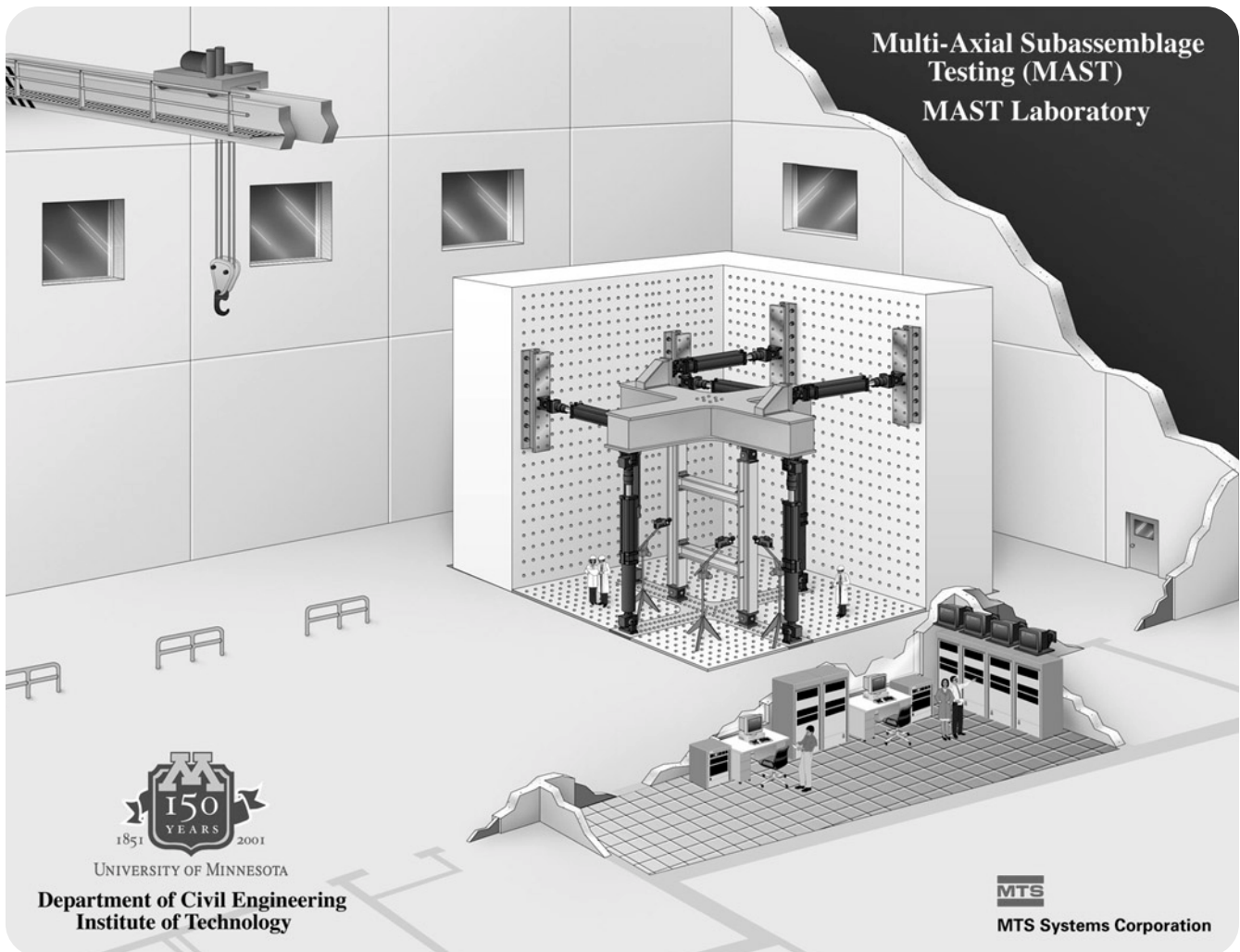


Research

Review



Sponsored Projects Administration
Patents and Technology Marketing
Oversight Analysis and Reporting



Quarterly publication of
the Office of the Vice
President for
Research

Inside

An NSF grant will allow University of Minnesota researchers to build a new facility for large scale structural testing.

-- page 4

Research Review

Volume XXX, Number 13
Fourth Quarter
2001

Writing credits are available upon request. Write to Research Review at 450 McNamara Alumni Center, 200 Oak Street SE, Minneapolis, MN 55455-2070, or call Brian Lieb, 612.624.8205, lieb002@umn.edu.

The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation.

Research Review is available electronically at <http://www.ospa.umn.edu>. It is also available on request to those who need it in other formats, such as Braille or audiotape.

© 2001 by the Regents of the University of Minnesota.

