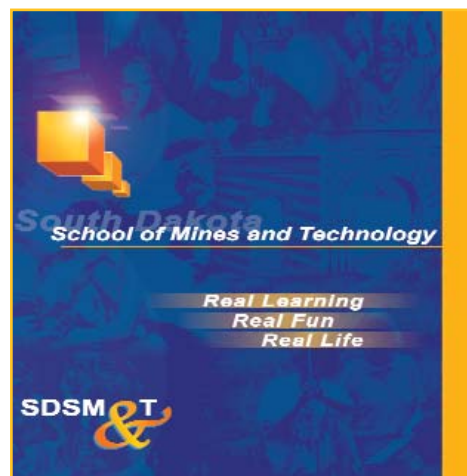
"We really wanted something that looked like the things prospective students

see elsewhere," Buchholz said. "It was important to us that the CD's look and feel appeals to that group."

The CD presentation tries to deliver all the crucial information prospective students need in a fun and lively format while being generic enough to have a two-year life. Results of the CD-ROM's impact will be closely tracked by the Admission staff, and data collected from the CD and the students viewing it will be used to adjust the presentation and distribution in the future.

"This CD allows prospective students an opportunity to instantly review information about Tech, and visit the campus without ever leaving their homes," Mueller said. "Students today want and expect information to be available to them immediately. This CD will now allow Tech to be accessible 24/7 around the world."

For more information about supporting this recruiting effort, or to request a CD-ROM, contact the Office of University and Public Relations at 394-2554.



The CD-ROM cover



Professor uses sports to engage students

Warning: This story is intended for entertainment purposes only

During the 18 playoff games played at the end of the 2002 NFL season, Tech math professor Dr. Roger Johnson correctly predicted 11 winners. His method: a math formula he developed that combines a number of factors to numerically rate the strength of each team.

For example, the formula predicted that New England would beat Oakland in the AFC Divisional Playoffs by one point, even though Vegas oddsmakers favored Oakland. The Patriots won by three. Johnson's predictions were not based on, and did not take into account, official Vegas point spreads. It is interesting to note, however, that Johnson's spreads were not always very far off from the Vegas odds.

"I like football, and it gives me something I can use in class," Johnson said. "Most of my students are not math majors, and this gives me a way to reach them."

Johnson's NFL research was published in the September 2001 issue of Math Horizons, a publication of the Mathematical Association of America. In the article, "Ranking NFL Teams," Johnson used a simple example to explain his formula.

"To Start with, consider the games played by Arizona, Dallas, New York Giants, and Philadelphia over just the first two weeks of the 2000-2001 NFL season. The results are shown in Table 1. Take

A = Rating for Arizona
D = Rating for Dallas
N = Rating for New York Giants
P = Rating for Philadelphia

"The fundamental idea behind point-spread ratings is that the difference in two teams' ratings will be the predicted score difference when these two teams play. In our case, for example, $A - N$ is a prediction of the number of points by which Arizona will beat the New York Giants (with a negative value favoring a victory by the Giants). Teams will generate higher point-spread ratings by substantially outscoring their opponents, especially highly rated opponents.

Home	Visitor
Week 1 Dallas 14	Philadelphia 41
New York Giants 21	Arizona 16

Week 2 Arizona 32 Dallas 31
Philadelphia 18 New York Giants 33

"To determine these ratings, we set the sum of predicted point differentials to the sum of actual point differentials for each team. Consider Arizona, for example. In the first two weeks of the 2000-2001 NFL season, Arizona played the New York Giants and the Dallas Cowboys. Consequently, $(A - N) + (A - D)$ is the total predicted number of points that Arizona outcores these two opponents by in its first two games, $(16 - 21) + (32 - 31)$, we have the first equation in the system...." Johnson created similar equations for the other possible combinations of the games.

After a bit of algebra, you end up predicting that Arizona will generally lose to Philadelphia by eight points, that Dallas will generally lose to Philadelphia by 18 points, and that the New York Giants will generally beat Philadelphia by six points. Johnson figures the ranking of the teams by arbitrarily assigning a value to one of the teams. In the example, if Dallas is assigned a value of zero, then Philadelphia has a ranking of 18, Arizona has a ranking of 10, and the Giants earn a ranking of 24. So, if the Giants played Arizona the following week, the formula predicts that the Giants will win by 14.

For the current NFL season, Johnson updates team rankings after each week's games and published them on his website, http://silver.sdsmt.edu/~rwjohnso/nfl02_8.html. Rankings change based on how well or how poorly a team does. Johnson takes into consideration home-field advantage, strength of schedule (teams that beat higher-ranked teams help their rankings improve at a faster pace), and blow-outs (running up a score does not help a team's ranking).

Johnson admits there are problems with the formula and its predictions. Most notably, it treats all games a team has played the same. That means that it doesn't take into account that the recent performance of a team could be a better prediction of how a team will fare in the future.

Besides having the research published and using in his classes, Johnson has used it to take home the winning prize in a few radio football pool contests.

Johnson has applied research to other

football statistics. He devised a formula that ranks quarterbacks who have thrown at least 1,500 passes based on regular-season performance. His most recent table puts former San Francisco 49ers quarterback Steve Young at the top with a rating of 96.8. Young's predecessor in the 49ers huddle, Joe Montana, lags a few points behind in second.

Johnson published an earlier version of the quarterback research in the College Mathematics Journal. He sent the issue to Joe Montana, who was the highest-rated quarterback at the time, and Montana returned the journal with an autograph.

Johnson also uses that research, based on the method least squares, in his classroom.

"It brings the math down to Earth for students," Johnson said. "It gets them excited about math."

Roger Johnson's final NFL rankings for the 2001-2002 seasons:

RANK	TEAM	RECORD	RATING
1	St. Louis	(16- 3)	17.1
2	Philadelphia	(13- 6)	14.3
3	Pittsburgh	(14- 4)	13.4
4	Chicago	(13- 4)	12.5
5	Green Bay	(13- 5)	12.3
6	New England	(14- 5)	11.7
7	San Francisco	(12- 5)	11.5
8	Oakland	(11- 7)	11.4
9	Baltimore	(11- 7)	10.3
10	Tampa Bay	(9- 8)	9.7
11	Miami	(11- 6)	9.3
12	N.Y. Jets	(10- 7)	7.7
13	Jacksonville	(6-10)	7.5
14	Denver	(8- 8)	7.4
15	San Diego	(5-11)	7.1
16	Cleveland	(7- 9)	6.8
17	N.Y. Giants	(7- 9)	6.3
18	Seattle	(9- 7)	6.2
19	Washington	(8- 8)	6.2
20	Indianapolis	(6-10)	6.1
21	Tennessee	(7- 9)	5.9
22	Kansas City	(6-10)	5.9
23	New Orleans	(7- 9)	5.4
24	Minnesota	(5-11)	4.3
25	Arizona	(7- 9)	4.1
26	Atlanta	(7- 9)	4.1
27	Cincinnati	(6-10)	4.0
28	Dallas	(5-11)	3.7
29	Detroit	(2-14)	2.3
30	Carolina	(1-15)	1.1
31	Buffalo	(3-13)	0.0

Project brings engineers and technicians together

Photo by Steve Buchholz



Students from South Dakota Tech and Western Dakota Technical Institute work together to engrave key chains in a shop at WDTI in Rapid City. The students from the two schools cooperated on the project to bridge the communication gap between managers and manufacturing workers before the students enter the working world.

In the cartoon “Dilbert,” management and workers constantly disagree and consider each other a bunch of dolts.

A project between the South Dakota School of Mines and Technology and Western Dakota Technical Institute (WDTI) aims to stop those misunderstandings before they start. Students from the two schools are cooperating on a design and manufacturing project that links designers from South Dakota Tech with manufacturers from WDTI.

“In industry, engineers are often regarded as ignorant and without common sense or arrogant by the people on the manufacturing side, and engineers often believe that manufacturers don’t have good ideas and knowledge,” Chenoa Jensen, (ME, ‘99), a former Tech mechanical engineering instructor, said. “Communication doesn’t always happen.”

The joint project put both sides into the design and manufacturing rooms together,

so they had no choice but to talk to each other. The project was simple – design and produce engraved key chains for the 120 involved in the project. Students inscribed “Tech” on one side of each key chain, and they will personalize the other side. The Tech students, mostly sophomores, created the design for the key chains. The group then went to WDTI, where manufacturing students showed Tech’s engineers-to-be how to use a lathe to turn design into reality.

“I think the real-world scenario of technical people working with engineers in designing parts is a realistic way of working,” Jerry Gossard, a WDTI instructor, said. “The technicians know what the equipment is capable of designing and the engineers then become aware of the capabilities. If a design can’t be manufactured, then the design defeated the purpose. It helps engineers make functional and useable designs.”

The schools also swapped instructors

for lectures. Gossard came to Tech to talk about basic injection molding design and another WDTI instructor came to Tech to talk about safety in shop.

Dr. Dan Dolan, professor in the SDSM&T Mechanical Engineering Department and co-director of the Center for Excellence in Advanced Manufacturing and Production, said the project can help bridge the gap between white- and blue-collar workers. The cooperation can also help better prepare students for the working world, and allow them to go into the workplace without preconceived notions or prejudices about the people they work with.

“Respect across the board is very important,” he said. “When you look at industry, you see that a lot of animosity exists. Until everyone trusts each other, there can be problems within the company.”

Tech and WDTI students have worked together before to produce parts for Tech’s vehicle teams, but this was the first time the cooperation was ever built into a class. Dolan wants the cooperation to expand.

“This is a significant step in our relationship,” he said. “We want to continue until we get to a point where students are in one class together.”

Then, maybe “Dilbert” will become obsolete.



Hardrockers call for new recruits

Teamwork. It can help a football team overcome an opponent with greater talent. It also can make Hardrocker athletics a real force on the playing field and give Tech students better recreational opportunities.

Anyone in the Tech community can join this team. The requirement to make the cut is a donation to the Hardrock Club's \$1 million Golden Anniversary Campaign. For 50 years, The Hardrock Club has supported Tech's athletic department and given true student-athletes a chance to learn important skills on the field while preparing for a career in the classroom.

"By contributing, you can be proud knowing you are making a difference in the life of student-athletes," Tom Rudebusch, Hardrock Club executive director, said. "Now is the time for you to ensure this 50-year tradition of support provided by the Hardrock Club continues."

The Golden Anniversary Campaign is one part of the university's broader plan to invest \$3 million into Tech's athletic programs and facilities over these next three years.

"These planned improvements will have a positive impact on the educational experience of every student, and certainly will help attract students to our campus," Rudebusch said. "As with any major accomplishments of this magnitude, we are relying on teamwork to make it happen."

The three main components of the planned improvements:

Currently, through a joint venture of Tech, the Rapid City School District, and the City of Rapid City, \$1 million dollars was spent for upgrades to the running track and the football field of the O'Hara Stadium. Work began in April 2002 and as completed in the fall.

