Professor Develops Smarter First-responder Robots

For over a decade, robots have been in the life-saving business: searching tough terrain for survivors after natural disasters or terrorism attacks and assessing damage in environments deemed too hazardous for humans.

Thanks to a research grant from Google, computer science Prof. Holly Yanco and her team in the Robotics Lab are developing a better way for first responders to work with robots in the field. The one-year funding, worth nearly $52,000, is one of four robotics technology-related grants awarded recently to Yanco, totaling more than $1 million.

“A major limitation of disaster responses is the difficulty of sharing information—between responders in the field, between the field and command center, etc.,” notes Yanco.

“For example, the video feed from current robot systems can only be seen by the robot operator and people looking at the computer screen over the operator’s shoulder. Our goal is to improve disaster response through more effective information sharing, including the fusion of multiple data streams to create augmented visualizations,” she says.

Yanco, who directs the university’s New England Robotics Validation and Experimentation (NERVE) Center, is also the principal investigator in the other three research grants:

- The National Science Foundation has funded a three-year, $553,607 project, being conducted in collaboration with Northeastern University and the Crotched Mountain Rehabilitation Center in Greenfield, N.H., to develop a robotic arm mounted on a motorized wheelchair or scooter to assist the elderly and people with disabilities in picking up things from a shelf, cabinet or floor.

- The National Institute for Standards and Technology (NIST) has funded $280,090 to establish international standard test methods to quantitatively evaluate the training proficiency of members of a police bomb squad or other emergency responders. The goal of the three-year project is to develop training methods to shorten the team members’ learning curve in operating a robot, track their progress and test scores and create better operators.

- NIST has also funded a two-year $181,380 project to test the safety of automated guided vehicles working with and around people in various manufacturing environments.
Roscoe passed away earlier this year. The chief and ardent supporter of the department was also honored.

Allan Roscoe, an alumnus, former professor, former campus police officer, and Justice Studies alum Richard Donohue Jr., an MBTA Transit Police Officer who was wounded during a shootout with the Boston Marathon bombing suspect, were honored. Boston Police Officer John Moynihan was given the Outstanding Alumni Award for Valor. Moynihan was shot in the line of duty in March and was also part of the team that helped save fellow alum Richard Donohue Jr., an MBTA Transit Police Officer who was wounded during a shootout with the Boston Marathon bombing suspects.

Allan Roscoe, an alumnus, former professor, former campus police chief and ardent supporter of the department was also honored. Roscoe passed away earlier this year.

First Ph.D. Class in Criminology and Justice Studies Stands Proud

Program Honors New Graduates and Alumni

The first class of doctoral graduates in the School of Criminology and Justice Studies—all nine of them—stood proudly as they were recognized at a ceremony in May that honored new graduates and alumni of the school.

The Ph.D. program is the only one of its kind at a public university in the region; eight of the graduates already have jobs lined up, including three who have tenure-track faculty positions at public institutions in the region.

“We diagnosed the need for a new generation of criminology and criminal justice professors in the region and developed the doctoral program in exactly the right place at the right time,” said Prof. Paul Tracy, program coordinator.

The school admits highly motivated students and encourages them to develop dissertation topics during the first year. Faculty members work closely with the students throughout the program.

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Study Abroad Heats Up This Summer

Gilman Scholarship Winner Lands Internship in China

International business major Nitta Heng will be getting an immersive, real-world experience this summer in Shanghai—while earning six credits toward her degree.

“I’m excited,” says Heng, a senior-to-be in the Manning School of Business who began the six-week internship in June. “China has the second largest economy in the world, so the experience should be good for my education.”

Heng received a $3,500 Benjamin A. Gilman International Scholarship, which is sponsored by the U.S. Bureau of Educational and Cultural Affairs. She also received a $1,000 scholarship from CAPA International Education, the study abroad partner program that is running her trip.

Since opening in the fall of 2012, the Office of Study Abroad and International Experiences has seen steady increases in both overall student participation and the number of faculty-led programs. Heng is one of 103 UMass Lowell students studying abroad this summer, up from 79 last year. Many of those students are traveling with one of the seven faculty-led programs.

