Jonathan Page, assistant professor of psychology (pictured in the back seat), works with the London Metropolitan Police Driving Academy studying driver reactions during high-speed pursuits. He is just one of many Minnesota State Mankato faculty members and students delivering dramatic results in real-life settings.

Photo courtesy of the London Metropolitan Police Federation. Photographer: Tom Parkes
The research featured in this issue of TOMORROW shows exactly what it means to be an institution that achieves beyond possibility.

Plenty of academic research and scholarship tells us what’s possible. But applied research, which makes up the majority of scholarly pursuits by our faculty, goes beyond telling us what’s possible to solving actual problems in the world around us. Applied research leads to tangible, measurable, and needed change.

For example, faculty in our Center for Renewable Energy, together with faculty from Minnesota West Community College, are creating public-private partnerships that promote economic growth, nurture alternative energy technology and increase energy diversity. At a time when environmental issues are discussed around dinner tables as much as they’re discussed in the conference rooms of business and government, research that solves energy problems is meaningful and valuable to every person.

Our mechanical engineering students have partnered with students at Kwame Nkrumah University of Science and Technology in Ghana to design and build solar-powered water heaters using inner tubes, rubber sheets, and other inexpensive materials readily available in Africa. “Global community” has been a popular phrase for some time, but a project like this makes the concept real and relevant. What better way for students, together with faculty, to realize their power to make a difference in a world that’s increasingly connected despite geographic and other kinds of distances?

In our School of Nursing, we’re establishing the Glen Taylor Nursing Institute for Family and Society, which will generate research focused on improving family and society-based health care. The Institute, an endowed chair, and the Becky Taylor Fellowships in Nursing are all made possible by a generous gift from Glen and Becky Taylor. Our Water Resources Center also garnered significant funding, in grants and contracts, for research aimed at improving water quality in the Minnesota River basin. And new books by faculty in various colleges are changing perceptions and behaviors among teachers, school administrators, and counselors regarding the learning environment, gender stereotypes, and bullying.

These are just a few of the many innovative, solution-based projects you’ll read about in this issue of TOMORROW. Much of the research featured here has been published in leading journals, presented at national and international conferences, and attracted funding from both private and public sources. Those validations speak to the credibility and stature of our faculty and their scholarly work. But the fact that so many of these discoveries are changing the way people think, work, and live is another impressive measure of our quality as an institution. I’m proud to showcase this distinctive work in TOMORROW.
At Minnesota State Mankato, 2008 will be remembered as a year of growth and expansion. New facilities, new programs, and new discoveries were just a few of the indicators that the University is a place where faculty and students achieve beyond possibility.

**Taylor Endowment**
Glen and Becky Taylor pledged $7 million to the Minnesota State University, Mankato School of Nursing. The gift provides for a new endowed faculty chair, establishes the Glen Taylor Nursing Institute for Family and Society, and establishes the Becky Taylor Doctoral Fellowships in Nursing. Projects supported by the gift are expected to attract scholars from around the world and generate research intended to improve family- and society-based health care.

**Third Doctoral Program**
Minnesota State Mankato added the Doctor of Psychology (Psy.D.) degree in school psychology in September. Designed to meet the standards of the National Association of School Psychologists and the American Psychological Association, the program will prepare candidates for certification to practice as school psychologists and for other doctoral-level careers. Nine candidates are enrolled in the new program.

**Global Solutions**
Minnesota State Mankato mechanical engineering students were awarded a grant from the U.S. Environmental Protection Agency’s People, Prosperity, and the Planet national design competition. Mankato students partnered with students at Kwame Nkrumah University of Science and Technology in Ghana to design and build solar-powered water heaters using inner tubes, rubber sheets, and other inexpensive materials readily available in Africa.

**Ford Hall**
The largest building project in the history of the Minnesota State Colleges and Universities system is the Trafton Hall renovation on the Minnesota State Mankato campus, which included the construction of Leonard A. Ford Hall. Dedicated in September, the $32.5-million, 67,000-squarefoot building will be home to the Chemistry & Geology Department. The project is one of the state’s “greenest” buildings and, although using green technology in heating and lighting systems added nearly a million dollars to the cost, the money will be made up with lower utility bills in fewer than five years.

