

UNIVERSITY OF MINNESOTA

DISCOVERY

THE GRADUATE SCHOOL

Academic Year 2008-09

NEW BRIDGES

The Quest for
Excellence in
Graduate Education



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THE QUEST FOR EXCELLENCE IN GRADUATE EDUCATION

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DISCOVERY

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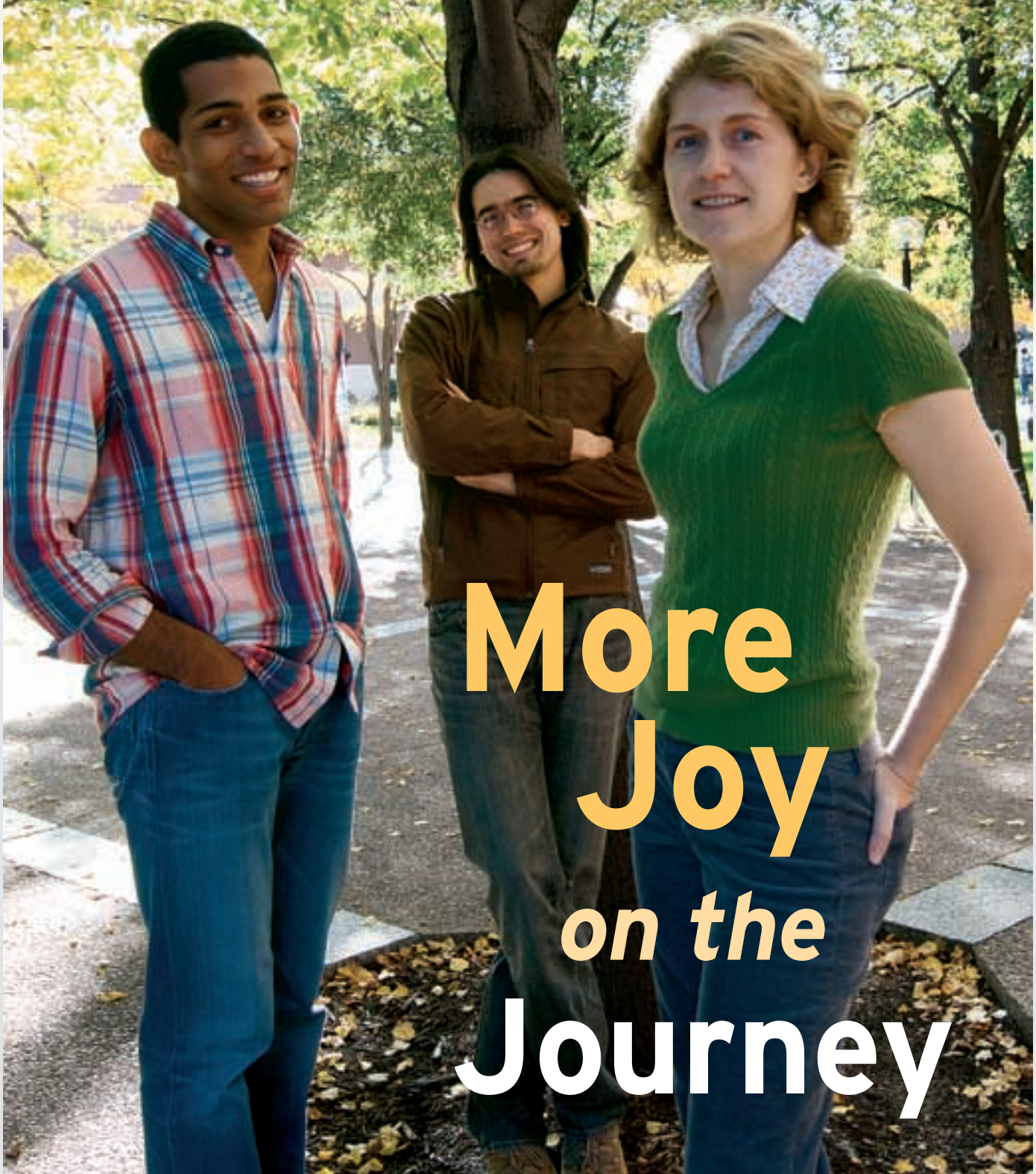
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The Graduate School sustains and develops high-quality scholarly work and graduate education programs at the University of Minnesota.

The Graduate School strengthens advanced teaching and research at the University by

- promulgating best practices in graduate education
- providing competitive support to the best faculty and students
- fostering the most promising interdisciplinary initiatives
- providing central support for student achievement in college and interdisciplinary programs



More Joy *on the* Journey

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DREW THOMPSON, Boyd Cothran, and Lizabeth Zanoni are part of a workshop in modern history that connects students and faculty researching topics from African art and identity to historical memories of Indian wars in the American West to women's roles in transnational migration.

When Boyd Cothran, Drew Thompson, and Liz Zanoni came from opposite ends of the country to scout out graduate school in Minnesota, they had history programs at big-name universities at the top of their lists.

Then they dropped in on the Graduate Workshop in Modern History, meeting on the West Bank of the Mississippi River in Minneapolis. There they saw and heard other graduate students—not just in history but in fields from English to education—presenting their research. Faculty members attended and participated, but the leadership came from graduate students, who were obviously thriving on each others' feedback and ideas.

All three packed their bags for Minnesota.

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More Joy, from 3

“One of the things that brought me was the rigorous and collegial graduate community,” says Cothran. “One week, the topic might be industrialization in China, and the next week, the colonial experience in Montana. To me, the workshop is the backbone of the U’s history graduate program.”

Zanoni—who studies migration and gender—is now a co-leader of the workshop with Thompson, who studies African Americans’ connections with contemporary Africa.

Cothran found a key faculty member for his dissertation committee when the workshop brought them together. He was also invited to organize a graduate workshop for the Department of American Indian Studies—which doesn’t have a free-standing graduate program but is a nexus for graduate students across the campus whose research has a base in American Indian studies.

The energy of the history workshop, which began in 2005, has ebbed and flowed with the students who participate. But it’s an example of the interdisciplinary strength of the University of Minnesota and a sign of how the graduate student experience is changing. Once known for narrowing students’ interests and producing overly specialized Ph.D.s, graduate education is gaining new vitality from revision and reform, and the University is at the leading edge.

Better practices

It’s a troubling statistic: nationwide, only about half of those who set out to get a doctorate actually complete it. And in some fields, even the best and brightest struggle or languish for more than a decade to finish. In most fields, the University of Minnesota has been typical. But, as an active participant in

The destination is unchanged. Yet the experience of graduate education is changing ... with Minnesota leading the way.

national efforts, it has made a commitment to increasing completion rates and reducing time to degree.

“One of the Graduate School’s guiding goals is more joy,” says Dean Gail Dubrow. “To create an outstanding student experience, one of our roles is to find best practices in departments and get others to adopt them—extending them in a way that ultimately lifts up the University as a whole.”

The Department of History is a case in point. Since 2001, it has adopted changes that have succeeded in shortening its doctoral students’ time to degree by about two years—from between 8.5 and 10 years (2000–02) to 6.5 and 8 years (2005–07). The rate of students who reach ABD status—all but dissertation—within three years has risen from about 25 to 90 percent. Changes include full funding for all admitted students through degree completion, reforming parts of the curriculum, and encouraging graduate students’ writing and publication through groups like the workshops. The Graduate School has relied on this and other departments’ experience as a testing ground for reform and as a resource for other programs contemplating change.

Best practices may come from entirely different areas of scholarship. Rotations, for example, are a standard part of laboratory training in the health sciences, where students like

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U.S. STUDENTS OF COLOR number about 1,400 in the University’s graduate student body of 10,000. The Community of Scholars Program provides a support network that starts with an opportunity for students to do summer research before enrolling for the first time. Its 2008 cohort met on Northrop Mall before fall classes began.

PATRICIA JONES WHYTE, left, directs the Graduate School Diversity Office. Its staff designs programs and offers not only listening ears but generous doses of encouragement to students navigating the world of graduate education. To Whyte's right: recruiter Derek Maness, office administrator Jennifer Garrison, program director Noro Andriamanalina, and writing initiative coordinator Anne Carter.



Katie Schiller got a chance to explore a range of research areas led by several faculty experts before selecting a longer-term lab placement.

“You get to try a lot of different things,” says Schiller, a doctoral student in comparative and molecular bio-sciences, who discovered her drive and talent for cystic fibrosis research during rotations. “Research on treating these diseases requires a lot of collaboration.”

Rotations also give faculty members exposure to gifted graduate students who have not yet found the perfect match between current research and their own skills, personalities, and intellectual passions. This practice can allow the University to retain talent and more fully realize the potential of graduate students as well as the potential of the faculty.

Dubrow envisions the lab rotation concept as a best practice to expand beyond the bench sciences to other fields, including the social sciences and even the humanities, where exposure to various faculty, research methods, and subjects may expand student horizons.

Stronger communities

Another strength of the University is the increasing diversity of students. In 2008, the Graduate School's student body of more than 10,000 came from all 50 states and 143 nations, with nearly equal numbers of men and women. About 25 percent are international and 10 percent U.S. minorities.

That diversity was attractive to Schiller, who appreciates the range of ages and cultures in the labs where she's worked

through her rotations. More than 75 percent of her peers in the lab are women and half are international.

“There is no typical grad student,” she says. “It's a fun work environment. Visitors notice that this is unusual.”

Increasing the number of students from underrepresented U.S. groups remains a work in progress, especially as the entire U.S. population becomes more diverse. Too often, students from backgrounds long underrepresented in academic life can't find the community they need. A sense of community with others from similar backgrounds has been identified as a critical factor in graduate student retention and graduation.

No one knows this better than Patricia Jones Whyte, director of the Graduate School's Diversity Office.