Front cover: Computer image of the Multi-Axial Subassembly Testing facility. Image provided by the Department of Civil Engineering, Institute of Technology, University of Minnesota.

Contents

- 3 McKnight Awards
- 4 MAST Grant
- 5 UM Duluth
- 6 UM Morris
- 7 Digitizing War Posters
- 8 UM Crookston / Army Grants
- 9 NCI Tea Grant / Weisman
- 10 EGMS
Electronic Grants Management System

Changes to this Publication

Research Review is being phased out in favor of the online publication *Research News Online*, a twice monthly email publication informing it's readership about grant policy, procedures, funding opportunities and other topics of interest to the University of Minnesota research community. (To subscribe to *Research News Online*, please email spanews@umn.edu) The print publication *Research Review* will appear several more times in the upcoming year, with a focus on significant research projects at the University. Readers looking for information such as the SPA directory or fringe benefit rates should look on page 11 of this publication for Web links.

McKnight Land-Grant Professors

The University of Minnesota named 14 faculty members as McKnight Land-Grant Professors for 2001-2003. The recipients will hold the title McKnight Land-Grant Professor for two years and will receive a \$25,000 research grant in each of those years.

The professorships are given to strengthen the University faculty and to recognize and reward promising junior faculty. Nominations came from a committee of faculty from across the University. Selection criteria included the potential for significant contributions to the discipline; the degree to which past achievements and current ideas demonstrate originality, imagination and innovation; and the potential for attracting outstanding students.

The recipients, their academic departments, and fields of interest follow:

Mohamed-Slim Alouini, electrical and computer engineering. Analysis of wireless communication transmission techniques.

Bruce Braun, geography. The theoretical relationship of nature, society and modernity in Canada, 1945-1970.

Patricia Crain, english. The history of literacy as a concept and symbol.

Shaul Hanany, physics and astronomy. Understanding the origin and evolution of the universe through measurements of cosmic microwave background radiation.

George Heimpel, entomology. Working to integrate principles of insect ecology with biologically-based pest management. "Research in our lab focuses on how an understanding of the reproductive strategies of natural enemies of pest insects can be used to improve the predictability and success of biological control. The main subjects



Professor Heimpel

of most projects are parasitic wasps, but predators and pathogens are represented as well. Pests that we have targeted with this approach include the European corn borer, alfalfa blotch leafminer, soybean aphid, codling moth, and various lepidopteran pests attacking cabbage."

Richard Hsung, chemistry. Synthesis of the naturally occurring substance arisugacin.

Victoria Interrante, computer science and engineering. The science behind the art of communicating information through images.

Canan Karatekin, child development. The nature and development of normal cognitive processes and how they go awry in mental disorders.

Monica Luciana, psychology. Human brain-behavior relationships.

Gary Muehlbauer, agronomy and plant genetics. Understanding the molecular mechanisms governing interactions between fungi and plants.

Claudia Schmidt-Dannert, biochemistry, molecular biology and biophysics. Combining metabolic engineering and molecular evolution techniques to create biosynthetic pathways.

Yoav Segal, medicine. Genetic diseases of the kidneys. "My primary research interests are in genetic kidney diseases. Among these conditions, Alport syndrome is the most common involving renal glomeruli, the basic filtering units of the kidney. Affecting an estimated 1 in 5,000 individuals, Alport syndrome is characterized by findings of blood and protein in the urine during childhood, and progressive kidney failure later in life, often with associated deafness. Despite description of over 300 disease-causing genetic mutations, the mechanisms of kidney failure in Alport syndrome are poorly understood.



Professor Segal

Insight into these mechanisms, as a basis for understanding kidney function under normal conditions, is essential to identifying promising avenues for therapy. In my laboratory, we are investigating the fundamental physiological consequences of genetic mutations in Alport syndrome, using novel animal models of the disease."

Jiaping Wang, mathematics. Geometric analysis and partial differential equations.

Barbara Welke, history. Product liability and the rights revolution in 20th-century America.

Department of Civil Engineering Awarded \$6.47 Million NSF Equipment Grant for Structural Engineering

The Department of Civil Engineering at the University of Minnesota has been awarded a \$6.47 million grant for large-scale structural testing equipment as part of the National Science Foundation's George E. Brown, Jr. Network for Earthquake Engineering Simulation (NEES). This grant, which will greatly enhance the department's structural testing capabilities, represents the single largest equipment award made through the NSF NEES program, and will be used to purchase equipment for the University of Minnesota Multi-Axial Subassemblage Testing (MAST) facility (a schematic view is shown on the front cover). With the NEES program, NSF is leading the effort to restructure the way engineering research is done in this country.

