

# UML

UMASS LOWELL MAGAZINE

FALL 2018

*Our Legacy, Our Place* campaign blows through \$125M goal—and keeps going! P.14

## BUCKLE UP!

*Everything about cars is changing, and UML alumni and faculty are helping pave the road ahead. P.26*



## HAPPY HOURS

University Crossing was turned into an amusement park for our annual UCrossing After Dark event this fall. Students hung out until 1 a.m., lining up for the arcade games, bowling, mini golf and free food.



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A message from  
**Chancellor Jacqueline F. Moloney '75, '92**

Fall is my favorite season. I love the feeling it brings of a fresh start, and welcoming thousands of enthusiastic students to campus every September always adds to that energy.

Once again we enrolled our largest, most diverse and most accomplished class of first-year students. For the second year in a row, UMass Lowell's total enrollment topped 18,000.

The university set another record this fall, thanks to all of you: We reached our initial goal of \$125 million in our very first fundraising campaign—18 months ahead of schedule. Read about how we did it (and why we're not stopping!) on Page 14.

The next phase of fundraising will focus on student scholarships, and we have a pretty exciting ambassador to help launch the momentum. On Nov. 15, the inimitable Oprah Winfrey will be the next guest in our Chancellor's Speaker Series, which will raise funds for scholarships that will benefit students for years to come.

A special thanks to English professor and best-selling author Andre Dubus III (check out his office on Page 13), whose friendship with Winfrey is responsible for her visit.

The Speaker Series is just one of dozens of events we've hosted on campus this fall—everything from Homecoming and Celebration of Philanthropy, to a visit from Comedy Central's Trevor Noah, to our annual DifferenceMaker Celebration featuring a keynote by CNBC correspondent Ron Insana.

Suffice to say, it feels like we've been moving 100 miles an hour this fall. Which brings us to the theme of this issue's cover package: the future of driving. Everything about the way we own, drive and power cars is changing and, as usual, UMass Lowell faculty are on the forefront of some of the most exiting advances happening in that industry. You'll see car-related content throughout the issue (including my own reminiscences about my first car, a '65 Mustang, on Page 35), and the cover story starts on Page 26.

Enjoy!

Sincerely,

Jacquie Moloney '75, '92



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### SENSORS

Lasers, radars and cameras detect objects in all directions

### INTERIOR

Designed for riding, not for driving

### ELECTRIC BATTERIES

To power the vehicle



### ROUNDED SHAPE

Maximizes sensor field of view

### COMPUTER

Designed specifically for self-driving

### FAIL-SAFE SYSTEMS

for steering, braking, computing and more

### ON THE COVER >

## Google Self-Driving Car

The Google self-driving car project—now called Waymo, which stands for a new way forward in mobility—resulted in "Firefly," a fully autonomous vehicle that first hit public roads in 2015. Firefly has custom sensors, computers, steering and braking—but no steering wheel or pedals.

In the last two years, the company added a fully self-driving Chrysler Pacifica Hybrid minivan to its fleet, launched an early-rider program in Phoenix, Ariz., and partnered with Jaguar to create the world's first premium electric self-driving vehicle, the Jaguar I-PACE.

UML Magazine has been honored with multiple awards, including nods from APEX Awards for Publication Excellence, Bell Ringer Awards, CASE Excellence Awards, Collegiate Advertising Awards, Hermes Creative Awards, Higher Ed Marketing Awards, PR Daily Awards and PR Daily Nonprofit PR Awards.



EDITOR'S NOTE: Please send comments to Editor Sarah McAdams Corbett at Sarah\_Corbett@uml.edu. Submit class notes at www.uml.edu/advancement/classnotes.

# CAMPUS LIFE

## TRENDING @UML

### IN GOOD REPAIR

The UML chapter of the Society of Women Engineers took over the MakerSpace on North Campus in September to host a Repair Café for the community. With the help of volunteers and university staff, students checked fluids and tire pressure in cars, repaired bicycles and fixed a range of household items—including furniture, printers and lamps.

Veronica Brown, a sophomore mechanical engineering major and co-chair of SWE's philanthropy committee, organized the Repair Café, applying for start-up funding through a university grant process with the help of the Francis College of Engineering service-learning coordinator. As a result, she learned more than just how to tear down a microwave.

"Running the café really improved my organizational skills," Brown says. "And seeing the process of writing a grant, and what a professional document looks like—how to condense everything—has already helped me on lab reports."



### CUMNOCK: THEN AND NOW...

On the stage where Pearl Jam and Run DMC once performed for hundreds of screaming fans, students can now order up Korean chicken baguette sandwiches and kale Caesar salads. With this fall's opening of the new Cumnock Marketplace on North Campus, the former Cumnock Hall auditorium has been transformed into a bright and comfortable hangout space where students can grab a bite to eat, study and recharge between classes.



### SIERRA CLUB RANKS UML NO. 22 IN U.S.!

The Sierra Club ranked UML No. 22 in its annual "Cool Schools" ranking of North America's greenest colleges and universities. That's a jump of more than 100 spots in one year—a bump that reflects university-wide sustainability efforts in everything from transportation and energy reduction to recycling and composting.



### OPRAH. HERE. ON CAMPUS. IN NOVEMBER.

One thing we know for sure: It's going to be awesome. #OPRAHatUML



### HERE COMES YOUR ... ALBUM FROM THE WUML VAULT.

Bands have been playing live in UML's "Fallout Shelter" studio in the basement of Lydon Library for over three decades. One of the earliest? The Pixies. In December 1986, the Boston band (which went on to record four albums and sell out stadium shows worldwide) played 15 songs at WJUL (the call letters became WUML in 2003). This September, the tracks and interview recorded on campus that day were released as part of a "Come On Pilgrim ... It's Surfer Rosa" box set celebrating the 30th anniversary of the band's seminal recordings. The Pixies were invited to perform at WJUL by former student Chris Porter, who founded the weekly "Live from the Fallout Shelter" program with Bob Weston '88. "I thought they were a cool band, and it was a good session, but I never knew this might happen," Porter says.



### THAT'S A THING?

The UMass Lowell underwater hockey team—called FloMass—won the 2018 USA Underwater Hockey National Championship this summer in Denver. Never heard of the sport? Invented in England by a group of free-divers who wanted to stay in shape over the winter season, the game is played at the bottom of a pool with a short stick and a lead puck. And now it's a breakaway hit all over the world.

 **CHECK OUT MORE TRENDING**  
UMass Lowell news at [uml.edu/news](http://uml.edu/news).

## RAMP CAMP GIVES WOMEN ENGINEERS A BOOST

For one first-year student, a six-week summer engineering camp was a chance to adjust to living on her own. For another, it was an opportunity to earn six credits, paid for by a scholarship. For a third, who's undeclared, "it was a good way to learn about the different engineering majors."

For all of them, it was an opportunity to build a network of friends among other young women pursuing engineering, sometimes after being the only girl on the high school robotics team or in an AP science or math class.

UMass Lowell's RAMP camp is designed to attract more women students to engineering and then to help them succeed. The camp, which launched this summer, is sponsored by a number of companies who share the goal, including Analog Devices, AutoGuide, BAE Systems, MACOM, New Balance, Red Hat, Skyworks Solutions Inc., UTC Aerospace Systems and Wittmann Battenfeld.

The program is led by Assoc. Dean Kavitha Chandra, who in 1992 became the first woman to earn a doctorate in electrical engineering from UML.

"I've been observing a decline in women entering engineering over the past two decades, except in biomedical engineering," Chandra says. "In every other department, it's tracking around 10 or 12 percent women. That's typical of other universities, too."

Chandra says that when fewer women enter engineering and stay the course, other young women feel isolated more often and then switch to other majors. She hopes to reverse that cycle with RAMP—Research, Academics and Mentoring Pathways—which she designed with help from other faculty, based on their experiences mentoring women students in their own labs.

For women who go into engineering, the rewards are considerable. The U.S. Department of Commerce says women in STEM careers out-earn both men and women in non-STEM jobs by 35 percent to 40 percent, and the gender pay gap is lower in STEM fields than in other sectors of the job market.



### WHAT'S OLD IS NEW:

The North Campus building formerly known as Pasteur Hall was renamed Dandeneau Hall in honor of plastics engineering alum James Dandeneau '80. But it didn't just change in name alone: This summer, the university completed a \$15.75 million renovation of the 80-year-old building, now home to mechanical engineering, computer science, UTeach and several civil and environmental engineering offices.

### YOU WON'T BELIEVE WHAT WE'VE DONE WITH THE PLACE.

You've read about all the awesome changes on campus in these pages, but wouldn't you like to see for yourself? If you can't make it to Lowell, we have the next best thing: a virtual tour.

You can tour the campus—inside and out—right from your computer or handheld device. Over 120,000 visitors from 163 countries have popped in via the virtual tour (available in four languages). Check it out for yourself at [uml.edu/touruml](http://uml.edu/touruml).



### Robot, Diagnose Thyself!

Robots can do a lot of things—assemble cars, search for bombs, cook a meal or assist in surgery. But something they can't do is tell you how they're doing.

Researchers from UMass Lowell and several other universities are aiming to change that. With funding from the U.S. Department of Defense's Multidisciplinary University Research Initiative (MURI), robotics experts from UML, Carnegie Mellon, Brigham Young and Tufts universities are working together to give humanoid robots and other autonomous systems the ability to assess themselves in terms of how well they can perform a given task or why they cannot complete the job.

This real-time feedback is vital as robots become increasingly autonomous and are tasked with jobs in remote, hostile or dynamic environments with minimal human supervision, says computer science Prof. Holly Yanco, who is the principal investigator for UML and director of the university's New England Robotics Validation and Experimentation Center.

The project—called SUCCESS, which stands for Self-assessment and Understanding of Competence and Conditions to Ensure System Success—is one of 24 grants awarded nationwide this year through the highly competitive MURI program. The grant is worth a total of \$7.5 million over a period of five years.

## UML BY THE NUMBERS

14

Electric vehicle charging stations on campus



2

Electric vehicles in UML fleet (one for Administrative Services, one for UML Police)



22

Buses and shuttles in university's fleet

5,500

Students with cars

10,300

Average number of free rides per month by students, faculty and staff on LRTA and MVRTA buses

2,200

Faculty and staff with cars



14

Zipcars available for rent on campus

3,987

Free Wheelers bicycle checkouts on campus in 2017-18 academic year



7,100

Parking spaces on campus

# 5 QUESTIONS

with Jonathan Arruda, student and Lyft driver...

Drawn to the flexible schedule and the idea of working as much or as little as he wanted, Jonathan Arruda decided to join the gig economy as an Uber driver when he turned 21. That was two years ago. The information technology major, who expects to graduate in 2019, now drives mostly for Lyft, the other popular ride-hailing service. A Medford resident who is planning on a career in the software industry, Arruda talked to us about what it's like as a driver for hire.

## HOW MANY HOURS A WEEK DO YOU DRIVE?

I aim for between 20 and 40 hours. When I'm not in school, I try to drive as much as possible. I've done about 2,000 rides for Lyft and about 1,500 for Uber. Driving in Greater Boston, you stay busy with all the universities, hotels, the airport. Most rides are local, but some are further away, to Providence, Worcester or Cape Cod.

## DO PEOPLE TIP YOU?

I get a lot of people who want to tip me. Older people who are used to taxis usually give me cash. Other people tip through the app. I used to worry about my ratings when I first started. With Lyft, I have a 4.9 [out of 5] star rating. I get a higher rating and more in tips if I'm social. I don't want to get too personal.

## DESCRIBE THE ATMOSPHERE IN YOUR CAR.

I do anything I can to make the experience more comfortable. I have gum and mints and phone chargers for every type of phone. I play the radio. Most of the time I have NPR on. People get drawn to that. I'm constantly reading the riders. If the person seems receptive, I'll start a conversation. Older people are more prone to talk. Younger riders are quiet—they feel more awkward and they stay on their phones.

## HOW CAN YOU TELL IF SOMEONE WANTS TO CHAT OR TO BE LEFT ALONE?

I've met a lot of interesting characters. I've met countless CEOs. I've gotten job interviews from people I've met. If I'm driving a software engineer, I might ask for their advice. If it's been a pleasant conversation, I ask to connect on LinkedIn or get their business card. Nine times out of 10, they are super OK with me asking.

## WHAT'S YOUR DREAM CAR?

A Tesla. I want something that would drive itself.



## HEY, JACK KEROUAC: Thanks for the new material

Before Jack Kerouac went "On the Road" and achieved fame as an iconic writer of the Beat Generation, he roamed his hometown of Lowell and wrote about it.

"He clearly loves that city and loves that river," Sean Daniels, artistic director of the Merrimack Repertory Theatre, says of "Galloway," the fictional name Kerouac used for Lowell in several early works, including the recently discovered novella, "The Haunted Life."

Now Daniels is adapting "The Haunted Life" for the stage, with input from Assoc. Prof. of English Todd Tietchen, a prominent Kerouac scholar and co-director of the American Studies program at the university. The novella and Daniels' script will also be used as teaching tools in UML's theatre arts and English literature programs throughout the academic year. The play will debut at MRT in March.

"That book only exists because of Todd," says Daniels. "Otherwise it would be sitting in a box at the estate."

The novella, which Kerouac lost shortly after completing it, re-emerged in 2002 when the handwritten manuscript appeared at a Sotheby's auction. With support from Kerouac's literary estate, Tietchen edited a scholarly book that includes "The Haunted Life" alongside outlines, notes and partial scenes for two sequels Kerouac had planned to write. Tietchen's book was published in 2014.



Source: Merrimack Repertory Theatre



## FARM TO OFFICE

The university just wrapped up a pilot CSA program, a joint initiative between the Office of Sustainability, the Center for Public Opinion and the Lowell-based urban farming venture Mill City Grows. The effort—in which a couple dozen university faculty and staff members received fruit and vegetable deliveries fresh from campus and city gardens every week for five months—sets the table for a larger program that will launch next summer.



## ATHLETIC DIRECTOR DANA SKINNER RETIRES

After more than three decades of leadership at UMass Lowell, including the last 23 years as director of intercollegiate athletics, Dana Skinner retired in September.

Skinner led the university's successful transition to NCAA Division I competition and oversaw the transformation of the university's athletic facilities. He also helped develop the Campus Recreation Program, providing intramural, club sport and fitness opportunities to all students.