Another study abroad avenue is through one of the university’s many academic partnerships. On May 15, five students from the Francis College of Engineering traveled to Pforzheim University in Germany to begin a six-week, nine-credit summer school program. The students are taking two engineering courses and one German language course, studying alongside peers from Penn State and Lehigh University.

Education Professor Wins Community Excellence Award

Assoc. Prof. Pat Fontaine shows future teachers how to bring history to life by using historical places in Lowell as the backdrop to learning. One of these special locations is the Hawk Valley Farm in Lowell, connected to the Varnum family since 1660. Fontaine developed lesson plans and planned a field trip for her students and 16 third graders that they tutored, a learning activity she will continue every semester.

This is just one of the ways that Fontaine connects education with the community and historical places in Lowell. In acknowledgement of her excellence in preserving cultural heritage, the Lowell National Historical Park and Lowell Heritage Partnership presented Fontaine with the Community Excellence Award.

“We are fortunate that the university is situated in Lowell, the premier industrial history city in America,” says Fontaine, who teaches future secondary history and elementary social study teachers in the Graduate School of Education. “Lowell has many stories, including its colonial history represented by Hawk Valley Farm.”

She was also recognized for spearheading the exhibit “Lowell, a City of Refugees, a Community of Citizens,” a collection of artwork and oral histories from Cambodian refugees who arrived in Lowell in the 1980s. She created a healing garden located in Clemente Park, in the Lower Highlands, where the majority of the Khmer population resides.

Celebrating the Community Excellence Award are, from left, Paul Marion, UMass Lowell’s executive director of Community and Cultural Affairs, Pat Fontaine and Celeste Bernardo, LNHP superintendent.

Using the Community as Teaching Tool

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Thanks to events like the Study Abroad & International Experience Fairs at O’Leary Library, more students are taking advantage of study abroad opportunities.

Learning with Purpose
Events Honor Voting Rights History, Examine Present Challenges

Activists, Educators and Students Commemorate 1965 Voting Rights Act

The campus celebrated the 50th anniversary of the Voting Rights Act by reviewing the impact of the landmark legislation and by facilitating conversations about ongoing voter suppression, racial tensions and police violence.

The series, organized by History Prof. Robert Forrant and several colleagues, brought activists and historians to campus to engage students in conversation and work surrounding civil rights and civic action.

Learning more about the people who advocated for the Voting Rights Act made history real for students. And discussing recent developments with people who were present for pivotal moments—such as activists Judy Richardson and Charles Cobb and journalist Callie Crossley, who all came to campus to participate in the events—put the past and present in perspective.

“The passage of the Voting Rights Act marked an important accomplishment for the long civil rights movement in the United States,” says

Forrant. “However, with recent Supreme Court decisions chipping away at the act, we need to better understand the history of the struggle for voting rights and re dedicate ourselves to continuing the fight for equal rights for all.”

Adds Forrant, “At a time when too many people do not exercise their right to vote, it is important for young people to learn just how difficult the fight was for African-Americans to truly obtain that right.”

UMass Lowell Concrete Canoe Shines in National Contest

Maureen Kelly, a UMass Lowell civil engineering student who graduated in May, shows off the canoe she and teammates raced during the national finals of the annual Concrete Canoe Competition at Clemson University in South Carolina.

Students Get Good Grades in Championship for Design, Construction of Vessel

Can a 146-pound canoe made of concrete—yes, concrete—and loaded down with 50 pounds of sandbags actually float?

That would be a yes.

Once again, UMass Lowell students won high marks in a national engineering contest that challenged them to build and race a canoe they made entirely of concrete.

Finishing eighth overall, the UMass Lowell team placed third in the “final product” category for the design, engineering and construction of its canoe, and fifth in the women’s endurance race in the national Concrete Canoe Competition championships.

Student teams from 215 universities entered the competition; UMass Lowell was the only institution from New England and Northeast Canada to reach the championships, having earned the right to compete after besting teams from 10 schools in their regional round in April.

Students must make the concrete from which the canoes are built, construct and decorate the vessel, race it and make sure it does not break during transport to the competition or when it is put to the test in the water.

UMass Lowell competed with a canoe that weighs 146 pounds and is 19 feet, 10 inches in length. Designed to be sleek and durable, the boat is 26.8 inches at its widest point and is 13.9 inches deep.