During the Spring semester of 2002, students on campus were presented with an opportunity to impact future generations of Tech students by imposing a student fee increase to fund upgrades to both Surbeck Center and King Center (formerly known as the "New Gym"). After campus-wide

discussions among students, the student senate voted and passed the resolution to increase student fees by \$3.50 per credit hour to fund these renovations. The Board of Regents approved the resolution, meaning \$550,000 will be invested in King Center for creation of a modern wellness center and for needed renovations to the women's and men's locker rooms. These would be the first major improvements to the King Center since its construction in 1976.

The wellness center, the fastest growing area of the King Center, is used throughout the day by students for weightlifting, aerobic exercising, and general fitness activities, as well as classroom instruction teaching nutrition, wellness, and other related physical education topics.

The additional locker room space is needed with the growth of women's athletics during the past 25 years and the need for more space when basketball and volleyball teams host tournaments. Visiting teams would now be able to dress on site instead of in their hotel rooms.

State funds for campus maintenance and repair have been slated for use toward athletic programs for needed upgrades to the practice field behind King Center. This will enhance the environment for physical education classes, intramurals, and football practice.

The third component of this \$3 million comprehensive plan to enhance athletic facilities at South Dakota Tech is the \$1 million dollar Hardrock Club campaign that will focus on student scholarships, program support, and construction of the Hardrock Room – a multipurpose conference and meeting area that also will house the Hardrock Hall of Fame.

The Hardrock Club's Golden Anniversary campaign includes \$600,000 for athletic scholarships and endowments, \$100,000 for program support, and \$300,000 dollars for facility enhancements.

"Scholarships are the key in recruiting and retaining quality student-athletes at South Dakota Tech," Rudebusch said. "Hardrocker athletes have consistently held grade point averages above the school average. Tech athletes, like all students, compete in a rigorous academic environment and uphold the tradition of academic excellence."

The NAIA limits the amount of aid schools can provide student-athletes each year. In the DAC 10 Conference, the Hardrockers rank seventh in total financial assistance, giving 39 percent of the NAIA limit. The top two schools in the DAC 10 give 84 percent of the limit, with the average school in the conference giving 54 percent of the maximum allowed.

The Hardrock Club's three-year goal is to increase scholarships from \$164,000 to \$284,000 in annual assistance. Successfully completing this goal will put us at 70 percent of the allowed NAIA scholarship limit and will improve Tech's ability to attract students to its programs. That will make Tech more competitive on the playing field.

Contributors can choose to donate to any of the three areas the Hardrock Campaign will address – athletic scholarships and endowments, program support, or Hardrock Room/area of greatest need. Everyone who gives \$1,500 to the construction of the Hardrock Room will have their names inscribed into a brick that will be used to build the room.

"Teamwork has always been synonymous with athletic competition – and teamwork is how, for the first time in Hardrocker history, \$3 million will be invested in South Dakota Tech's athletic and intramural programs and facilities for the benefit of South Dakota Tech's current and future students," Rudebusch said.

Let the game begin.



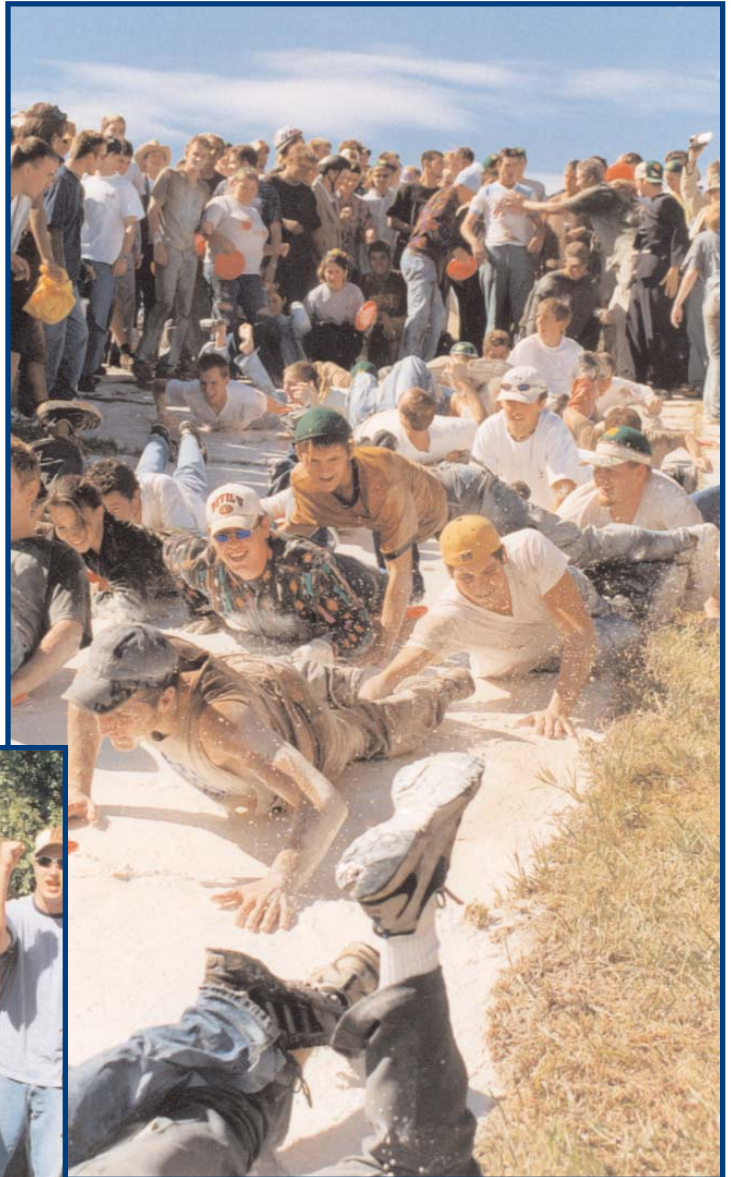
M-WEEK

The tradition continues



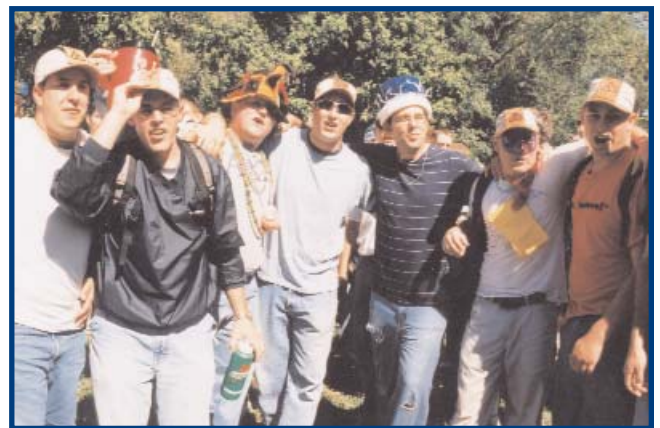
The South Dakota School of Mines and Technology students who biked up M-Hill September 20 to lay the senior plaque and whitewash the "M" carried on traditions that date back nearly a century. The same carrying on of tradition was true for all the other M-Week activities such as Homecoming Coronation, downtown parade, and the M-Week football game.

The "M" and accompanying "S" and "D" were built by hand some 90 years ago on Cowboy Hill by students and faculty of what was then called the South Dakota School of Mines. Workers removed rock and dirt and replaced it with stones that were later whitewashed to make it visible from 12 miles away. Students began replacing the stones with concrete in 1922.



All M-Week photos by Steve Buchholz

M-*WEEK*



M-Week is about continuing traditions, but it's also about starting your own. That's why every M-Week seems a little different than the previous. That's also what makes it so special.



Several Tech students presented posters at the Society of Vertebrate Paleontology annual meeting. **Andy Farke** (GEOL, Armour), **Dan Lien** (GEOL, Rapid City), **Frank Varriale** (MS.PALEO, Lake Luzerne, N.Y.) and **Jennifer Cavin** (MS.PALEO, Chadron, Neb.).

Tech students recently were inducted into the Phi Eta Sigma National Honors Society chapter at the South Dakota School of Mines and Technology. The Phi Eta Sigma Honor Society is a national organization that recognizes freshmen with high grade-point averages. Phi Eta Sigma is the largest freshman honor society with more than 300 chapters throughout the United States and more than 600,000 members. Thirty Tech freshmen were inducted into the society. **Wayne Baker** (ME, Sturgis), **Tyler Bergstrom** (CENG, Aberdeen), **Stephanie Bristlin** (IS, Rapid City), **Bobbie Crater** (ME, Glasgow, Mont.), **Kerri DeVries** (IS, Belvidere), **Jared Fenton** (CHEME, Gillette, Wyo.), **Nickolas Fletcher** (PHYS, Rapid City), **Janae Herman** (IS, Menno), **Benjamin Herrington** (CSC, Hermosa), **Chester Ismay** (CENG, Vale), **Jerome Koistinen** (EE, Bryant), **Patricia Krugjohn** (PHYS, Rapid City), **Anne Larson** (CHEME, Albert Lea, Minn.), **Yingxing Lin** (CENG, China), **Jennifer Moege** (CHEM, Parkston), **Andrea Mueller** (IS, Martin), **Mitchell Olson** (CENG, Saint Cloud, Minn.), **Grant Palmer** (GEOL, Oviedo, Fla.), **Joseph Pendo** (IS, Rapid City), **Austin Powell** (ME, Pukwana), **Amanda Prines** (IS, Rapid City), **Shane Roby** (CHEME, Sioux Falls), **Joshua Sass** (ENG, Lake Preston), **Loren Schmidt** (CENG, Elk Point), **Jackalyn Spry** (GENE, Rapid City), **Seth Swanson** (EE, Lake Norden), **Trevor Urban** (ME, Billings, Mont.), **Jessica Walloch** (CEE, Lesterville), **Elizabeth Weimer** (IS, Miles City, Mont.), and **Jennifer Wentz** (CEE, Lemmon).

The following students served as Orientation Leaders. The group of 16 students met regularly throughout the spring semester to prepare for the arrival of new students in the upcoming summer and fall semesters. **Brooke Dinger** (MATH, Aberdeen), **Jenni Christensen** (EE, Bloomington, Minn.), **Scott Fritz** (IENG, Sioux Falls), **April Hilzinger** (CHEM,

Wright, Wyo.), **Dawn Huston** (CEE, Pierre), **Dusty Johnson** (CENG, Baltic), **Lindsay Lipps** (IS, Hay Springs, Neb.), **Shelley Mansano** (MET, CHEM, Savage, Minn.), **Mark Moberg** (MET, Rapid City), **Nick Newell** (CENG, Havre, Mont.), **Justin Reisenauer** (CHEME, CHEM, Hettinger, N.D.), **Seth Ritter** (MINE, Casper, Wyo.), **Jesse Suck** (CENG, Havre, Mont.), **Tony Tegels** (CHEME, Windom, Minn.), **Breanne Vottero** (CHEME, Rapid City), and **Miaken Zeigler** (ENVE, Sturgis). Orientation Leaders are the first students who have contact with incoming freshmen and transfer students. They guide, support and provide information. In addition to helping students feel welcome, Orientation Leaders also are responsible for planning Orientation Week. This includes scheduling and planning events, programs and helping new students with placement testing and registration.