Within the MAST facility, researchers will be able to conduct multi-axial cyclic static tests of large-scale structural subassemblages including portions of beam-column frame systems, walls, tanks and bridge piers using six degree-of-freedom control technology. The MAST system advances the current state of technology through imposing multiple-degree-of-freedom states of deformation and load. The four vertical actuators will provide a combined 1.3 million pounds of vertical loading capacity. The longitudinal and lateral (transverse) actuator pairs anchored to an L-shaped reaction wall will provide up to 880,000 pounds of loading in the orthogonal horizontal directions, and four ancillary actuators will be used to apply lateral loads at intermediate story levels, gravity loads, or simulated specimen boundary conditions.

Innovative elements of this facility include the large load magnitudes, the multi-dimensional testing capabilities of the facility, and the integration of experimental testing with model-based computational simulation. Eight video cameras and eight still cameras on robotic arms will create a visual and audio record of the experiment.



The sensor, visual, and audio data will be interfaced with a web-based graphical visualization and control system that will allow researchers both at the facility and at remote locations to be actively involved in the experiments and computational simulation projects at the MAST facility. The system is unique in size and scope and will greatly expand the large-scale structural testing capabilities both nationally and internationally.

University faculty who are co-investigators on the MAST project include Catherine W. French, Arturo E. Schultz, Jerome F. Hajjar, Carol K. Shield, and Robert J. Dexter, from the Department of Civil Engineering (CE), Douglas W. Ernie from the Department of Electrical and Computer Engineering (ECE), and David H.-C. Du from the Department of Computer Science and Engineering (CSE). The CE faculty have a long history of conducting internationally renowned research in large-scale testing and computational simulation of building and bridge structures. Investigators from ECE and CSE, working together with the CE faculty, bring expertise in telepresence and networking that will lead to a state-of-the-art national facility for engineering research.

According to Professor French, "one of the reasons that the University of Minnesota was chosen to be an integral part of the NEES program is because of the expertise and reputation of the faculty. A key feature of our proposal was the strong interdisciplinary links among the Department of Civil Engineering, the Department of Electrical and Computer Engineering, and the Department of Computer Science and Engineering. The objectives of the NEES program coincide with a number of the University of Minnesota's digital technology initiatives."

"One of the reasons that the University of Minnesota was chosen to be an integral part of the NEES program is because of the expertise and reputation of the faculty."

Catherine French

The NEES initiative, which is part of NSF's Major Research Equipment Program (MRE), represents a bold effort on the part of NSF to restructure engineering research in the United States in

order to take advantage of new technologies, collaborative initiatives on the part of participating research institutions, and new models for sharing research facilities, data, and equipment. According to NSF, NEES will “shift the emphasis of earthquake engineering research from current reliance on physical testing to integrated experimentation, computation, theory, databases, and model-based simulation.” This ambitious initiative is being aggressively supported by the federal government. On October 1, 1999, Congress committed \$82 million over the next five years for the NEES program to develop the networked system of equipment. The NEES initiative is unique in the history of the MRE program for several reasons. It is the first to fund an engineering program. It is also the first to develop not a single facility, but a network of facilities across the country maximizing the use of the Internet to further information sharing and cross-facility research. The program includes the development of a single national repository for structural engineering experimental and computational data and the integration of model-based computational simulation with experimental testing to provide a comprehensive assessment of the performance of structures.

Within the NEES program, 11 sites have been awarded funding nationally in five different categories. They include four large-scale structural facilities, two shake tables, two geotechnical centrifuges, one tsunami, and two field equipment sites. The University of Minnesota MAST system was chosen as one of the four large-scale structural testing facilities. The equipment will be housed in a new structural engineering laboratory planned for construction on the University of Minnesota’s Minneapolis campus. Researchers from across the country and around the world will visit the University to conduct research both independently and in conjunction with University faculty and graduate students. The equipment will also provide a tremendous resource for local industry in the structural engineering and transportation communities through contract testing and research. With recent building code changes such as those implemented in the International Building Code (IBC 2000) broadening the requirements for seismic considerations across the nation, this facility will also help to increase the Minnesota engineering community’s ability to respond to the increased demand for earthquake engineering expertise.