A native of Danvers, Skinner was a Div. II All-American basketball player for Merrimack College, from which he graduated in 1978. He was drafted by the Boston Celtics in the third round (50th overall) of the NBA draft and played briefly for the Maine Lumberjacks of the Continental Basketball Association. He earned a master's degree in sports administration from St. Thomas University in Miami.

He was named the Div. II NACDA Northeast Athletic Director of the Year in 2003 and was inducted into the New England Basketball Hall of Fame in 2004.

Skinner is succeeded by Peter Casey, who has served as deputy director of athletics since 2013.



OPERATION250.ORG

## Student Counterterrorism Project Gets \$1 Million Boost from DOJ

This is how it begins.

A high school student, a Russian immigrant, goes online to vent about being bullied for being a foreigner. Soon, he's got a bunch of online "friends" who tell him he doesn't need "those losers" at school.

Over time, they redirect his anger at the United States by sharing news stories about U.S. airstrikes killing civilians in Syria. When he asks what he can do about it, they invite him to move to a private messaging app.

He's now part of a terrorist network.

At least 250 Americans have left the U.S. to join ISIS. Operation250, which started as a UMass Lowell project, aims to prevent more young people from joining by teaching children, teenagers, parents and educators about extremism and online safety.

And Op250 just got a giant boost for its work from the federal government: a \$1 million grant from the U.S. Department of Justice to further develop its program.

"Now we can develop everything we've done tenfold," says Tyler Cote, one of five students who developed Op250. "Most importantly, we'll be able to go into classrooms every week and interact with students, teachers and our community partners."

Op250 began when five interns in the university's Center for Terrorism and Security Studies entered the U.S. Department of Homeland Security's Peer-to-Peer: Countering Extremism competition in fall 2016. Their advisor was Neil Shortland, the center's director and an assistant professor in the School of Criminology and Justice Studies.

Op250 was named one of four finalists and invited to Washington, D.C., to present its project to judges from Facebook and the Department of Homeland Security; they won third place. They went on to develop Op250 through the university's DifferenceMaker program and incorporate as a nonprofit.

Last fall, Cote began piloting Op250 in elementary and middle-school classrooms in North Adams, Mass. When he graduated in December, he became Op250's first full-time employee. He worked with Shortland and the other team members to host a conference introducing their work to educators, law enforcement and government officials.

Over the summer, Cote and business major Nicolette San Clemente '19 worked with two Somali community organizations and Harvard University researchers to develop a one-day summer program for 14- to 18-year-old Somali youths—a very different audience than the mostly white middle-schoolers in North Adams.

However, Shortland says, in order to expand, Op250 must deliver certain core messages and skills to every audience. That's where Asst. Prof. Jason Rydberg, a criminologist who specializes in formative evaluation, comes in. He, along with the Harvard team, is working on the evaluation piece of the project.

"When we don't talk about this with kids, then they'll find information in inappropriate ways," she says. "Terrorists can give them a place to belong, but we need to avoid that."—KW



## PROGRAM HELPS FIRST-GENERATION STUDENTS SOAR

It takes a special kind of courage to be the first in your family to pursue a college degree.

It takes even more nerve to attend a college far from home—like first-year student Jaya Sims of Milwaukee, Wis., who turned down offers from Midwestern universities to pursue a sociology degree at UMass Lowell.

A major factor in her choice? The River Hawk Scholars Academy, which provides extra help and a caring community for first-generation college students.

"I wanted the extra support network, especially since it's so far from home," Sims says. "I liked the feel of this campus when I visited. Everyone was really nice and made me feel like they wanted me here."

Sims is among hundreds of first-generation college students in this fall's first-year class. All earned their places here through a combination of strong grades, test scores and extra-curricular activities. In fact, many had such high GPAs and test scores that they were automatically invited to join the Honors College.

But while they are well-prepared academically, first-generation college students often struggle with financial aid, course selection and time management because they can't turn to family members who've been through the college experience.

That's where the River Hawk Scholars Academy comes in. All year long, its students are supported by a dedicated academic advisor, workshops and boot camps, social events, volunteering opportunities and peer mentors.

"First-generation college students bring so many wonderful abilities, strengths and perspectives to campus, so we want to make sure that they're getting the support they need to navigate campus culture," says Matthew Hurwitz, program director and an assistant teaching professor in the English Department.

## Look who popped by campus...



"Daily Show" host Trevor Noah (Oct. 5)



Folk singer-songwriter Arlo Guthrie (Oct. 13)



Hip-hop legends Wu Tang Clan (Nov. 2)

## And did we mention Oprah (Nov. 15)?

## RAISING THE CURTAIN

Shirts and shoes with wearable electronics embedded in them to measure vital signs. Building materials with built-in sensors that can detect unseen structural flaws or damage. Medical textiles that can help heal wounds. Those are some of the innovations that could come to fruition at UMass Lowell's Fabric Discovery Center, a new research and development facility that brings together researchers, industry and public agencies to develop and manufacture 21st century materials.

Established with a \$10 million grant from the state, the center officially opened its doors in July at an event attended by Gov. Charlie Baker, UMass President Marty Meehan, elected officials, representatives of businesses and university administrators, faculty and students.

Housed alongside the university's Innovation Hub business incubator at 110 Canal St. in downtown Lowell, the center offers 28,000 square feet of space for research, design, prototyping, pilot manufacturing and testing of advanced materials.

Baker hailed the facility as the future of manufacturing in Massachusetts.

The governor also announced a \$1 million grant from the Massachusetts Manufacturing Innovation Initiative to support robotics research and development at the university.

UML's New England Robotics Validation and Experimentation (NERVE) Center, which is also located at 110 Canal St., will be the home for the robotics investment. NERVE is a testbed for robotics systems and is used as a training center by faculty and students as well as Massachusetts robotics companies, software developers and manufacturers looking to evaluate their systems.



On display at the FDC's ribbon-cutting this summer was a JanSport backpack created with programmable fabric, allowing users to share a song, social media post or Internet link with anyone in the vicinity.

TEACHING THE TEACHERS

Educators from around the world came to UMass Lowell this summer to learn skills that they will, in turn, take back and teach in their classrooms.

Twenty-five professors and teachers from Northern Africa, the Middle East, India, Korea, Japan and Southeast Asia came for a two-week intensive course in teaching critical thinking skills. The program was led by College of Education Prof. A.J. Angulo and Assoc. Dean Sharon Subreenduth and was funded by the U.S. State Department's Office of English Language Programs, part of the Bureau of Educational and Cultural Affairs.

The participants went through a rigorous selection process to be picked for the program, says Angulo. The grant from the State Department was highly competitive, too: UMass Lowell beat out 16 other universities to host the Critical Thinking Skills Exchange scholars, thanks to the curriculum, which takes advantage of Lowell's reputation and resources as a city that welcomes immigrants from around the world.

Working with faculty from the colleges of Education and Fine Arts, Humanities and Social Sciences, along with community partners including UTEC and TeenBLOCK, Angulo and Subreenduth designed a program that included hands-on learning exercises and games, technology and curriculum development.



Bigger and better than ever!

This fall, more than 3,200 new students—a third of whom are from underrepresented populations—entered UMass Lowell with the highest average SAT scores (1232) and high-school GPAs (3.596) in the university's history. More than 650 new students are enrolled in the university's Honors College, bringing it to a record-high enrollment of 1,750.

For the second year in a row, UMass Lowell's total enrollment topped 18,000, an increase of more than 57 percent over the last decade. The Chronicle of Higher Education has ranked UMass Lowell in the top 10 fastest-growing public doctoral institutions in the nation for the last three years.



HAPPY BIRTHDAY TO US

Biological Sciences is **50**



Nursing is **50**

Center for Women & Work is **20**



OfficeHours

A peek into some of the most interesting faculty and staff offices on campus

**WHO:** Best-selling author Andre Dubus III, a full-time professor in UML's English Department. He's written seven books, including the memoir "Townie," a No. 4 New York Times best-seller, and the novel "House of Sand and Fog," a finalist for the National Book Award, a No. 1 New York Times best-seller and the basis of an Academy Award-nominated film. In 2000, "House of Sand and Fog" was chosen as an Oprah's Book Club selection (a connection that led to Winfrey's campus visit this fall). Dubus has been awarded a Guggenheim Fellowship, a National Magazine Award for Fiction, two Pushcart Prizes and an American Academy of Arts and Letters Award in Literature. His first novel in a decade, "Gone So Long," is out this fall, and is already building buzz. ("I love every single person in it. They are so real, these people—I know them and love them all," gushed Pulitzer Prize-winning author Elizabeth Strout. "Dubus is just so good and real and true, he doesn't pull one sentimental punch the whole time—extraordinary.")

**WHERE:** An office with a small window at the end of the hall in the English Department's fourth-floor space in O'Leary Library. A tall bookcase is stuffed with a messy jumble of books, everything from textbooks to Eudora Welty. There are inspirational quotes, family photos, a surprising amount of French impressionism and colorful prints of old trucks painted by his friend Alan Bull that he ripped out of a calendar. It's hard to see the desktop through all the piles of paper.

**HOW HE USES IT:** "Mostly to meet with students—my favorite part of teaching," he says. "I usually have chocolate, so I can soften the bad news."

**WEIRDEST THING IN HERE:** A framed photo of his novel "House of Sand and Fog," burned and submerged in water. "It was a gift from a student. I don't know if it was a threat, or because the book sucked so bad. It's kind of disturbing, but I like it."

**SWEETEST THING IN HERE:** A note that his daughter Ariadne left in his office when she was a philosophy student at UML (she graduated in 2017): "... I thought I would leave this note to tell you I love you!"



**HIS PROUDEST MEMENTO:** The Literary Death Match championship medal from five years ago, when he beat out National Book Award finalist Sarah Shun-lien Bynum in the final round of a rigorous competition involving, among other things, reading from their work and tossing cupcakes at a poster of writer George Saunders. "I passed the lit test, I answered questions, I threw things through a hoop, I boxed ... I won."

**WHERE HE WRITES:** Not in this office. "I built my house by hand up in the woods, and I have a little soundproofed cave in my basement. You have to go downstairs, then upstairs to get to

it, so it's kind of like going to an art farm. It's a five-foot-wide room, with six-foot ceilings, so if you're tall, you have to duck. And there's a plywood desk against a blank wall. A tiny window I cover with a black blanket, nothing on the walls. A couple of shelves with music and poetry and stuff to keep me going. Then notebook, pencil, lamp. Silence."

**WHAT'S NEXT:** "I'm starting the throat-clearing for a new novel. And then I'm working on a collection of essays and also a big, fat anthology. And I have a couple of film things in the works."



> BY BETH BROSAN

# \$125 MILLION AND RISING!

WORK HARD, GET AHEAD, GIVE BACK—THAT'S THE UML WAY, AND IT'S PROPELLED *OUR LEGACY, OUR PLACE* PAST ITS INITIAL GOAL

OUR LEGACY  
OUR PLACE   
THE CAMPAIGN FOR UMASS LOWELL





**“Everyone at UML is so committed to helping students succeed, it makes you want to do the same thing—to pay it forward and help others.”**



Increasing scholarship support to benefit students like Roma Aurora '18 (above) is a top priority for *Our Legacy, Our Place*, UML's first-ever comprehensive campaign.

**A**t last spring's Commencement ceremony, Roma Aurora '18 had one of the best seats in the house.

As a winner of the Chancellor's Medal for Student Service, she was seated onstage at the Tsongas Center, just a few rows away from the chancellor herself, with an ecstatic sea of graduates and their proud friends and family members spread out before her. In her mind, Aurora could also see the long road she had traveled to get to this point.

“When I got to campus, I just felt, *“This is where I belong,”*” says Aurora, a business administration major and member of the Honors College. Born in India, she moved with her family to North Andover when she was 15, and remembers feeling shy and a little lost during her high school years.

She arrived at UMass Lowell determined to step out of her shell, and emerged as one of the most admired student leaders on campus: president of the Manning Leaders Council, where she worked to build community in the business school and strengthen mentoring and professional networking programs; an International Student Ambassador who helped newcomers navigate the culture shock she knew so well; and a member of an award-winning DifferenceMaker team that developed low-cost, high-tech prosthetics.

“I wouldn't be where I am if I didn't get involved early on and didn't have professors who believed in me,” says Aurora, who graduated magna cum laude and now lives in New York, where she has a paid internship with Instinet, a global financial securities service.

“Everyone at UML is so committed to helping students succeed,” she adds. “It makes you want to do the same thing—to pay it forward and help others.”

And that, in many ways, is the spirit behind *Our Legacy, Our Place: The Campaign for UMass Lowell*.

**UML SURPASSES \$125 MILLION GOAL**

When UML launched its first-ever comprehensive fundraising and engagement campaign, it was with the express purpose of helping others—with a goal of raising \$125 million by 2020 for student scholarships, faculty recruitment and research, campus improvements and the university's Division I athletic program.

So strong is the UML drive to work hard, get ahead and give back that the campaign has just surged past its original goal, 18 months ahead of schedule.

In September, Brian Rist '77 made a \$5 million commitment to *Our Legacy, Our Place*, one of the largest gifts in university history.

“I'm a big believer that you go home from the dance with the person who got you there,” says Rist, a Stoughton native who worked his way through the University of Lowell and went on to found Storm Smart, now the largest hurricane protection company in Florida. “I've been very lucky in my life, and a lot of my success grows out of my time at Lowell—not just what I learned in the classroom, but also the people I met and the culture of the place. I wanted to give back to thank the university for putting me on the road to where I am today, and for making those same opportunities available for even more people.”

Like so many others who have helped make this campaign successful, Rist's generosity will have a tremendous impact on our students, says Chancellor Jacquie Moloney '75, '92.

“Our alumni understand how a UML education changes lives, and they want to make sure students today have the same opportunities they did,” she says. “That truly is the power of our place—this determination to help new generations succeed, because we all share the same story.”

It's what makes this such a special institution, says Robert Manning '84, '11 (H), chair of the UMass Board of Trustees. “UMass Lowell's culture is about helping others,” says Manning, who, along with his wife, Donna '85, '91, '11(H), has been among the campaign's strongest supporters.

*Continued*



Manning School of Business students (including Aurora, center) celebrate the grand opening of the Pulichino Tong Business Center in 2017, one of several game-changing facilities the campaign has helped make possible.