To qualify to race, canoes had to pass a “swamp test” that showed they could rise to the water’s surface after being submerged while weighed down by 50 pounds of sandbags.

This is the second time in three years UMass Lowell has qualified for nationals and has placed among the contest’s top 10, this year finishing ahead of peers from 14 universities across the country.

Designing the Airplane after You Jump Off the Cliff

Deshpande Symposium Focuses on Innovation in Higher Education

“We put a man on the moon before we put wheels on a suitcase. Americans do very well when there is a target to shoot for,” Subra Suresh told attendees in June at the fourth annual Deshpande Symposium for Innovation and Entrepreneurship in Higher Education. Suresh, president of Carnegie Mellon University and former National Science Foundation director, gave the keynote address at the UMass Lowell Inn & Conference Center.

The conference, launched three years ago and co-founded by UMass Lowell and the Deshpande Foundation, drew more than 300 people from more than 100 institutions across the U.S. and from as far away as Africa. Attendees shared a yearning to accelerate innovation and entrepreneurship at their colleges and universities.

“The great thing about this conference,” said UMass Lowell Executive Vice Chancellor Jacqueline Moloney, “is that in this room, we are all kindred spirits.”

Attendees heard about successful strategies for cultivating innovation on campus and, through panel discussions, learned from each other. Between keynote speakers, there was a packed schedule of panels, workshops, an awards dinner and a constant undercurrent of networking.

The conference-closing keynote speaker, Priceline.com co-founder Jeff Hoffman challenged educators to give their charges the tools to make things happen.

Hoffman summed up entrepreneurship like this: “Being an entrepreneur is like jumping off a cliff and designing an airplane on the way down.”

Participants in the Deshpande Symposium for Innovation and Entrepreneurship in Higher Education shared ideas in small group sessions.

www.uml.edu
Giving Trends Mirror—and Support—Campus Progress

There are many ways to measure UMass Lowell’s remarkable growth in recent years. Rapidly rising applications and student test scores. National recognition for faculty. Research dollars going through the roof. A spirited energy throughout the campus.

Here’s another measurement to ponder: Six straight years of increased fundraising support for the university.

During the just-closed fiscal year, alumni, faculty, staff and a host of community and corporate friends gave $21 million to UMass Lowell. That brings the total raised over the past six years to $104.4 million.

“What an extraordinary show of generosity demonstrates the excitement the UMass Lowell community feels about everything that’s happening here,” says Edward Chiu, vice chancellor for advancement. “It’s also a testament to their loyalty and the strong ties they have to the university.”

Chiu says he is especially heartened by another statistic: the steady rise in the number of alumni making annual gifts. In 2008–09, at the start of the recession, just 4,683 alumni made an annual gift to the university. By 2014–15, that number had almost doubled, rising to 8,762.

Not only does this increase buck national trends, Chiu adds, it also helps boost the university in the annual college rankings compiled by U.S. News & World Report, which uses alumni participation as one of its criteria.

Also surging during this same period were endowed funds. Earlier this fiscal year, UMass Lowell passed a major fundraising milestone when it secured its 400th endowed fund. By June 30, that total had risen to 429.

We’re very pleased to have crossed that threshold,” says John Davis, the university’s associate vice chancellor for principal gifts. “That’s like having 429 partners—individuals and companies who have a real stake in their funds and in the students, faculty and programs those funds support.”

This groundswell of support bodes well for UMass Lowell’s next major milestone: the public launch this fall of its first-ever comprehensive fundraising campaign. Our Legacy, Our Place: The Campaign for UMass Lowell will focus on five key priorities: increasing financial aid; recruiting and retaining a dynamic faculty; creating the ideal campus environment; investing in athletic programs and facilities; and strengthening alumni engagement and annual giving.

While the $125 million campaign won’t officially launch until Oct. 22, Chiu is “greatly encouraged and moved” by the support Our Legacy, Our Place has already received—close to $56 million during the two-year “quiet phase” of the campaign.

“Our donors feel such a strong connection to ‘Our Place,’ and such pride about all the university has accomplished,” Chiu says. “They’ve shown a willingness to invest in that success, in our people and our programs, so that we can do even more.”

Records are Made to Be Broken