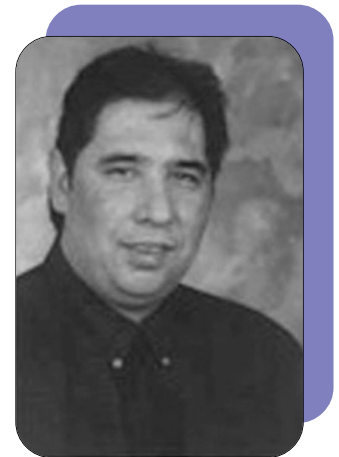
Manuel Barrera Works to Help Students with Limited English Proficiency

In the summer of 2000, Manuel T. Barrera of the University of Minnesota Duluth received a national “Initial Career Award” of \$198,000 sponsored by the U.S. Department of Education Office of Special Education Programs. The project, now called the Curriculum-based Dynamic Assessment project (CDAP), is also supported by seed monies (\$12,000) through President Yudof’s Multicultural Award (2000-2002). The project addresses ways to improve current educational assessment practices to prevent inappropriate referral and placement of students in special education who are learning English as a new or second language. The three-year study focuses on:

- ◆ Identifying current learning tasks that Mexican-American parents, students, and their teachers believe are important for educational success of high school students learning English as a new or second language;

- ◆ Use of the data gathered from these parents, students, and teachers to develop an assessment process combining the research-validated curriculum-based measurement of Dr. Stanley Deno (UM Twin Cities) and the promising practice of dynamic assessment;

- ◆ Validating this combined assessment process through practitioner evaluation of learner work samples produced during the assessment phase of the study and analysis of standardized academic achievement and language assessment data simultaneously collected on students during the intervention phase of the study.



Professor Barrera

Differentiating among learners of English with and without learning disabilities is critical for two reasons. First, special education law requires this distinction through the Individuals with Disabilities Education Act reauthorized in 1997. However, to assess for learning disabilities the learner must exhibit learning problems *not* explained by environmental variables such as limited English proficiency, cultural differences, or socio-economic status. Second, despite legal mandates, misidentification of these students continues to plague school programs nationally and in the state of Minnesota.

Continued on next page

Despite the identified importance of reducing bias in assessment practices for special education identification, there has been little research in identifying specific procedures to help teachers and other assessment practitioners conduct assessments that are more appropriate with new learners of English. The project has been designed to study assessment processes for use in public schools in Minnesota and in southern Texas; the originating point of migration for many current and former Mexican-American migrants who attend schools in Minnesota.

Eight research sites for this project are currently established in St. Paul, Willmar, St. Croix, and Brownsville (Texas) schools. By the end of three years, over 300 students, teachers, and school specialists will have participated directly in the study. Dr. Barrera's work has also received mentoring support from Dr. Alba Ortiz and Dr. Cheryl Wilkinson of the University of Texas at Austin as well as from UM faculty members Dr. Stan Deno and Dr. Chris Espin (Twin Cities).

For the PTM Quarterly Reports, go to Patents and Technology Marketing's web site at

<http://www.ptm.umn.edu>

and look for *Quarterly Reports* under the PTM News section.

UM Morris Receives Diversity Grant

The University of Minnesota Morris (UMM) Minority Student Program (MSP) received a three-year grant totaling \$141,000 from the Otto Bremer Foundation to establish a Diversity Community Outreach Program. The program will create new opportunities and resources for both the UMM and larger Morris communities, while strengthening and building on current initiatives. Program components will include the Ambassadors for Cultural Exchange (ACE), the Minority Alumni Mentorship Program, a Diversity Community Outreach University - Community Liaison, and an Outreach to Campus Program.

Ambassadors for Cultural Exchange (ACE) takes UMM students of color into area schools to read stories and lead activities with third grade students. The stories and activities reflect the culture of the reader. ACE was developed and piloted by alumnus Ron Morris in 1998 to 1999, while he was a student. ACE was hugely successful as a pilot program. Area teachers and community leaders have requested that the program be revived and formally implemented.

The Minority Alumni Mentorship Program currently links students of color with successful UMM minority alumni. When a student's career interest falls outside the experience of available alumni mentors, local community mentors are identified. Through these critical links, alumni and community mentors assist students in navigating through UMM and in achieving their career goals. This program was initiated in 1996 through a grant partnership with American Express Minnesota Philanthropic Program. As American Express funding ends in 2002, Bremer funding will provide program continuity.

The Diversity Community Outreach University - Community Liaison will expand MSP's ability to respond to requests for diversity training from community agencies. Areas of skill development may include cultural awareness, conflict resolution and mediation, cross-cultural communication, and

leadership in multicultural organizations. The coordinator will also work to increase the capacity to respond to campus and community events that involve intercultural communication and understanding.

The Outreach to Campus Program will bring additional diversity training, resources, and support to student leaders and campus programs. The program will be available to assist in training for students from Resident Advisors and Orientation Group Leaders to TAs. The coordinator will also lend additional support to programs begun through UMM's Campus of Difference Initiative- the Diversity Peer Educators and Multicultural Student Leadership Retreat.