**OUR LEGACY, OUR PLACE, OUR LEADERS**

More than 32,000 supporters contributed to the success of *Our Legacy, Our Place*, led by members of UMass Lowell's Circle of Distinction, which recognizes those donors who have made lifetime commitments of \$1 million or more. Today, 23 individuals and couples have joined this select circle, up from just a single donor prior to 2007.

Gerald '78 and Joyce '77 Colella

Jeffrey Cosiol '67

James '80, '18 (H) and Deborah Dandeneau Gururaj '08 (H) and Jaishree Deshpande

Richard\* '91 (H) and Nancy '13 (H) Donahue Charles '66, '04 (H) and Josephine Hoff

John Kennedy '70, '16 (H)

L. Donald '59, '07 (H) and Gloria\* LaTorre Brendan\* and Mary Jo Leahey\* '37, '08 (H)

Chian-Hsiang “Lawrence” Lin '90 and Jang-Li Chang '80

Robert '84, '11 (H) and Donna '85, '91, '11 (H) Manning

Francis '56, '00 (H) and Tonita McKone Martin Meehan '78

Bill and Carol Mucica

David Pernick\* '41, '06 (H)

Barry '68, '15 (H) and Janice Perry

John Pulichino '67, '14 (H) and Joy Tong '14 (H)

Brian Rist '77

Mark '81, '13 (H) and Elisia '13 (H) Saab

Anil and Abha Singhal '88

Alan '77, '94 (H) and Susan Solomont

Robert '71, '12 (H) and Gail Ward

Roy Zuckerberg '58, '99 (H)

\* deceased



**“UMass Lowell gave me opportunities I never thought I’d have as an undergraduate. “It’s really impossible to say thank you enough.”**



Campaign support made it possible for biology major Kierra Walsh '19 (above) to conduct groundbreaking research during her freshman year.

In all, more than 32,000 donors made gifts to the campaign between 2013 and 2018, ranging from a single dollar to several million, says Vice Chancellor for Advancement John Feudo.

The university hopes to continue that momentum, with a second phase of the campaign. *Our Legacy, Our Place: 125 and Rising* aims to raise an additional \$25 million by 2020, when UML will celebrate its 125th anniversary.

Already, donors have helped fuel dramatic growth by:

- More than doubling the university’s endowment to \$84.7 million;
- Helping to fund the physical transformation of the UML campus, including game-changing facilities like University Crossing, the Pulichino Tong Business Center and the River Hawk Village residence hall;
- Supporting programs focused on entrepreneurship, like DifferenceMaker, and facilities like the Innovation Hub and the Fabric Discovery Center, and;
- Ensuring a successful transition to Division I athletics.

Sitting in the University Crossing student center, Jon de Leon '18 marvels at the growth he’s witnessed during his four years at UML. “It’s like watching a small city going up,” he grins. A criminal justice major from Berkeley, Calif., he first learned about Lowell in his high school AP U.S. history course. A campus visit sealed his decision to enroll here; receiving the Roy Zuckerberg '58, '99 (H) endowed scholarship made it possible for him to do so.

“I got a high-quality education, made great connections in my field and gained real leadership experience,” says de Leon. “The financial support meant a lot, but so did the recognition that people believed in me and my education.”

“Not only has the campaign raised funds, it has also raised the university’s profile,” says campaign chair John Pulichino '67, '14 (H), who with his wife, Joy Tong '14 (H), endowed a multimillion-dollar scholarship program that has already benefitted more than 80 students. “It’s brought a whole new awareness to the alumni community about the rewards of giving back—and the importance of private support.”

**A CULTURE OF PHILANTHROPY**

Marty Meehan '78 knew that private support would be essential for UMass Lowell’s future when he was appointed chancellor in 2007. He also realized that not many alumni understood this.

“Back when we were students, the university could count on state support for most of its operating costs,” says Meehan, now president of the UMass system. “That kept tuition low, and many of us could pay our way through college with summer jobs and part-time work.”

Today, state support constitutes just 23 percent of the university’s budget, and tuition must cover much of the difference—putting UML’s fundamental commitment to access and affordability at risk. “We knew we had to think more entrepreneurially about our funding and develop a culture of philanthropy,” Meehan says.

This combination of entrepreneurial funding and philanthropy planted the seeds for *Our Legacy, Our Place*, and helped drive the construction of UML’s first new academic building in 30 years—the Saab Emerging Technologies and Innovation Center, which opened on North Campus in 2012.

The building attracted major corporate support, including \$5 million from Raytheon to establish a joint research institute focused on flexible and printed electronics. Private donors contributed more than \$10 million to the science and technology center, led by Mark Saab '81, '13 (H) and his wife, Elisia '13 (H), for whom the building is named.

Saab ETIC, as the 84,000-square-foot facility is known, established a funding model that has helped UML build or acquire a total of 14 buildings since 2009 and renovate some of its oldest facilities—like 80-year-old Pasteur Hall, which reopened this fall as Dandeneau Hall, the home to robotics and computer science programs, with substantial support from James Dandeneau '80, '18 (H).

This building boom has repercussions felt well beyond campus, says Mark Saab: “Lisa and I live in the city of Lowell, and I believe that the recent growth of UMass Lowell has made the city a better place to live. The upgrades to the university over the past decade have made Lowell, and UMass Lowell in particular, a hot spot for innovation and forward thinking.”

Biology major Kierra Walsh '19 can vouch for that. By the second term of her freshman year, the Billerica native was already in a Saab ETIC research lab, working with chemical engineering professor Gulden Camci-Unal on an effort to grow bone cells on filter paper—a process that could one day lead to a safe, inexpensive source of biomaterials for tissue and organ transplants.

“UMass Lowell gave me opportunities I never thought I’d have as an undergraduate,” says Walsh, including the chance to co-author an article in a peer-reviewed academic journal. It also provided her with a series of scholarships that will enable her to graduate debt-free and better able to afford veterinary school, a dream she’s had since she was a young girl. Says Walsh: “It’s really impossible to say thank you enough.”

**VISIONARY LEADERSHIP**

*Our Legacy, Our Place* takes its name from UML’s 2020 Strategic Plan, the road map that has guided the university’s growth since 2010.

By launching its first-ever comprehensive fundraising campaign, UML could, the plan’s authors wrote, “build on its legacy and take its place among the best public higher education institutions in the country.” The campaign’s quiet phase began in 2013 and quickly gained momentum.

By the time *Our Legacy, Our Place* had its public launch in April 2016, it had already attracted more than \$78 million in contributions from donors like then-campaign chair Charles Hoff '66, '04 (H), who with his wife, Josephine, had endowed the largest privately funded scholarship program in the history of the UMass system.

Hoff, who says he could “talk for hours about UMass Lowell students”—how hard they work, and the challenges they’ve overcome—also has plenty of praise for the university’s leadership. “Both Jacquie Moloney and Marty Meehan have brought such an entrepreneurial spirit to UMass Lowell, and a real passion for the work because they both grew up in the area,” he says. “They’ve created a university that is bigger, broader and more visionary than the one I attended.”

Over the past decade, UML’s enrollment has doubled to more than 18,000 students, while academic achievement and

diversity levels have also steadily increased. Research spending now totals more than \$70 million, up from \$36 million in 2007. Today, 23 individuals or couples have made gifts or commitments of more than a million dollars.

Many corporate partners—led by companies like Raytheon, Kronos, BAE Systems, Analog Devices Inc., UTC Aerospace, Skyworks, Pfizer, E Ink, Comcast, and Jeanne D’Arc Credit Union—have recognized UML’s growth and played a decisive role in it, through a combination of philanthropic giving, enthusiastic hiring of students and alumni, and on-campus partnerships ranging from research to support for academic and athletic programs.

“There’s nothing more important one can do than give another person a chance at a great education,” says John Kennedy '70, '16 (H), whose support has touched almost every aspect of campus life, particularly the athletics program and the Kennedy College of Sciences, which in 2015 was named in honor of him and his late brother, William '54.

Adds Linda FitzPatrick '68, chair of the College of Education Advisory Board and a major scholarship benefactor, “My dream for our students is that they feel as I did: that they have the support, guidance and financial help they need to pursue their education and go on to fulfilling, successful careers.”

What’s striking, says Feudo, is that “donors of all levels feel this same sense of dedication to our students.” That’s particularly true of UML faculty and staff, 45 percent of whom have made gifts to *Our Legacy, Our Place*—“a giving rate that is three times the national average, and one of the many reasons we were able to meet our campaign goal well ahead of schedule.”



*Our Legacy, Our Place* helped UML’s 17 athletic teams make the successful transition to NCAA Division I competition, providing scholarships for student-athletes like Abdi Shariff-Hassan '21.

**125 AND RISING**

Meeting the campaign goal is a “true cause for celebration,” says Moloney. It’s also, she adds, an opportunity to put some extra points on the board.

“We have a lot of important work still to do,” Moloney says, including the renovation and expansion of historic Coburn Hall, the oldest and most iconic building on the UML campus, which is scheduled to open in 2020 as a new home for the College of Education.

It also includes putting a bigger dent in the student loan debt. While UML is able to meet 89 percent of demonstrated student need for financial aid, a significant gap remains. Almost one-third of in-state UML students with

*Continued*

**THE UML WAY—AT A GLANCE**

<p><b>\$125M+</b> DOLLARS RAISED</p>	<p><b>18,000+</b> STUDENTS, FALL 2018</p>
<p><b>32,000+</b> DONORS 2013-2018</p>	<p><b>TOP 10</b> FASTEST-GROWING PUBLIC RESEARCH UNIVERSITY IN THE COUNTRY</p>
<p><b>520</b> SCHOLARSHIPS AND ENDOWED FUNDS</p>	<p><b>14</b> BUILDINGS OPENED 2009-2018</p>
<p><b>57%</b> INCREASE IN ENROLLMENT SINCE 2007</p>	<p><b>\$921.9M</b> REGIONAL ECONOMIC IMPACT</p>



**"I've often said that without UMass, I would not be where I am today. To the degree that I am able, I feel a strong obligation to give back."**

—John Kennedy

need come from families with household incomes of \$30,000 or less.

In the second phase of the campaign, says Moloney, "We're going to work a little harder and give back a little more."

**A SHARED STORY**

Abdi Shariff-Hassan '21, a business administration major and member of UML's men's soccer team, knows all about working harder and digging deeper. He first learned to play soccer in a Kenyan refugee camp, where his family had fled following the civil war in their native Somalia. In 2005, his family emigrated to the U.S. and eventually settled in the Maine mill town of Lewiston, home to a growing Somali community.

Shariff-Hassan can still recall the joy he felt when he first saw a group of young Somali boys kicking a soccer ball in a Lewiston park. He quickly joined them, and that group of boys grew up to lead Lewiston High School to the state championship title in 2015, with Shariff-Hassan as captain—a story that author Amy Bass chronicles in her new book, "One Goal: A Coach, a Team, and the Game That Brought a Divided Town Together."

"It was such a great feeling to do that with guys I'd grown up with, and with the whole city there cheering us on," Shariff-Hassan says now. "It taught me that it doesn't matter where someone is from or what their background or culture is—if you're willing to work together, you can achieve any goal."

He says he's noticed that same spirit at UML, "where everyone is willing to help and guide students"—including a family he'd never even met.

Last spring, Shariff-Hassan was awarded one of the campaign's newest scholarships, the Virginia and James Comley Scholarship, which Tony Award-winning producer Bonnie Comley '81 and her husband, Stewart Lane, endowed to honor her parents. While Virginia and James never went to college, they made sure their daughter did, and they instilled in her the drive to work hard, get ahead and give back to her community.

All of that sounds pretty familiar to Shariff-Hassan, who also comes from a family that prizes education.

"My family moved to the U.S. so my eight siblings and I could get a better education and more opportunities," he says. "Although my parents don't speak English very well, they both have jobs and work as many shifts as they can to support our family and make sure we are happy."

Like Comley and so many other UML students before him, Shariff-Hassan is the first member of his family to attend a four-year college. "Having the chance to study here is really a dream come true for me," he says.

It's an American dream as old as his adopted country, and as new as the freshman class that arrives on campus each September. We come from Lowell and Lewiston, from Billerica and Berkeley, from the U.S. and India, to become part of a shared story and work toward the same goal.

That's the power of "Our Place." **UML**

**WHY SUPPORT UMASS LOWELL?**

UMass Lowell makes an exceptional education possible to many deserving students who might otherwise be priced out of higher education. Your support matters:

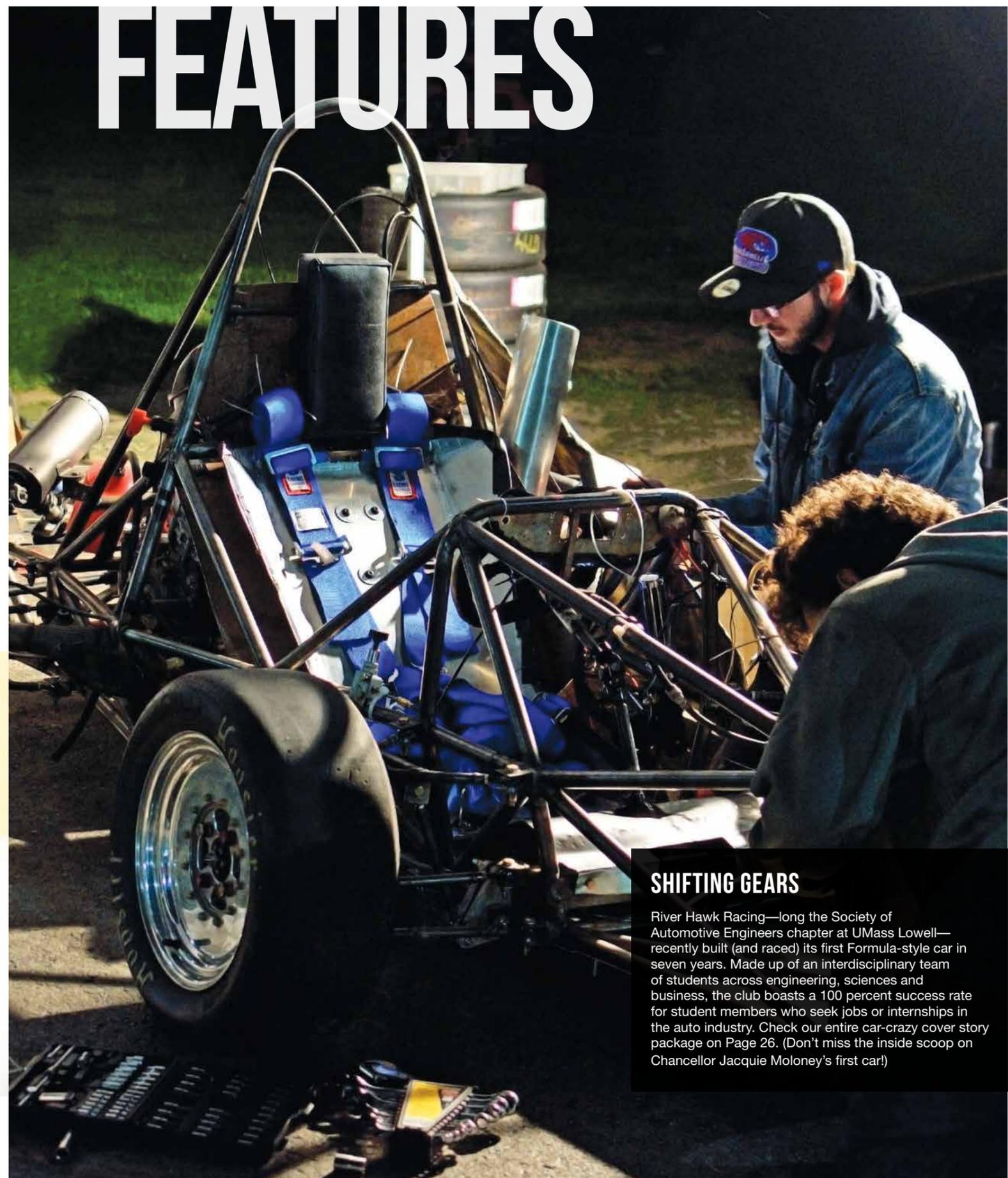
- UML receives only 23 percent of its funding from the commonwealth.
- One-third of in-state students with need come from families with household incomes of \$30,000 or less.
- All gifts matter. Last year, gifts of \$100 or less added up to full scholarships for 11 full-time students.