“The University is a big place,” says Jones Whyte. “That's a good thing, but a person can get lost and lose courage. It can be difficult to find somebody who has faced the same kinds of challenges you have with your particular ethnic background, a disability, or age—those are just a few examples.”

The Community of Scholars Program was created in 1999 to fill the gap for students of color. In the summer before students enroll for the first time, the program brings fellowship

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KATIE SCHILLER completed her undergraduate degree in physiology at a small liberal arts college in Duluth. She was attracted to the University of Minnesota because of its interdisciplinary strength and diversity—which she first experienced in lab rotations. That experience is giving her the collaborative skills required to find cures for disease.



ASSOCIATE PROFESSOR Doug Hartmann's department just recruited its most diverse class ever. Sociology is one of 20 graduate programs that volunteered for a project to reexamine graduate and professional admissions practices, a joint effort of the Graduate School and the Office of Equity and Diversity. "It was a no-brainer for us to volunteer," says Hartmann. "Diversity is deeply connected with our commitment to excellence—doing the best, most innovative, and most cutting-edge research on social issues we can do."



More Joy, from 5

recipients together for research with a faculty mentor, networking, and workshops. Before their first year is over, they also mentor and tutor community youth.

"The Community of Scholars has made a tremendous impact in my graduate experience," says Teresa Obrero, a first-generation college student who came to the University for master's degrees in public policy and social work. "I've made friends from across disciplines and formed my community. The program provides a space for students of color to widen their networks and learn from one another."

Ideas developed and tested in the Diversity Office—such as a personal approach to recruiting and sustained dissertation-writing workshops—have resulted in measurable improvements, going against local and national trends. The Community of Scholars Program has been so successful that, starting in 2005, components such as writing support groups were extended to all graduate students as a best practice.

More support

Funding packages play a key role and remain a daunting challenge—despite dramatic increases in the University's investment in graduate fellowships over the past four years. When it comes to recruiting the world's best students, Minnesota is competing ever more fiercely with top public and private institutions supported by major endowments and unprecedented investment. Many peers and competitors for graduate students now offer five years of support to all admitted doctoral students, a goal that eludes many programs at Minnesota.

Graduate students are commonly supported by a combination of assistantships funded by their departments and by fellowships from the Graduate School and other sources. The University has doubled its support for Graduate School fellowships since 2004. Yet, for the class entering in fall 2008, the Graduate School was able to make multiyear offers to only a fraction of the entering class.

"Even in the speediest programs, graduate school is a multiyear endeavor," says Dubrow. "Multiyear packages provide some measure of predictability for today's top talent."

The cost of graduate education is a major challenge, not only for individuals but for adults supporting families. Those trading the security of a full-time job for the long-term benefits of an advanced degree benefit from greater certainty up front about the level and duration of financial support they can anticipate before embarking on the journey to the Ph.D.

The Graduate School promotes a combination of fellowships and research and teaching assistantships that encourage steady progress while students gain skills valuable in the job market—a combination that has proven successful for the Department of History.

Cothran, for one, is on track to finish his Ph.D. in what many consider lightning speed for the humanities and social sciences. A little more than two years after arriving in Minnesota, he'll be ABD—all but dissertation—in December.

"The quality of the graduate community here was the key, but I couldn't even look at programs without full funding," he says. "And the funding made a big difference in how fast I could go." ■

Ph.D. Completion Project and Graduate Writing Initiative: Speeding Up Ph.D.s' Time to Degree

In 2005, the University of Minnesota became part of the national Ph.D. Completion Project, an in-depth multiyear study of doctoral education led by the Council of Graduate Schools. The project aims to produce comprehensive data on attrition from doctoral study and completion and to develop best practices.

Fourteen U of M graduate programs contribute data and are now beginning to implement best practices.

The Graduate Writing Initiative is a best practice identified right here. It grew out of dissertation-writing workshops developed for students of color by the Graduate School Diversity Office. Workshop leaders knew they were on to something when participants began asking permission to bring their friends. Then the participants began to show higher and faster completion rates than their peers.

The workshops were so successful that they

served as a model to extend support to all graduate students who need it. The initiative connects University offices and units that already support graduate students' writing. It provides a dissertation calculator, workshops, support groups, and a sense of community.

Read more about the Graduate Writing Initiative at www.grad.umn.edu/gradwriting.

New Voyageurs

In a community partnership, singing graduate students teach children about public health.



Two centuries ago, voyageurs packed their canoes and paddled the waters of the Great Lakes region, portaging from waterway to waterway, trading furs and goods of all sorts.

This year, graduate students in music are Duluth's new generation of voyageurs. They're packing up UMD campus vans and portaging sets and costumes to elementary schools, trading loads of fun and something more valuable than furs: information for living healthy lives.

At each school, a ship unfolds—a clever and colorful contraption to carry the *Pirates of the Carrot Bean*. The Voyageurs don hats and scarves to become pirates, extolling the virtues of eating not only carrots and beans but bananas (whose potassium will calm you down) and other foods loaded with nutrition, plus exercise and hygiene. After the 45-minute show, the pirates jump ship to follow the students.

“One of my favorite parts is going into the classrooms to find out what’s clicked with the kids and reinforce it,” says master’s student Christine Hawkins, captain of the *Carrot Bean*. Hawkins is an opera student from Georgia who never thought of doing children’s theater before she came to Duluth.

“It’s been eye-opening for all of us to see how much music and theater can assist in learning,” she says. “I love it.”

Kids and teachers love it, too. In the first month, the Voyageurs performed for more than a thousand students and

ABOVE, VOYAGEURS, FROM LEFT: Jenna Colaizy, Greg Dokken, Elizabeth Steffensen, Eric Bigalke, Jennifer Graupmann, Vince Osborn, Brishelle Jacobs, Taylor Baggott, and Christine Hawkins.

Graduate Education at UMD

MORE THAN 800 UMD STUDENTS are enrolled in graduate and professional programs, including about 550 in Graduate School programs based in Duluth. Others are in all-U programs with substantial UMD student and faculty participation, such as Integrated Biosciences. UMD also independently administers several graduate programs. Key leaders: Graduate School associate dean Lawrence Knopp, professor of geography; Graduate Council chair Judith Kritzmire, professor of music.

Learn more about the master of music program and graduate education at UMD at <http://www.d.umn.edu/grad>.

visited 43 classrooms. *Pirates of the Carrot Bean* will run well into 2009. Then the Voyageurs will embark on a new show for high schools, venturing into the territory of relationships, peer pressure, bullying, substance abuse, and wellness.

“This is a completely different way to use graduate talent,” says Judith Kritzmire, professor and director of UMD graduate studies in music.

Typically, when students perform in an opera or show, the script and score are in final form.

“For most of us Voyageurs, this is the first really interactive creative process we’ve been involved in,” says Jennifer Graupmann, who plays the Sea Monster. “We were given a script at the end of August and were making changes up until our first shows in November. It’s great.”

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Leading through Collaboration

Interdisciplinary innovation attracts top talent, but working together isn't always smooth sailing. Collaboration is required, and the Graduate School is taking the lead to discover what works and to share it.



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Jeff Kahn navigates an interdisciplinary world every day. He heads the University's Center for Bioethics, working closely with faculty colleagues and students not just from different departments but from multiple colleges—the Medical School, Law School, School of Public Health, School of Nursing, and College of Liberal Arts—on thorny dilemmas of life, death, and well-being in the modern world.

Should dying patients be able to buy the organs they need? Should healthy people be able to sell organs they don't need? Who determines need? Who decides? Who has priority?

Organ transplant is just one of many subjects surrounded by innumerable ethical issues. Beginning in fall 2009, students in a new master's program in bioethics will begin to navigate those issues with Kahn and other faculty experts in the Center for Bioethics. They'll prepare for interdisciplinary careers that explore the high stakes and deep questions of topics from genetic testing to pandemic readiness.

"Interdisciplinary" also describes Kahn himself as a scholar whose work crosses the usual disciplinary boundaries. That realization began when he was an undergraduate, majoring in molecular biology and aiming for medical school.

"I took a hospital job drawing blood and hated it," he remembers. "I realized medicine wasn't for me. I was interested in the moral issues of medicine but not the blood and guts."

As it turned out, Kahn was more than interested in the moral issues in medicine. He was driven to explore, test, and develop approaches to addressing them. He completed a Ph.D. in philosophy at the same time as he pursued a master's in public health—at two different universities.

"So our lives as individual scholars are interdisciplinary, and so is our collaboration with colleagues," he says.

Navigating convergence

Kahn is one of those scholars who thrive on the friction and energy released where two or more disciplines come together. His drive is to master the languages and methodologies of each and go where the convergence leads.

Ray Newman is another brave traveler across the boundaries of conventional disciplines as he studies the impact and control of invasive species. Though he's a professor of fisheries, wildlife, and conservation biology—an interdisciplinary department in itself—Newman regularly works with colleagues and graduate students in fields including applied eco-

Read more ... U of M interdisciplinary research and education: www.interdisciplinary.umn.edu ■ Office of Interdisciplinary Inquiry: www.grad.umn.edu/oii
■ Center for Bioethics and the new master's program: www.bioethics.umn.edu ■ Water Resources Center: wrc.umn.edu
■ U of M Rochester and BICB: www.r.umn.edu & www.r.umn.edu/19_BICB.htm ■ Large Lakes Observatory: www.duluth.umn.edu/llo



Photo courtesy Large Lakes Observatory

DULUTH GEOLOGICAL SCIENCES PROFESSOR Tom Johnson, center, and Martijn Wolterling, a Ph.D. student in water resources science, discuss a sediment core split open aboard the R/V *Blue Heron* on Lake Superior. The Large Lakes Observatory (LLO) brings together researchers in aquatic chemistry, circulation dynamics, geochemistry, acoustic remote sensing, plankton dynamics, sedimentology, and paleoclimatology to solve problems of freshwater lakes—on the biggest freshwater lake in the world. Johnson is a member of the University’s Network of Interdisciplinary Initiatives.

nomics, entomology, plant biology, public affairs, and biology in Duluth. “Increasing globalization has made the need for studying invasive species more urgent,” he says, “and expertise from molecular biology to aerospace science will be used to better predict and manage the risks.”

