Student Engineers Help Shelter Make Money-saving Improvements

Energy Ambassadors Target Efficiency

Moving from room to room at the Lowell Transitional Living Center (LTLC), senior mechanical engineering majors Orhan Kallogjeri and Tu Anh Huynh noted all the money-saving improvements that could be made as they assisted with a comprehensive energy audit.

Throughout the five-story LTLC building, where many of the city’s homeless and low-income residents come for shelter, food and services, the students found poorly insulated pipes and walls, drafty windows and inefficient lighting. In the kitchen, several old donated refrigerators are not Energy Star-certified. Nor are the washing machines, water heaters and furnace.

The students were there as “Lowell Energy Ambassadors,” a directed-study project led by Michele Putko, a senior lecturer in the Francis College of Engineering.

“We’re trying to help connect the dots between what the students know about engineering and energy efficiency and what’s actually happening in the market,” says Putko, who created the project with an $8,000 mini-grant she received last spring from the university’s new Sustainability Encouragement & Enrichment Development (S.E.E.D.) Fund.

Five undergraduate students enrolled in the two-credit directed study last fall, meeting with Putko once a week and serving meals at the LTLC, the largest homeless shelter and support organization north of Boston, to become familiar with its mission and services. The students then helped LTLC officials apply for the Low-Income Multi-Family (LIMF) Energy Retrofit program, which provides state funding to improve energy efficiency in residential buildings across the commonwealth.

The LIMF application was approved earlier this year and the students then helped with the energy assessment. The energy efficiency improvements, such as insulating, weatherproofing and installing new appliances, will be completed in the coming months.

“It’s going to make a big difference for the LTLC,” says Putko, who notes that the shelter’s electric bill topped $100,000 over the past two years combined. “There’s a lot of room for efficiency, and they can use those savings in a different capacity.”

Jayde Campbell, executive director of the LTLC, agrees.

“This improves our ability to serve the folks that are most in need in our community,” he says. “It gives us ways to better afford our utility costs, which are extensive, and also to do our part to help the environment.”

Campbell says the LTLC’s facilities coordinator, Richard Boucher, has developed a strong working relationship with UMass Lowell students, which has paved the way for projects like the energy retrofit.

In a separate project, a group of graduate students in Asst. Prof. Juan Pablo Trelles’ Energy Engineering Workshop conducted an assessment last semester to see if the LTLC’s roof could support solar panels (it can). Putko’s Lowell Energy Ambassadors are now soliciting quotes from solar vendors and assisting LTLC leaders with the next steps of the project.
Student EMTs Shine on National Stage

**EMS Team Takes Second in Skills Competition**

Students who work for the university’s Emergency Medical Services (EMS) are trained to perform in life-or-death circumstances. So they can handle the pressure of putting their skills to the test at a national competition.

Squaring off against more than 30 collegiate teams from across North America, UMass Lowell EMS finished second in the Physio-Control Skills Classic at the annual conference of the National Collegiate EMS Foundation (NCEMSF), held recently in Philadelphia.

It was the university’s best-ever finish at the competition, which tests teams’ skill, teamwork and leadership in three simulated patient scenarios: medical, trauma and team-building.

UMass Lowell also was among 12 schools recognized at the conference as an EMS Ready Campus. The designation is for campus EMS agencies that go beyond regular patient care activity and incorporate emergency management education and preparedness activities. UMass Lowell received a bronze-level distinction, joining such schools as the University of Arizona, Johns Hopkins University and Wake Forest University.

Nearly 40 students work as EMTs for UMass Lowell EMS, which provides professional-quality care to the university and its community 24 hours a day, seven days a week during the academic year. Founded as a student club in 1984, the organization has grown to include a cadet program for EMTs in training. It also provides supplemental emergency services for university events and offers CPR training and first aid training to hundreds of people each year.

**Engineering Professor Recognized for Research and Innovation**

Prof. Oliver C. Ibe of the Department of Electrical and Computer Engineering has been named a fellow of the National Academy of Inventors (NAI) in recognition of his innovative research and his contributions to the economy.

Ibe’s research has led to improvements in cellular phone networks, particularly in making roaming calls between local and cellular carriers possible and managing network resources more efficiently.