**Be part of the *Our Legacy, Our Place* campaign. Make your gift today.**

[uml.edu/givenow](http://uml.edu/givenow)



# FEATURES



**SHIFTING GEARS**

River Hawk Racing—long the Society of Automotive Engineers chapter at UMass Lowell—recently built (and raced) its first Formula-style car in seven years. Made up of an interdisciplinary team of students across engineering, sciences and business, the club boasts a 100 percent success rate for student members who seek jobs or internships in the auto industry. Check our entire car-crazy cover story package on Page 26. (Don't miss the inside scoop on Chancellor Jacquie Moloney's first car!)

> BY KATHARINE WEBSTER

# ENGINEERING CHANGE

*Alumnus Opens School  
for Girls in India*



**“A lot of people have asked me, ‘What came into your head that you quit your job, left the country, went to a village where there’s no job, no electricity, no water—nothing?’”**

**V**irendra “Sam” Singh ’65 grew up in a small Indian village, went to Aligarh Muslim University on a field hockey scholarship and then traveled halfway around the world to earn a master’s degree in textile engineering at Lowell Tech.

After working on a nylon-cotton blend at Natick Labs for his thesis research, Singh got job offers at nine companies—and chose DuPont on the advice of his mentor, Prof. John Goodwin. Over the next 35 years, he rose to become one of the company’s top executives, returning to India to head its Asia division.

But his career is not what’s on Singh’s mind these days. He’s more interested in explaining why he quit his job in 2000, at age 61, and moved back to his village in Uttar Pradesh State, where he started a school for girls to spur rural economic development. At the time, his friends and his family in India thought he was crazy. “A lot of people have asked me, ‘What came into your head that you quit your job, left the country, went to a village where there’s no job, no electricity, no water—nothing?’” he says.

The answer is complicated. As he got to know DuPont’s board members, Singh says, he sensed they had a question they were too polite to ask: “Why are you here when your country needs you?” At the same time, he felt the pull of an Indian tradition: Once your children are grown and your family provided for, you seek higher spiritual wisdom through service and the renunciation of material comforts.

Either way, Singh felt compelled to return and put his executive skills to work on solving the problem of

rural Indian poverty, starting where he’d grown up: Anupshahr, a subdistrict with a central town and 175 villages.

Singh’s research persuaded him that the biggest barrier to India’s economic advancement was its mistreatment of women. The evidence was all around him in rural Uttar Pradesh, which has some of the highest rates of female infanticide, illiteracy and child marriage in India—and a seemingly unbreakable cycle of poverty.

“If you want to transform the future, you have to transform the mother,” Singh says. “Future mothers have to become financially independent so they can become socially independent. A socially independent mother will not treat her boy children and girl children differently.”

So, with help from a local social worker and activist, Renuka, he built a free school for girls in the town of Anupshahr. He named it Pardada Pardadi, Hindi for great-grandfather and great-grandmother.

Nobody came.

He asked people in his village why—and realized how out of touch he was with their day-to-day concerns. “They’re not interested in education,” he says. “They want to know where the food is coming from this evening. They’d say to me, ‘I have a daughter. How will I feed her? How will I clothe her? In 10 or 15 years, she’s going to get married, and then where will I find the money for her dowry and the wedding feast?’”

Singh visited parents in their homes, touching their feet as a gesture of respect. He told them he would feed their daughters three meals a day, provide them with school uniforms and give them jobs in a textile factory upon graduation. He would even pay the girls to attend classes: The money would accumulate in an account the girls could access when they left school and use for a dowry or anything else. The school would feed the wedding party, too.

Still, people were suspicious. But 13 families agreed to send their daughters to Pardada Pardadi. When the school followed through on its promises, a few more families joined. The girls got a solid, basic education as well as vocational training. When the first 13 girls graduated, Singh opened a textile plant to employ them—and offered jobs to their mothers and older sisters, too.

The trickle became a flood, and the students became more ambitious. They were learning about the world outside their villages and the textile factory, and they wanted to be part of it. “The girls started asking, ‘Why can’t I do my 10th grade? Why can’t I do my 12th grade and go to college?’” he says. So the school expanded to offer a complete college and career prep program.

Pardada Pardadi now educates 1,500 girls. Many graduate from 12th grade and go on to higher education, with help from scholarships provided by the nonprofit educational society. Today, 127 alumnae are studying at universities and another 130 have



Textile engineering alumnus and former DuPont executive Virendra “Sam” Singh ’65 says he built Pardada Pardadi, a school for girls in rural India, because research showed that the biggest barrier to economic advancement in his birth country is mistreatment of women.

graduated and obtained good jobs, including more than 50 who work for IT firms in Bangalore, Singh says proudly.

The educational society has become the base for social and economic changes in the wider community, too. The school’s medical clinic provides health care to students and their families. Singh has expanded the nonprofit textile factory, iVillage, by using his corporate contacts to get contracts from large clothing firms, including New Look. iVillage now employs 375 women and donates its profits back to the school.

Through a community outreach program, volunteers and staff also educate women in the villages in financial literacy and assist them in forming self-help groups, which pool their resources to help members start small businesses. More than 6,000 women are now involved. And because many of them are small-scale dairy farmers who were being paid unfair prices for their milk by brokers, Singh negotiated a contract for them to sell their milk directly to Mother Dairy, a socially responsible enterprise. “We cut out the middlemen so that they are not exploited,” Singh says.

The school and related programs attract a steady flow of Peace Corps volunteers and others whom Singh has met in his travels with DuPont. Over the next three years, Singh plans to use all of these networks to double the size of Pardada Pardadi from 1,500 to 3,000 students.

“We have a long line waiting to come to school,” he says.

He needs to raise \$9 million. Once the expansion is complete, his daughters, Renu Singh Agarwal and Ena Singh Murphy, will take over for him.

In the meantime, Singh, now 79, plans to keep expanding his vision of rural development through the education, employment and empowerment of women.

He welcomes members of the UMass Lowell community to visit and learn more.

“My job is to facilitate that future vision and talk to people and say, ‘It’s not an impossible dream; it’s a dream we can put our hands around and make it happen.’” [UML](#)



**“It’s not an impossible dream; it’s a dream we can put our hands around and make it happen.”**

# BUCKLE UP!

BY ED BRENNEN

*Everything about cars is changing, and UML alumni and faculty are helping pave the road ahead*

**T**he puck drops for the Homecoming hockey game at 7 p.m. “Has it really been 20 years?” you ask yourself. You fish your River Hawks T-shirt from the drawer and tell Alexa to order a car for 6:15.

Destination: the Tsongas Center.

The two-door, electric coupe—the latest model from Facebook’s autonomous transportation division—pulls up to your house at 6:14. The car’s sound system is already playing a tune from your playlist, a favorite old-school Drake song. You climb into what used to be known as the driver’s seat, smile for the facial confirmation scanner, buckle your seatbelt and sit back in your swivel chair for the 31-minute ride (according to the in-dash monitor).

As the car exits off the Lowell Connector and heads downtown, you look up from your phone’s newsfeed and think back to how congested these streets used to be. But now, as in every city, driverless cars barely slow down as they quietly weave past one another in busy intersections. Coming down Dutton Street, you can’t believe the vintage Haffner’s Gasoline “It Kicks” sign is still there, although it now points to an electric hypercharging station.

The car pulls smoothly into the dropoff lane in front of the Tsongas Center (at 6:46 on the nose), stopping abruptly as an oblivious visiting fan steps directly in its path. As the car pulls to its final stop, you check your frequent-rider miles balance on the display before opening the door and stepping out into the cool October night.

*Continued*



**“Once upon a time, the automobile’s primary interface was the wheels hitting the road. Now, the vehicle has to interface with other vehicles and with the environment around it.”**

**“H**ow we power, how we drive and how we own our vehicles ... all of these things are going to change fundamentally within the span of one generation, at a level that hasn’t changed in the last 100 years—since cars have been around.”

So says industrial management alumnus Cuneyt Oge ’75, a leading voice in the automotive world. He’s worked as an industry consultant for nearly 40 years and is the former president of SAE International, a global association of more than 128,000 Society of Automotive Engineers members. SAE is helping the U.S. Department of Transportation establish guidelines for autonomous vehicle development, starting with the classification of the six levels of automation: from 0 (where the driver does everything) to 5 (where the driver doesn’t even need to be in the car).

In this emerging era of connected vehicles, where cars rely more on lidar (light detection and ranging) imaging and machine learning than carburetors and pistons, Oge says young engineers today face a phenomenal array of challenges.

“Once upon a time, the automobile’s primary interface was the wheels hitting the road. Now, the vehicle has to interface with other vehicles and with the environment around it through information and data,” he says. “All of these additional dimensions—software, connectivity, cybersecurity—are coming into the automotive space.”

As they do, they are revolutionizing how and what we drive—or what drives us. Whether it’s the promise of planet-saving electric and hybrid vehicles, the disruptive business models of ride-hailing apps like Uber and Lyft or the curious excitement that comes with seeing video clips of driverless cars navigating city streets, the transformation of personal transportation is shifting into high gear.

With this transformation comes a trunkload of new challenges and questions. What’s the best way to power the cars of tomorrow? How do driverless cars respond in life-or-death situations? What happens to the auto industry if people stop buying cars and start sharing them instead? What will our roads, cities and skies look like in 25 years? Will car crashes and greenhouse gas emissions go the way of hand-cranked windows and dashboard ashtrays?

UMass Lowell alumni, faculty and students are playing a role in this lane shift—from computer scientists to engineers, from policymakers to philosophers. Through research and innovative work, they are helping to pave the road for the future of driving.

**TAKE THE WHEEL**

Assisted-driving technology isn’t so new. Cruise control was invented in 1948, and the Toyota Prius has been able to park itself since 2003. Most new cars today have sensors and cameras that will check your blind spots, keep you in your lane and warn you when you’re about to back into that shopping cart. These innovations, combined with increasingly sophisticated GPS systems and navigation apps like Waze, have helped drivers gradually become comfortable with Levels 1 and 2 of the autonomous driving scale.

“If you look at what the automakers in Detroit were doing, it was a slow move toward partial autonomy,” says computer science Prof. Holly Yanco, director of the university’s New England Robotics Validation and Experimentation Center. “But then Google came along and broke the entire model by removing the steering wheel and pedals from the car. And then Uber broke it worse.”

She’s referring to the fact that those companies (along with others such as nuTonomy, which has partnered with Lyft to pilot self-driving cars on the streets of Boston) are skipping the baby steps and jumping right into fully autonomous Level 5 vehicles.

It’s a bold strategy, says Manning School of Business Assoc. Prof. Berk Talay, who researches auto industry innovation. “It’s really too early for that technology to take over a significant portion of the market,” he says. “It will be a huge challenge to convince people to ride in autonomous vehicles where there’s nothing you can do if something goes wrong. It’s not comfortable.”

Indeed, a recent Brookings Institution survey found that 61 percent of Americans were not inclined to ride in self-driving cars, while 69 percent of those surveyed by the Advocates for Highway and Auto Safety said they were concerned about sharing the road with autonomous vehicles. Those results were likely impacted by headlines about a self-driving Uber that hit and killed a pedestrian in Arizona and two fatal crashes involving Tesla automobiles in autopilot mode.

But more than 35,000 people die on American roads each year; that’s almost 100 per day. So aren’t a few fatal accidents involving self-driving cars, while tragic, still an improvement? Isn’t it better to take the steering wheel away from humans and eliminate deadly threats like speeding or driving while distracted, drunk or drowsy?