Claudia Neuhauser brings intellectual strength in mathematics to the fields of biology, medicine, and ecology. An award-winning faculty member on the Twin Cities campus, Neuhauser took a new position this fall as vice chancellor for academic affairs at the University’s unfolding campus in Rochester. It’s a location that promises to harness the region’s power in medicine and technology, known around the world for the Mayo Clinic, IBM, and Hormel. A new program in biomedical informatics and computational biology (BICB), anchored in Rochester under Neuhauser’s leadership, will join health informatics as the first elements under the University-wide interdisciplinary informatics umbrella.

Kahn, Newman, and Neuhauser make their own professional paths and accomplishments look natural—which, in some ways, they are. All have built careers around responding to real-world issues of urgency and relevance in everyday lives. All have pushed the boundaries of knowledge in a public university while preparing the next generation of educators, professionals, and scholars.

Yet all have been forced to navigate barriers, from financial systems and outdated bureaucratic practices to narrow reward policies and habits of thinking.

“In a single generation, we’ve moved from disciplinary practice to this more fluid interdisciplinary approach,” says

Kahn. “How to manage the ongoing evolution is a live issue.”

That’s why the University’s Network of Interdisciplinary Initiatives (NII) was formed in 2007. The grassroots group of about 250 faculty and staff members—seeking to expand its reach to postdoctoral appointees and students—was an idea conceived and tested by University vice provost and Graduate School dean Gail Dubrow toward the end of her time at the University of Washington. As a peer network at the University of Minnesota, the NII has blossomed as a result of collaboration within the Provost’s Interdisciplinary Team and with leadership from the Graduate School’s newly established Office of Interdisciplinary Initiatives (OII).

As Newman sees it, the NII offers a valuable overview of interdisciplinary research, teaching, and training. “It’s useful to get a variety of perspectives,” he says. “Challenges in applied sciences, for example, are different from those in other areas. It’s eye-opening.”

Last year, NII members pooled their knowledge and experience to identify many of the institutional policies and practices that are obstacles to interdisciplinary activity, and offered recommendations for change that would make the University of Minnesota a leader among research universities.

Now the NII’s working groups are refining their recommendations and developing strategies for implementing them in critical areas, such as research centers and institutes, incentives and rewards, teaching, public engagement, and collaborative leadership—with a focus on ways to overcome the barriers to working effectively across disciplines. With the changes they seek, NII members aim for a stronger, more flexible, and more competitive University as a whole—a safer harbor for those who do innovative work within existing disciplines as well as faculty, staff, students, and postdoctoral appointees whose work routinely involves what Dubrow calls “border crossings.”

Conflict and curiosity

Water may be where the disciplines come together for Newman, but he never assumes smooth sailing.

“Some challenges you could describe as bureaucratic,” he says. “But there are differences of vocabulary, worldview, and approaches to problems” that need to be addressed by those who voluntarily collaborate on water issues across disciplines.

Leading, to page 10



FACULTY MEMBERS Mary Jo Kreitzer from the Center for Spirituality and Healing, right, and Jean Bauer from family social science are working through the Network of Interdisciplinary Initiatives to identify and adopt best practices for scholarship and collaboration across disciplinary and college boundaries.

Leading, from 7

In a training program that Newman leads, for example, 40 faculty members from 16 departments are collaborating on new research and courses supported by a five-year, \$2.99-million grant from the National Science Foundation. A graduate minor in risk analysis for introduced species, approved last year, engages faculty and students.

As everyone knows, brilliant people don't always make good leaders. And in academe, where traditions place a premium value on individual achievement and original contributions, the ability to collaborate effectively has not commonly been taught or modeled. Newman's collaborative skills make him valuable both as a leader of specific initiatives and as a resource within the wider university.

Last spring, a series of workshops on collaborative leadership debuted in which Newman and other key faculty leaders were able to share their approaches and experience. Topics covered teambuilding, collaborative grant-writing, and conflict management.

"It's all about collaboration," says Vicki Field, director of the Graduate School's Office of Interdisciplinary Initiatives. The OII itself collaborated with the Office of the Vice President for Research and the Office of the Senior Vice President and Provost to cosponsor the workshop series.

Conflict is normal in academic and group work—but so is curiosity, and they should be related, said Howard Gadlin at the first workshop. Gadlin has

helped to resolve many conflicts in his role as ombudsman and director of the Office for Cooperative Resolution at the National Institutes of Health.

"When you hear something that upsets or angers you, when you are in the middle of a dispute with someone else, the stance you want to take is not to rebut, not to debate, not to fight back, but to become curious," Gadlin told the audience. "You want clarity, and then you want to understand why the person might be holding that position."

If expected, welcomed, and used well, conflict can enrich the power of collaboration, he said. Rather than viewing conflict as an unexpected disruption in the normal work flow, Gadlin encouraged the audience to view conflict as an

opportunity to deepen understanding across lines of difference and a vehicle for strengthening relationships within teams.

The first year was so successful that the workshops expanded in 2008-09.

A national opening

The OII was created in the Graduate School in 2006, after the need to foster interdisciplinary inquiry was identified as a critical institutional priority during the strategic planning process.

"The University of Minnesota has benefited from a generation of leadership that has recognized the strategic importance of fostering interdisciplinarity," says Field. "Fortunately, our leaders have recognized that success cannot be left to chance."

Photo courtesy Academic Health Center





SPACE IS A CRITICAL FACTOR in fostering interdisciplinary collaboration. **Left**, existing space—such as this open area in Nolte Center, now home to the Institute for Advanced Study—is adapted to provide an “academic hearth” that fosters the exchange of ideas among students and faculty in many fields. **Below left**, new buildings, such as the state-of-the-art McGuire Translational Research Facility, are incorporating features such as this flexible-space wet lab for use by researchers in a variety of disciplines.

opportunities. The University of Minnesota was joined by Berkeley, Brown, Duke, and the universities of Illinois, Michigan, North Carolina, Pennsylvania, Washington, and Wisconsin in conducting self-studies in eight functional areas—research, education and training, administration and governance, finance and budget, space and planning, development and fundraising, equity and diversity, and collaborative technologies.

Past studies have focused on interdisciplinary research and the departmental reward structure for faculty. In contrast, the consortium’s work has brought to light the myriad ways that barriers to interdisciplinary work are embedded in the standard operating procedures of universities, which were designed to optimize the flow of resources to individual colleges and the discipline-based departments within them.

At every step in organizing the consortium, collaboration rather than competition among peers has been the method as well as a goal.

As results of the study roll out this year, Dubrow hopes the consortium will be able to welcome new institutional members who agree to adopt one or more of the recommendations identified as a result of this project to improve higher education as a whole.

“The goal is nothing short of transformation,” says Dubrow. “The work of the consortium is our opening.” ■

Field speaks from years of experience supporting the academic governance system for graduate education. She has observed up close the evolution of traditional disciplines as they have embraced new approaches and methods, as well as the barriers that make it more complicated to develop and sustain graduate programs that extend beyond established departments and colleges.

Interdisciplinary innovation has a long and strong track record at the University. Epidemiology, classical studies, water resources, conservation biology, and biotechnology are just a few of the fields that emerged early. The University’s unusually comprehensive character—all the health professions, law, and agriculture in addition to liberal arts, sciences, and engineering—and its location in a state with a diverse economy have undoubtedly contributed to creativity.

But with the birth of the information age and the boom of the knowledge economy, rising costs of research, and an

ever more complex academic infrastructure to support them, interdisciplinary endeavors have had to rely more on intention than serendipity to ignite and flourish, especially at big research universities. Beginning in the 1980s, Graduate School leadership recognized the critical need to support interdisciplinary scholarship.

In 2005, the University gained an edge over its peers—who are exploring these same issues—with the arrival of Dubrow as vice provost and dean of the Graduate School. Dubrow herself is an interdisciplinary scholar whose work in the preservation of places significant in the history of underrepresented groups crosses the fields of architecture, landscape architecture, history, and planning, an unusual mix reflected in faculty appointments in four departments across three U of M colleges.

In 2007, Dubrow convened a consortium of major public and private research universities to map the landscape of interdisciplinary challenges and

Interdisciplinary. Engaged in communities. Focused on diversity. A new postdoctoral fellowship is a bridge for new Ph.D.s and a catalyst for the nation's faculty.

AGENTS of Transformation

H*abitus.*

12 |

To Zenzele Isoke, *habitus* means much more than the place you inhabit. It's the way daily actions and surroundings shape you and you shape a place—in her words, “a space that's made through the everyday practices of living, breathing human beings.”

Isoke earned her Ph.D. at Rutgers University with a dissertation exploring the lives of women who are choosing to live creatively and powerfully in the devastated inner city of Newark, New Jersey.

She brought that research to Minnesota last year as one of the first three recipients of an innovative new postdoctoral fellowship, sponsored through the Graduate School. The focus of the fellowship is on interdisciplinary scholarship, community engagement, and diversity.

In its first year, the competition attracted nearly 150 applicants from top universities, including Oxford, Harvard, and Berkeley, and in fields from psychiatry to ecology.

“In the humanities and social sciences, postdocs are a privilege,” says Isoke. “They give time to build relationships.”

Isoke worked with faculty mentors in two College of Liberal Arts departments—political science and gender, women, and sexuality studies—and with a faculty member in the Humphrey Institute for Public Affairs.