The grant, which is the largest grant UMM has ever received from the Otto Bremer Foundation, allows MSP to hire a full time coordinator to develop and implement the outreach program initiatives. The coordinator will be someone who has or will receive extensive cultural awareness, prejudice reduction, conflict resolution, and cross-cultural communication training. The coordinator will then be able to provide specifically tailored training in coordination with local schools, businesses, organizations, and campus groups when called upon to do so. The coordinator will build on current UMM and MSP multicultural initiatives and create new programs that will enhance MSP, the University and the Morris community by presenting a better-targeted Community-University effort. Over the past several months, this proposal was developed in consultation with and endorsed by community leaders in city government, area schools, and the Morris Human Rights Commission. The Minority Student Program is excited about the possibilities of this program and believes that it ties in nicely to UMM's mission of "teaching, research, and outreach" and to being "an educational resource and cultural center for citizens of west central Minnesota."

LIBRARIES DIGITIZING IMAGES FROM WORLD WARS

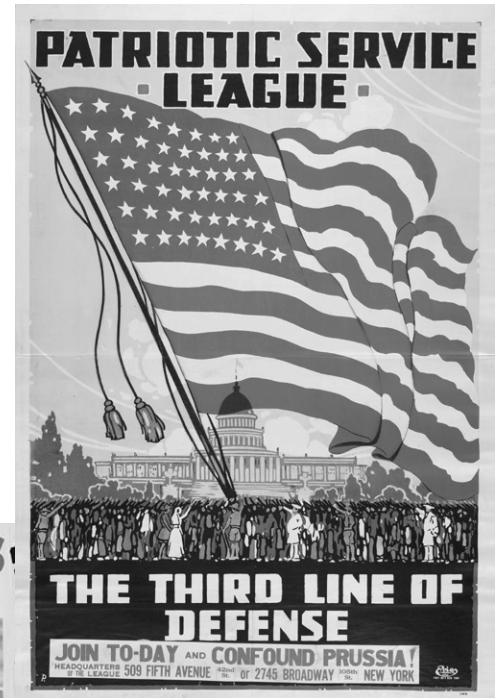
The Institute of Museum and Library Services (IMLS) recently awarded a National Leadership Grant of \$275,077 to the University of Minnesota Libraries to fund the digitization of 6,000 posters from World Wars I and II. As part of this grant, which is under the IMLS Preservation and Digitization program, University of Minnesota Libraries will work with the Minneapolis Public Library to build an online database containing digital images of all the war posters owned by both institutions.

These collections are multinational in scope and cover veterans' benefits, war bonds and loans, military recruitment, civil defense, international welfare organizations, labor organizations, recruiting of women in military and noncombatant organizations, anti-war movements and other topics. Artists such as James Montgomery Flagg, James H. Daugherty, Ben Shahn, Gil Spear and Otto Fischer are represented in the collections. Together, these two digital collections will constitute one of the largest databases of war posters in the world.

A novel aspect of this grant-funded project will be the collaborative sharing of digital content. Nationally, much work is being devoted to systems that permit digital content owners to share information—metadata—about their electronic collections. As part of this effort, University Libraries is constructing a system that permits users to discover digital content created not just by the libraries, but by all departments across campus. This system, IMAGES (Image Metadata Aggregation for Enhanced Searching) consists of a database, descriptive standards and a suite of tools that help campus users maximize access to distributed digital collections. Participants in IMAGES retain full control of their digital collections, but also exploit the benefits of metadata sharing.

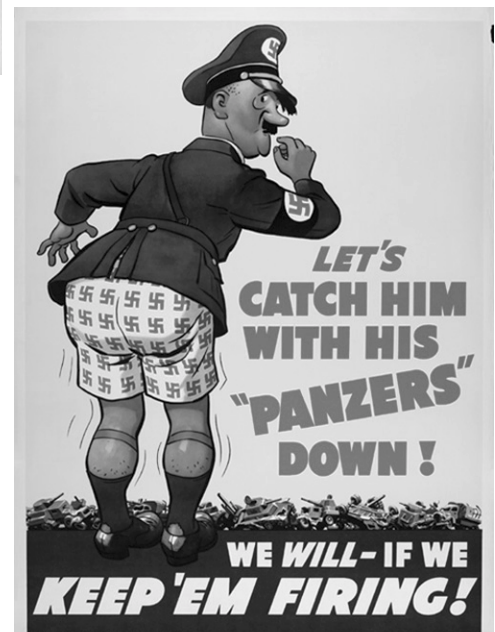
The IMAGES database now contains thousands of images created of unique materials owned by University Libraries. Among them is the University Archives image database, available at <http://www.special.lib.umn.edu/uarch/IMAGES>, which contains approximately 1,200 images of people, buildings, and events from throughout the University's history. It will continue to grow as more images from the vast University Archives holdings are digitized. The War Posters project will integrate with the IMAGES infrastructure and with national metadata harvesters to significantly extend the online user's ability to discover relevant electronic content.