The following students were inducted into the Order of Omega at the South Dakota School of Mines and Technology. The Order of Omega is a national Greek honorary society. It was founded in 1959 upon the belief that individuals in the Greek community should be recognized for their service to the fraternity system and to the University. The purpose of the Order of Omega is to recognize fraternity men and women who have attained a high standard of leadership, to foster continued leadership among its members, and to inspire others to strive for similar achievements. Selection to the honorary society is based on application, grade point average, and is limited to the top three percent of the Greek community who are juniors or above. **Roger Schmaltz** (CHEME, Custer), Alpha Chi Sigma; **Sara Reausaw** (CHEM, Lead), Alpha Chi Sigma; **Bethany Pompy** (CHEM, Black Hawk), Alpha Chi Sigma and Beta Phi; **Jessica Kienow** (CHEME, Aberdeen), Alpha Delta Pi; and **Berthold Liebig** (CHEME, Amberg, Germany), Alpha Chi Sigma.

The following students were recognized for leadership skills during the South Dakota School of Mines and Technology's Fourth Annual Leadership Recognition Reception held in April. During the reception, Tech President Dr. Richard Gowen and his wife Nancy welcomed the students into their

home to thank them for their dedication and commitment to the university. Student leaders from all facets of campus life were invited to the reception including athletic team captains, peer advisors, resident assistants, and more. Tech's Leadership Development Team organized the reception. **Ray Aljets** (ME, Brandon), **Dan Alsup** (EE, Spearfish), **Andy Baker** (CEE, Rapid City), **Molly Barnes** (IS, Laramie, Wyo.), **Steph Beck** (IENG, Rapid City), **Lisa Bell** (IENG, Whitewood), **Bobbi Jo Beyer** (IS, Parkston), **Jonathon Bogott** (CENG, Bloomington, Minn.), **Nick Bottolfsen** (ME, Yankton), **Seth Brakke** (CEE, Presho), **Dave Brecht** (EE, Golden Valley, N.D.), **Robert Brown** (IENG, Rapid City), **Aaron Buchholz** (CEE, Rapid City), **Chris Bulian** (CHEME, Yankton), **Rebecca Burrows** (GEOL, Dyer, Ind.), **Chris Chiller** (IENG, Hot Springs), **Paul Chilson** (MINE, Sisseton), **Jessica Christensen** (IENG, Rapid City), **Derek Colling** (IENG, Laramie, Wyo.), **Jacob Colvin** (CHEME, PHYS, Hutchinson, Minn.), **Matthew Colvin** (CHEME, MATH, Hutchinson, Minn.), **Rob Cook** (MET, Rapid City), **Beth Cornelison** (CHEME, Rapid City), **Aaron Costello** (ME, Lingle, Wyo.), **Cameron Crow** (CENG, Stephan), **Robert Cunningham** (CHEME, Mitchell), **Benjamin Cutler** (MATH, CSC, Hot Springs), **Rob Dahlenburg** (CSC, Sioux Falls), **Padmavati Dasari** (EE, India), **KD Davis** (ME, Rapid City), **Chris Deaver** (EE, Winner), **Ben Decker** (PHYS, Gillette, Wyo.), **John Deeny** (CSC, Rapid City), **S. Martin Digler** (IS, Rapid City), **Erin Dimock** (IS, Simley, Minn.), **Brooke Dinger** (MATH, Rapid City), **Anne Dirks** (IS, Rapid City), **Zachary Doorenbos** (CHEME, Owatonna, Minn.), **Mike Dorman** (ME, Kennebec), **Jessica Duba** (CENG, Rapid City), **Ben Edwards** (CENG, Casper, Wyo.), **Luke Epperson** (CENG, Piedmont), **Kevin Erdmann** (ME, Rapid City), **Graham Erickson** (ME, Sioux Falls), **Shelly Erickson** (CEE, Sioux Falls), **Jake Erpenbach** (CEE, Ethan), **Sarah Farber** (CHEME, Glendive, Mont.), **Andrew Farke** (GEOL, Armour), **Geoffrey Fecske** (EE, Rapid City), **Mark Fersdahl** (EE, Renner), **Tony Fischer** (ME, Midland), **Chris Fischer** (IS, Sidney, Neb.), **Andy Fisher** (ME, Bowman, N.D.), **Nick Fletcher** (PHYS, Rapid City), **Naomi**

Fossen (CEE, Pierre), **Darryn Frafford** (EE, Halliday, N.D.), **Shelby Frammatlick** (IS, Rapid City), **Ross Friesz** (EE, Mandan, N.D.), **Scott Fritz** (ME, MET, Rapid City), **Peter Gasper** (CSC, Sidney, Mont.), **Hannah Gibson** (IENG, Philip), **Connie Giroux** (CHEM, Rapid City), **Matt Goeden** (CENG, Yankton), **Jason Goehring** (IS, Long Lake), **Kurt Goltz** (MET, Windon, N.D.), **Aaron Gough** (ME, MET, Rapid City), **Kevin Goyer** (ENVE, Rapid City), **Jamie Gramm** (CHEME, Gillette, Wyo.), **Vanessa Gray** (IS, Ellsworth AFB), **Jeff Guenther** (ME, Yankton), **Lee Gunderson** (ME, Watertown), **Mindy Haerer** (MATH, Wall), **Tim Hagerott** (ME, Rapid City), **Steven Hain** (CHEME, Rapid City), **Kris Hallan** (ME, Tabor), **Otto Hallberg** (IENG, Rapid City), **David Hansen** (ME, Rapid City), **Jared Hanson** (CENG, Madison), **Jeff Hartman** (CHEME, Sioux Falls), **Sarwat Hassan** (CHEME, India), **Laurie Hayden** (IS, Rapid City), **Sarah Hayes** (IS, Rapid City), **Scott Heibel** (CENG, Pierre), **Linda Heindel** (GEOLE, Hot Springs), **Kathryn Henning** (CHEME, Scotland), **Jason Herr** (CHEME, St. Paul, Minn.), **April Herrera** (CHEM, Rapid City), **Chris Hill** (CENG, Douglas, Wyo.), **Angela Holetson** (IS, Rapid City), **Hank Hollenbeck** (CENG, Rapid City), **Miriam Holmberg** (GEOLE, Spencer, Neb.), **Greg Holzwarth** (EE, Gillette, Wyo.), **Aubree Horan** (IS, Mitchell), **Steph Hummel** (CHEME, Rapid City), **Susan Huseby** (EE, Circle, Mont.), **Matt Husman** (ME, Sheridan, Wyo.), **Dawn Huston** (CEE, Pierre), **Dyani Jensen** (IENG, Rapid City), **Dustin Johnson** (EE, Baltic), **Garret Johnson** (EE, Buffalo), **Shawna Johnson** (GEOL, Morton, Minn.), **Scott Johnson** (EE, Rapid City), **Jeff Johnson** (ME, Rapid City), **Kevin Jordahl** (CHEME, Yankton), **Timur Jumaev** (MINE, Uzbekistan), **Matt Kafka** (IENG, Utica), **Abran Kean** (CENG, Pierre), **Cassie Keene** (ENVE, Cedar Hill, Texas), **Micah Keller** (GEOLE, Dickinson, N.D.), **Jessica Kienow** (CHEME, Aberdeen), **Shirleine Kleppe** (CEE, Rapid City), **Georgia Knauss** (GEOL, Bowman, N.D.), **Charles Knight** (EE, Ottumwa, Iowa), **Nick Koch** (ME, EE, Plankinton), **Jennifer Korn** (CHEME, Meridian, Idaho), **Tracy Koskan** (ME, Wood), **Krystal Kubas** (IENG, Glendive, Mont.), **Thomas**

Kung (CSC, Rapid City), **Espen Kvernstuen** (EE, Norway), **Jason Lamont** (CSC, Aberdeen), **Anne Larson** (CHEME, Albert Lea, Minn.), **Scott Larson** (EE, Albert Lea, Minn.), **Michael Larson** (IS, Rapid City), **Mark Lefevre** (IS, Rapid City), **Zhengpeng Li** (CSC, Rapid City), **Mandy Lilla** (MINE, Hecla), **Cory Lillesve** (EE, Kasson, Minn.), **Steve Lipetzky** (CEE, Sioux Falls), **Lindsay Lipps** (IENG, Hay Springs, Neb.), **Brian Literski** (CENG, Helena, Mont.), **Tim Lucking** (ME, Buffalo, Wyo.), **Marc Macy** (GEOLE, Aberdeen), **Zach Mader** (ME, Biddle, Mont.), **Joels Malama** (MINE, United Kingdom), **Shelley Mansano** (CHEME, Savage, Minn.), **Cassady Marshall** (CHEME, Laramie, Wyo.), **Jack Massarello** (MET, Rapid City), **Krista Masteller** (IS, Piedmont), **Michelle Mazur** (GEOL, Valencia, Calif.), **John McCanna** (GEOL, Eden Prairie, Minn.), **Benjamin McGregor** (CENG, Box Elder), **Austin McNall** (ME, Newcastle, Wyo.), **Celeste Mercado** (CHEM, Box Elder), **Heather Merrill** (CHEM, Scenic), **Mathew Meyer** (ME, Northville), **Kiley Meyer** (CEE, Rapid City), **John Meyers** (CHEME, Sioux Falls), **Anna Miller** (CEE, Bloomfield, Neb.), **Justin Mitchell** (CEE, Loveland, Colo.), **Mark Moberg** (MET, Rapid City), **Dale Morrison** (ME, Rapid City), **Shawn Moulton** (EE, Encampment, Wyo.), **Dan Mueller** (IENG, Baker, Mont.), **Chuck Murray** (IENG, Sioux Falls), **John Myers** (CHEME, Sioux Falls), **Dan Nebelsick** (CEE, Mount Vernon), **Bob Nelson** (CSC, Helena, Mont.), **Jason Nelson** (ME, Mitchell), **Andrew Nelson** (EE, Rapid City), **Nick Newell** (CENG, Havre, Mont.), **Katie Norman** (IS, Aberdeen), **Jed Padilla** (CSC, Cheyenne, Wyo.), **Anirudh Patel** (EE, Rapid City), **Micah Peters** (MATH, CSC, Spearfish), **Heidi Peterson** (CHEM, Rapid City), **Matt Pfister** (ME, Black Hawk), **Mike Phenicie** (ME, Westminster, Colo.), **Dickson Phongrekun** (MET, Indonesia), **Robert Pille** (CEE, Manderson), **Brandon Quiett** (CEE, Rapid City), **Jaime Rathjen** (IENG, Hitchcock), **Dan Rausch** (CSC, Big Stone City), **Sara Reausaw** (CHEM, Lead), **Justin Reisenauer** (ME, Hettinger, N.D.), **Clint Richards** (EE, Spearfish), **David Richer** (ME, Seneca), **Scott Robertson** (CENG, Mitchell), **Wes Roth** (CSC, Laramie, Wyo.),