Another recipient, Ludwin Molina, worked in the departments of political science and psychology. The third, Patina Mendez, worked in a single department—entomology—where postdoctoral experience is common before applying for tenure-track faculty positions.



ZENZELE ISOKE'S study of women in central cities has called for a level of community engagement that is transforming the way universities think about research. Her postdoctoral fellowship led to a tenure-track position on the University's faculty.



2008-09 POSTDOCTORAL FELLOWS
LaRose Davis and Robyn Autry arrived on campus to begin a year of research and teaching that, between them, spans four departments—history, sociology, English, and African American and African studies—as well as the Institute for Advanced Study. Davis studies the convergences of African American and Native American communities, and Autry enters the world of museums to explore how race and nation are represented, especially in societies after conflict.

The Postdoctoral Fellowship was created to support visionary Ph.D.s and build a bridge to the nation's faculty. This year, it began to do just that. Isoke and Molina were offered and accepted tenure-track faculty positions—she at the University of Minnesota and he at the University of Kansas—and Mendez was offered a second postdoctoral year at the University of Minnesota to continue her research.

“If it weren't for the Postdoctoral Fellowship, the three of us never would have met,” says Isoke. “Because of the way it's designed, we got to spend time together—and it was amazing the connections we made.”

The word *habitus*, for example. To Patina Mendez, *habitus* refers more simply to the physical or characteristic appearance of an organism. Mendez studies aquatic insect communities of streams and rivers—in particular, the ecology and evolution of a species of caddisfly well-known to fly fishers.

Connections like the word *habitus*—humorous, poetic, and profound—enriched the growth of all three as scholars.

A place to create

Isoke brings a personal history of varied *habitus* to her research. Born in St. Louis, she was raised in Long Beach, California, and moved to Georgia for college. As a first-generation college student—“my friends were all raised by single moms”—she chose Clark University, a historically black college in Atlanta. Before starting graduate school in Michigan

and finishing in New Jersey, she worked as a community organizer with mostly welfare-reliant mothers in Selma, Alabama, on issues such as access to water.

In Newark, Isoke got hooked on the stories of women who lived in the Central Ward, transforming their landscape through what she identified as homemaking, reclamation, and the politics of “selling in.” The way they created home had political implications because they cared and advocated for themselves and others—one woman quoted her father as telling her to “create what you want to create—where you are.” Some had left the suburbs and returned to Newark because of its black history. Others lived elsewhere but consciously contributed to central Newark's economy and future through work and advocacy.

Isoke set out to document their stories in a way that bridges the gap between communities and universities.

At Rutgers, she was offered a multiyear financial package, a chance to teach, and an energetic, supportive adviser who nominated her for Minnesota's new postdoctoral fellowship. As rare as postdoctoral appointments are in the social sciences, Isoke interviewed for several and turned down other offers to come to Minnesota. Its interdisciplinary and community focus won her over.

“The postdoc gave me time to get a good grip on how my

Transformation, to page 14

Transformation, from page 13

work fits within the larger intellectual community,” says Isoke. “It was an opportunity to meet those working at the cutting edge of these issues and to get rich, critical feedback. But the most important part was building relationships across campus.”

One of those relationships—with a workshop leader at the Humphrey Institute—gave her the opportunity to lead a workshop with about 20 women community leaders.

“I knew that, if I were going to stay here, I had to have community contacts,” she says. “I’ve framed my work to be applicable to women ‘on the ground’—women in the community, building institutions, underpaid but doing it anyway.”

The sheer quality of Isoke’s contributions to feminist studies, political science, and sociology impressed Professor Edén Torres, a senior member of the faculty in Isoke’s new departmental home, who mentored Isoke during the postdoctoral fellowship.

“She is a fresh, young scholar with a complex mind,” says Torres. “Her ability to synthesize studies of space utilization, various kinds of violence, political mobilization, and previously undocumented struggles for social justice make her a scholar worth listening to.”

A year after her arrival, as a new assistant professor in the University’s Department of Gender, Women, and Sexuality Studies, Isoke taught a course on contemporary black feminisms—“invigorating,” she says—and prepared for two new courses for spring. She also kept working on a book based in part on her dissertation. To her study on Newark, she plans to add St. Louis and possibly another city. The north side of Minneapolis is a candidate.

“There are so many people who come together to shape that landscape,” she says of the neighborhood in her new urban home.

Meanwhile, two new scholars arrived to join Patina Mendez as this year’s postdoctoral fellows.

Robyn Autry is exploring how race and nation are represented in historical museums, with a special interest in societies after conflict. She’s working in the departments of sociology and history.

LaRose Davis is researching convergences of African American and Native American communities, past and present, and writing a book about the role of place in the cultures and literatures of both groups. Her appointments are in English, African American and African studies, and the Institute of Advanced Study.

Jump-start to the future

Postdoctoral fellows have been called the suffering artists of the 21st century, engaged in creative, pathbreaking work at universities around the world.*

About 900 postdoctoral appointees are employed at the University of Minnesota every year. Such positions began in the sciences and were adopted widely over the past 40 years as a way for new Ph.D.s to gain specific experience and publications before applying for tenured positions. Today, they’re standard in many fields. The University’s Office of Postdoctoral Affairs was established in the Graduate School in 2002 and the U of M Postdoctoral Association in 2003.

The Graduate School’s Postdoctoral Fellowship is a small but significant step in enriching the quality of the faculty, providing top, new Ph.D.s with a critical period of professional development in Minnesota before embarking on faculty careers.

But the fellowship is not the only initiative that the Graduate School is taking to speed the transformation of the nation’s faculty. It has served as a basis for improving services for all postdoctoral scholars at the University. And the same concept is being applied to the University’s new initiative in interdisciplinary informatics, a field destined to become a linchpin of the 21st century knowledge economy. This year, the search is on for another cohort of talent.

“By bringing postdoctoral scholars, we expect to jump-start interdisciplinary research and graduate education in selected areas,” says Graduate School dean Gail Dubrow. “They are well-positioned to strengthen established areas of concentration, bridge existing subfields, and pioneer new areas that fuel the University of Minnesota’s development as a center of excellence.” ■

*Jonah Lehrer, in *Proust Was a Neuroscientist* (Houghton Mifflin, 2007).

PATINA MENDEZ researches aquatic insect communities of streams and rivers—in particular, the ecological and evolutionary diversity of *Uenoidae*, a species of caddisfly well-known to fly fishers. Examining biological traits in an evolutionary framework may help to identify characteristics sensitive to habitat change, which could be easily lost from a system.



WARREN WARWICK, Medical School '54, directed Fairview-University Medical Center's cystic-fibrosis center from its start in 1962 until 1999, and he remains a senior adviser.



Warren & Henrietta Warwick

A Match for Life

New donors are ushering in an era of giving to transform graduate education.

Cystic fibrosis may have met its match in Warren Warwick.

Warwick is a physician. He's also a researcher. Over the years, he's invented a new cough, a stereo-stethoscope, and the Vest—a chest-thumping device that CF patients wear with much more consistency than they stick to manual chest therapy. In 1966, the national life expectancy for someone with cystic fibrosis was 10 years. By 1972, it was 18 years; by 2003, 33 years.

Warwick's work has contributed mightily to that progress, not only with his patents but with passionate curiosity and care. At his clinic, patients have survived into their sixties.

Now he and his wife, Henrietta—a Ph.D. and independent classics scholar in her own right—have innovated again. In 2007, they created a fellowship that supports a student working toward a Ph.D. in pediatrics or another medical field. Their vision is the combination of physician and researcher with the ingenuity and motivation to succeed in the fight against disease.

Erik Carlson was the first recipient, and John Albin is

the second. Both are enrolled in the M.D./Ph.D. program, Carlson pursuing a doctorate in neuroscience and Albin in microbiology, immunology, and cancer biology.

"It was extremely important to me to get encouragement and support from people who know what it takes to do scientific research with relevance to medicine and the treatment of disease," says Carlson. "I consider Warren and Henrietta Warwick to be great role models. They're inspiring to the next generation of physician-scientists."

Fellowship support like that provided by the Warwicks makes the difference between good and great graduate education. The University of Minnesota strives to attract top students like Carlson and Albin in a highly competitive environment that includes not only private institutions with large endowments but also many leading public institutions.

The Graduate School's 21st Century Fellowship Match Program doubles the payout of fellowships, which means students reap twice the benefit. Fellowships created by the Warwicks qualified for the match. ■

Learn more about fellowships by contacting Graduate School development director Bill Venne at 612-625-6977 or venne025@umn.edu. Your support will help to attract the very best graduate students in the world to Minnesota.

Henrietta and Warren Warwick have not only supported but inspired fellowship recipients Erik Carlson, left, and John Albin.



FACULTY AWARDS

Our Newest Distinguished McKnight University Professors

Judith Berman, Genetics, Cell Biology & Development

Berman is a leader in the study of yeasts—both the baker's yeast that produces bread and beer, and its more insidious cousin, *Candida albicans*, one of the most prevalent human pathogens. Her interdisciplinary contributions span genetics, cell biology, genomics, microbiology, and systems biology. Her earlier work with baker's yeast focused on telomeres, the chromosome ends, which have important roles in maintaining genetic integrity and preventing cancer.



Photo by Tim Rummelhoff



Andreas Stein, Chemistry

Stein is an internationally recognized expert in syntheses of porous solids with designed architectures. His pioneering research has rendered synthetic strategies that are now widely applied to address applications in catalysis, photonics, batteries, sensors, biomaterials, and polymer nanocomposites. His interdisciplinary approach has equipped students to tackle materials problems that cross multiple scientific and engineering disciplines. He holds the Merck Chair in Chemistry and previously received the McKnight Land-Grant Professorship.