All images on this page have been reproduced with the permission of the University of Minnesota Libraries.



For more information and to view the war posters or other digital collections, visit the University Libraries' Digital Collections web site at

<http://digital.lib.umn.edu/>





Pam Holsinger-Fuchs, discusses UMC's Service Learning Program with Rob Jacobson, President of Bremer Bank of Crookston.

Professors Giannakis and Schmidt receive U.S. Army Collaborative Technology Alliances Grants

UM Crookston Receives Grant to Support Service Learning

The University of Minnesota, Crookston (UMC) has been awarded a grant from the Otto Bremer Foundation that will provide a total of \$100,000 over the next four years. The grant will be used to support UMC's Service Learning Program, which involves students and faculty in course-related community service projects.

According to Pam Holsinger-Fuchs, director of student activities and service learning at UMC, the money will be used to set up a volunteer clearinghouse that will benefit the entire community and to fund staff positions for the program. "We're very thankful to the Bremer Foundation and very excited to show how this grant will help build on our existing service learning initiatives," she says.

The Otto Bremer Foundation has a commitment to the countryside and a focus on serving regional and local communities. This focus reflects the asset structure of the Foundation that is the principal owner of Bremer Financial Corporation, a regional bank holding company with bank, insurance, and trust companies serving over 70 predominantly rural communities in Minnesota, North Dakota, and Wisconsin.

For UMC, a focus on civic responsibility and service learning is nothing new. The campus made a strong commitment to the concept in 1996, with the hiring of Holsinger-Fuchs as director of student activities and service learning. In addition to the traditional responsibilities of working with students to provide educational and entertainment programming, she was charged with involving students and faculty in various service learning projects in the community.

This past fall semester the program again played a role in new student orientation, when new students and UMC faculty and staff joined together for a day of service projects throughout the city. "The idea is to show new students that there is a commitment from day one at UMC to be civically engaged," says Holsinger-Fuchs.

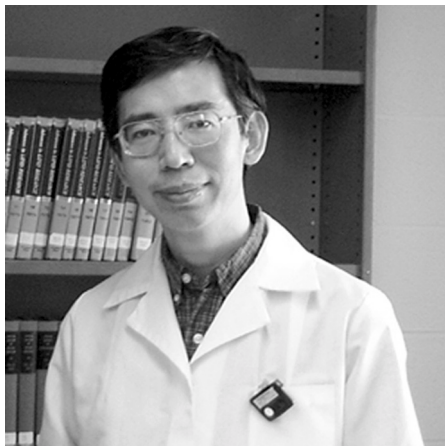
A distinction between service learning and community service is important. Holsinger-Fuchs wants to break the preconceived notion that service learning is little more than having UMC students pick up roadside trash or perform similar community service activities, although UMC students do take part in those types of activities, too. "The goal of service learning," she states, "is to connect UMC students to the larger community by involving them in activities that are directly tied to their majors or their courses. It's a way for students to gain real experience by taking concepts and theories they learn in class and applying them to volunteer projects that really help the community."

From humble beginnings and a handful of community projects in the fall of 1996, UMC's Service Learning Program has grown to over 50 projects involving more than 500 UMC students—and that's just for spring semester, 2001. The program even received recognition from Governor Jesse Ventura in 1999, when UMC's service learning initiative was honored as a "Star Program" at the Minnesota Services Recognition Day.

Two University of Minnesota researchers recently received grants from the U.S. Army's Collaborative Technology Alliances. Professor Georgios Giannakis of the Department of Electrical and Computer Engineering will do research as part of a \$61,199,537, eight year cooperative agreement. Professor Lanny Schmidt of the Department of Chemical Engineering and Materials Science will work with the Power and Energy Consortium on an eight year, \$49,000,000 award. The Consortium, headed by Honeywell International Inc., consists of six industries and 16 universities, including the University of Minnesota.

The objectives of the Consortium will advance the fundamental sciences and understanding of efficient compact power and propulsion technologies needed to develop affordable state-of-the-art systems required by soldiers of the future Army Objective Force (AOF). The Consortium is focused on increasing the power density of compact soldier portable power systems by 5-10 times over current level of 200 W-hr/kg (small power), and of vehicle propulsion systems (big power) by 3-5 times over current diesel engines, while reducing usage of fossil fuel by 75%. Dr. Schmidt will work to help make a technology leap in the areas of Proton Exchange Membrane Fuel Cells and Solid Oxide Fuel Cells, leading to high performance, highly efficient, lightweight, compact power sources.

Can Drinking Tea Help Prevent Cancer?