“...consider it a great honor to be listed among the country’s foremost innovators and inventors,” says Ibe, who joined UMass Lowell in 2003.

**National Academy of Inventors Honors Prof. Oliver Ibe**

His career in the field of telecommunications technology spans nearly four decades, having spent years with industry in various capacities and as a consultant. He currently holds 10 patents, all of which have been licensed. He has also authored, co-authored or contributed to 16 books on telecommunications and computer network technologies and applied probability.

Ibe was inducted along with 154 other NAI fellows from across the country April 5 as part of the organization’s annual conference in Washington, D.C.

Ibe grew up in Nigeria and attended the University of Nigeria, Nsukka, where he majored in electrical engineering and graduated at the top of his class in 1975. He holds a master’s degree in electrical engineering and computer science and a doctorate in electrical engineering from MIT. He also earned an MBA from Northeastern University. Ibe and his wife, Christie, live in Andover.

**Human Rights Activist Tawakkol Karman Brings Message of Peace to Campus**

Nobel Prize winner Tawakkol Karman has been named UMass Lowell’s 2018 Greeley Scholar for Peace Studies.

Karman, a native of Yemen, is a human rights activist, journalist, politician and president of the nongovernmental organization Women Journalists Without Chains. She is also the general coordinator of the Peaceful Youth Revolution Council and a member of several other international human rights organizations.

Karman’s oft-quoted philosophy—“We do not fear the future, we make it”—has inspired countless individuals around the world. She shared the 2011 Nobel Peace Prize with Ellen Johnson Sirleaf and Leymah Gbowee, who was UMass Lowell’s Greeley Scholar that same year.

As the Greeley Scholar for Peace Studies, Karman is participating in a series of programs for UMass Lowell students, faculty, staff and the community over a two-week period in April. She was the keynote speaker at the university’s annual Day Without Violence.

Greeley Scholars are selected for their achievements as humanitarians and their effective efforts to promote peace and conflict resolution at the local, regional, national or international level. The honor is named for the late Rev. Dana McLean Greeley, who was a longtime Unitarian Universalist minister in Concord.

The Greeley Scholar program is funded by the Greeley Endowment for Peace Studies, established with a gift from the Dana McLean Greeley Foundation for Peace and Justice and a contribution from the commonwealth of Massachusetts via the UMass Foundation.

**Brings Message of Peace to Campus**

Nobel Peace Prize winner Tawakkol Karman, UMass Lowell’s 2018 Greeley Scholar for Peace Studies, is leading programs for the campus and community during her visit to campus in April.

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Coburn Hall Goes Back to the Future with Renovation

College of Education Will Return to Historic Home, with Updates

The College of Education will return in 2020 to its historic home after a top-to-bottom expansion and renovation, complete with updates that will help train the educators of tomorrow.

The work goes hand-in-hand with another big change: the return, after a 32-year hiatus, of the undergraduate teaching major. The first class of 18 students started last fall and will graduate in 2021 with dual certifications in elementary education and teaching children with moderate disabilities in pre-K through eighth grade.

The “new” undergraduate major is also a return to the college’s roots. Coburn Hall was built in 1897 to house the Lowell Normal School, a state teaching college.

The centerpiece of the renovation will be a model classroom and attached “design and discovery” center on the first floor, where undergraduates can prepare lesson plans and practice teaching. The college also plans to bring in children from local schools for summer reading and science camps.

“The Coburn Hall redesign will advance that mission by helping our students practice and apply educational innovations in schools today and in the future,” says College of Education Dean Eleanor Abrams.

The renovation will preserve historic elements of the building, including the 1934 WPA-era murals of mill girls on either side of the front entrance. A matching mural that runs the length of the ballroom and was painted over years ago will be restored.

Coburn will close for the overhaul after the spring semester ends in May.

Long-lost Satellite Carrying UML-built Instrument Rediscovered

NASA Lost Communication with the IMAGE Spacecraft for More Than a Decade

It’s like having a dead person start talking again after 12 years.

That is how physics Prof. Paul Song describes IMAGE, a NASA satellite launched in 2000 that suddenly disappeared in December 2005. NASA had given up on the satellite, but in January of this year, an amateur astronomer in Canada rediscovered the spacecraft and NASA was able to re-establish radio contact with it, albeit very weakly.