Jeffrey J. Derby, Chemical Engineering & Materials Science

Derby is a world leader in studying the growth of crystals, materials upon which the entire electronics industry is based. He is known for pioneering research using computational models to understand how crystals grow and to improve their production processes. Derby has written over 120 peer-reviewed and invited publications and has received numerous awards, including a McKnight Land-Grant Professorship.



Sachin S. Sapatnekar, Electrical & Computer Engineering

Sapatnekar is an international leader in the high impact area of computer-aided design (CAD) of integrated circuits—the heart of the electronics we use in our daily lives. His research contributions have helped shape the future of the semiconductor business. Among them: the optimization of on-chip circuitry for improved power and speed, the development of statistically driven methods for circuit analysis, and the development of technologies for 3D-circuit design.

These prestigious awards honor the U's finest mid-career faculty—full professors (promoted within the past 10 years) who have brought renown to the U and who are poised for still greater attainments. Recipients are awarded \$100,000 over five years for scholarly or artistic work. They hold the title *Distinguished McKnight University Professor* throughout their U careers.

Ph.D. Dissertation Award Winners

The Graduate School's annual Best Dissertation Awards (complete with \$1,000 honorarium and award ceremony) honor the University's top Ph.D. graduates in four broad disciplinary areas.

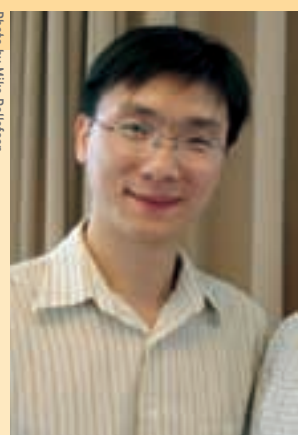
Arts & Humanities

Nicole Phelps, History. Advisers: David Good and Barbara Welke. "**Sovereignty, Citizenship, and the New Liberal Order: U.S.-Habsburg Relations and the Transformation of International Politics, 1880-1924.**" Now: Assistant Professor, History, University of Vermont.

Biological & Medical Sciences

Cristina Pereira Marques, Comparative & Molecular Biosciences. Adviser: James R. Lokensgard. "**Microglia-mediated Immune Responses During the Development of Herpes Encephalitis.**" Now: Postdoctoral Fellow, Cleveland Clinic Lerner Research Institute.

Photo by Mike Rollerson



Rewarding Excellence

Our Newest McKnight Land-Grant Professors

Taner Akkin (Ph.D., U of Texas)

Biomedical Engineering

Non-invasive optical imaging of tissue microstructure and function

Alptekin Aksan (Ph.D., Michigan State U)

Mechanical Engineering

Biopreservation by confinement

Elizabeth Beaumont (Ph.D., Stanford U)

Political Science

Exploring democratic citizenship: bridging the theory and practice of democracy and constitutional rule

Mark A. Bee (Ph.D., U of Missouri)

Ecology, Evolution & Behavior

Behavioral and neural mechanisms for separating continuous streams of sensory input

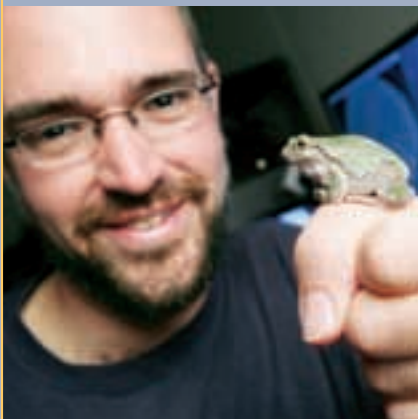


Photo by Tim Rummelhoff

Nicholas Hopper (Ph.D., Carnegie Mellon U)

Computer Science & Engineering

Provable security analysis of privacy-related technologies

Chris H. Kim (Ph.D., Purdue U)

Electrical & Computer Engineering

Design for reliability: making future generation chips resilient to aging

Kirill A. Martemyanov (Ph.D., Russian

Academy of Sciences)

Pharmacology

Regulation of cellular signaling in health and disease

Katsumi Matsumoto (Ph.D., Columbia U)

Geology & Geophysics

Climate change and carbon cycling in oceans and lakes

Jason McGrath (Ph.D., U of Chicago)

Asian Languages & Literatures

Chinese cinema from the silent era to the 21st century



Photo courtesy College of Pharmacy

Shana J. Sturla (Ph.D., MIT)

Medicinal Chemistry

Understanding how cancers are initiated, and advancing treatment using chemical tools

Elizabeth J. Wilson (Ph.D., Carnegie Mellon U)

Public Affairs

Responding to climate change: energy within a carbon-managed world

Michael L. Wilson (Ph.D., Harvard U)

Anthropology

Using 40 years of data to better understand intergroup aggression and vocal communication in chimpanzees

Hui Zou (Ph.D., Stanford U)

Statistics

Statistical methods for knowledge discovery in the information age

These awards honor rising stars—junior faculty who are poised to make significant contributions to their disciplines. The two-year professorship includes a research grant in each year and an additional grant or research leave during year two. Thirteen were selected for 2008-10.



LIPING LIU, left, and Professor Perry Leo. On his way to a Ph.D. in aerospace engineering, Liu took a detour: he solved a math problem that had stumped scientists for more than a century.

Physical Sciences & Engineering

Liping Liu, Aerospace Engineering. Advisers: Richard James and Perry Leo. **"Multiscale Analysis and Modeling of Magnetostrictive Composites."** Now: Postdoctoral fellow, California Institute of Technology.

Social & Behavioral Sciences & Education

Angela Bos, Political Science. Adviser: Regents Professor John Sullivan. **"Stereotypes at the Gate? Gender Stereotypes and Candidate Nominations."** Now: Assistant Professor, Political Science, College of Wooster (Ohio).

Rewarding Excellence |

GRADUATE STUDENT FELLOWSHIPS AND AWARDS

Doctoral Dissertation Fellowships

For Ph.D. candidates who have completed all degree requirements except the dissertation

Roman Agatonov, Physics
Katherine Ahmann, Biomedical Engineering
Rouzbeh Amini, Biomedical Engineering
Kelly Anderson, Chemistry
Brett Arenz, Plant Pathology
Andrew Bailey, Kinesiology
Noelle Beckman, Ecology, Evolution & Behavior
Michael Behr, Materials Science & Engineering
Tovah Bender, History
Swapna Bhagwanth, Medicinal Chemistry
Janice Boercker, Chemical Engineering
Martha Boyer, Astrophysics
Luke Brekke, History
Laura Breshears, Molecular, Cellular, Developmental Biology, & Genetics
Shea Brown, Astrophysics
Paroma Chakravarty, Pharmaceuticals
Amy Chen, English
Chiao-nan (Joyce) Chen, Rehabilitation Sciences
Yu Chen, Physics
Arjun Chowdhury, Political Science
Eric Dahlin, Sociology
Ursula Dalinghaus, Anthropology
Qiqi Deng, Statistics
Matthew Dobson, Mathematics
Joel Donna, Education, Curriculum & Instruction
Jeffrey Doom, Aerospace Engineering and Mechanics
Aimee Dunlap-Lehtila, Ecology, Evolution & Behavior
Farjana Fattah, Biochemistry, Molecular Biology & Biophysics
Adam Fremeth, Business Administration
Allison Gamble, Water Resources Science
Chandana Gangadagamage, Civil Engineering
Debarchana Ghosh, Geography
Meredith Gill, Comparative Studies in Discourse & Society
Midori Green, Art History
Amy Griffiths, English
Yu (Jason) Gu, Computer Science
Paul Gugger, Ecology, Evolution & Behavior
Atreyee Gupta, Art History
Insoon Han, Educational Psychology
Benjamin Hardt, Geology
Julia Hatler, Molecular, Cellular, Developmental Biology, & Genetics
Laura Hauff, Anthropology
Chunyong He, Physics
Stephen Healey, English
Johannes Hubmayr, Physics
David Huff, Conservation Biology, Fisheries & Aquatic Biology
Medora Huseby, Biochemistry, Molecular Biology & Biophysics
Ann Impullitti, Plant Pathology
Haiyan Jia, Applied Plant Sciences
Yi Jiang, Psychology
Robert Jilek, Chemistry
Christopher Kamerbeek, English
David Kast, Biochemistry, Molecular

Biology & Biophysics
Yoshito Kawabata, Child Psychology
Casey Kelly, Communication Studies
Ryan Kelly, Microbiology, Immunology, & Cancer Biology
Jung-Hyun Kim, Kinesiology
Jessica Knight, English
Yevhen Kovalyshen, Civil Engineering
Sanjay Kumar, Electrical Engineering
Hadas Kushnir, Conservation Biology
Daniel LaChance, American Studies
Oksana Laleko, Linguistics
Evan Larson, Geography
Ioan Lascu, Geology
Serena Laws, Political Science
Jaerim Lee, Family Social Science
Kurtis Leschkies, Chemical Engineering
Oleksandr Levchenko, Physics
Meijuan Li, Biostatistics
Chin-Yi Liu, Mechanical Engineering
Jennifer Lobasz, Political Science
Sarah Loyd, Comparative Studies in Discourse & Society
Radhika Lunawat, Business Administration
Sudeep Maheshwari, Chemical Engineering
Eugenie Maiga, Applied Economics
Dalhia Mani, Sociology
Jeffrey Manuel, History
Peter Marks, Child Psychology
Matthew May, Communication Studies
Steven McKay, Applied Plant Sciences
Tamene Melkamu, Comparative and Molecular Biosciences
Daniel Miller, Economics
Faraz Mirzaei, Computer Science
Ryan Murphy, American Studies
Prashant Nagpal, Chemical Engineering
Sylvie Ndome Ngilla, French
Rachel Neiwert, History
Kjersten Nelson, Political Science
Yingliu Nie, Speech-Language-Hearing Sciences
Eric Novotny, Civil Engineering
Steven Offer, Molecular, Cellular, Developmental Biology, & Genetics
Alicia Peterson, Chemistry
Patrick Pithua, Veterinary Medicine
Joshua Puhl, Neuroscience
Jake Rafferty, Chemistry
Laura Ramsey, Molecular, Cellular, Developmental Biology, & Genetics
Aaron Rapport, Political Science
Mathew Reiter, Natural Resources Science & Management
Eric Richardson, Biomedical Engineering
Eve Ringsmuth, Political Science
Scott Roberts, Chemical Engineering
Jennifer Rutledge, Political Science
Neelakantan Saikrishnan, Aerospace Engineering and Mechanics
Marianne Samayoa, History
Heather Sander, Conservation Biology
Pallab Sanyal, Business Administration
Jessica Savage, Plant Biological Sciences
Anderson Schneider, Economics
Samuel Schueth, Geography
Kevin Schwandt, Music
Maia Sheppard, Education, Curriculum &