Sarah Rouse (MET, CHEM, McCook Lake), **Josh Russo** (EE, Rapid City), **Austin Salonen** (CSC, De Smet), **Kiran Kumar Samineni** (CSC, India), **Jason Sanderson** (CENG, Rapid City), **Jerry Santoro** (IS, West Long Lake, N.J.), **Kenon Sarratt** (ME, Hinton, Iowa), **Eric Sauer** (CHEME, Watertown), **Sarah Schaeffer** (IS, Rapid City), **Mike Schlabsz** (CENG, Ashley, N.D.), **Lisa Schlink** (MET, Rapid City), **Jason Schmidt** (CHEME, Elk Point), **Erika Schoen** (CEE, Mansfield), **Pat Schwickerath** (CEE, Newton, Iowa), **Andrew Shepherd** (CENG, Gillette, Wyo.), **Nick Smith** (MET, Buffalo, Wyo.), **Curt Smith** (ME, Rapid City), **John Sommervold** (IS, Rapid City), **Nicole Stengle** (IS, Cedar Rapids, Iowa), **Jon Stone** (MET, Rapid City), **Mike Stratton** (CHEME, Brooklyn Park, Minn.), **Jesse Suek** (CENG, Havre, Mont.), **Tonya Taggart** (CENG, Deadwood), **Karen Tallent** (IS, Rapid City), **Tony Tegels** (CHEME, Windom, Minn.), **Troy Travnicek** (CHEME, Dallas), **John Ullman** (IS, Rapid City), **Gary Vance** (ENVE, Rapid City), **Tim Vavra** (IENG, Utica), **Breanne Vottero** (ENG, Rapid City), **Tiffany Walz** (IENG, Huron), **Stacy Watters** (IS, Rapid City), **Holly Wattleworth** (IS, Rapid City), **Sarah Weidner** (CEE, Anoka, Minn.), **Kerri Whittecar** (IS, Box Elder), **Dan Wolf** (CENG, Canton), **Gavin Woltjer** (CHEM, Sioux Falls), **Lance Woodsend** (CEE, Sioux Falls), **Rob Worl** (EE, Bellevue, Wash.), **Tristan Woster** (CEE, Reliance), **Lonnie Wright** (IENG, Ridgeview), **Miaken Zeigler** (ENVE, Sturgis), **Katie Zeller** (IENG, Pierre), **Christina Zellmer** (IENG, Pierre), and **Jami Zilles** (IS, Logan, Utah).

The following students were selected to serve as a Resident Assistant at the South Dakota School of Mines and Technology for the 2002-2003 school year. South Dakota Tech's Department of Residence Life provides on-campus dormitories for almost 500 students. Resident Assistants are the foundation of the residence life system. Their job is to promote a spirit of unity and an atmosphere conducive to study. Resident Assistants will do that by helping create an environment that allows all students to succeed in and out of the classroom. Being

a Resident Assistant provides students with opportunities to challenge themselves while helping others do the same. Maureen "Reeny" Wilson, assistant director of Residence Life, said serving as a Resident Assistant is good training for life. "Being a leader in today's business world means more than just having authority," she said. "A leader must also possess the ability to work together in a team and solve problems through a group effort. The Residence Life department gives Resident Assistants the opportunity to experience leadership from many facets - with fellow RAs, with the students on their floors, and with university staff and administration."

The students:

Chris Bartelt (CENG, Watertown), **James Beat** (ME, Hot Springs), **Jenni Christensen** (CENG, Bloomington, Minn.), **Chris Deaver** (EE, Winner), **Ben Decker** (PHYS, Gillette, Wyo.), **Zac Doorenbos** (CHEME, Owatonna, Minn.), **Sarah Farber** (CHEME, Glendive, Mont.), **Chris Fischer** (IS, Sidney, Neb.), **Benjamin Good** (ME, Parker), **Sarwat Hassan** (CHEME, India), **Micah Keller** (GEOLE, Dickinson, N.D.), **Cory Lillesve** (EE, Kasson, Minn.), **Steve Lipetzky** (CEE, Sioux Falls), **Brian Literski** (CENG, Helena, Mont.), **Tim Lystad** (EE, Stanley, N.D.), **Shelley Mansano** (CHEME, Savage, Minn.), **Cassady Marshall** (CHEME, Laramie, Wyo.), **Corey McIntosh** (CEE, Sutherland, Neb.), **Shawn Moulton** (EE, Encampment, Wyo.), **Charlie Murray** (IENG, Sioux Falls), **Mike Phenicie** (ME, Westminster, Colo.), **Dickson Pongrekun** (MET, Indonesia), **Justin Reisenauer** (ME, Hettinger, N.D.), **Wes Roth** (CSC, Laramie, Wyo.), **Patrick Schwickerath** (CEE, Newton, Iowa), **Dan Wolf** (CENG, Canton), **Tristan Woster** (CEE, Reliance), and **Miaken Zeigler** (ENVE, Sturgis).

The following students traveled to Colorado Springs, Colo., recently to compete in the ROTC sponsored Ranger Challenge. The team competed against Colorado University Boulder (Army), Colorado University Boulder (Marines), University of Colorado Colorado Springs, Colorado State University (two teams), and University of Wyoming. The events included were Army Physical

Fitness Test, Patrolling Operations Written Test, Orienteering, One-rope Bridge, Grenade Assault Course, and the 10K Forced Ruck March. The team placed first in the the 10K Forced Ruck March (with a winning margin of three minutes). The team consisted of the following Tech students: co-captain **Jordan Lanning** (ME, Jefferson), co-captain **Bryan Woods** (ME, Rapid City), **Jeff Odell** (ME, Camp Crook), **Greg Ornelaz** (IS, Rapid City), **Wes Mulder** (ME, Corsica), and **Ryan Batt** (ME, Spearfish). Alternates from Tech who did not compete are **Andy Kenyon** (EE, Wentworth), **Chris Bongard** (CSC, Rapid City), and **Charles Gwynn** (CENG, Gordon, Neb.). The coaches were MSG **Frank Hall** from Tech and SFC **Cres Tumangday** from BHSU.

Two South Dakota Tech students recently were awarded scholarships from the Institute of Industrial Engineers. IIE awarded only 14 scholarships for 2002-2003. **Rebekah Dargatz** (IENG, Keystone) won the UPS Scholarship for Female Students. **Rob Brown** (IENG, Rapid City) won the Marvin Mundel Memorial Scholarship.

Santiago Handboy (IE, Rapid City), has been awarded a two-year, \$20,000 year scholarship from the David and Lucile Packard Foundation. Handboy is a graduate of Rapid City Central High School. The scholarship is one of only 10 given by the Packard Foundation in the Tribal Scholars Program. The Tribal Scholars Program supports graduates of tribal colleges who are admitted to four-year colleges and universities for study in science, engineering, computer science, or mathematics. Handboy earned an associate's degree at Oglala Lakota College. The David and Lucile Packard Foundation was created in 1964 by David Packard (1912-1996), co-founder of the Hewlett-Packard Company, and Lucile Salter Packard (1914-1987). They shared a deep and abiding interest in philanthropy. The Foundation awarded approximately \$454 million in grants in 2001.

Tech student **Dana Sander** (ME, Bismarck, N.D.) has been awarded one of two \$5,000 D.J. McDonald scholarships. The National

Board of Boiler and Pressure Vessel Inspectors selected Sander for the award. Howard Pfaff, South Dakota's Chief Boiler Inspector, presented Sander with the award. Sander will use the scholarship to finish his degree at South Dakota Tech. The National Board of Boiler and Pressure Vessel Inspectors was created in 1919 to promote safety through uniformity in the construction, installation, repair, maintenance, and inspection of boilers and pressure vessels.

Tech student **Nick Wald** (MET, Rapid City) has been awarded a \$1,000 MPD scholarship by the Society of Mining Engineers.

Four students were inducted into the South Dakota School of Mines and Technology's Leadership Hall of Fame this year - Angela Holeyton (IS, Rapid City), Abe Kean (CENG, Pierre), Shirleine Kleppe (CEE, Rapid City), and Joels Malama (MINE, '02). The Hall of Fame was created by Tech's Leadership Development Team to raise awareness about the importance of student leadership and to recognize the valuable contributions student leaders make. The Hall of Fame recognizes students based on their contributions to the campus community. It's not about how many leadership positions they list on their resume. The award recognizes students who have made a difference. Any full-time Tech student in good academic and disciplinary standing is eligible to apply for induction to the Leadership Hall of Fame. An anonymous committee of students, faculty and staff reviews applications. Up to six students are selected each year for this honor.



Hall of Fame inductees pictured with president Richard Gowen: (L-R) Angela Holeyton, Abe Kean, Shirleine Kleppe, Joels Malama.





Dr. Arden Davis, professor and Chair of the Department of Geology and Geological Engineering, has been elected to the Engineering Accreditation Commission

(EAC) Davis previously has served as an alternate to the Board of Directors of the Accreditation Board for Engineering and Technology (ABET). As a member of the EAC, he will serve as a team chair for accreditation visits.

Dr. Chris Jenkins, professor, Department of Mechanical Engineering, has been elected to the Executive Board of the Society for Experimental Mechanics (SEM). The Executive Board is the governing body of the Society. Jenkins has served the Society in the past as Chair of the Composites Technical Division, Co-Chair of the Education Committee, and has organized numerous sessions and symposia for the annual meetings. He is organizing a symposium for the 2003 annual meeting in Norfolk, VA titled "100 Years of Experimental Mechanics in Flight: Commemoration of the 1903 Wright Flyer Centennial."

At the 51st Annual Honors Convocation, the South Dakota School of Mines and Technology presented awards to students, faculty, staff, and friends of the university in recognition of their outstanding service and academic achievements.

Tech faculty and community award winners:



Mines Award for Outstanding Public Service: Helene Duhamel, Vice President of Duhamel Broadcasting.

She was honored for her many activities, including serving as the Chair of the KOTA Care and Share Food Drive, which annually collects more than 150,000 pounds of food for the Black Hills communities' food banks. She has also produced and broadcast a daily television Healthcast for the past decade. She is past Chair of the Youth and Family Services Sustaining Membership Board, has served as Membership Chair of the United Way, and served on the Board of Directors of the Rapid City Convention Visitors Bureau and

the Board of directors of the Museum Alliance of Rapid City.



Mines Award for Outstanding Teaching: Barbara J. Hascall, a math teacher at Parker High School. Her nominator, Tech sophomore Benjamin Good, said, "Mrs. Hascall

was an excellent teacher. She worked hard at teaching her students the material they needed to know. She integrated technology and practical application experiences into her classroom, and she did her best to prepare her students for college."



Benard A. Ennenga Award: Dr. Carter J. Kerk, associate professor in the Industrial Engineering program. This award was established by Mr. Ennenga (CHE, '49) to recognize a

tech teaching assistant or faculty member who has demonstrated excellence in teaching and motivating students.



Virginia Simpson Award: Dr. Larry A. Simonson, professor and chair, Electrical and Computer Engineering Department. The late Virginia Simpson, a long-time supporter of

Tech and active community member, established the award to support and encourage new or continued community involvement by Tech faculty or staff.



