University Launches Campaign to Support Women Faculty in STEM

$3.5 Million NSF Grant Supports Research on Gender Bias

Pamela Conrad, a NASA scientist who researches extreme environments on Earth to better understand the surface of Mars, loves to explore—whether at the North and South poles or inside a submersible vehicle on the ocean floor.

But sometimes her biggest concern isn’t the danger of a hostile environment. It’s how to go to the bathroom while clothed in protective gear designed for men.

“Let me tell you what it feels like to be in a ball six-and-a-half feet wide on the very bottom of the Pacific Ocean. It is scary—and you think a lot about whether or not you’re going to have to pee,” she said to a wave of laughter from faculty, administrators and students. “So I dehydrated myself.”

Conrad, an astrobiologist and mineralogist who works on the Mars rover team, spoke at a launch event for Making WAVES (Women Academics Valued and Engaged in STEM), a campuswide initiative to research and address barriers confronting women and minority faculty in science, technology, engineering and mathematics (STEM).

Making WAVES is supported by a five-year, $3.5 million ADVANCE Institutional Transformation grant from the National Science Foundation, awarded to the university’s Center for Women and Work. The campaign will raise awareness about “microaggressions,” promote equity and alternative paths to mentoring, reform institutional practices and hold departments and colleges accountable for becoming more inclusive.

Common microaggressions include patronizing remarks, having your ideas ignored by senior faculty until they’re echoed by a male colleague—who then gets the credit—and scheduling meeting times that interfere with childcare responsibilities, women faculty say.

Such slights are often unintentional, part of a culture in which all faculty are encouraged to aggressively pursue grants, grad students and publication in prestigious journals, says Assoc. Prof. of Chemistry Marina Ruths, part of the Making WAVES leadership team. But they can make women feel marginalized.

Psychology Prof. Meg Bond, director of the Center for Women and Work, says most microaggressions, taken one by one, seem not worth making a fuss about. But their cumulative effect is to discourage women and underrepresented minorities from pursuing academic careers.

“It’s death by a thousand paper cuts,” she says.

The grant was awarded to UMass Lowell because of the Center for Women and Work’s previous research on gender bias, as well as broad support from the faculty union and campus leadership—including Chancellor Jacquie Moloney, who is named as primary investigator.

The team will employ a wide range of strategies to address lingering bias and research which strategies are most effective so they can be used by other universities. The idea isn’t to shame anyone or scrutinize individual motives, but to change behaviors and promote equity, Bond says.
Learning with Purpose

Expert Weighs In on Nutrition Trends

Research Says Mediterranean Diet Is Best

Gluten-free? Paleo? Juicing? Is fat bad or good? What’s healthy and what’s hype? Katherine Tucker, professor of nutritional epidemiology in the Biomedical and Nutritional Sciences Department, weighs in on new nutrition trends and which diet is the healthiest:

Probiotics and prebiotics are all the rage. It’s all about good bacteria. These tiny organisms play a big role in our overall health, and Tucker says a major focus of the coming year will be increasing their ranks through probiotics and prebiotics. Probiotics can be found in yogurt, sauerkraut and kimchi, while prebiotics are found primarily in resistant starch, which is in whole grains, nuts, seeds and legumes.

Go Mediterranean in 2017. “The Mediterranean diet is the pattern that has shown the most health benefits in research,” says Tucker. “This means increasing the use of olive oil, nuts and seeds, seafood, fruit and vegetables, and fluid dairy such as milk and yogurt while avoiding processed meat, refined-grain products and sugar-sweetened beverages.”

Quinoa is on the rise. Quinoa’s star should continue to rise in 2017 and beyond, says Tucker: “It is the seed of a grain plant, used as a whole grain, that is high in protein, good-quality fatty acids, dietary fiber, magnesium, B vitamins and antioxidants—and it tastes good.”

Extremes are out, and balance is in. “In 2017, I see a decline in the appeal of fad diets,” Tucker says. “People are realizing that while some lead to weight loss at first, they’re not sustainable.” Overall, Tucker says she believes people will continue to move away from processed foods to more natural, balanced options.

Emerging Scholars Program Teaches Research Skills

Students Work One-On-One with Faculty Mentors

Psychology major Pisey Hok knew almost nothing about research before he started working with Assoc. Prof. Jana Sladkova under an Emerging Scholars grant.

Now he’s helping Sladkova teach a class that’s also an interactive research project, “Diversity and Inclusion,” on how students can use photography to convey their feelings, experiences and attitudes about race and diversity.