**New Mineral**
Physics and astronomy faculty member Russell Palma is part of an international team credited with the discovery of a new mineral—a manganese silicide named Brownleeite. The mineral was in a sample of interplanetary dust and was the 4,324th mineral certified by the International Mineralogical Association.

**Energy Institute**
Minnesota State Mankato was named academic partner in an international renewable energy institute that

**Accomplishments**

- Mary Nelson and Lucas Brun—were awarded Fulbright U.S. Student scholarships. Nelson is an English teaching assistant in Taiwan, and Brun is a U.S. teaching assistant in Austria.
- Twin Cities residents need travel no farther than Edina to attend classes at Minnesota State University, Mankato. In August, Minnesota State Mankato opened its new 7700 France educational site in Edina—its first site with full programs in multiple disciplines in the suburban Twin Cities. The satellite serves 300 students with an expected enrollment of 2,000 in three years.
- Nine candidates are enrolled in the new program.
- Technical communication faculty member Lee S. Tesdell was awarded a 2008-2009 Fulbright Scholarship to study at Birzeit University in Palestine. And two 2008 graduates—Associate professor of construction management Scott Fee (second from right) meets with students in the newly constructed Leonard A. Ford Hall. The largest building project in the history of the Minnesota State Colleges and Universities system, the 67,000-square-foot, state-of-the-art science building was green technology for heating and lighting.
remains the top fundraiser of the fiscal year. Minnesota State Mankato achieved the second-highest fundraising year in its history. The Minnesota State University, Mankato Foundation has been named one of the nation's best business schools in its 2009 business school guidebook. The list is based on surveys of 19,000 students attending the schools and on school-reported data. Mankato's program has been included on the list since the publication began three years ago.

The Minnesota Corn Growers Association and Minnesota State University, Mankato's MBA program as one of the nation's best business schools in its 2009 business school guidebook. The list is based on surveys of 19,000 students attending the schools and on school-reported data. Mankato's program has been included on the list since the publication began three years ago.

The academy's programs will focus on helping math teachers align their curriculum with state requirements and support research on engine design.

Minnesota State University, Mankato and the College of Education and the Department of Mathematics and Statistics have been named to lead a new academy to improve science and engineering education. The new academy to improve science and engineering education will enhance efforts to increase the number of students of color and staff of color, and the efforts are paying off. From 2003 to 2008, the number of students of color increased from 440 to 1,064, which is 8% of the student body.

Since 2002 when President Davenport announced that increasing diversity was the University's number one goal, Minnesota State Mankato has worked hard to attract students and staff of color, and the efforts are paying off. From 2003 to 2008, the number of students of color increased from 440 to 1,064, which is 8% of the student body.

MBA PROGRAM

Research & Promotion Council approved a $250,000 grant for a new Mankato Foundation. The Minnesota Corn Growers Association and Minnesota State University, Mankato's MBA program as one of the nation's best business schools in its 2009 business school guidebook. The list is based on surveys of 19,000 students attending the schools and on school-reported data. Mankato's program has been included on the list since the publication began three years ago.

EMISSONS LAB

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MATH ACADEMY

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BIOENERGY DAYS

Minnesota State Mankato hosted the United States' first International Bioenergy Days. A 6-day, innovative conference, IBED was designed to jumpstart biomass energy commercialization and technology transfer initiatives between the United States and Sweden.

DIVERSITY

Since 2002 when President Davenport announced that increasing diversity was the University's number one goal, Minnesota State Mankato has worked hard to attract students and staff of color, and the efforts are paying off. From 2003 to 2008, the number of students of color increased from 440 to 1,064, which is 8% of the student body.

WATER RESOURCES CENTER

The Water Resources Center received grants and contracts totaling more than $850,000. The funding supports applied research projects aimed at improving water quality in the Minnesota River basin.

NEW RESIDENCE HALL

After two years of construction, the Julia A. Sears residence hall opened, providing semi-suite accommodations for 608 students. Students helped select furniture and finishes for the four-story, $25 million dollar building and enjoy upgraded amenities such as tile floors; sound resistant walls; and dual Internet, telephone, and cable TV jacks. The building also features energy efficient innovations, making it 30 percent more efficient than required by state code.