Professor Zigang Dong

Dr. Zigang Dong, Professor and Executive Director of the University of Minnesota's Hormel Institute, in Austin, Minnesota, has been awarded a five year \$1.5 million grant from the National Cancer Institute to study the effectiveness of tea in preventing cancer. This award is a component of a Program Project Grant totaling \$6 million, which is a collaborative effort between Dr. Dong and five other scientists at Rutgers University in New Brunswick, New Jersey. Dr. Dong and his colleagues study the mechanisms underlying the observed anticancer effects of specific food factors, including tea.

Even though the overall incidence and deaths from breast, lung, prostate and colorectal cancers have slowly decreased in the last five years, death rates from many other types of cancers including melanomas and lymphomas and kidney, liver and esophagus are still increasing. Major problems that are associated with cancer prevention and treatment include the extreme toxicity of drugs used in chemotherapy. Many times, patients die as a result of the side effects associated with the treatment. The use of natural food compounds in preventing and treating cancer has gained considerable acceptance as an alternative approach to the control of cancer

because these types of compounds have little or no toxicity. A major goal of Dr. Dong and his research group is to identify nontoxic anticancer agents, and thus, in collaboration with colleagues throughout the U.S. and the world, they are testing the anticancer effect of hundreds of food factors. Evidence from epidemiological and experimental studies, including data from Dr. Dong's group, indicates that compounds derived from tea have a strong inhibitory effect on cancer development with few side effects. The new research grant will further support work on the mechanisms by which tea prevents cancer. Understanding the mechanisms of the anticancer effects of tea will help in the development of more effective agents for the prevention and treatment of cancer.

In addition to this research grant, Dr. Dong has current research funding totaling \$2.6 million from the National Institutes of Health and the American Institute for Cancer Research. These funds also support experimental studies on the development and testing of cancer preventive agents. Recently, Dr. Dong has also received research funding from the University of Minnesota for pilot studies and equipment needed for investigating the mechanisms of cancer development. In addition to the federal and state government support, Dr. Dong's work has also benefited significantly from funding obtained from local donors including the Hormel Foundation and the Eagles Cancer Telethon.

Weisman Museum Receives NEH Grant

The Weisman Museum on the Twin Cities campus recently received a grant of \$250,000 from the National Endowment for the Humanities (NEH) to fund the exhibition *On the Edge of Your Seat: Popular Theatre and Film in Early 20th-Century American Art*, opening in April 2002. The award was the largest NEH grant in Minnesota this year. The project includes a nationally touring interpretive exhibition of approximately 150 artworks and historical artifacts, a 240 page illustrated catalogue co-published with Yale University Press, K-12 curriculum materials, and a full array of public programs and performances. The exhibit will travel to the Montclair Art Museum in New Jersey and to the Pennsylvania Academy of Fine Arts in Philadelphia.

On the Edge of Your Seat is the first major exhibition and publication devoted to the art inspired by the visual culture of American popular entertainment from 1890 to 1930. It is a multimedia exhibition that examines the relationship of the fine arts with vaudeville and theater, and especially the new form of entertainment – the movies – in the early decades of the 20th century. Charles Demuth, Edward Hopper, Walt Kuhn, Everett Shinn, John Sloan, and

Max Weber are among the many artists included. This exhibition is the brainchild of the museum's curator, Patricia McDonnell, who wrote the successful grant proposal. Scholars from the University of Minnesota and all across the country have been involved

in the planning of this project and will contribute to the catalog.



Weisman Museum

The University's Electronic Research Administration (eRA) Initiative

New University initiative in eRA

As part of its commitment to the continued development of electronic research administration, the University has created an office of Electronic Research Administration (eRA). This office, housed in the Office of the Vice President for Research, is headed by David Hamilton, Assistant Vice President for Research, who has primary responsibilities for electronic research administration and responsible conduct of research education. Hamilton, a professor in the Department of Genetics, Cell Biology, and Development and formerly the Grants Management project director, will focus his office's efforts on the enhancement and integration of the electronic research tools already in place (see below), as well as the development of new tools to support the University research community. The goal of the eRA office is to completely integrate these online tools into a single system for electronic research administration; this integration will include creation of a single point of entry to the electronic tools, information, and resources that support research administration. Hamilton's office will develop an eRA Web site as a resource for faculty and staff and use an online newsletter to announce news related to the development of the University's electronic research activities.