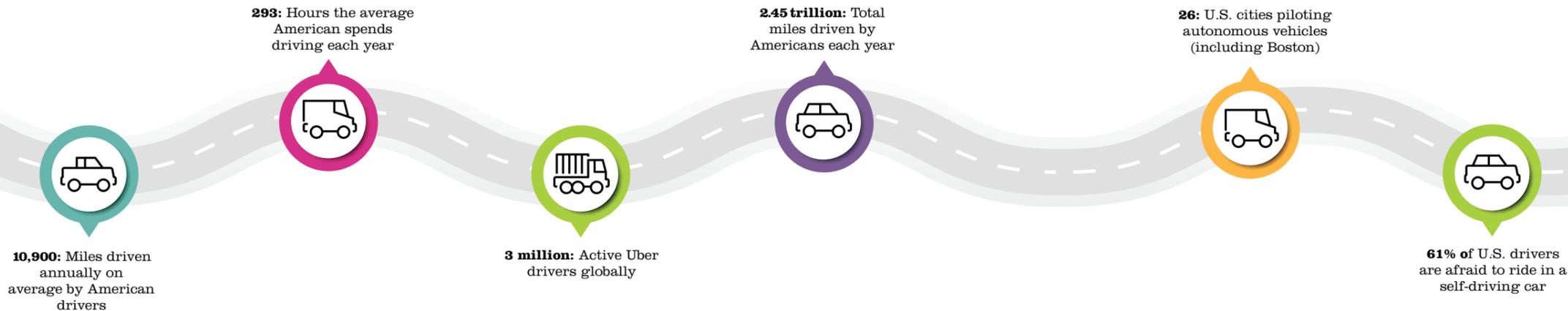
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Faculty in UML’s Philosophy and Civil Engineering departments are collaborating on an NSF-funded project in which they’re creating computer models with PTV Group software to assess the ethical dilemmas created by self-driving cars.



Autonomous vehicle developer nuTonomy partnered with Lyft in Boston on a pilot program in the Seaport district, where passengers can now hail one of nuTonomy’s self-driving cars during regular business hours on weekdays.



**“There are two reasons Americans die so often in car crashes. One is that we have terrible road laws, and two is that Americans drive a ton.”**

Nicholas Evans is an assistant professor of philosophy who studies the ethical dilemmas posed by emerging technologies such as self-driving vehicles. He’s heard people like Tesla founder Elon Musk make that argument, but Evans sees it a different way.

“There are two reasons Americans die so often in car crashes. One is that we have terrible road laws, and two is that Americans drive a ton,” says Evans, who points out that 35,000 road deaths translate to 1.18 per 100 million miles driven. Autonomous vehicles, meanwhile, have only logged about a collective 20 million miles driven. In that context, three fatalities is actually worse.

Evans is working with philosophy lecturer Heidi Furey and civil engineering Asst. Prof. Yuanchang Xie to research the ethical dilemmas created by self-driving cars. For instance: Should your car be programmed to drive you into a ditch (likely causing you harm) to avoid injuring others? The team won a three-year, \$556,650 grant from the National Science Foundation to come up with ethical answers to these types of questions, translate them into decision-making algorithms and then use computer modeling to see how the algorithms play out in various high-risk scenarios.

“It’s an open question as to how we should program autonomous vehicles,” Evans says. “In the past, if you were in a crash, you acted on instinct and weren’t blamed for something that you had no control over. But with autonomous vehicles, we do have control now. We have to program in what happens when there’s no time to think, and that’s a thorny decision.”

**ROAD SCHOLARS**

If self-driving cars can eliminate bad drivers and traffic-snarling accidents, does that mean roads of the future will buzz along smoothly, free of congestion? Not so fast, according to Xie, who thinks autonomous vehicles could actually make our traffic worse. “People may not care if they’re stuck in traffic for an hour if it’s like sitting on their couch and watching TV,” he says. “It’s really difficult to predict when you’re dealing with humans.”

Assuming self-driving cars would be programmed to obey speed limits, however, that itself could help to ease traffic congestion. According to Evans, when London lowered the speed limit on one of its main highways from 60 mph to



**UML STUDENTS HELP CARMAKERS NAVIGATE THE FUTURE**

**A**fter spending the summer working at Veoneer in Lowell, Sam Kovaly will never think about cars the same way.

Kovaly, a senior computer science major, worked at the supplier of advanced driver assistance systems as part of UML’s professional co-op program. He was assigned to write software code for light detection and ranging, or lidar, a technology that functions a lot like radar but uses short, super-fast pulses of lasers instead of radio waves to measure distance. Lidar then takes those millions of measurements and creates 3-D maps that can be used for navigation.

Advances in lidar technology over the past 15 years have accelerated the development of self-driving cars.

“There’s a lot of complexity. Lidar will make cars safer,” says Kovaly, who was not familiar with lidar until he started the co-op job.

Kovaly was one of three UML co-op students working at Veoneer over the summer. They join the ranks of other River Hawks, most of them engineering students, who have been at the forefront of the development of next-generation autos through the professional co-op program and internships.

In recent years, UMass Lowell students have worked at such companies as Tesla, Toyota, Ford Motor Company and Freudenberg-NOK, a maker of gaskets for cars. They’ve worked on powertrain production, researched and analyzed new materials for SUVs and tested safety sensors. Many have parlayed those positions into permanent jobs in the auto industry after earning their degrees.

After his summer at Veoneer, Kovaly is certain that fully self-driving cars are coming; he’s just not sure how soon.

“Every new car will have autonomous capabilities. It could be anything from self-parking or autopilot to fully autonomous. How far out that is depends on how fast the laws change,” he says. **UML**



40 mph, people’s commuting time was reduced by a third. Instead of cars constantly accelerating and braking (which is also bad for fuel economy), they cruised along at a steady speed.

As part of the research on the ethics of self-driving cars, Xie is using traffic simulation software called PTV VISSIM (“Because the NSF wouldn’t buy us a Tesla,” Evans says) to see how autonomous vehicles can strike a balance between safety and efficiency, particularly on freeway ramps and at intersections.

“If autonomous vehicles are going to be extremely cautious, they’re going to be very slow, which will affect the overall system efficiency,” says Xie, who is also helping the Massachusetts Department of Transportation develop a plan for connected vehicle technologies through research work with the UMass Transportation Center.

Xie’s research on intelligent transportation systems includes looking at how self-driving cars navigate four-way intersections. While some envision cars using vehicle-to-vehicle communication to weave around one another in intersections without stopping, Xie doesn’t think that will work. “First of all, it’s scary. You have to consider the passengers in the car,” he says. “And the other problem is, how do pedestrians and cyclists cross the street?”

Instead, Xie says a more sensible solution is vehicle-to-infrastructure communication, where traffic signals will know when cars are approaching from a distance and can adjust accordingly. “Even though your vehicle is still on the Lowell Connector, those traffic signals at the end of the off-ramp can be prepared,” he says. “Or, those controllers can guide your vehicle to a different route altogether.”

Enabling cars to communicate with traffic lights and roads will require some considerable infrastructure work, however. UMass Lowell is collaborating with five other universities from across New England to create the Transportation Infrastructure Durability Center. Backed by \$2.5 million in funding from the U.S. DOT, one of the center’s goals is to develop new technology platforms for automated and connected vehicles that are durable enough to withstand harsh New England winters.

“We expect to develop new sensing and monitoring technologies and new construction materials to achieve a sustainable and durable transportation infrastructure in the U.S.,” says Tzu-Yang Yu, an associate professor of civil and environmental engineering who is heading up UML’s role in the project.

**START YOUR ENGINES**

Cuneyt Oge’s wife, plastics engineering alumna Margo Oge ’72, ’75, took her plug-in hybrid Chevy Volt to the car wash one day near their home in McLean, Va. As the former director of the Office of Transportation and Air Quality at the U.S. Environmental Protection Agency (EPA), Margo Oge helped craft the Obama administration’s landmark 2012 deal with automakers to double the fuel efficiency of cars and trucks sold in the U.S. by 2025 while cutting greenhouse gas emissions in half. At the car wash, she noticed a man waiting to pick up his freshly waxed Tesla. Oge was curious why he chose to drive an electric vehicle.

“Are you an environmentalist?” she asked. “Absolutely not,” the man replied. “My previous car was a Ferrari, but this is more powerful.”

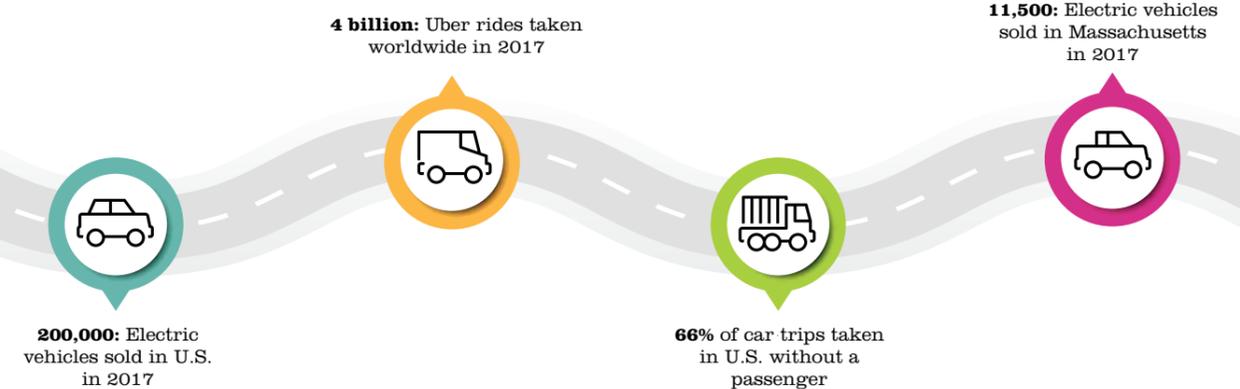
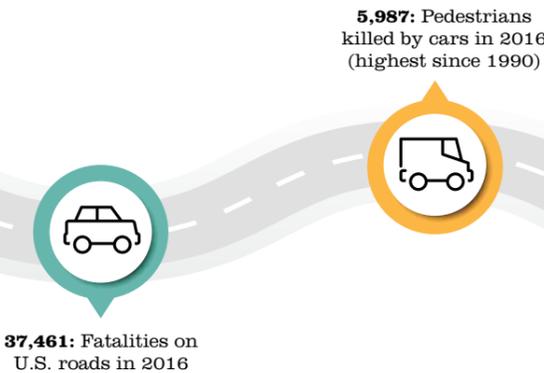
Oge, who wrote the book “Driving the Future: Combating Climate Change With Cleaner, Smarter Cars” after retiring from the EPA in 2012, says the car wash anecdote gives her reason to believe the future of driving is electric.

“In the last seven years, the cost of the battery, the most expensive part of an electric vehicle, has come down by 70 percent. And all the car companies are investing in electric powertrains,” says Oge.

But if cars of the future drive autonomously with complex sensors and computer systems, then mechanical engineering Asst. Prof. Hunter Mack wonders if purely electric vehicles will be up to the task. He sees hybrid vehicles (with biofuel-powered internal combustion engines that help carry the load) as the answer.

“Being able to run the lidar that tells you where all the different hazards are, or being able to run the communication

*Continued on P. 34*



# IN THE DRIVER'S SEAT

## UML'S IMPACT ON THE FUTURE OF CARS AND DRIVING

### LASER FOCUS

Most autonomous vehicles rely on a combination of cameras, radar and lidar to see the world around them. But current lidar systems, which use a high-frequency laser beam, are cumbersome (they look like a blender bolted to the car roof) and expensive (about \$3,000 apiece). **Wei Guo**, assistant professor of physics, and **Hualiang Zhang**, associate professor of electrical and computer engineering, are working with a Cambridge company called Analog Photonics to develop smaller, low-cost lidar systems using silicon technology.

### LATER, RADIATOR

The same vascular structure that could make cracks self-healing may also make engine radiators obsolete. Mechanical engineering Assoc. Prof. **Chris Hansen** has worked with the Air Force on ways to pull heat through channels in a plane's wing and dump it in the atmosphere. "We could do something similar in a car, in the hood or side panel, where we can transfer heat into a structural panel rather than having a separate radiator," he says. Removing the radiator would make cars lighter, more aerodynamic and more efficient.

### BRIGHT IDEA

**Guo** is also creating advanced materials to improve the color spectrum, efficiency and life cycle of white LEDs (light-emitting diodes), which are often found in headlights. Guo, who received funding from the Massachusetts Clean Energy Center, says the technology will better direct the headlights' beam.

### BIG BIOFUELS

With engines evolving—and the environmental and geopolitical consequences of fossil fuels tough to ignore—the race is on to develop cheaper and more efficient alternative fuels and biofuels. In September, mechanical engineering Asst. Prof. **Hunter Mack** and chemical engineering Asst. Prof. **Hsi-Wu Wong** were awarded a \$1 million grant by the U.S. Department of Energy for their proposal to develop renewable fuel additives from woody biomass, or sawdust. "Our team has identified a promising pathway for producing renewable fuel additives derived from a sustainable feedstock, which will help offset traditional fossil fuel usage," says Mack, who hopes the method will lead to other potential sustainable fuels and chemicals.

### QUIET, PLEASE

Mechanical engineering Asst. Prof. **Alireza Amirkhizi** is working with the Army Research Laboratory to develop acoustic-dampening "meta-material" that would result in a more quiet interior for Humvees—and could be used in civilian vehicles. The 3-D-printed polymer is made up of repeating shapes (such as T's or H's) that are surrounded by air. When a sound wave of a particular frequency comes in, the shapes resonate and absorb the energy. The structure can be "tuned" to absorb frequencies over a particular range, such as a car's engine noise.

### FINE PRINT

Through her work with the U.S. Office of Naval Research, plastics engineering Asst. Prof. **Amy Peterson** has actually stepped inside a room-sized 3-D printer at the Oak Ridge National Laboratory in Tennessee. The printer produced the shell of a Shelby Cobra sports car in two days—which sounds cool, but is "still pretty slow compared to traditional processing if you want to scale things to an assembly line," she says, adding that 3-D printing could be handy, however, in making replacement parts for older cars that are out of production.

### HEAL THYSELF

Cracked your bumper by backing into a lamppost that came out of nowhere? Car owners may soon be able to watch the part repair itself, à la "Terminator 2." **Hansen** is working on microcapsules (smaller than the diameter of a human hair) filled with a liquid healing agent that can be mixed into composite materials. When the structure cracks, the capsules rupture and the liquid is released, bonding the piece back together. "We've worked on new capsule chemistries so that we can maintain the liquid inside the shell for years," says Hansen.

### FILL 'ER UP (WITH WATER)

Prof. **David Ryan**, chair of the Chemistry Department, has developed a catalytic hydrogen production process that could power EVs with little more than water, carbonate and cobalt. The process produces almost 90 percent hydrogen, which is then sent to the fuel cells. The only byproduct is water, which can be sent back through the system to make more hydrogen. "You can generate hydrogen as needed for the fuel cell," says Ryan, who recently received a patent on the process and has a grant from the Massachusetts Clean Energy Center.