L. Richard Kitchen Award: Carolyn M. Brich, secretary, Electrical and Computer Engineering Department. One of her nominators said, one of Carolyn's nominators,

wrote "Carolyn demonstrates to all students that she comes in contact with that she truly cares about them and that she is willing and able to help them in any way. In a sense, she has taken on a role as a surrogate mother to many. Her upbeat manner and perpetual positivism is contagious."

Presidential Award for Outstanding Professor: Dr. Edward M. Corwin,



professor, Math and Computer Science Department. The Presidential Award is based on exemplary performance as an assistant, associate or full professor at the South Dakota School of Mines and Technology.

The Career Service Council at the South Dakota School of Mines and Technology gives its Tradition of Excellence Award to a Career Service Council employee each month. The Career Service Council gives the award to someone who has performed their assigned duties at a high level or above and beyond expectations, who has taken the initiative to promote the concept of successful job completion and has promoted a positive working relationship with students, faculty and staff.

Recipients from the past year include:

November 2001: **Irene Vanderbush**, a financial aid assistant in Academic and Enrollment Services.

December 2001: **Carolyn Brich**, a secretary in Electrical and Computer Engineering Department.

January 2002: **Karen Connors**, a senior claims clerk in Student Accounts/Cashiering Services.

February 2002: **Kristy Engle**, a payroll assistant in Human Resources. and Administration.

March 2002: **Tisha VanRavenhorst**, former secretary in Student Activities and Leadership Center.

April 2002: **Monica Beardt**, former secretary in Business and Administration.

May 2002: **Deborah East**, a secretary in the College of Interdisciplinary Sciences.

June 2002: **Lisa DeVries**, a personnel assistant in Human Resources.

October 2002: **Donna Neal**, librarian, Devereaux Library.

November 2002: **Emily Price**, secretary, Graduate Education and Sponsored Programs.



Dr. Brad Baker, assistant professor, Institute of Atmospheric Science, received \$57,664 in additional funds from the National Science Foundation for his project, "CAREER:

Biogenic Hydrocarbons from Grasslands - Flux Measurements and Education Outreach."

Dr. Sangchul Bang, Dean, College of Earth Systems, received \$193,932 from the National Science Foundation for his project, "Collaborative Research: Effect of Point of Loading on Lateral Resistance of Rigid Piles." He also received \$25,000 from the National Science Foundation for his project, "SGER - Suction Pile Retrieval."

Dr. Gale Bishop, director, Museum of Geology, received \$300 from the U.S. Forest Service for his project, "Documentation of an Ambiguous Trace Fossil Associated with a Dinosaur Trackway."

Dr. David Boyles, professor, Department of Chemistry and Chemical Engineering, recently attended the following conference at the Benjamin N. Cardozo School of Law, Yeshiva University, New York City. The conference title was "The Jouissance of Transgression: Lacan and Crime."



William Capehart, assistant professor, Institute of Atmospheric Sciences, received \$11,200 in additional funds from the National Oceanic and Atmospheric

Administration for his project, "Improved Representation of Snow and Its Subgrid Distribution in a Coupled Model System."

Dr. Robert Corey, associate professor, Department of Physics, **Dr. Sherry Farwell**, Dean of Graduate Education and Research, and **Dr. Zbigniew Hladysz**, professor, Civil and Environmental Engineering Department, received \$100,000 from the National Science Foundation for their project, "Homestake Mine as a National Underground Scientific Facility."

Dr. Sherry Farwell, also received \$100,000 in additional funds from NASA for his project, "South Dakota Space Grant College

and Fellowship Program - FIRST Robotics." He also received \$15,000 in additional funds from the University of North Dakota for his project, "Public Access Resource Center (PARC) Empowering the General Public to use EOSDIS-Implementation Phase III." He also received \$19,498 from the University of North Dakota for his project, "A Public Access Resource Center (PARC) Empowering the General Public to Use EOSDIS - Implementation Phase." Farwell also received \$135,118 from the South Dakota Governor's Office of Economic Development for his project, "Planning Grant to Obtain Baseline Information for Proposed HNUSL."

Dr. Arden Davis, professor, Department of Geology and Geological Engineering, and **Dr. David Dixon**, associate professor, Department of Chemistry and Chemical Engineering, received \$9,147 in additional funds from South Dakota State University for their project, "Arsenic Remediation of Drinking Water: Phase II."

Dr. James Munro, professor, Department of Chemistry and Chemical Engineering, **Dr. David Dixon**, associate professor, Department of Chemistry and Chemical Engineering, and **Dr. Jan Puszynski**, dean, College of Materials Science and Engineering, received \$100,000 from the National Science Foundation for their project, "Integrating Design-Oriented Experiments into the Chemical Engineering Laboratory."

Dr. Jan Puszynski, also received \$24,980 from the Department of Defense-Naval Surface Warfare Center for his project, "Intermetallic Ignition Delay Mixtures and Investigation of Mixing of Solid R. - Kinetic Studies of Ultra-Fast Reactions." Puszynski also received \$61,449 from the University of Minnesota (Prime-US Dept. of Defense) for his project, "Processing Behavior of Nanoenergetic Materials." He also attended two technical conferences, TMS Fall Meeting in Indianapolis, Ind., and the Annual National American Institute of Chemical Engineers (AIChE) Meeting in Reno, Nev. At the TMS conference, Puszynski presented keynote paper on "Advances in the Formation of Metal and Ceramic Nanopowders." In addition, he presented a poster jointly with graduate student **Berthold Liebig** (MES, Germany).

Puszynski chaired one technical session at that meeting. At the AIChE meeting, he presented one paper with Liebig and one poster with Liebig and two REU students who worked at Tech during the summer 2001. In addition, Puszynski chaired one technical session at that meeting. Puszynski also attended the 6th International Symposium on the Self-propagating High-temperature Synthesis in Haifa, Israel (February 16-21, 2002). At this meeting, Puszynski presented a talk on Thermodynamics and Kinetics of Self-propagating High-Temperature Reactions. This paper is going to be published in the International Journal of SHS. He also presented one poster with his graduate student, Berthold Liebig. In addition, he chaired two technical sessions. He also presented an invited talk to the National Academy of Sciences (Committee on Advanced Energetic Materials and Manufacturing Technologies) in Washington, DC on "Formation, Characterization, and Reactivity of Aluminum Nanopowders."



Dr. Dave Dixon, professor, Department of Chemical and Chemical Engineering, presented two papers at ASEE Annual meeting in Montreal on June 19. The titles of the talks were:

"Introducing Process Controllers Throughout the ChE Laboratory", **D.J. Dixon** and **J.A. Puszynski**, American Society of Engineering Education (ASEE) Annual Meeting, Montreal, Canada (19 June 2002); and "AIChE's Student Chapter Competition: The chem-E-Car Competition", **D. Dixon**, **R. Hesketh**, **M. Abraham**, **C. Coronella**, **R. Zollars**, and **S. Rochefort**, American Society of Engineering Education (ASEE) Annual Meeting, Montreal, Canada (19 June 2002).

Richard Farley, research scientist IV, Institute of Atmospheric Sciences, received \$45,100 in additional funds from the University Corporation for Atmospheric Research for his project, "Extension of UCAR Subcontract No. S01-31727."

Mike Greenwald, research scientist II, Museum of Geology, received \$8,400 in additional funds from the Bureau of

Reclamation for his project, "MNI-WICONI Water Project: Red Shirt Sector."



Dr. Ken Han, professor, Department of Materials and Metallurgical Engineering, received \$40,000 from Haju Tech, University of Suwon, Korea for his project, "Dissolution Behavior of Indium from In/Sn Oxides."

Drs. John Helsdon and Andrew Detwiler, professors, Institute of Atmospheric Sciences, were awarded \$156,000 in additional funds from the National Science Foundation for their project, "Airborne Observations and Storm Modeling in Support of the Severe Thunderstorm Electrification and Precipitation Study (STEPS)."

Carrie Herbel, collections manager and preparatory, Museum of Geology, received \$16,000 from the U.S. Forest Service for her project, "USFS Fossil Specimens Requiring Preparation, Conservation and Curation." She also received \$45,597 from the United States Department of the Interior-National Park Service for her project, "Support field work, lab preparation and curation of paleontological material collected from the Conata Basin Excavation Site (Big Pig Dig)." She also received \$37,285 from the United States Department of the Interior-Badlands National Park for her project, "Emergency Salvage Collection of Fossils at the Titanotheres Graveyard, Badlands National Park." Herbel also received \$26,843 from the United State Department of the Interior-Badlands National Park for her project, "Baseline Mapping of Fossil Bone Beds, Scenic Member, Badlands."

Dr. Mark Hjelmfelt, professor, Department of Atmospheric Sciences, received \$5,000 from the Office of Naval Research for his project, "Orville Symposium." He also received \$113,700 from the National Science Foundation for his project, "Collaborative Research: Investigations of Non-Classic Lake-Effect Boundary Layer Processes."



Dr. Chris Jenkins, professor, Department of Mechanical Engineering,

received \$10,000 in additional funds from the Boeing Company for his project, "Novel Solutions for Large Aperture Ultra-Lightweight Diffraction Limited Space Optics." He then received \$8,575.50 in additional funds from the Jet Propulsion Laboratory for the same project. He also received \$30,000 from TRW Inc. for his project, "The Evaluation of the Perimeter Truss Support System for Membrane Applications." Jenkins also was invited to present the keynote lecture at the 1st European Workshop on Inflatable Space Structures. The title of Jenkins' presentation was "The Status of Gossamer Spacecraft in the United States." His travel to the Workshop was supported by the European Space Agency.

Dr. Roger Johnson, associate professor of Mathematics, was awarded the C. Oswald George Prize for having the "best" article appearing in the British journal Teaching Statistics during calendar year 2001. The article in question, published summer 2001, is entitled "An introduction to the bootstrap". The prize includes a modest monetary award.



Dr. Jon Kellar, chair and professor, Department of Materials and Metallurgical Engineering, received \$10,000 in additional funds from the National Science Foundation for his project, "A Multi-Scale Approach for Understanding the Role of the Interphase in Polymer Matrix Composites-REU." He also received \$15,000 from TRW Inc. for his project, "Analysis of Zirconium Tungstate Fillers for PMCs." He also received \$5,000 from Rapid City Economic Development for his project, "Black Hills Mineral Industry Database." Kellar, along with **Dr. William Cross**, research scientist III, Department of Materials and Metallurgical Engineering, **Dr. Lidvin Kjerengtroen**, professor, Department of Mechanical Engineering, **Dr. David Boyles**, professor, Department of Chemistry and Chemical Engineering, and **Dr. Christopher Jenkins**, professor, Department of Mechanical Engineering, received \$190,797 from the U.S. Air Force Office for Scientific Research for their project, "(DURIP 2002) Polymer Matrix Composites Characterization."