“It’s a really good opportunity to learn more and work with a professor one-on-one,” says Hok, who was born in Cambodia, then moved to Lowell as a child. “I’m really interested in race, inequality, diversity and social justice—and in helping students tell their own stories through a racial or ethnic identity lens.”

The Emerging Scholars program, now in its sixth year, prepares undergraduates in the College of Fine Arts, Humanities and Social Sciences for research careers while also providing valuable assistance to faculty members. Students apply for a $2,000 grant to work with a faculty member on a particular research project. The program, supported by the FAHSS dean’s office and the office of the vice chancellor for research and innovation, accepts eight to 10 students each year.

This year’s scholars are researching the experiences of LGBTQ asylum-seekers, eye movements associated with learning, musical playgrounds made from recycled materials and the experiences of college students who are adopted, among other projects. Past Emerging Scholars have gone on to deliver original research papers at conferences, join Ph.D. programs and do applied research in their fields.

Business Students Tap into App Development

Business and Computer Science Profs Collaborate To Bring Finance Apps to Life

Students in Assoc. Prof. Harry Zhu’s Business Application Development course are now turning their personal finance app ideas into reality—in just one semester, thanks to a collaboration with Prof. Fred Martin of the Computer Science Department.

Using technology called “AppVis,” Manning School of Business students with little to no coding experience are learning to create sophisticated mobile apps in a visual, graphical interface with drop-and-drop building blocks. Developed by Martin and colleagues at the Massachusetts Institute of Technology, AppVis combines the MIT App Inventor’s visual programming environment. The versatility of the tool sparks new ideas and unleashes students’ creativity.

“Developing an application is the coolest thing I’ve ever done,” says Aurora. “The project really opened my eyes to how much business is related to technology. That’s where the future is.”

Java programming and applying it to App Inventor’s visual programming environment: “The versatility of the tool sparks new ideas and unleashes students’ creativity.”

Among the first apps created were several interest-rate and tax calculators, a stock visualizer and “The Gold Standard,” which shows real-time pricing of precious metals.

Junior business administration major Roma Aurora teamed with Josie Nou and Ronald Ramirez on the wryly named “Go Fund Yourself,” a budget planner that helps users visualize their savings goals.

“Developing an application is the coolest thing I’ve ever done,” says Aurora. “The project really opened my eyes to how much business is related to technology. That’s where the future is.”
Sig O Scores Big for Scholarships

Hockey and Florida Reunions Raise Almost $12,000 in One Night

February 4 was a big night for the UMass Lowell ice hockey team, which topped Hockey East rival UNH 8-2 before 6,500 fans at the Tsongas Center.

But the River Hawks weren’t the only ones who came up winners. The Sigma Phi Omicron fraternity hosted two reunions that night—one at the hockey game, the other in Florida—and in the space of a few hours raised almost $12,000 for its endowed scholarship.

“This is the sixth straight year that Sig O has held a reunion to raise money for scholarships,” explains Heather Makrez, executive director of alumni and donor relations. Close to 100 Sig O alumni attended this year’s event, where an anonymous donor offered to match the amount raised up to $1,500. When Sig O alumni gathered at the home of Tony Noga ’66 heard this, they phoned in their pledges.

“Not only have UMass Lowell’s fraternities and sororities resumed their place as an important part of student life,” says Makrez, “they’ve become wonderful partners in enhancing our alumni community and rallying their classmates to return to campus and give back.”

Says Hank Brown ’67, who organized the Sig O hockey reunion, “Many individuals have supported me through my life. My efforts to advance the Sig O endowed scholarship are my way of giving back to those who share my values, while honoring Carl Pitas’ ’66, the prime founder of Sigma Phi Omicron.”

To learn how to support the Sig O scholarship, contact the Office of Alumni and Donor Relations at 978-934-3140.

Buffett Shares Wealth of Knowledge with Finance Students

18 from Manning School Travel to Omaha to Meet with Billionaire Investor

When the second-wealthiest person in the world walks into the room, you might expect some kind of fanfare or, at the very least, a bubble of bodyguards. But when billionaire investor and philanthropist Warren Buffett strolled into the function room at Anthony’s Steakhouse in Omaha, Neb., on a recent Friday morning to meet with finance students, he couldn’t have been more unassuming.

“He walked in like it was no big deal,” says senior business administration major Miranda Winter, one of 18 UML students in attendance along with Assoc. Prof. Ravi Jain and Manning School Dean Sandy Richtermeyer. “Suddenly he was right there in front of us. It was surreal.”