Instruction
Weon Gyu Shin, Mechanical Engineering
Sarah Sik, Art History
Shyam Sivaramakrishnan, Mechanical Engineering
Aeleah Soine, History
Vassilios Sotiriopoulos, Chemical Engineering
Greggory Springer, Physics
Matthew Stoddard, Comparative Studies in Discourse & Society
Ian Stoner, Philosophy
Kristi Strandberg, Microbiology, Immunology & Cancer Biology
Jose Suarez, Epidemiology
Erin Surdo, Civil Engineering
Jenny Tone-Pah-Hote, History
Marion Traub-Werner, Geography
Francis Valiquette, Mathematics
Michel Van der Hoek, Germanic Studies
Her Vang, History
Tou Via Yue, Neuroscience
Michael Vuolo, Sociology
Abigail Walter, Entomology
Peng Wei, Biostatistics
Julie Weiskopf, History
Martin Wells, Classical & Near Eastern Studies
Pamela Wesely, Education, Curriculum & Instruction

Carolyn M. Crosby Fellowships

For graduate students engaged in field-based botanical investigation

Evan Larson, Geography
Annika Moe, Ecology, Evolution & Behavior
John Stanton-Geddes, Ecology, Evolution & Behavior

DAAD-German Exchange Fellowship

Provides 10 months of study or research in Germany

Sean Nye, Comparative Studies in Discourse & Society

Distinguished Master's Thesis Award

For distinguished research and scholarship that will represent the U of M in a regional competition

Adela Oliva Chavez, Entomology

Louise T. Dosdall Fellowships in Science

For women in natural or physical sciences where women are under-represented in graduate programs

Amy Hansen, Civil Engineering
Chunze Lai, Chemistry

Susan Lein, Physics
Emily Love, Ecology, Evolution & Behavior
Cardessa Luckett, Public Policy
Karla Padron, American Studies
Djordje Popovic, Comparative Studies in Discourse & Society
Davu Seru, English
Ivory Taylor, Social Work
Bart Vargas, Art
Samantha Wenwol, Mass Communication
Anne Wolf, Rhetoric & Scientific & Technical Communication

Fulbright Fellowships

For one year of study or research abroad in one of 140 countries

Naheed Aaftaab, Anthropology
Amy Chen, Geophysics
Rachael Kulick, Sociology
Brian Plasecki, Plant Biological Sciences
Anne Wallen, Germanic Studies

Fulbright-Trondheim Exchange from Norway

For one Norwegian U of Science and Technology student for a year of study at the U of M

Nathalie Holtmark, Electrical Engineering

ADELA OLIVA CHAVEZ received the Distinguished Master's Thesis Award for her groundbreaking work on the way ticks transmit disease to cattle. Chavez now is pursuing a Ph.D. in entomology. The Graduate School will enter her thesis in a competition sponsored by the Midwestern Association of Graduate Schools.



Photo by Marty Moen

Vance Whitaker, Applied Plant Sciences

Holly Willis, Nutrition
Brian Willoughby, Family Social Science
Emily Wroblewski, Ecology, Evolution & Behavior
Nichollette Zeliadt, Environmental Health
Yu Zhang, Chemistry
Xueyan Zhao, Natural Resources Science & Management

Alexander P. Anderson & Lydia Anderson Fellowships

For students who have completed a bachelor's or master's degree at the U in plant or animal sciences

Michael Dixon, Conservation Biology
Beth Holbrook, Water Resources Science
Margaret Mangan, Applied Plant Sciences

DOVE Fellowships

To promote diversity of views, experiences, and ideas

Veronica Bullock, Conservation Biology
Julio Cabrera, Educational Psychology
Cristal Cisneros, Applied Plant Sciences
Kwofie Danso, Social Work
Carmelo Declat-Perez, Chemical Engineering
Yahkeva Eason, Human Resources & Industrial Relations
Mukhtar Gaaddasaar, Public Policy
Raquel Gabbitas, Child Psychology
Briellen Griffin, Social Work
Shannon Hutcheson, Educational Psychology
Sarah Jackson, Mass Communication
Hayley Jirasek, Anthropology
Mary Joyce Juan, Psychology
Antonia Kaczurkin, Psychology
Meadow Kouffeld, Natural Resources Science & Management

Fulbright-Trondheim Exchange to Norway

For one U of M Graduate School student for a year of study at the Norwegian U of Science and Technology, Trondheim, Norway

Matthew Grandbois, Chemistry

Roger D. Gordon Endowed Evans Fellowship

For Evans Scholars to advance into graduate or professional study

Lewis Werner, Microbial Engineering

Graduate School Fellowships

For outstanding students new to U of M graduate programs

Cheryl Ainslie, Nutrition
Oliver Archer-Antonsen, Political Science
Anna Beek, Classical & Near Eastern Studies
Rachel Burns, Psychology

“The DDF support meant I didn’t have to teach this year and could write my dissertation instead,” says deer fossil researcher Sabrina Curran. With a boost from the Doctoral Dissertation Fellowship, Curran finished her Ph.D. in anthropology and was offered a postdoctoral fellowship at the Smithsonian in Washington, D.C.

Ariel Chatman, Mechanical Engineering
Michael Cheyne, American Studies
Lars Christensen, Music
Andrea Claassen, Conservation Biology
Robert Dietz, Water Resources Science
Mark Ditmer, Conservation Biology
Matthew Dufort, Ecology, Evolution & Behavior
Carolyn Elerding, Music
Hallie Elich, Mathematics
Katherine Fallen, Neuroscience
Wen Fan, Sociology
Shelby Flint, Conservation Biology
Mohammad Hadi, Biomedical Engineering

Subhrajit Roychowdhury, Electrical Engineering
Gerald Shannon, Geography
Angela Shin, Pharmacology
Whitney Shook, Materials Science & Engineering
Megan Strom, Hispanic Linguistics
Alexandra Swanson, Conservation Biology
Wenfang Tan, Animal Sciences
Elizabeth Venditto, History
Emily Voytek, Geological Sciences (Duluth)
Sarah Ward, Psychology

Interdisciplinary Doctoral Fellowships

For Ph.D. students whose dissertation topic is interdisciplinary; supports interaction with faculty at a U-wide center or institute

Consortium on Law & Values:
Kimberly Thomas-Polle, Rhetoric & Scientific & Technical Communication

Institute for Advanced Study:
Thomas Doyle-Walton, Anthropology
Ozan Karaman, Geography
Tim O'Brien, Music

National Science Foundation Fellowships

National three-year awards for Ph.D. students in science, engineering, and some social sciences

Matthew Bakker, Plant Pathology
Christine Balonek, Chemical Engineering
Luke Bergmann, Geography
Damien Brewer, Chemical Engineering
Paula Chesley, Linguistics
Timothy Currie, Geography
James Faghmous, Computer Science
Amy Gower, Child Psychology
Julia Haltiwanger, Mechanical Engineering

Samia Ilias, Chemical Engineering
Kathryn Johnson, Chemical Engineering
Margaret Kosmala, Ecology, Evolution & Behavior

Lela Lackey, Biochemistry, Molecular Biology & Biophysics
Jennifer Lowe, Chemistry

Ameera Mansour, Materials Science & Engineering

Clinton Matson, Molecular, Cellular, Developmental Biology, & Genetics

Melissa Maurer-Jones, Chemistry
Elizabeth Olson, Psychology

Derek (Jason) Owens, Chemical Engineering

Katherine Panciera, Computer Science
Todd Pangburn, Chemical Engineering

William Ratcliff, Ecology, Evolution & Behavior

Laurie Richmond, Conservation Biology
Brian Skinner, Physics

Megan Strauss, Ecology, Evolution & Behavior

3M Fellowships

Four-year awards for students pursuing Ph.D.s in fields of interest to 3M

Katherine Ahmann, Biomedical Engineering

Gina Albanese, Neuroscience
Kevin Allen, Pharmacology

Garret Anderson, Pharmacology
Nicole Atchison, Biomedical Engineering

Devin Berg, Mechanical Engineering
Kent Bodurtha, Physics

Adam Boies, Mechanical Engineering
Kelly Bouchonville, Molecular, Cellular, Developmental Biology & Genetics

Joshua Colby, Chemical Engineering
Wynette Dietz, Microbiology, Immunology, & Cancer Biology

Melissa Fierke, Chemistry
Nicholas Gabriel, Electrical Engineering

Tiffany Glass, Molecular, Cellular, Developmental Biology & Genetics

Brandon Goblirsch, Biochemistry, Molecular Biology & Biophysics

Audrey Guerand, Chemistry
Jenny Hwang, Chemical Engineering

Jooyeon Hwang, Environmental Health
Hyunsoong Im, Electrical Engineering

Thomas Johnson, Medicinal Chemistry
Valerie Klema, Biochemistry, Molecular Biology & Biophysics