### BETTER BUMPERS

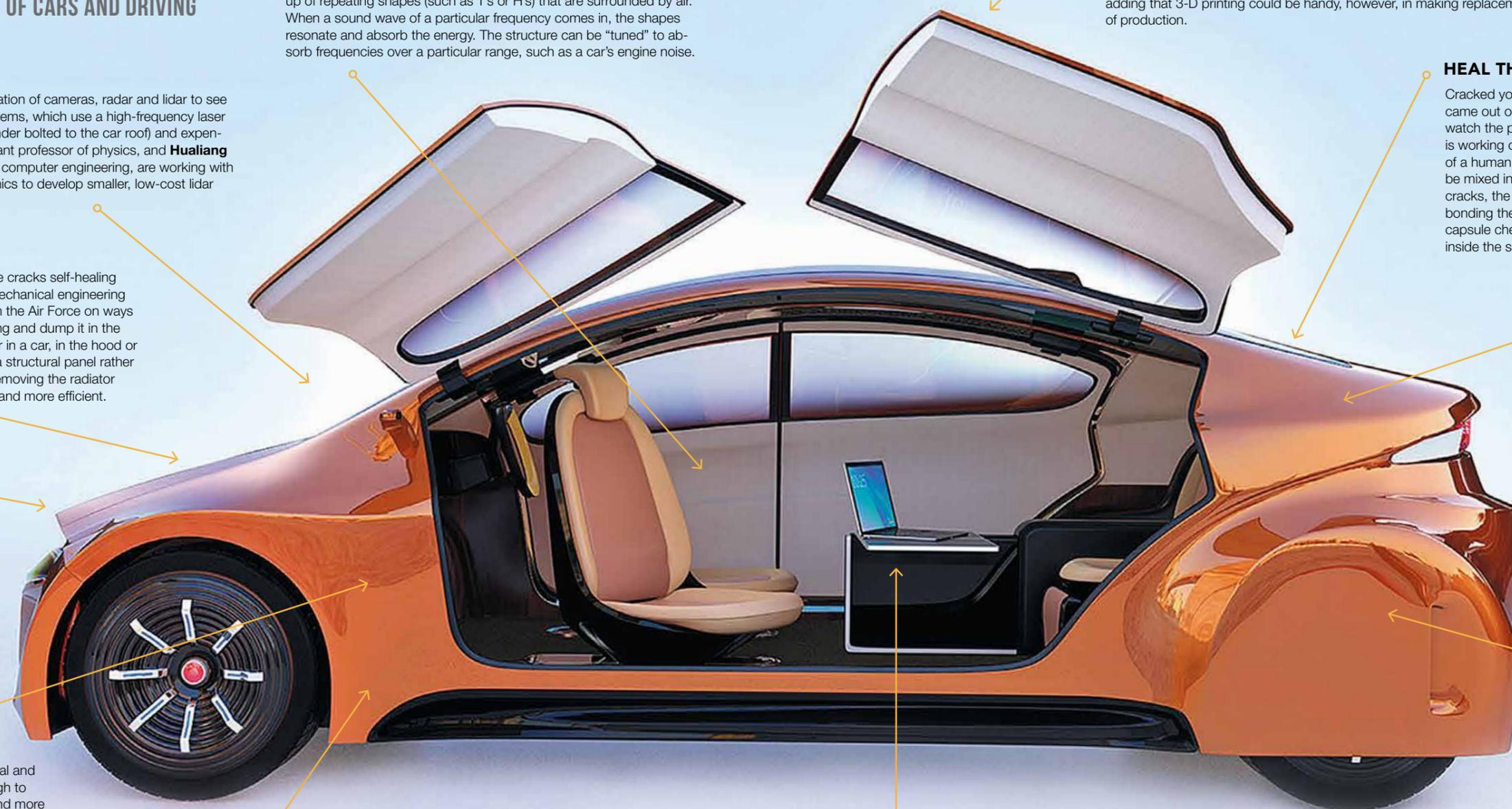
Working in the Advanced Composites Materials and Textile Research Lab (AC-MTRL), Ph.D. student **Xiao Liu** is helping NASA develop lightweight lattice structures that could one day be used in car bumpers. The composite structures consist of multiple layers of intersecting struts that are stronger (and potentially lighter) than the polymer foams currently found inside bumpers.

### LICENSED TECHNOLOGY

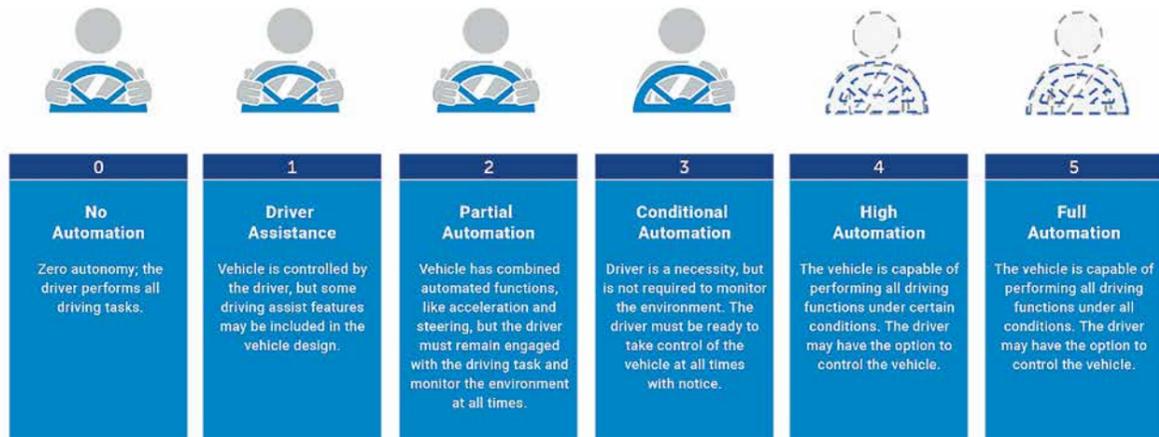
Everything in our wallets is moving to our phones—including our driver's licenses. Billerica-based Idemia, a global leader in augmented reality technology, has helped Iowa become the first state in the country with digital driver's licenses. Manning School of Business student **Kelly Skelton**, a digital marketing intern at Idemia, works with early adopters of the app, which uses biometrics and facial recognition. "It's only a matter of time until all states have this technology, for the sheer security and convenience that it offers," Skelton says. The mobile ID can be updated in real time for name or address changes, and users can hide personal information like their address when showing the bartender that they're over 21.

### RUST STOP

Thanks to all that ice-melting salt on the roads every winter, cars in New England are extra-susceptible to rust. Plastics engineering Prof. **Joey Mead** is part of an international team that's developed and patented nanotechnology-based coatings that have "superhydrophobic" surfaces to repel water and ice. Easily applied to a variety of surfaces with a sprayer, the coatings can be used to prevent corrosion on cars and improve aerodynamics. Mead and her colleagues are working on a clear version of the coating that could be used on car windshields in the future.



AUTOMATION LEVELS



Source: The Society of Automotive Engineers (SAE)

If you can order a self-driving car on demand to get you to the work or to the store, why would you want to buy a car?

systems, those require a lot of energy,” says Mack, whose research expertise is on fuels and combustion. “Our reliance on autonomous vehicles is going to extend the need for internal combustion vehicles in the long run, which is something interesting that I didn’t see coming 10 years ago.”

Mack believes autonomous vehicles will have a “massive impact” on emissions and fuel efficiency, as they will eliminate many wasteful human driving habits (such as accelerating toward a stoplight before stopping). Engine design will also become more practical, eliminating cars that can accelerate to 120 mph in 10 seconds. “There’s no car that actually needs to do that,” he says. With the auto industry at the crossroads of autonomy and electrification, Mack says it’s an opportune moment for engineering innovation.

“For years, fuels and engines developed in their silos. But now, with all these external factors changing, we’re recognizing that we can optimize them in tandem,” he says. “Where we end up in five to 10 years is going to be very interesting.”

LICENSE AND REGISTRATION, PLEASE

The popularity of ride-sharing apps, combined with mobile technology that makes it easier to connect virtually, has led to an interesting trend: Fewer young people are getting driver’s licenses. According to a University of Michigan study, a record-low 71.5 percent of high school seniors had a license in 2015.

If you can order a self-driving car on demand to get you to the work or to the store, why would you want to buy a car? After all, it’s estimated that cars are parked and unused 95 percent of the time. Doesn’t it make more sense to share a car than to commit to car loans and insurance payments?

“I get asked all the time if autonomous vehicles will signal the end of car ownership,” Evans says. “But car ownership is already a thing of the past in many countries. It’s just not replaced by autonomous vehicles, but [instead] by public transportation.”

Still, there were more than 17 million vehicles sold in the U.S. last year. Owning a car, truck or SUV remains a big part of our identity. Talay notes that Americans change their cars about every four years. “But if autonomous vehicles become the norm,” he says, “we will need far fewer cars on the road.”

Which is why automakers like GM, Ford and Toyota are getting in on the ride-sharing action. “They need to get into the ride-hailing business, which will be a lot more profitable,” says Talay, who also predicts that tech companies like Google and Apple will join forces with traditional automakers rather than try to build their own vehicles from the ground up.

Talay points out that 150 years ago, when steam-engine cars first rumbled on the scene, few thought they could replace horse-drawn carriages. Now you only see carriages at royal weddings and in places like New York’s Central Park. A century from now, will human-driven cars be relegated to a similar novelty existence?

“I believe they will coexist,” Talay says. “Some people will still drive cars, especially in rural areas and harsh climates. And some people will keep buying traditional cars anyway, just like some people still ride horses.”

Two UML alumni with a vested interest in the future of cars are John ’90 and Karen ’90 Manelas, who met at the university while earning their degrees in electrical engineering. In 2004, they both quit their corporate jobs to start their own car repair and service shop, Auto Care Plus. The business has grown to six locations across New Hampshire and Maine, and this fall, they’re opening a seventh in Derry, N.H., that will cater primarily to hybrid and electric vehicles.

“They’re building out the charging infrastructure pretty heavily in Europe, and it’s coming this way, too. I definitely see a big shift happening in the next 15 years,” says John Manelas, a self-described “motorhead” who used to build his own muscle cars while growing up in Lowell. He says one of his biggest challenges is finding mechanics who are up to speed with the computer components in new vehicles: “The technology seems to change every minute. It takes a certain mindset to work on cars today.”

Self-driving cars will only make things more complex with their wireless communications, cameras and lidar systems, creating entirely new avenues for services and products that few people have imagined.

“There are companies working on air fresheners for autonomous vehicles to try to keep people from getting carsick,” Manelas says. “That’s another challenge: People on their phone or laptop getting nauseous while their car drives them.” UML



GLOBALIZATION: A DRIVING FORCE IN GERMANY

Thanks to automakers such as Audi, BMW, Porsche and Mercedes-Benz, Germany is synonymous with engineering excellence. But sit in the driver’s seat of one of those cars for a moment and consider the steering wheel.

“How many nations are involved in manufacturing that simple part?” asks Matthias Weyer, dean of the School of Engineering at Pforzheim University, located in the southern Black Forest region of Germany. “The suppliers of the steering wheel and their sub-suppliers are spread over 15 countries. Engineers therefore need to be more globally positioned and networked worldwide.”

Francis College of Engineering students gained that valuable international experience through the Engineers Made in Germany program, which is held in partnership with Pforzheim University.

“It’s a great experience, yet practical,” says Engineering Dean Joe Hartman, who visited Pforzheim in 2013 and collaborated with Weyer to help establish EMIG, a six-week program where students can earn nine credits by taking two engineering courses and one German language course (at beginner or refresher level). Only three U.S. schools are invited to participate in EMIG each year: Penn State University, Lehigh University and UMass Lowell.

“They put together a wonderful program that includes cultural sightseeing, engineering and business visits, and a great curriculum centered on automobile production,” Hartman says. “What better place to learn about building cool cars than Germany?” UML

Mechanical engineering major Nour Khreim (above, right) drove a classic Trabant sedan through Berlin during his “Engineers Made in Germany” study abroad program this summer in Germany.



My First Car

Jacque Moloney recalls her disaster-prone 1965 Ford Mustang

Chancellor Jacque Moloney’s first ride was a wreck. “I got the car because it had been in an accident—it was rear-ended—and it was totaled, but we got it fixed up,” says Moloney, who was a senior in high school when she acquired the 1965 red Ford Mustang. It had been rebuilt by her brother-in-law, a mechanic in Westford. It was cheap.

“I remember picking up my friends, and they all thought it was a very cool car. A hot car. We would just tool around town together,” says Moloney, who also drove the Mustang to and from her job as a waitress at the Airport Diner in Tewksbury.

“It was my first real possession. I bought it myself and was responsible for taking care of it,” she says. “Your first car is a real rite of passage.”

That car “lasted nearly half way through college,” Moloney says, until another driver ran a stop sign and T-boned the Mustang.

Back to the Westford garage for the family fix-up.

Alas, shortly after the repairs were made, another errant driver smashed the Mustang’s front end when it was parked on the street overnight. Its last rites were administered.

“That was an unlucky car,” says Moloney.

It was followed, however, by what the chancellor says became her all-time favorite car: a black VW Bug.—DP

WEB EXTRA: Check out more first-car stories (and share your own!) at [uml.edu/magazine](http://uml.edu/magazine).

# RIVER HAWKS: START YOUR ENGINES

BY DAVID PERRY

UML's Society of Automotive Engineers Chapter Learns How to Build Cars, Confidence and a Business



**"The whole purpose of Formula SAE is not to just build the car and win the race, but to teach engineers cross-functional teaming that is required for product development."**

**S**parks cascade from the bar of a metal skeleton. They flicker and die on the concrete floor of the Shell station garage as Brian Craven, a senior mechanical engineering major, welds.

Craven arrived at 7 a.m., three hours after leaving his other job. It's now 5 p.m.

Empty water bottles and coffee cups are strewn along workbenches, near greasy pizza boxes and an array of tools.

Crunch time. The skeleton must become a car chassis soon.

Thirty-six hours later—at 5 a.m. on Father's Day—11 students from the River Hawk Racing student club hit the road for Lincoln, Neb., and a four-wheel, multiday final exam: The Formula SAE Lincoln North American competition.

From June 20-23, River Hawk Racing competed with the likes of Michigan State University, UCLA, MIT and perpetual piston-pumping powerhouse Texas A&M, which this year lodged its seventh win since 2000.

In 2017, its first competition in five years, River Hawk Racing's goal was to build a car and just make it to the competition. This year, the goal was to do better than in 2017.