Dr. Scott Kenner, associate professor, Department of Civil and Environmental Engineering, received \$2,000 from the Black Hills Flyfishers and \$161,167 from South Dakota Game Fish & Parks for his project, "Upper Rapid Creek Watershed Assessment." He also received \$1,500 in additional funds from the Belle Fourche River Watershed Partnership for his project, "Belle Fourche River Watershed Assessment and TMDL." Kenner also received \$29,238 from the Black Hills National Forest for his project, "Common Water Unit - Integrated Resource Inventory (year 3)." Kenner also received \$50,000 from the South Dakota Department of Environment and Natural Resources for his project, "Upper Rapid Creek Watershed Assessment." He also Kenner also received \$68,337 from South Dakota Game Fish and Parks for his project, "Development of a Multi-agency Systems Approach to Manage a Wild Brown Trout Fishery within an Urbanized Watershed, Rapid Creek, SD."

Dr. Carter Kerk, professor, Department of Industrial Engineering, received \$5,000 from the David and Lucile Packard Foundation for "Scholarship Grant for Santiago Handboy."

Dr. Mel Klasi, associate professor, Department of Civil and Environmental Engineering, received \$41,429 from South Dakota State University for his project, "South Dakota Transportation Technology Services (15)."

Dr. Alvis Lisenbee, professor, Department of Geology and Geological Engineering, received \$8,000 from the West Dakota Water Development District for his project, "Geological Map Preparation of the Northern Half of the Hill City (1:24,000 Scale) 7.5 Minute Quadrangle, South Dakota." Lisenbee also received \$8,000 from West Dakota Water Development District for his project, "Preparation of a 1:24,000 Scale Geologic Map of the Southern Half of the Black Hawk Quadrangle."



Dr. Antonette Logar, professor, Department of Mathematics and Computer Science, received \$4,277 from Raytheon for her project, "Development of a Web Site for the LDOPE

Tools." Logar also received \$10,243 from Raytheon for her project, "Assistance with Development of the MODIS Direct Broadcast System," and \$4,715 from Raytheon for her project, "Enhancement of the MODIS Reprojection Tool Graphical User Interface."

Dr. James Martin, curator, Vertebrate Paleontology, Museum of Geology, received \$61,063 in additional funds from the National Science Foundation for his project, "Collaborative Research: Evolution and Biogeography of Late Cretaceous Vertebrates from the James Ross Basin, Antarctic Peninsula."

Kata McCarville, director, Information Technology Services, received \$4,800 in additional funds from North Dakota State University for her project, "Undergraduate Research Experiences in High Performance Computing and Advanced Networking."



Deborah Mitchell, director, Apex Gallery, received \$9,000 from the Elizabeth Firestone Graham Foundation for her project, "Sandy Skoglund: Here and Now."

Dr. Henry Mott, professor, Department of Civil and Environmental Engineering, received \$5,000 from CDM Federal Programs Corporation for his project, "Testing of Potential Construction Material via Column Leaching, Gilt Edge Mine Site, Lawrence County, South Dakota." He also received \$18,991 from the City of Rapid City for his project, "Co-composting of Municipal Solid Waste (MSW) and Residual Digested Wastewater Biosolids (RDWB): Optimization of Parent Material Proportions."

Dr. Colin Paterson, professor, Department of Geology and Geological Engineering, received \$16,850 in additional funds for his project, "A Black Hills Science Teaching Project to Prepare K-8 Teachers for the New Millennium."



Dr. Manuel Penalosa, professor, Math and Computer Science Department, received \$6,925 from Rapid City Regional Hospital for his

project, "Enhancements to the Claims Processing Data Warehouse Project."

Dr. Maribeth Price, assistant professor, Department of Geology and Geological Engineering, received \$75,924 in additional funds from NASA for her project, "Application of Remote Sensing to Forest Resource Inventory and Habitat Modeling." Price also \$30,000 in additional funds from NASA for the same project.

Dr. Venkataswamy Ramakrishnan, distinguished emeritus professor, Department of Civil and Environmental Engineering, received \$80,000 from the South Dakota Department of Transportation for his project, "Optimized Aggregate Gradation for Structural Concrete." Dr. Ramakrishnan also received \$15,500 from the Research & Technology Corp. for his project, "Advanced Concept Concrete using Basalt Fiber/BF Composite Rebar Reinforcement."

Dr. William Roggenthen, professor, Department of Geology and Geological Engineering, received \$5,000 from the Matrix Production Company for his project, "Belle Fourche Seismic Profile."

Bryan Schumacher, acting director, Information Technology Services, received two grants - \$4,664 and \$45,000 - in additional funds from the United States Department of Agriculture-Forest Service for his project, "To Provide a Training and Learning Opportunity to Students at the Box Elder Civilian Conservation Center-Year 2."

Dr. Paul Smith, professor emeritus, Institute of Atmospheric Sciences, received \$24,000 in additional funds from the National Science Foundation for his project, "Armored T-28 Aircraft Facility for Research Requiring Storm Penetrations." Smith also received \$69,600 in additional funds from NSF for his project, "Armored T-28 Facility for Research Requiring Storm Penetrations (Deployment to Colorado, June 2002)." Smith also received \$130,000 from the National Science Foundation for his project, "In-Situ Verification of Hydrometeor Algorithms for Polarimetric Radar."

Dr. Judy Sneller, Associate Professor, Department of Humanities, published "The New '3Rs': Gender and the Science and

Engineering Classroom" in the Winter 2001 issue of Academic Exchange Quarterly.



Dr. Kerri Vierling, assistant professor, Department of Chemistry & Chemical Engineering, received \$6,000 in additional funds from the National Science Foundation for

her project, "CAREER: A Keystone Species Approach to Determining Post-fire Successional Influence on Cavity user Communities in the Black Hills, South Dakota - REU." Vierling, also received an NSF REU (Research Experience for Undergraduates) grant for \$6,000 to hire an additional field assistant for her project titled "NSF CAREER: A Keystone Species Approach to Determining Post-fire Successional Influence on Cavity user Communities in the Black Hills, South Dakota." Vierling also received \$5,000 from the South Dakota Wildlife Diversity Small Grants program (Department of Game, Fish, and Parks) for a project titled "Surveys of Woodpecker Abundance and Reproduction in Response to the Jasper Fire." She also received \$5,000 from South Dakota Game, Fish and Parks for her project, "Fire Effects on Breeding Cavity Nesters: Surveys of Woodpecker Abundance And Reproduction In Response To The Jasper Fire." She also received \$29,300 in additional funds from South Dakota Game, Fish and Parks for her project, "Development of a multi-agency systems approach to manage a wild brown trout fishery within an urbanized watershed, Rapid Creek, SD." Vierling also received \$50,000 in additional funds from the United States Department of Agriculture-Forest Service for her project, "Evaluation of a Model Examining Post-Fire Impacts of the Jasper Fire on Primary Cavity Nesters (year 2)."

Dr. Lee Vierling, assistant professor, Institute of Atmospheric Sciences, received \$29,873 in additional funds from NASA for his project, "Earth Systems Connections: An Integrated K-4 Science, Mathematics and Technology Curriculum." Vierling also received an additional \$132,127 for the project.

Dr. Karen Whitehead, vice president, Academic Affairs, received \$39,671 from the

Research Notes CONTINUED

South Dakota Board of Regents-Eisenhower Program for her project, "Paving the Way: Preparing Students for Mathematical Success."



Dr. Keith Whites, professor, Department of Electrical and Computer Engineering, received \$210,010 from Agilent Technologies for his project, "RF and Microwave Measurement Equipment Acquisition through the Agilent Technologies University Relations Philanthropy Grants Program."

Dr. Keith Whites, Dr. Neil Chamberlain, professor, and **Dr. Thomas Montoya**, assistant professor, Department of Electrical and Computer Engineering, received \$226,464 from the National Science Foundation for their project, "Equipment Acquisition to Establish an Applied Electromagnetics and Communications Laboratory."



Dr. Scott Williams, assistant professor, Department of Chemical and Chemical Engineering, presented a two-hour presentation at the Metropolitan Museum of Art (NYC) to

photographic conservationists and curators from around the world Feb. 5. The presentation was entitled: "Silver Image Formation and Toning Mechanisms." The Presentation was part of the Nineteenth Century Silver Photographic Processes Workshop in Photographic Conservation.



Dr. Robb Winter, professor, Department of Chemistry and Chemical Engineering, received \$67,121 in additional funds from the National Science Foundation for his project, "REU Site: Molecular

Level Modification of Surfaces." Winter also received \$20,962 from the University of South Dakota for his project, "Pacer-Statewide Partnership to Support Technology Innovation and Entrepreneurship in South Dakota." Winter also received \$20,000 by the Sandia National Laboratories for his project, "Analysis of Nanomechanical Properties in Mock

Propellant." Winter also received \$11,000 from the University of Missouri-Columbia for his project, "Development and Manufacturing of Highly Damage resistant Fiberglass Reinforced Window Panels for Buildings in Hurricane Prone Areas." In addition he received \$146,344 in additional funds from the National Science Foundation for his project, "Nanomechanics and Interphase Chemistry of Interfacial Fracture." He also received \$10,000 in additional funds from the Camille and Henry Dreyfus Foundation for his project, "The Interphase Chemistry and Nanomechanical Properties of Polymeric Composites."

Dr. Pat Zimmerman, director, Institute of Atmospheric Sciences, received \$319,000 from the State of South Dakota for his project, "South Dakota Carbon Sequestration Project." Zimmerman also received \$22,000 from NASA for his project, "Semi-Arid Grassland Ecosystem Forcing: Replacing Native, Free-Ranging Ungulate Grazing with Human-Managed Livestock Grazing." He also received \$24,000 in additional funds from NASA for his project, "Semi-Arid Grassland Ecosystem Forcing: Replacing Native, Free-Ranging Ungulate Grazing With Human-Managed Livestock Grazing/Timothy Bennett."

More than 90 research grants were awarded in FY 2002. Major funding sources include the National Science Foundation, NASA, Department of Education, Department of Energy, Department of Defense, and the state of South Dakota.



National Outstanding Advisor. Simonson was awarded \$1,000 and a commemorative plaque. The society presented another \$1,000 to Tech's discretionary fund. The society selected Simonson for his energy, enthusiasm, and initiative - factors that have garnered recognition for students on his campus. The local Tau Beta Pi chapter designed and assembled a lighted Christmas tree, on display at Tech's parade of trees and the town's Festival of Lights parade. In 2002, Simonson received the university's Virginia Simpson Award in recognition of his involvement as a staff member in the Rapid City community. His Tau Beta Pi chapter has received numerous awards during his tenure as advisor. The awards include nine Secretary's Commendations and Project Awards for the past three years and a Greater Interest in Government grant for its involvement with the YEA.

Eta Kappa Nu, a national Electrical and Computer Engineering Honor Society, has selected South Dakota School of Mines and Technology President **Dr. Richard Gowen** as an Eminent Member. The society inducted Gowen during ceremonies held June 22 in Toronto, Canada. Eta Kappa Nu established the rank of Eminent Member in 1950 as the society's highest membership classification. The society confers the title on "those select few whose technical attainments and contributions to society through leadership in the field of electrical and computer engineering have resulted in significant benefits to humankind."