EGMS is the centerpiece of electronic research tools

For several years, the University has been on the leading edge of a growing national movement committed to eRA and now has six Internet-based tools in place to facilitate effective research administration:

- ◆ **Electronic Grants Management System** (EGMS; <http://nirvana.ospa.umn.edu>), which encompasses:
 - **Grant proposal form preparation:** faculty and staff use EGMS to prepare grant proposals and the University's Proposal Routing Form (PRF, formerly known as the BA23). EGMS allows multiple individuals to work on an electronic proposal as a work group, stores proposal data for reuse, calculates budget costs across project years, and checks proposal data against both sponsor and University rules.
 - **Sponsored project proposal and award management:** Sponsored Projects Administration (SPA) staff use a separate EGMS database to gather data from EGMS proposals and PRFs. These data create a project record as the first step in the award process and serve to streamline award setup. The award management function of EGMS (currently under development) will allow SPA to manage awards from setup through closeout. A Web interface to this database will, when built, provide faculty and staff a method of tracking an award's status.
 - **External professional activities reporting:** faculty and professional and academic (P & A) staff use EGMS to prepare both requests for approval of proposed external professional activities (Request for Consultant or Outside Service Agreement, or ROC) and summary reports of external professional activities (A Report of External Professional Activities, or AREPA). These forms are both prepared and approved using EGMS.
 - **Potential conflict of interest oversight:** University compliance officers (the Conflict Review Committees, for example) use EGMS reports to monitor compliance with requirements for all faculty and P & A staff to file AREPA forms and to identify individuals whose reported external professional activities may represent a conflict of interest.
- ◆ **Financial reports** (available from the SPA Home Page; <http://www.ospa.umn.edu>; password protected, or <http://financial.reports.umn.edu>; password protected): principal investigators (PIs) use personal PI reports and accountants use oversight reports to track expenditures on sponsored projects. Financial reports provide detailed, up-to-date information on each of a PI's individual research projects. These reports are the official University record of sponsored account balances.

◆ **Financial FormsNirvana** (FFN, <http://nirvana.fss.umn.edu>): faculty and staff use FFN to prepare and approve financial transactions. FFN's electronic process moves documents to the financial system faster than paper, making the financial reports more accurate and timely. FFN provides an additional level of electronic oversight for expenditures on sponsored accounts (for example, for federally sponsored accounts, FFN flags potential violations of OMB Circular A-21).

◆ **Education in the Responsible Conduct of Research Web site** (RCR; <http://nirvana.ospa.umn.edu/rcr>): faculty and principal investigators use the RCR site to register for required RCR educational courses or workshops. The Office of the Vice President of Research also uses the RCR site as a single administrative site for oversight of research education and training programs. The RCR site stores all records related to RCR training and can be queried to check the training history of a single individual or to create more comprehensive compliance reports on research training (listing all attendees or registrants for a single college or department, for example).

◆ **Research Subjects Protection Programs Web site** (RSPP; <http://www.research.umn.edu/subjects/index.html>): faculty and staff use the public module of the RSPP site to access a variety of Institutional Review Board (IRB) and Institutional Animal Care and Use Committee (IACUC) resources. These resources include downloadable application forms, the University's guides for protection of human and animal subjects, training and certification information, and lists of meeting dates, deadlines, and results. Through a restricted access module of the RSPP site, staff in the Research Subjects Protection Programs manage their study review process and track proposed and ongoing research studies involving human or animal subjects.

◆ **Institutional Biosafety Committee Web site** (IBC; <http://www.ibt.umn.edu>): faculty and staff use the IBC site to access information on the review and approval process for the use of research materials with environmental health and safety issues (potentially infectious agents, recombinant DNA, and biological toxins, for example). The application forms for requesting IBC review of the use of such research materials can be downloaded from the IBC site.

**If you are looking for the SPA
contact list,
you can now find it on
the SPA web site at**

<http://www.ospa.umn.edu>

**If you are looking for
the Fringe Benefit
Rates, you can now
find them on the Of-
fice of Budget and
Finance web site at**

**[http://budoff.umn.
edu/budget/
fringe2002.htm](http://budoff.umn.edu/budget/fringe2002.htm)**

**If you are looking for current news
or policy, you can receive it in the
Research News Online.**

Research News Online provides information about news, policies, procedures, funding opportunities, and events of interest to our University of Minnesota research community. It is sent via email twice a month to faculty, staff, and other interested parties.

To subscribe to this publication, email
spanews@umn.edu

This publication goes to all UM faculty. SPA cannot change the faculty mailing list. It is a list we buy quarterly. Human Resources generates the faculty mailing list and departments must initiate changes by contacting their departmental payroll person or Human Resources coordinator.



Made with agribased inks and at least 10 percent post-consumer waste.

UNIVERSITY OF MINNESOTA
Sponsored Projects Administration
450 McNamara Alumni Center
200 Oak Street SE
Minneapolis, Minnesota 55455-2070

Nonprofit Org.
U.S. Postage
PAID
Minneapolis, Minn.
Permit No. 155