Formula SAE (part of SAE International, formerly known as the Society of Automotive Engineers) is, at its heart, a collegiate

engineering competition, about research, design and manufacturing a car that—if it makes it through the preliminaries—can reach speeds of up to 60 mph. But it's also about management, finance and marketing.

The main race in this competition is one of readiness.

"We got a late start this year," says mechanical engineering senior Zach Tenaglia. "The schedule didn't go as planned, but luckily, we have a lot of people who are good with the hands-on part of it."

"And right now," says Tenaglia, wearily surveying the wires, the pedal boxes and the Ninja 650 motorcycle engine that have yet to find their final places on the chassis, "we are tired."

## DAVID VS. GOLIATH

The River Hawks were underdogs, say team members.

"Well, here we are in a Shell garage in Dracut, when a lot of the teams we're competing against have million-dollar shops of their own," says Tenaglia. "But we go to compete and people remember us. It's not like we wouldn't like to have what they do. We just work harder. The dedication here is unparalleled." (The Shell station, on Lakeview Avenue, is owned by Nouria Energy Corp., which donates the garage's use to River Hawk Racing.)

Lincoln was challenging. River Hawk Racing placed 64th of

80 teams overall, and 58th in the Presentation category. But the team earned an impressive fourth place in the Cost category, for which judges meticulously studied team budgets and spending. The River Hawks raised about \$20,000, which paid for everything from car parts to travel expenses.

"Every penny has to be accounted for," says Tenaglia. "And every wrench turn is figured into the cost."

The team never got to the driving or "dynamic" events. The car wasn't starting, so it couldn't undergo the brake test. There was disappointment, sure, but the team is focused on a longer race.

"Going to Nebraska was a lot of fun," says Louis Cirignano, a senior business student. "Would we have liked to have done better? Sure. But this is about learning,

and we learned a lot by doing the wrong things." "The goal this year was to do better than we did the year before, which we did," said mechanical engineering graduate Kevin Nguyen '18, who remains River Hawk Racing's president.

"In 2017, it was about physically making it to the competition," he says. "There were 109 teams at the competition, and we were 109th. Though we did not achieve as much as we had hoped this year, we did make a lot of relative improvements in how we conducted the trip and some of our static events."

## SHIFTING GEARS

River Hawk Racing was hatched in 2006 by a small group of Francis College of Engineering students. UML teams made it to Formula SEA competitions in 2008, '10 and '12 before a five-year break.

Nguyen—a Melrose native who says he's been under the spell of automobiles for as long as he can remember—was instrumental in bringing it back to life. When he arrived at UML, Nguyen quickly discovered that River Hawk Racing could use an infusion of fresh blood.

Others joined the club, but it was "mostly just mechanical engineering students, fixated on the technical work," says Nguyen, who, along with ME major Spencer Culpepper, knew they needed more diversity.

In the summer of 2017, the pair hooked up with business administration major Kelly Foley, a member of the Collegiate DECA club. Foley became an essential cog in formulating a general business plan for River Hawk Racing, until she left in January to start a job

with iRobot.

Since then, Cirignano has taken charge of the business side.

A business major with a concentration in entrepreneurship and finance, Cirignano leads the part of the team that crafts business plans, does cost analysis and handles money management for River Hawk Racing. He is also looking to form a board of directors, which will include students and alumni from various fields.

A good candidate for that board is industrial management alumnus Cuneyt Oge '75, an auto industry consultant who is a former president and chair of the board of directors at SAE International.

"The whole purpose of Formula SAE is not to just build the car and win the race, but to teach engineers cross-functional teaming that is required for product development," says Oge. "You have people that become chief engineers, you've got a marketing person, you've got somebody who worries about the cost. They take on these roles as a team and work as a team, which is exactly the way you work in the workplace."

Formula SAE is formative for automotive engineers, says Oge, who points out that the ranks of automakers like Ford, GM and Toyota have stocked their engineering teams with Formula SAE veterans. And Tesla founder Elon Musk pays particular attention to them, Oge says.

"For students who want to work in the auto industry, it's an opportunity to meet people from huge manufacturers," says Tenaglia. "Last year, a couple of our folks landed internships."

Formula SAE offers great hands-on experience, he adds, pointing out that just like "cars are a system of very small, complicated parts and subsystems working together," so, too, are successful businesses.

"The cool thing about River Hawk Racing," he says, "is that it's not just mechanical engineering students. It's people majoring in electrical engineering, business, finance—students who are not used to working together."

But they're getting better at it.

The team has already started work on next year's model, says Nguyen, who landed a sales engineer job at Aligned Vision, a fabrication management systems company.

He has no plans to leave River Hawk Racing behind just yet.

"Our goal for next year," he says, "is to do better than this year." **UML**



River Hawk Racing's business team (bottom) meets on a weekly basis and communicates daily to stay on track with the strict schedule set by the technical team (center).

> BY GEOFFREY DOUGLAS

# The ‘Life-Changing Opportunity’

## Bill Rhodes ’82 Gives Back by Balancing Things Out for Others

**W**hen William Rhodes arrived at ULowell as a first-year graduate student in 1980, he had some serious educational gaps. “I didn’t write well,” he says today. “My math skills were poor. And I wasn’t good at critical thinking.”

Today, as one of the nation’s leading experts on key facets of U.S. homeland security—emergency assessment and response, radiation and explosives detection—Rhodes is in Washington as an advisor to the chairman of the Senate committee that oversees it. It’s not a role he could even have dreamed up 35 years ago. And there is no question in his mind as to where the path began.

“Whatever successes I’ve had since then,” he says, “I credit to ULowell.”

The successes have been many. For the past 25 years, Rhodes has been a leading member of a series of program teams at Sandia National Laboratories in New Mexico, the nation’s pre-eminent science and engineering lab working on national security. He is also the author of more than 80 technical papers, book chapters and presentations and has consulted with the International Atomic Energy Agency as an expert on radioactive and nuclear-material security.

Currently on sabbatical (or as he puts it, “on loan”) from his most recent post, as technology and program deputy with Sandia’s Defense Nuclear Non-proliferation Division in Albuquerque, he is midway through a two-year stint as a congressional fellow in support of the office of U.S. Senator Ron Johnson, who chairs the Senate’s committee on Homeland Security and Governmental Affairs.

“I function as a kind of translator,” he says. “My role is to study the data that comes in, say, on any threats to our electrical grid security—either from natural causes like weather, or from terrorism—then break down the technical stuff into basic layman’s terms, so the committee can act on it.”

Sandia Labs, a subsidiary of Honeywell International, is under contract with the U.S. government to provide a host of defense-related research and assistance services; among those are oversight of nuclear weapon systems, nonproliferation technologies and the disposal of the nuclear weapons program’s hazardous waste. Its roots, says Rhodes, go all the way back to the Manhattan Project that helped end World War II.

“That’s where the idea of the government’s cooperation with the private sector first came about—the notion that some of the nation’s brightest minds could be found in industry, or in academia,” he says. “So while technically we work for Sandia, the government owns everything, right down to the pencils on our desks. We’re a government operation; it’s the government that benefits from our work. We call ourselves ‘pseudo feds.’”

As a senior manager at Sandia, says Rhodes, as well as in his capacity as a congressional fellow, “I’m expected to be able to show knowledge in different areas, to think critically and to be an effective leader. There’s no way I could manage that without what I learned at ULowell.”

### THE PERSONAL TOUCH

By the time Rhodes arrived on campus in the fall of 1980 with a bachelor’s degree in physics from Ohio’s Wittenberg College, he had a pretty good idea already of what he could expect: “I had applied to a half-dozen universities, had gone around and met all these different professors. It was the ones at ULowell who really took the time to talk with me. And that’s what sealed the deal.”

For the two years that followed, as he pursued a master’s degree in radiological sciences and protection, his early impressions were borne out, he says.

“I had a lot to learn, a lot to digest. And the professors always made time; they answered my questions, they worked with me one-on-one,” he says. “Two of them especially: my thesis advisor, Ken Skrable, and George Cabot [today an emeritus professor]. Just unbelievable educators, both of them. I can’t tell you what a difference they made.”

His years at ULowell, he says, coupled with the financial support that came along the way (he was a teaching assistant, for two years, under Skrable), made his time on campus “literally life-changing,” he says.

That’s why he’s made it a priority to return the favor, giving nearly a quarter-million dollars to the university so far, in part to support two UMass Lowell endowed funds and the top-rated Radiological Sciences Program. He is also a member of the Legacy Society and the Radiological Sciences Advisory Board, and is currently chairman of the Advisory Board for the Kennedy College of Sciences.

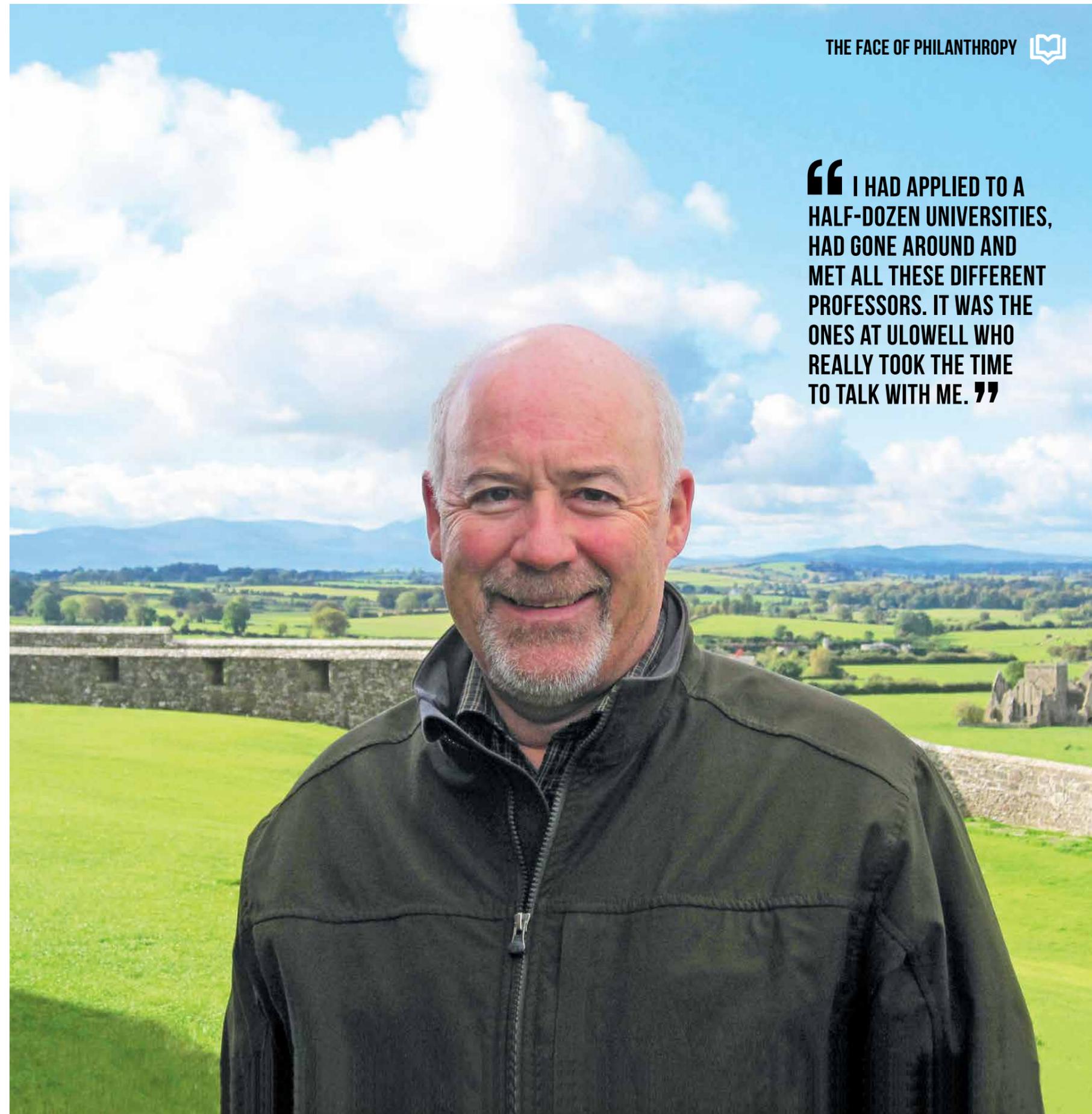
In 2009, he kicked off a fund of his own, the William G. Rhodes III Scholarship Fund, in support of minority and female students studying radiological sciences. Asked what’s behind his choice of beneficiaries (being a member of neither group himself), his response is as sensible as the science he pursues.

“Well, in my family, we’ve had some amazing women,” he says. “My grandmother, for instance, was among the first females ever to graduate from Cornell. It must have been a struggle. I can only imagine what people like her might have done if they’d had more opportunity.”