Dr. Carter J. Kerk, associate professor, Industrial Engineering, has been elected Foundation Vice Chair for the American Society of Safety Engineers (ASSE) Foundation. Since joining the ASSE Foundation's Board of Trustees in 1999, Kerk has helped raise over \$800,000 for research, education and professional development in occupational safety and health. Founded in 1911 and celebrating its 90th anniversary, ASSE is the oldest and largest professional safety organization and is dedicated to protecting people, property and the environment. Its more than 30,000 members manage, supervise, and consult on safety, health, and environmental issues in industry, insurance, government, and education. For more information visit ASSE's website www.asse.org.



Campus Briefings continued



Tau Beta Pi, the engineering honor society, has selected **Dr. Larry Simonson**, chair and professor in Tech's Department of Computer and Electrical Engineering, as its

Welcome:

Robert A Faubert, Faculty, Director of Drama Activities, Humanities, (10/3/01)

Joan C. Lindstrom, Exempt, Educational Sign Language Interpreter, Counseling and ADA Services, (11/1/01)

Scott S. Tubbs, Faculty, Instructor, Social Sciences, (1/1/02)

Patrick C Gilcrease, Faculty, Assistant Professor, Chemistry and Chemical Engineering, (1/1/02)

Joseph B. Mueller, Exempt, Director of Admissions, Academic and Enrollment Services, (1/22/02)

Karmen A. Aga, CSA, Accounting Assistant, Graduate Education and Sponsored Programs, (2/1/02)

Ruth A. Golabiewski, CSA, Senior Secretary, University and Public Relations, (2/1/02)

Stacy S. Collins, Exempt, Assistant Football Coach/Assistant Intramural Director/Weight Room Supervisor, Intercollegiate Athletics, (2/1/02)

Christopher M. Salazar CSA, Laboratory Storekeeper, Chemistry and Chemical Engineering, (4/1/02)

Liliane S. Wood, temporary exempt, Education Coordinator, Children's Science Center, (5/17/02)

Brandy L. Strom Dugger, CSA, Secretary, Student Activities and Leadership Center, (6/6/02)

Dr. Alan J. Anderson, Exempt, Research Scientist II, Materials and Metallurgical Engineering, (6/24/02)

Derek D. Andrews, Exempt, Admissions Counselor, Academic and Enrollment Services, (7/1/02)

Michele L. Azar, Faculty, Assistant Librarian, Devereaux Library, office Library, (7/8/02)

Dr. Wei Chian, Faculty, Instructor (Camille and Henry Dreyfus Fellow), Chemistry and Chemical Engineering, (7/25/02)

Ellen I. Lefler, CSA, Secretary, Civil and Environmental Engineering, (7/8/02)

Daniel D. Nebelsick, Exempt, Hall Director, Residence Life, Connelly Hall, (8/1/02)

Audra M. Baker, CSA, Senior Secretary, President's Office, (8/1/02)

Emily M. Price, CSA, Secretary, Graduate Education and Sponsored Programs, (8/12/02)

Jackie Adamson, Faculty, Assistant Professor, Social Sciences, (NEED DATE)

Dr. James W. Sears, Exempt, Research Scientist IV, Advanced Materials Processing Center, (8/15/02)

Elaine K. Linde, Faculty, Instructor, Electrical and Computer Engineering, (8/15/02)

Karim Heinz Muci Kuchler, Faculty, Associate Professor, Mechanical Engineering, (8/15/02)

Tsvetanka S. Filipova, Exempt, Research Scientist II, Chemistry and Chemical Engineering, (8/15/02)

Dr. John C. Quinn, Faculty, Associate Professor, Social Sciences, (8/15/02)
Dr. Frank Van Nuys, Faculty, Assistant Professor, Social Sciences, (8/15/02)

Jason P. Henry, Exempt, Assistant Men's Basketball Coach, Intercollegiate Athletics, (8/16/02)

Janet M. Kirsch, Exempt, Director of Administrative Services, Business and Administration, (8/19/02)

Daniel S. Moore, CSA, Library Clerk, Devereaux Library, (9/16/02)

Richard H. Beshara, CSA, Library Technician, Devereaux Library, (10/1/02)

Guy R. Gregory, CSA, Library Technician, Devereaux Library, (10/1/02)

Randall P. Benson, Exempt, Fire Meteorologist, Institute of Atmospheric Sciences, (10/1/02)

Dr. Vasudevan Devanath, Faculty, Instructor, Chemistry and Chemical Engineering, (10/7/02)

Shawwna J. Willcox, CSA, Secretary, Business and Administration, (10/8/02)

Melinda A. Poyourow, Exempt, Publications Manager, University and Public Relations, (10/17/02)

Mary L. Maher, CSA, Senior Claims Clerk, Business and Administration, (10/21/02)

Alicia L. Stubbs, Exempt, Assistant to the President, President's Office, (10/23/02)

Jacek J. Swiatkiewicz, Exempt, Research Scientist II, Chemistry and Chemical Engineering (11/01/02)

Farewell:

James W. Cote Jr., Faculty, Electrical and Computer Engineering, (12/31/01)

Amy Bauer, Faculty, Humanities, (12/31/01)

Kevin Cooper, Faculty, Mathematics and Computer Science, (12/31/01)

John Dunn, Faculty, Humanities, (12/31/01)

Christy Heacock, Faculty, Social Sciences, (12/31/01)

Barbara Preszler, Faculty, Mathematics and Computer Science, (12/31/01)

Anf. Ziadat, Faculty, Civil and Environmental Engineering, (12/31/01)
Dr. Taegyung Ko, Exempt, Materials and Metallurgical Engineering, (2/15/02)

Holly Iversen-Hall, Exempt, Academic and Enrollment Services, (4/19/02)

Ione McCloskey, CSA, Residence Life, (4/30/02)

Jill Gray, CSA, Secretary, President's Office, (5/24/02)

David W. Gutierrez, Faculty, Instructor, Chemistry and Chemical Engineering, (5/19/02)

Thomas Foertsch, Faculty, Instructor, Mining Engineering, (5/19/02)

Jason Ash, Faculty, Instructor, Mechanical Engineering, (5/19/02)

Chenoa Jensen, Faculty, Instructor, Mechanical Engineering, (5/19/02)

Ryan H. Koontz, Faculty, Instructor, Mechanical Engineering, (5/19/02)

Russell R. Korzeniewski, Faculty, Instructor, Social Sciences, (5/19/02)

Rebecca P. Lust, Faculty, Instructor, Social Sciences, (5/19/02)

Patrick D. Mackin, Faculty, Instructor, Social Sciences, (5/19/02)

Michael D. Strub, Faculty, Instructor, Civil and Environmental Engineering, (5/19/02)

Larry G. Bauer, Faculty, Professor, Chemistry and Chemical Engineering, (5/19/02)

David H. Grow, Faculty, Assistant Professor, Electrical and Computer Engineering, (5/19/02)

Stephen R. Pratt, Faculty, Associate Professor, Social Sciences, (5/19/02)

Tisha VanRavenhorst, CSA, Secretary, Student Activities and Leadership Center, (6/5/02)

Keith O. Pruitt, CSA, Electrical and Computer Engineering, (6/28/02)

Cherie Hintz, Exempt, Business and Administration, (6/28/02)

George Gladfelter, Exempt, Academic and Enrollment Services, (6/28/02)

Qixu Mo, Exempt, Institute of Atmospheric Sciences, (6/28/02)

Dr. Dean Bryson, Faculty, College of Interdisciplinary Studies, (7/5/02)

Dr. Benjamin Premkumar, Faculty, Electrical and Computer Engineering, (7/11/02)

Shawn R Waldie, CSA, Title III, (7/24/02)

Julia T. Sankey, Faculty, Museum of Geology/Geology, (7/31/02)

Kathleen F. Fischbach, CSA, Civil and Environmental Engineering, (7/31/02)

Audra M. Baker, CSA, President's Office, 8/16/02)

Summer R. Feind, CSA, Business and Administration/ (Tech Print Center), (9/10/02)

Iiona K. Hermanson, CSA, Business and Administration, (9/19/02)

Gail Boddicker, Exempt, President's Office, (9/27/02)

Sara K. Cox, CSA, Children's Science Center/University and Public Relations, (10/10/02)

Tiffany Smith, Exempt, President's Office, (10/25/02)

Change:

Gayla Schlei, CSA, Residence Life, has been reclassified to a Senior Secretary, (11/1/01)

Karl LaLonde, Exempt, Institute of Atmospheric Sciences, has been promoted to Research Scientist II/Research Computer Scientist, (12/1/01)

Brenda K. Standiford has transferred to Academic and Enrollment Services as Assistant Coordinator of Academic Support Development, (4/1/02)

Richard W. Brich, CSA, Academic and Enrollment Services, has been reclassified to a Senior Programmer Analyst, (4/1/02)

Jamie Sumners, CSA, High Priority Connection, reclassified to Senior Programmer/Analyst, (6/1/02)

Dale Nickels, CSA, Mining Engineering, reclassified to a Computer Support Specialist, (6/1/02)

Donna V. Kliche, Exempt, Institute of Atmospheric Sciences, promoted to Research Scientist II, (7/1/02)

Barbara F. Dolan, Exempt, Academic and Enrollment Services, has accepted the position of Director of Student Information Systems/Title III Project Director, (7/1/02)

Monica L. Beardt, CSA, Business and Administration, has accepted the Purchasing Assistant position in Business and Administration (9/18/02)





**Architecture
Civil & Structural
Engineering**

Architects & Engineers

Quality, Service & Integrity.....Attitudes to Build On

*South Dakota School
of Mines & Technology
Civil Engineering Students
benefit from TSP Three, Inc.
Scholarship Fund.*




www.teamtsp.com

*A tradition of
excellence in
design, engineering
and construction.*

TSP Three, Inc. - 600 Kansas City St. - Rapid City, SD - Ph: (605) 343-6102 - Fax: (605) 343-7159



Margaret Puszynski
Broker Associate

Raben REAL ESTATE

Service With a Smile!