COLLEGE OF ALLIED HEALTH AND NURSING


Losh (left) studies how oils and gases move beneath the Earth’s surface. An internationally known researcher, Losh gave the 34th President’s Faculty Research Lectureship in April 2008. His lecture was the 21st named in honor of former Minnesota State Mankato President Douglas R. Moore, who established the annual lectureship to illuminate faculty research.
Sherry Aimable (right) explores the Mechanical engineering student fundraising total in the University’s history. Mankato raise more than $12 million in Callers, Aimable helped Minnesota State


Quade, A. (2008). Redesigning a systems analysis and design course to promote problem-based learning. In M. Syed, & S. Syed (Eds.), Handbook of research on modern systems analysis and design technologies and applications (pp. 642-654). Hershey, PA: IGI Global.


Greenwood Press.


Tomasz Inglot is a professor in the Department of Political Science/Law Enforcement.

In this first ever comparative historical analysis of East Central European welfare states published in English, Inglot analyzes nearly a century of the expansion of social insurance programs across different political regimes. He examines the highly unusual evolution of the welfare states of East Central Europe, Czechoslovakia, Czech Republic and Slovenia since 1993, Poland, and Hungary. Inglot argues that despite apparent similarities, each welfare state has pursued distinct historical paths of development and change.


Susan K. Freeman is an associate professor in the Department of Women’s Studies. Freeman investigates classrooms of the 1940s and 1950s as a potential learning ground for adolescent gender and heterosexual norms, particularly for girls. Across the U.S., the use of discussion-based classes focused on the social realities of adolescence, dating, and preparation for marriage in the decades before the sexual revolution. In contradictory ways, the curricula reinforced and critiqued stereotypical gender roles, enabling discussions that expanded girls’ awareness of their options and constraints.


Richard Robbins is a professor in the Department of English.

The Untold Hand is Robbins’ latest collection of poetry rooted in the American Midwest and West. Described as one of today’s masters, Robbins writes about nature as a teacher and nurturer and, too often, a casualty of humankind. His poetry is described as “consistently arresting” and “rich in language and music.”


Walter Roberts is a professor in the Department of Counseling and Student Personnel.

Roberts explores common concerns of parents and educators on the subject of bullying. He offers practical strategies for educators to expand their skills in leading conversations with even the most persistent or resistant parents. Roberts offers sample dialogues and vignettes written by parents of bullies and victims. This resource provides a practical approach to help administrators, counselors, and teachers work collaboratively with parents.
On the strength of its reputation for solving problems through applied research, Minnesota State Mankato has realized a steady increase in external funding over the past five years. External grants have funded cutting-edge research in biofuel development, wetlands conservation, innovative instruction strategies, and health care.

In FY 2008, Minnesota State Mankato faculty and staff submitted a record number of grant and contract proposals. Of the 127 proposals submitted, 87 were funded for a total of $5.7 million in sponsored research and programs.

More than $1.7 million in federal funding was awarded in FY 2008—evidence that programs such as the National Science Foundation, the Department of Education, and the National Institutes of Health view Minnesota State Mankato as a solid investment. In addition, the more than $3.5 million in state funding is evidence of Minnesota State Mankato’s value to the Minnesota economy, environment, education and health care systems, and quality of life.

While external funds support research and innovative programs campus wide, more than $3.5 million was awarded to the College of Science, Engineering & Technology alone in FY 2008—reflecting Minnesota State Mankato’s leadership in applied research and the STEM areas.

Mechanical engineering professor Patrick Tebbe received a grant from the Minnesota Department of Commerce to determine the effectiveness of solar thermal wall systems in supplying heat and reducing fossil fuel use and greenhouse gas emissions. Tebbe’s research also includes designing solar chimneys for power generation as part of the EPA’s People, Prosperity, and Population program.

Photo by: Bridget Fowler
Professor of automotive and manufacturing engineering technology Bruce Jones was among several Minnesota State Mankato faculty members awarded more than $1.2 million from the U.S. Department of Energy and the Minnesota Department of Employment and Economic Development to research renewable energy and emissions.