News of the satellite’s recovery was of particular interest to UMass Lowell researchers: One of the scientific instruments on board IMAGE is the Radio Plasma Imager (RPI), which was designed, built and operated by researchers at the university’s Space Science Laboratory. The researchers hope they will be able to download data from RPI.

“It is still too early to say about the status of RPI, given that NASA is trying to understand the overall health of the satellite,” explains Song, who directs the Space Science Laboratory (SSL).

The satellite’s recovery generated media coverage from CNN, Science, The Washington Post, USA Today and Space.com, among others.

IMAGE was designed to study Earth’s magnetosphere, the vast region of space surrounding our planet that is filled with space plasma (mainly electrons and positive hydrogen ions) and extends some 600 to 50,000 miles above the ground. RPI’s goal was to characterize that plasma using radio waves from 3 kilohertz to 3 megahertz.

UMass Lowell received more than $12 million from NASA to build RPI, and it paved the way for many more research grants that followed.

Physics Prof. Paul Song hopes that data can be recovered from the RPI instrument after 12 years of hibernation.

Memorial Scholarships Will Honor Mark Hines and Georges Grinstein

Pair Provided Leadership and Vision for Kennedy College of Sciences

The Kennedy College of Sciences has launched two new scholarships to honor its former dean, Prof. Mark Hines, as well as Research Prof. Georges Grinstein, both of whom passed away this winter.

Hines, 67, who had taught previously at the University of New Hampshire and the University of Alaska, joined UML’s biology faculty in 2002 and went on to serve nearly a decade as chair of the Biological Sciences Department and four years as dean of the Kennedy College of Sciences.

“Mark provided crucial leadership in growing and strengthening the Kennedy College to gain the outstanding reputation it enjoys today,” says Chancellor Jacquie Moloney. “I am grateful not only for his dedication to scholarship and student success, but also for his kindness and generosity as a colleague.”

An emeritus professor of computer science, Grinstein, 71, taught at UML for 30 years and served as head of UML’s Bioinformatics Program and director of the Institute for Visualization and Perception Research.

Memorial scholarships have been established in both men’s names. The university will match donations to the Hines Scholarship Fund, which was kicked off by a $5,000 gift from Kennedy College alumnus John Kennedy ’70.

For more information or to make a gift, please visit www.uml.edu/give or call the Office of University Advancement at 978-934-2223.
Hip-Hop Star Gives Students a Class to Remember

Music students recently had a master class with a special guest: three-time Grammy winner Wyclef Jean, who came to campus not only to teach but also to look for potential talent to perform on an upcoming recording.

The singer-rapper-producer Jean has been leading occasional master classes at colleges, universities and high schools while on tour as part of his “Wyclef Goes Back to School” project. He decided to come to Lowell because his tour manager, Rachel Driscoll, is a 2017 alumna of UML’s music business program.

Jean spent an afternoon at Durgin Hall, listening to songs by three groups of student music majors and offering positive comments and constructive criticism. He grabbed his guitar, plucked a lead guitarist, bassist and drummer from the students in the crowd and led them in a jam.

“It’s a very rare thing in school to have an international-level musician come play and work with students. It was incredible,” said Chris Winters, a sophomore sound recording technology (SRT) major.

Jean was a member of the seminal 1990s hip-hop group The Fugees. As a performer and producer, he has worked with some of the biggest names in the music business, including Michael Jackson, Carlos Santana, Bob Dylan, Paul Simon, Beyoncé, Mick Jagger and Shakira.

“That was amazing,” said music department chair Alan Williams after the master class. “He is a consummate musician and a consummate professional.”

Jean is the latest big-name recording artist to visit campus and work with students. Three years ago, Melissa Manchester was on campus for a three-day residency, and Billy Joel served up a lively master class from the same Durgin Hall stage in December 2011. More recently, Manhattan Transfer took time out from rehearsals at Durgin Hall to meet with students and field their questions about the music business.

Jean had high praise for Driscoll, who works for Heads Music, an independent record label in New York City. Driscoll worked there as an intern before being hired for a full-time job.

“I’ve got to say, if that’s what UMass Lowell does, provides people like Rachel, then I might have to camp out there for like a month. She does a great job,” Jean said.