302 Main Street
Rapid City, SD 57701
Business: (605) 342-7272
Fax: (605) 343-8900
Residence: (605) 342-2262
E-mail: puszynski@earthlink.net

For Relocation Package call: 1-800-888-1619
Please ask for Margaret





CALENDAR

of Events

December 2-6

Bowling for Tech's Food Pantry Week
1:00 PM- 4:00 PM (Grubby's Gameroom)

December 3

Parade of Trees/Holiday Open House
1:00 PM - Ballroom

December 4-7

Volleyball NAIA National Tournament

December 5

Children's Holiday Party - 6:30 PM - Ballroom

December 6

Men's/Women's Basketball vs. Dickinson State
6:00 PM and 8:00 PM
Friday Family Fun Night - Children's Science Center
4:00 PM - 8:00 PM

December 7

Men's/Women's Basketball vs. Minot State
6:00 PM and 8:00 PM

December 7-8

Concert Choir and Master Chorale Holiday Concert
8:00 PM - Our Lady of Perpetual Help Cathedral

December 11

Board of Regents Meeting
Academic Affairs Council
8:00 AM - 4:00 PM (Rapid City)

December 12-13

Board of Regents (BOR) Meeting - Rapid City
(Surbeck Student Center)

December 12-17

Visit the LCM Angel Tree - Surbeck Center

December 13

Men's/Women's Basketball @ Mayville State
6:00 PM and 8:00 PM
Winter Band Concert - 7:30 PM
(Rushmore Plaza Civic Center Theatre)

December 14

Men's/Women's Basketball
@ Valley City State University 6:00 PM and 8:00 PM

December 16-20

Finals Exams

December 20

President's Graduation Reception -
3:00 PM - 4:30 PM (Surbeck Student Center)
President's Dinner for honored guests - 6:00 PM

December 21

Reception for honored guests - 9:00 AM (Rushmore Plaza Civic Center)
Graduation - 10:00 AM
(Rushmore Plaza Civic Center)

December 21-January 8

Christmas Break

December 24

Christmas Eve

December 25

Christmas Day ~ Holiday

December 26

Kwanzaa begins

December 27-29

Women's Basketball @ Las Vegas Shootout

December 27-January 4

LCM Mission trip to Venezuela

December 28-29

Men's Basketball @ Spearfish Classic

January 1

New Year's Day ~ Holiday

January 4

Men's/Women's Basketball @ Black Hills State
University 6:00 PM and 8:00 PM

January 8

New Student Orientation

Registration Day

January 9

Classes Begin

January 10

Men's/Women's Basketball vs. Huron University
6:00 PM and 8:00 PM

January 11

Men's/Women's Basketball vs. Dakota State
6:00 PM and 8:00 PM

January 12

Friends of Devereaux (FOD) Film Series
6:00 PM (Elks Theatre) "Rear Windows"

January 16

Women's Network Luncheon - 11:30 AM

January 17

Men's/Women's Basketball @ Jamestown
6:00 PM and 8:00 PM

January 18

Men's/Women's Basketball @ University of Mary
6:00 PM and 8:00 PM

January 19

Friends of Devereaux (FOD) Film Series
6:00 PM (Elks Theatre) "Mr. Roberts"

January 20

Martin Luther King, Jr. Day ~ Holiday

January 24

Men's/Women's Basketball vs. Valley City State
University 6:00 PM and 8:00 PM

January 25

Men's/Women's Basketball vs. Mayville State
6:00 PM and 8:00 PM

January 26

Friends of Devereaux Film Series - 6:00 PM (Elks Theatre) "Father Of The Bride"

January 30

Men's/Women's Basketball vs. Black Hills State
University 6:00 PM and 8:00 PM

January 31

Deadline for nominations for Faculty and Staff Awards (Presidential Outstanding Professor Award, Virginia Simpson Award, Benard Enenga Award, and the Kitchen Award)

February 2

Friends of Devereaux Library Film Series
6:00 PM (Elks Theatre) "Too Hot To Handle"
Ground Hog Day

February 4

Networking Reception/Business Etiquette Dinner
4:30 PM

February 7

Men's/Women's Basketball @ Dakota State
6:00 PM and 8:00 PM

February 7-10

Mathematical Contest in Modeling

February 8

All Campus Formal

Men's/Women's Basketball @ Huron University
6:00 PM and 8:00 PM

February 9

Friends of Devereaux Library Film Series
6:00 PM (Elks Theatre) "Meet Me In St. Louis"

February 10

Deadline to register for Spring Fundamentals of Engineering (FE) Exam

February 11

Tau Beta Pi Spring Career Fair - Ballroom

February 13

Matters of the Heart: A Health and Wellness Fair
10:00 AM-3:00 PM (Ballroom)

February 13-15

Drama Club One Act Festival
7:00 PM - Ballroom

February 14

Men's/Women's Basketball vs. University of Mary
6:00 PM and 8:00 PM

Valentine's Day

February 15

2003-2004 Music Scholarship Auditions
11:00 AM (First Congregational Church)
Men's/Women's Basketball vs. Jamestown College

6:00 PM and 8:00 PM

Block Kids Contest - Ballroom

February 16

Friends of Devereaux Library Film Series
6:00 PM (Elks Theatre) "Sargeant York"

February 16-23

National Engineers Week

February 17

President's Day ~ Holiday

February 18-19

Rube Goldberg Machine Contest
3:00 PM Ballroom

February 20

Order of the Engineer - 11:00 AM - Ballroom

February 21

Engineering Week Open House
10:00 AM-2:00 PM

Men's/Women's Basketball @ Minot State
6:00 PM and 8:00 PM

February 22

Computer Programming Contest - 9:30 PM
MathCounts Contest - 1:00 PM

Men's/Women's Basketball @ Dickinson State
6:00 PM and 8:00 PM

February 23

Friends of Devereaux Library Film Series
6:00 PM (Elks Theatre) "The Quiet Man"

February 25

Women's Basketball Play-offs

February 26

Men's Basketball Play-offs

March 1

Men's Basketball Play-offs
Women's Basketball Play-off Semi-Finals

March 1-9

Spring Break

March 2

Friends of Devereaux Library Film Series
6:00 PM (Elks Theatre) "An Affair To Remember"

March 3

Women's Basketball Play-off Championship

March 4

Men's Basketball Play-offs

March 9

Friends of Devereaux Library Film Series
6:00 PM (Elks Theatre) "Sunset Boulevard"

March 12-18

Women's Basketball NAIA Tournament

March 13

Women's History Month Luncheon
11:30 AM (Ballroom)

Black Hills Regional Job Fair
(Rushmore Plaza Civic Center)

March 13-14

Board of Regents Meeting - Vermillion, USD

March 16

Friends of Devereaux Library Film Series
6:00 PM (Elks Theatre)

"The Good, The Bad and The Ugly"

March 18-19

CAAP/Information Technology Exam
8:00 AM-12:15 PM

March 20

CAAP/Information Technology Exam
12:30-4:45 PM (Ballroom)

March 21

High Plains Regional Science
and Engineering Fair

March 27

Honor's Day Convocation
Leadership Hall of Fame Induction Ceremony

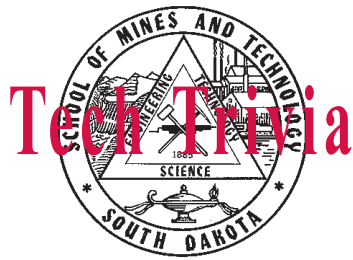
March 28-29

Cultural Expo (Ballroom)

March 30-April 4

Habitat for Humanity Shack-a-thon (Quad)

view the campus calendar on-line at
<http://www.hpcnet.org/sdsmtcalendar>



Tech Trivia

Did you know that...

- That the U.S. Army used space on the South Dakota School of Mines and Technology campus during World War I. The photo shows a training detachment taking a class in radio.



- The Old Main, also called the Liberal Arts Building, was razed in 1994? The arches in the building were saved and rebuilt where they stand today in the Quad.



- The M-Club was formed in 1922? The photo shows the group in 1924.

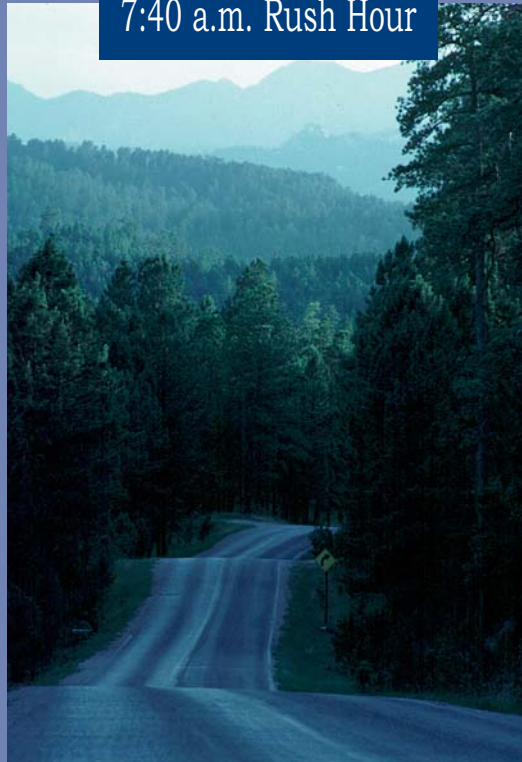


- March Dake Hall was completed in 1959? The residence hall remains in use today, housing primarily freshmen.



6,000 copies of this publication were printed by SDSM&T at a cost of \$1.73 each.

7:40 a.m. Rush Hour



in the Black Hills of South Dakota

RAPID CITY AREA ECONOMIC DEVELOPMENT PARTNERSHIP

For More Information:

444 Mt. Rushmore Rd N, PO Box 747

Rapid City, SD 57709-0747

(605) 343-1880 • FAX (605) 343-1916

E-mail: info@rapiddevelopment.com

<http://www.rapiddevelopment.com>

Gateway 2000,
Citibank, Spiegel,
Conseco, and General
Electric are some of the
successful companies
working and playing in
South Dakota.

*We Encourage Quality
Growth!*



HIGHMARK

FEDERAL CREDIT UNION

Serving Educators and Our Community since 1940.

(formerly Rapid City Federal Credit Union)

YOUR FULL SERVICE FINANCIAL INSTITUTION

No minimum balance on checking accounts • No monthly service charge

No charge for transfers between accounts • ATM and Debit Cards

24 Hour Teller • Credit Cards • Low Rates on Loans

Friendly, Courteous Staff

HIGHMARK FEDERAL CREDIT UNION

Conveniently Located At:

725 Fifth Street

2120 W. Main Street

(605) 343-4776 • info@highmarkfcu.com • 1-800-672-6365

The photo of the snowboarder on the postcard is courtesy of SD Tourism.

DAKTRONICS, INC.



"As a Sports Application project manager, I have had the opportunity to work with a variety of people in many different sports venues ranging from colleges and universities to minor and major league facilities. My degree in industrial engineering has greatly prepared me for the challenges of my career at Daktronics, Inc."

- Stephanie Evans
Daktronics Project Manager
and graduate of SDSM&T

Stephanie's Projects include:



Torero Stadium home of the San Diego Spirit, Women's USA Soccer Team



Oakland A's Major League Baseball team



Sam Boyd Stadium at the University of Nevada, Las Vegas

331 32nd Ave, PO Box 5128, Brookings, SD 57006
Phone (605) 697-4215 or (800) 843-5843
Fax (605) 697-4297 www.daktronics.com
email recruiter@daktronics.com



EQUAL OPPORTUNITY EMPLOYER

SOUTH DAKOTA SCHOOL OF MINES AND TECHNOLOGY

A tradition of excellence in engineering and science education since 1885.

501 E. Saint Joseph St. • Rapid City, SD 57701 • (605) 394-2554 • (800) 544-8162
www.sdsmt.edu

NONPROFIT ORG.
U.S. POSTAGE
PAID
RAPID CITY, SD
PERMIT #541