Brijesh Kumar, Electrical Engineering
Lela Lackey, Biochemistry, Molecular Biology & Biophysics

Grant Loden, Materials Science & Engineering

Elizabeth Mallon, Chemical Engineering
Abby McDonald, Molecular, Cellular, Developmental Biology & Genetics

Misha Mehta, Microbiology, Immunology, & Cancer Biology
Kathryn Michalski, Medicinal Chemistry

Anusha Mishra, Neuroscience
Rashad Moarref, Electrical Engineering

Amy Moran, Microbiology, Immunology, & Cancer Biology
Michael Neilsen, Computer Science (Duluth)

Nathaniel Powell, Neuroscience
Michael Raleigh, Pharmacology

David Rennard, Materials Science & Engineering
David Rowe, Mechanical Engineering

Dan Schuster, Neuroscience
Elizabeth Smith, Physics

Kerry Sokol, Biochemistry, Molecular Biology & Biophysics
Bradley Tiffany, Electrical Engineering

Haink Tu, Mechanical Engineering
Ryan Turgeon, Chemistry

Kristyn VanderWaal, Molecular, Cellular, Developmental Biology & Genetics

Nathan Weidenhamer, Biomedical Engineering
Adam Wohl, Chemistry

Andrea Yoder, Pharmacology

Torske Klubben Fellowships for Minnesota Residents

For graduate students in any field who demonstrate a strong interest in or connection with Norway

Leif Ellevik, Architecture
Daniel Westholm, Biochemistry, Molecular Biology & Biophysics

Torske Klubben Fellowships for Norwegian Citizens

For Norwegian citizens enrolled in the U of M Graduate School

Nina Stupphaug, Public Policy
Lars Stormo, Electrical Engineering

Warren & Henrietta Warwick Fellowship

For a student in biomedical sciences

John Albin, Microbiology, Immunology & Cancer Biology

Mark and Judy Yudof Fellowship

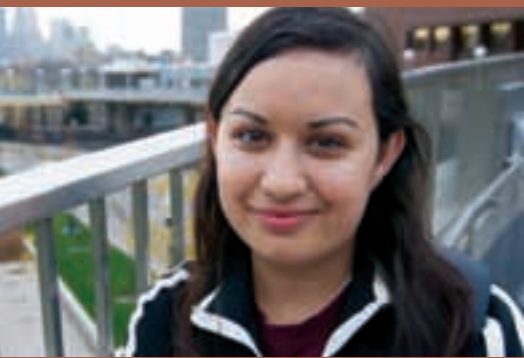
For students pursuing interdisciplinary work in science policy and ethics

Emily Smith, American Studies

Tibor & Olga Zoltai Fellowship

For a Hungarian citizen enrolled in the U Graduate School

Andrea Szabo, Economics



KARLA PADRON is a first-generation college student who earned her undergraduate degree in women's studies at UCLA and a master's degree in Chicana and Chicano studies at California State University. A DOVE Fellowship allowed her to begin work on a Ph.D. in American studies at the University of Minnesota.

Addie Hall, Applied Plant Sciences
Melissa Hatmaker, American Studies
Cathy Hayakawa, Child Psychology
Thelma Heidel, Entomology
Cynthia Hornbeck, Classical & Near Eastern Studies
Camelia Hostinar, Child Psychology
Sangruo Huang, Mass Communication
Judd Hultquist, Molecular, Cellular, Developmental Biology, & Genetics
Elizabeth Jensen, Computer Science
Anna Johnson, Child Psychology
Jonathan Kaiser, Art
Jennifer Kang, English
Megan Kelly, Water Resources Science
Caitlin Kersten, Landscape Architecture
Katherine Krueger, Mechanical Engineering
Kwok Yin Lai, Materials Science & Engineering
Abram Lewis, American Studies
Edward McPherson, Creative Writing
Emily Mohl, Ecology, Evolution & Behavior
Michael Nelson, Plant Biological Sciences
Daniel Nidzgorski, Ecology, Evolution & Behavior
Daniel Paltzer, History
Sarah Panzer, Water Resources Science
Kristen Pauken, Microbiology, Immunology, & Cancer Biology
Emily Pelton, Chemistry
Nicholas Petkovich, Chemistry
Jessica Petocz, Feminist Studies
Jennifer Puig, Child Psychology
Xudong Rao, Applied Economics
Jonathan Rawson, Biochemistry, Molecular Biology & Biophysics

Elicia Whittlesey, Geography
Patrick Willoughby, Chemistry
Casey Wilmesmeier, Germanic Studies
Peter Wragg, Ecology, Evolution & Behavior
Brian Zurowski, Economics

Graduate School Fellowships—2nd Year

For outstanding graduate students who received a multiyear Graduate School Fellowship

Nina Barnett, Chemistry
Renata Blumberg, Geography
Christopher Chamberlain, Molecular, Cellular, Developmental Biology & Genetics
Kathleen Ess, Classical & Near Eastern Studies

Nicholas Fisichelli, Natural Resources Science & Management

Anthony Giacomoni, Electrical Engineering

Thomas Giarla, Ecology, Evolution & Behavior

Erik Girvan, Psychology
Yenan Hou, Economics

Ankur Khare, Materials Science & Engineering

Katherine Larson, Classical & Near Eastern Studies

Wendy Lee, Child Psychology
Hong-You (David) Lin, Pharmacology

Steven Ludeke, Psychology
Meagan Snow, Geography

Grayce Theryo, Materials Science & Engineering

Luke Venstrom, Mechanical Engineering
Rachel White, Child Psychology

Institute of Translational Neuroscience:

Lin Yang, Biomedical Engineering

Institute on the Environment:
Stephan Cameron, Biochemistry, Molecular Biology & Biophysics

Harriet Van Vleck, Ecology, Evolution & Behavior

Minnesota Population Center:
Misty Heggeness, Applied Economics

Karen Kramer, Family Social Science
Johanna Leinonen, History

Stanwood Johnston Memorial Fellowship

For promising students in biochemistry, chemistry, geology, geophysics, microbiology, or physics

Sergiy Dubynskiy, Physics

Frieda Martha Kunze Fellowship

For students in biochemistry, chemistry, or biomedical sciences

Melissa Fierke, Chemistry

Harold Leonard Memorial Fellowships in Film Study

For students of film history, criticism, theory, or aesthetics

Morgan Adamson, Comparative Literature
Paige Sweet, Comparative Literature

Eva O. Miller Fellowship

For graduate students engaged in research in psychology or statistics and measurement

Zhicheng Lin, Psychology

Highlights | AWARDS IN GRADUATE EDUCATION



Photo by Mike Rollefson

Best DGS & DGS Assistant Awards

FOR EACH of the U of M's 150 graduate programs, a faculty member serves as director of graduate studies (DGS) to coordinate recruitment, admissions, financial aid, degree-progress tracking, fellowship nominations, and more. Most programs also have a DGS Assistant. In alternate years, the Graduate School honors these faculty and staff who play a key role in long-term student and program success. From left: Campbell, Kalli, Cucullu, and Hubinger.

Best Directors of Graduate Study

John Campbell, Psychology

The University psychology program's top-ten national ranking "is by no means a happy accident," Graduate School Dean Gail Dubrow said in honoring DGS John Campbell at a reception. As a DGS for three decades, Campbell enjoys a wide reputation as both superb administrator and inspiring mentor.

Lois Cucullu, English Language & Literature

Cucullu has developed new approaches to pedagogy, including a seminar that is strengthening faculty-student community and a reinvented recruitment program. Last year, every graduate was placed in a full-time, tenure-track position—impressive considering that the national average for placement of English Ph.D.s is only 30 percent.

Best DGS Assistants

Lisa Hubinger, Veterinary & Biomedical Sciences

Hubinger has been the DGS assistant for both comparative and molecular bioscience and veterinary medicine. Known for her personal approach to student services, she also helped to establish Veterinary Medicine's Office of Graduate Programs from four separate departments.

Gail Kalli, Plant Biological Sciences

Kalli's contributions as DGS assistant have included two now-annual events: a workshop at the Itasca Biological Research Station for incoming graduate students, and an off-campus retreat featuring student presentations and community-building activities.

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Graduate & Professional Distinguished Teaching Awards 2008



S. Massoud Amin

Director and Honeywell/H.W. Sweatt Chair in Technological Leadership & Professor of Electrical & Computer Engineering



Richard C. Brundage

Program Director and Associate Professor of Experimental & Clinical Pharmacology



Cesare Casarino

Associate Professor of Cultural Studies & Comparative Literature



Douglas N. Foster

Professor of Animal Science

EIGHT U FACULTY MEMBERS were inducted into the U's Academy of Distinguished Teachers in 2007-08 for their contributions to graduate and professional education.

The Distinguished Teaching Awards are sponsored by the Senate Committee on Educational Policy, the Office of the Senior Vice President for Academic Affairs and Provost, and the U of M Alumni Association.

More online:

www.irr.umn.edu/evpp/gradprofaward08/



John Freeman

Distinguished McKnight University Professor of Political Science



Stephen A. Katz

Associate Professor of Integrative Biology & Physiology



John Matheson

Professor of Law



Melissa Middleton Stone

Associate Professor of Public Affairs

Photos by Patrick O'Leary

Guy Stanton Ford Lecture

Story Magic

Opening Community Doors to Campus

“One morning about 1920, Dragonfly set out for my grandfather’s house. In the mystery and magic of the oral tradition, Dragonfly’s voice becomes the voice of my father.”

The speaker was N. Scott Momaday, poet and novelist, who sat on the wide stage of Ted Mann Concert Hall. To his right, the sign language interpreter formed dragonfly, magic, voice, and father with her hands.

The listeners were students as well as faculty, staff, and people from communities near and far, junior high school students as well as Native American elders.