And it only got better. The 86-year-old chairman of Berkshire Hathaway Inc., who’s known for his modest lifestyle and genial demeanor—not to mention his $76.5 billion net worth—spent the next two-and-a-half hours sharing his insights on business, the economy and life in general. The “Oracle of Omaha” then posed for group photos with the students, shook hands and treated everyone to lunch.

“It was an incredible, once-in-a-lifetime opportunity,” says senior business administration major Jacob Ashley, who worked with Winter to organize the trip and raise nearly $7,000 in funds through the GiveCampus website.

Buffett hosts the invitation-only luncheones for future business leaders several times a year in his hometown of Omaha. Schools must apply several years in advance and are then put on a waitlist. Jain, who also took a group in 2011, says the opportunity for finance students to meet with Buffett is like physics students meeting with Albert Einstein.

“He’s probably the most important, most respected and most knowledgeable businessperson in America, if not the world,” Jain says of Buffett, “who trails only Bill Gates ($86.3 billion) in net worth. “Being in the presence of such a hugely successful figure is inspirational to students. When advice comes from someone like him, that matters to students.”

Students Create Winning Counterterrorism Website

Team Places Third in Homeland Security Competition

A team of five students—mostly criminal justice majors—that created a website that educates students, parents and teachers about terrorist recruitment methods won an all-expenses-paid trip to Washington, D.C., in January after advancing to the final round of an international contest.

The Peer to Peer: Challenging Extremism competition, sponsored by the Department of Homeland Security and Facebook, taps college students’ social media skills to counter the influence of extremists and terrorists in their own communities.

The UMass Lowell team, working as interns with lecturer Neil Shortland, program manager for the university’s Center for Terrorism and Security Studies, used a $2,000 seed grant from the competition’s sponsors to develop Operation 250, which they named for the more than 250 Americans known to have been recruited by ISIS.

The team created a website showing preteens and teenagers how extremist organizations use social media to find, befriend, convert and isolate young people, then recruit them as members.

“We felt it was important to get to them (students) before any radicalization happened, because otherwise it’s too late,” says junior Jamie Keenan. “We also went after parents and educators, giving them the information and teaching tools they need, all in one place.”

Their third-place finish netted them a $1,000 award—and a couple of angel investors, including former National Security Council member and counter-terrorism expert Roger Cressey ’87.

On February 4, Sigma Phi Omicron reunions in Florida (above) and at a UMass Lowell hockey game raised close to $12,000 for scholarships.
University Collaborates with LRTA, MVRTA to Encourage Public Transit

As a commuter living in his hometown of Lawrence, Ramses Jimenez relies on both the Lowell Regional Transit Authority and Merrimack Valley Regional Transit Authority to bus to and from campus each day.

“Public transportation is a key part of my daily routine,” says Jimenez, a junior majoring in radiological health physics. He catches the 6:30 a.m. MVRTA bus out of Lawrence most mornings in order to make his 8 a.m. physics class.

Thanks to the university’s new collaboration with the LRTA and MVRTA, Jimenez can now ride those buses for free simply by showing his UCard to the driver.

“It’s probably going to save me about $300 per semester on transportation,” Jimenez says of the program, which was introduced in January. “That’s money I can use to pay my phone bill or something else. It makes a big difference.”

The program allows UMass Lowell students and employees to ride any of the LRTA’s 18 bus lines for free with their campus ID. It also provides free service on the MVRTA’s Route 01/41 bus, which connects Lowell to Dracut, Lawrence and Methuen, as well as Haverhill, where the university is opening a satellite campus this fall.

In addition to the 5,000 students that reside here on campus, we have thousands of students and employees in surrounding towns and neighborhoods that will benefit from this program,” says Lemoine, who notes that students can ride the bus to Showcase Cinemas Lowell, the Burlington Mall or to Lowell’s Gallagher Terminal, where they can catch the MBTA commuter rail to Boston.

The university is subsidizing the cost of the bus fares, which are usually $1 but can be higher with transfers. The free service will begin as a six-month pilot program, during which time the university ridership will be tracked and analyzed.

Executive Director of Administrative Services, Environmental & Emergency Management Rich Lemoine, who helped bring the collaboration together along with Director of Administrative & Office Services Tom Miliano, says the program will help connect the university community with the surrounding region.

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Chancellor Jacquie Moloney joins Rowdy and a dozen students at the University Crossing bus stop to celebrate the university’s new collaboration with the LRTA and MVRTA.