During a magical hour in October, Momaday recreated stories of Dragonfly and his hunting horse, of an old woman who gave him the Kiowa sundance tradition, of a bear and God—Urset and Yahweh—talking about writing and stories. He read from Shakespeare, translations of Homer, and the writings of J. M. Coetzee. Listeners responded with laughter and awe.

The topic of the 2008 Ford Lecture was “Native American Oral Tradition—The Stories and Storytellers,” and Momaday became the storyteller. “Drama is as close as we come to oral tradition in this culture,” he said. He showed how it’s done.

Most intellectual life of the faculty takes place within specific departments and programs. One of the roles of the Graduate School is to build intellectual community at the level of the broader university.

Momaday—the first Native American to win the Pulitzer Prize in 1969 for his novel *House Made of Dawn*—drew one of the largest audiences in the Ford Lecture’s history. He joined a long line of renowned intellectuals in the series, including Stephen Ambrose, Margaret Atwood, David McCullough, Elaine Pagels, Billy Taylor, and Richard Leakey.

Leakey is one Momaday counts among his friends. “We talk about origins,” Momaday said. “Leakey’s big on bipedalism, I’m big on language. We need to learn more about language—its magic and power. I’d like to talk more about discovering words and how words can be marshalled to create meaning and beauty.” ■



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ACCLAIMED AUTHOR, artist, and scholar N. Scott Momaday drew a wide audience to campus for the 2008 Ford Lecture on the West Bank of the Twin Cities campus.

Read more about Momaday and the Ford Lecture: <http://www.grad.umn.edu/news/ford>



THE ANNUAL GUY STANTON FORD LECTURE is a memorial to the man who was dean of the Graduate School from 1913 to 1938 and president of the University from 1938 to 1941. Ford’s family, friends, and colleagues established an endowment after his death to bring to campus scholars from many different disciplines, reflecting Ford’s own broad interests. Once again this year, his descendents gathered from across the country for the lecture. Pictured with Momaday are the grandchildren of Ford and his brother Franklin, from left, Guy Crawford, Richard and Roger Dart, Emily Dart Savage, Penny Breitlow, and Susan Ford.

AROUND THE GRADUATE SCHOOL

BY THE NUMBERS

With **MORE THAN 10,000 STUDENTS AND ABOUT 900 POSTDOCTORAL SCHOLARS**, the Graduate School spans the Twin Cities, Duluth, and Rochester campuses of the University.

Our programs span some **150 MAJORS** in the sciences (biological, health, engineering, physical, mathematical, and social), education and psychology, and language, literature, and the arts.

In 2007-08, we enrolled **2,705 NEW STUDENTS**—and awarded **2,608 GRADUATE DEGREES**—**1,855 master's degrees** (154 at UMD) and **753 doctorates**.

Overall, women earned **54%** of the degrees we awarded, **international students earned 23%**, and **students of color earned 10%**.

On average, our students took **2.3 years to complete master's degrees** and **5.9 years for Ph.D.s**.

FOR MORE DETAILS, see www.grad.umn.edu/data/stats/

SHORT TAKES

ApplyYourself online admissions expanded to Duluth and Rochester in September. The Graduate School first implemented ApplyYourself on the Twin Cities campus in 2002.

Reexamining Graduate and Professional Admissions Practices, a three-year joint project with the Office of Equity and Diversity, worked with 20 graduate programs in Year 1. One result: The application for Graduate School admission was revised to provide greater opportunities for applicants to describe their life history, qualifications, and drive to succeed.



Dean Tsantir, above, became the Graduate School's new director of admissions in June after a national search. He brings strong experience in international recruitment and expertise in online application systems. Tsantir succeeds Andrea Scott, recognized across the nation for her leadership. Jim Rowan joined the admissions team in August with more than 20 years of experience in the U's undergraduate admissions office.

Theses and dissertations by more than one author are now permitted by the Graduate School. Also, **bound paper copies of theses and dissertations** are no longer required for Graduate School degrees; copies can be submitted in digital form through a process developed with U Libraries.

The first Doctoral Dissertation Fellowship Research Showcase allowed students to present their work to peers, faculty, prospective employers, and U leaders. Legislators from the students' home districts also learned about research and scholarship of their constituents. Another showcase is slated for April 2009.

The Graduate School won a Service and Process Improvement Fund grant in support of a transition to paperless competitions and processes. The first to go paperless was the faculty competition for Grants-in-Aid of Research, Scholarship, and Artistry. Faculty applicants and reviewers were able to conduct all their work online.

Four Graduate School projects will be featured at the University Quality Fair in February 2009: electronic dissertations, workflow software, communication improvement, and staff collaborative networking lunches. In addition, a featured project by the U's International Enrollment Management Committee includes a Graduate School staff member.

The U of M Rochester's first vice chancellor for academic affairs is Claudia Neuhauser, named July 1. Neuhauser, director of graduate studies (DGS) for the UMR-based biomedical informatics and computational biology program, is a Distinguished McKnight University Professor and was recognized as Best DGS in 2005 as a faculty member in the College of Biological Sciences. Graduate education is expected to be a key component of the emerging Rochester campus, which will build on the strength of the University, Mayo Clinics, IBM, Hormel Institute, and other regional assets.

Voyageurs, from 7

Graupmann left a well-paying job in Minneapolis to enroll. The Voyageur assistantships are attracting talent from top music programs across the country. They're funded through a new partnership with Duluth health care organiza-

tions—SMDC Foundation, SMDC Health System and Duluth Children's, and HealthPartners. Duluth Public Schools have played a critical role by involving teachers, principals, and school leaders.

"It's a win-win-win," says Jack Bowman, dean of UMD's School of

Fine Arts. "It's a win for the public schools and our community. It's a win for our health care partners—here's a way to spend on prevention rather than treatment. And it's a win for our students and university—it has doubled the size of our master's program in music." ■



Dean
Gail Dubrow

Opening Doors

AUGUST 2008 MARKED MY THIRD ANNIVERSARY AS DEAN. I am extremely proud of the changes we have implemented in this short time and the innovations we have brought to graduate education at the University of Minnesota. The measure of our success is in the quality of our graduate programs as well as an outstanding graduate student experience. Our hope is to open doors for an increasingly diverse population of graduate students who will contribute to the ranks of future leaders in academe, industry, and other sectors of the economy.

In this issue of *Discovery*, you will learn about some of these exciting and innovative

changes in graduate education. Everyone knows that “change is never easy.” But what excites me most about my job as dean of the Graduate School is that the University of Minnesota is leading

the world in improving core features of graduate education. For the past hundred years, graduate education and graduate students were pretty much the same—you chose a field, and you studied it as your mentors did before you.

In the 21st century, a diverse pool of graduate students comes to the University of Minnesota to pursue advanced studies. I have made it a priority to open the doors for all qualified students, regardless of their background.

I have also opened the doors for students who wish to study outside of the disciplines that have constituted the traditional core of graduate

Our hope is to open doors for an increasingly diverse population of graduate students ... future leaders in academe, industry, and other sectors.

studies. Many of today’s students come to the University of Minnesota to solve the world’s problems rather than to be an expert in a conventional discipline. For that reason, we have actively sought to promote new areas of interdisciplinary education that emphasize conceptual frameworks, tools, and methods across relevant disciplines. In this issue, you see some of our best and brightest students engaged in interdisciplinary inquiry. They will surely lead you to reconsider what motivates today’s graduate students to pursue advanced study—and the skills needed to solve complex intellectual and societal problems.

WE CANNOT MOVE GRADUATE EDUCATION completely into this millennium without the support of a larger community. We have seen an increase in fellowships, but we are far from our goal of offering multiyear fellowships to every Ph.D. student. I have met many community leaders in the past three years who are committed to strengthening and supporting graduate education at the University of Minnesota—to not only open the door, but to hold the door open. Together we can make it happen.

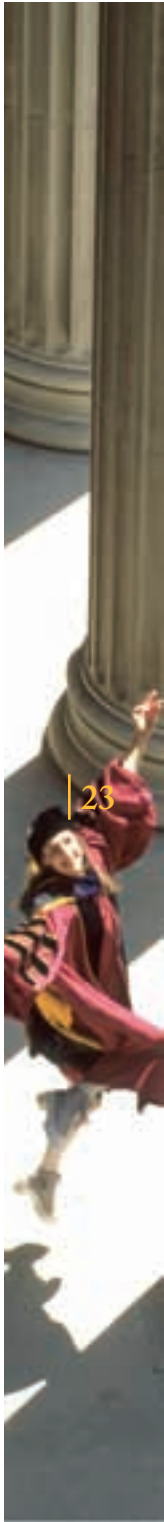
mitted to strengthening and supporting graduate education at the University of Minnesota—to not only open the door, but to hold the door open. Together we can make it happen.

Enjoy this issue of *Discovery* and learn about the students and faculty who are working to make the University one of the most innovative and effective public research universities in the world.

Warmly,

Gail Dubrow | Dean

Gail Dubrow has been vice provost and dean of the Graduate School since 2005. She is also a professor of architecture & landscape architecture, public affairs & planning, and history.



Michele Goodwin, J.D.

Maryam Valapour, M.D.

Jeffrey Kahn, Ph.D.

Search

Why can't I buy the kidney I need?



▶ The National Organ Transplant Act (NOTA) passed in 1984 prohibits all exchanges for organs that involve “valuable consideration.” So buying or even bartering for that kidney would violate federal law and could result in criminal penalties and fines. It may be time to rethink this policy.

▶ It's not clear if the ban on organ sales protects either donors or recipients, especially in living kidney transplantation where donor risk is minimal and recipient benefit substantial. Policy research could provide scientifically supported answers to this question posed by dying patients.

▶ We should worry that the unscrupulous will take advantage of people who have no other options. No matter how “reasonable” the price, there will always be someone whose life circumstances will tempt them to do something that deep down they know is a bad idea.