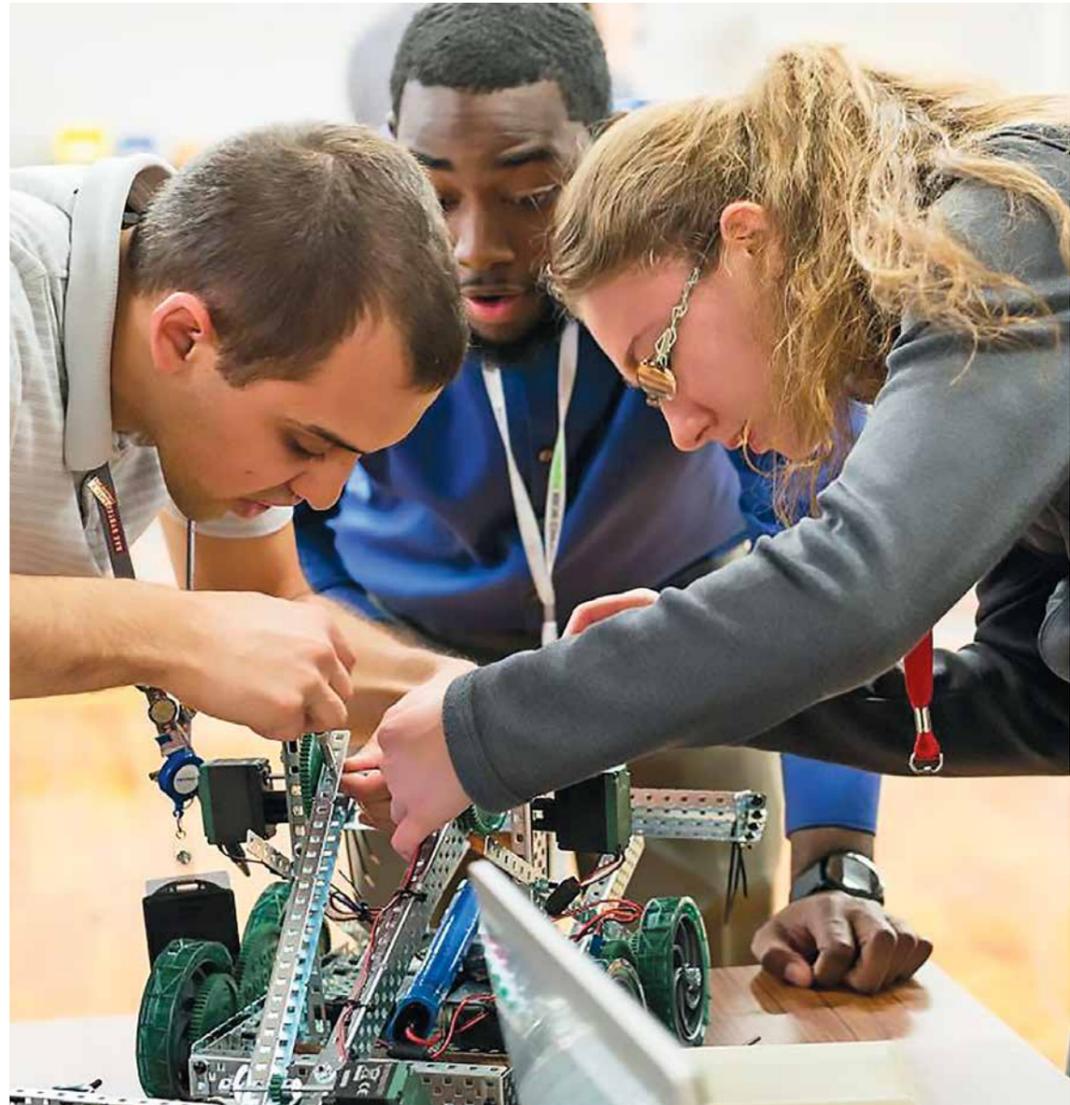
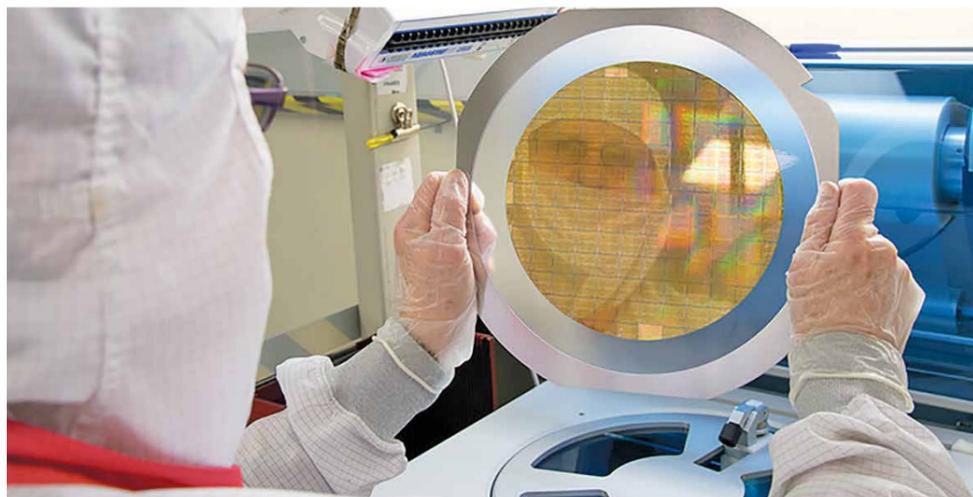
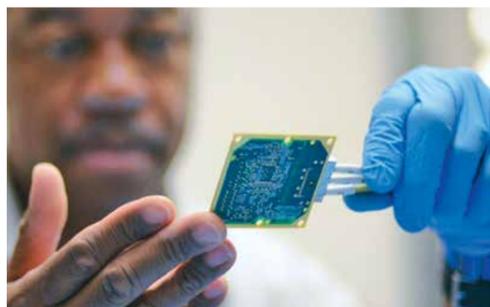
As for the minority-student end of the gift, his thinking is just as reasoned: “In New Mexico, where I live when I’m not in Washington, half the state is Hispanic—and that’s true also for the workers at Sandia. So I’ve been able to observe firsthand the lack of opportunity they face. The Native Americans as well. So I’m trying to do what I can to even things out a little.”

It’s an instinct for which the university is grateful.

“Bill Rhodes understands the importance of helping others achieve their dreams, the power of generosity and the beauty of kindness,” says Kennedy College of Sciences Dean Nouredine Melikechi. “He has the university at heart and is always available to provide a helping hand, an idea or a gift, particularly in those moments when the need is greatest. I’m honored to know and work with him.” **UML**



“ I HAD APPLIED TO A HALF-DOZEN UNIVERSITIES, HAD GONE AROUND AND MET ALL THESE DIFFERENT PROFESSORS. IT WAS THE ONES AT ULowell WHO REALLY TOOK THE TIME TO TALK WITH ME. ”



# BAE SYSTEMS:

## UML IS 'THE BEST SORT OF PARTNER TO HAVE'

> BY GEOFFREY DOUGLAS

When Ray Brousseau, vice president and deputy general manager of electronic systems for BAE Systems' Electronic Systems sector—the largest manufacturing employer in New Hampshire—is looking for a new employee with a particular skill set he needs, the first call he makes is to UMass Lowell Engineering Dean Joe Hartman.

"He knows the sort of people we need here; he understands just what I'm looking for," says Brousseau, a 1986 UMass Lowell electrical engineering graduate who's been with the company 24 years. "That's the best sort of partner to have."

The partnership between UMass Lowell and BAE Systems runs deep. Whether it's a question of employment opportunities, resource donations or joint-project collaborations, the interests of the university and the Nashua-based company are well-aligned.

The mission of BAE's Electronic Systems sector—which produces commercial and defense electronics for flight and engine control, surveillance, electronic warfare and a host of other equally critical tasks—lines up well with the university's prowess in STEM education.

"UMass Lowell produces great engineers," says Brousseau, a member of the university's Industrial Engineering Advisory Board. "And not only that—they're great engineers who love the area and want to live their lives here."

The company has been around since 1951, when a crew of Raytheon engineers left the Massachusetts giant to found a small company in an abandoned Nashua textile mill. Originally called Sanders Associates (after one of the founding group), the new firm's focus was on protecting military aircraft from detection by radar. By the mid-1970s, the mission had broadened: The company became a leader in defending U.S. jets from an enemy's heat-seeking missiles, and in defeating any countermeasures that might detect its sensors. All this came under the general heading of military electronics, still a young industry at the time—though by the end of the century, most of the country's military aircraft would be equipped with its defenses.

In 2000, Sanders was acquired by the British firm BAE Systems, among the largest military contractors in the world, then merged with a second defense-focused company to form the Electronic Systems of today.

At the core of the UML-BAE partnership is employment. The company, which currently has 5,400 employees in southern New Hampshire, hired roughly 1,000 new workers last year alone and recently announced plans for 400 additional jobs. Many of these are graduates of UMass Lowell.

For some of them, says Brousseau, the relationship begins with a summer internship: "We look for the students with the latest skills, then we put them right to work—they're not just running out for coffee, believe me. By the end of the summer, they've received some valuable experience, as well as exposure to what the company is about. And for us, it makes for some excellent branding. Lots of those students end up leaving here with a job offer in hand. So it works out well all around."

For some UML grads, there is another benefit. BAE Systems' Warrior Integration Program, a three-year rotational system designed to integrate post-9/11, combat-injured veterans into the company's workforce, seems almost tailor-made for the university, whose population of veterans is the highest in the state and among the highest in New England.

A second area of partnership revolves around various research and event collaborations. One of these, last year's "Space Conference," celebrating the 60th anniversary of the dawn of the Space Age and designed around the theme of "Space Exploration in the Upcoming Decade," was directed by UML physics Prof. Supriya Chakrabati, who heads the university's Lowell



Center for Space Science and Technology. Over several days in April, it brought to campus a nationwide team of astronauts, scientists, researchers, students and industry leaders who shared their work on space exploration and discussed its new frontiers.

"We have a strong and growing partnership with BAE Systems in space science and engineering," says Chakrabati. "One clear reflection of that was the company's generous support for that symposium, which attracted many of the country's leading thinkers and provided a blueprint for our approach to 'New Space.'"

Another joint project, also under the direction of Chakrabati, awarded a team of more than 50 UML students a \$200,000 NASA grant to design and build a solar-powered satellite for a yearlong mission orbiting the earth.

"That project really demonstrates the students' energy, and their commitment to designing something to go into space," says William Watson '84, '88, chief scientist at BAE Systems' ES sector and a member of UML's Electrical Engineering Advisory Board, who led the company's effort to launch the program. "And it definitely shows off what they're known for: an ability to get things done."

There have been other partnerships. BAE Systems was the chief sponsor of this year's Women's Leadership Conference, hosted by UMass Lowell at the Inn & Conference Center. And on BAE's Nashua campus, a series of four three-credit courses taught by UML faculty—the university's Graduate Certificate Program in Microwave Engineering—offers company employees advanced training in radio-frequency and microwave development, as well as credit toward a graduate degree.

Finally, the company is also a longtime collaborator with UMass Lowell students in their senior-year capstone design projects, often to the benefit of both parties.

"It's not uncommon for us to have a problem we need help solving," says Brousseau. "A student will come in with a fresh perspective, and really add something to the discussion. We're talking about well-prepared, high-caliber people—the sort who go on to be outstanding engineers." [UML](#)

**"UMASS LOWELL PRODUCES GREAT ENGINEERS, AND NOT ONLY THAT—THEY'RE GREAT ENGINEERS WHO LOVE THE AREA AND WANT TO LIVE THEIR LIVES HERE."**

Photo top right: BAE executive Ray Brousseau '86 speaks to students in the UML graduate certificate course in microwave engineering, taught on the BAE Systems campus.

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# ALUMNI LIFE



## TAKE A HIKE

Over 130 days of hiking north from the Mexico border through California on the Pacific Crest Trail, Kyle Soeltz '14 had tasted the array of spoils the natural world offers. Fresh air, sunlight, challenge. There were surprises, of course, including the acrid smoke from distant forest fires. Soeltz was mostly alone.

The 26-year-old graphic design graduate finished the 2,660-mile trek in September.

Along the way, he raised money for Hike for Mental Health, far surpassing his goal of \$1 per mile. The idea for the trip began with "Reconnect," a campaign he developed for his UML capstone project that encourages folks to "experience the world on your feet, not on your phone."

Reconnect, he says, is about not over-doing screen time. "The goal is to bring awareness to how much time we spend on Facebook and sitting in front of a TV, watching and reading other peoples' stories," he says. "But at the end of our time here, it's not the stories we read and watched that will have had the greatest impact, it's the ones we created through our own experiences."

**SAMUEL L. CLOGSTON '48** isn't as interested in the future of driving as he is in its past. The Olcott, N.Y., alumnus recently acquired a 90-year-old Model T Ford Depot Hack. Originally designed to transport guests from train stations to hotels, the station wagon-like hack retailed for \$695 in 1928. [1]

**'58 Robert Munroe** of Dallas, Texas, retired from IBM and Motorola and is spending time traveling extensively, with emphasis on the contiguous 48 states.

**'64 Arthur Stein** is retired and reports that he is busy "attending former employees' retirement parties."

**Ann Fox Chandonnet** is an accomplished author, poet, culinary historian and journalist, with an impressive catalogue of published works. Ann resided in Alaska for many years and is now living in St. Louis, Mo.

**Marie Sweeney** was honored at "An Evening for Marie Sweeney," hosted by the Brush Art Gallery & Studios in Lowell, for her tremendous service to the local cultural community. A former Lowell High School English teacher and longtime member of the UMass Lowell College of Education Advisory Board, Marie is a dominant force in the community, a longtime activist in civic, political and cultural affairs and an advocate for education, human services and volunteerism. At the event, Marie received a congressional citation from U.S. Rep. Niki Tsongas and U.S. Sen. Elizabeth Warren.

**'68 William Caparelli** spent years in the semiconductor industry in Silicon Valley. He is focusing now on technologies needed in the oil and gas production and development cycle.

**John and Bonnie '69 Wilder** celebrated 50 years of marriage last October.

**'69 Paula Abate** reports that she is now semiretired from her career as a licensed marriage and family therapist.

**Lillian Pearsall** retired from the Department of Veterans Affairs, Nursing, in July 2016. Since then, she has visited several national parks in the western U.S., cruised to Norway and

Britain and through the Panama Canal, and visited both coasts of Mexico. She is also spending time with family and friends in both Massachusetts and North Carolina.

**'70 Nick Siviglia** retired after 39 years working for the family business—a truck-body manufacturer on Long Island in New York. He now lives in North Carolina with his wife, Laurel, a former Lowell State student. The pair met in college on a blind date and went on to marry and raise a boy and a girl (now both in their 40s). A lifelong car lover—his first car was a '67 Mustang, 3-speed, yellow with black interior—Nick says he and Laurel collect antique cars and go to car shows whenever they can. Their collection is holding steady at six—his first purchase was a 1956 Thunderbird two-seater, and his most recent a 1955 baby-blue Thunderbird two-seater. If money were no object, and any car in the world could be his, Nick says it would be a 1930s Cord. "What a beauty, what a gorgeous car," he says. "If there's such a thing as a dream car, I guess the Cord would be mine." [2]

**'72 Michael R. Moran '72, '77** recently retired from Bayer Corp. and moved from California to North Dartmouth, Mass.

**Joanne L. Achille** writes, "After living on Marco Island in Florida for three years, we moved back to New Jersey to be close to our five children and nine grandchildren! Celebrated our 46th anniversary in June."

**'73 Anthony Caputo**, president of Pyrotech Consultants Inc., writes, "Hey, I should be retired, but having too much fun. Starting to slow the workload down, just spent three weeks touring Italy. Plan to travel more and cut my work week to three days for the summer, spending more time with grandchildren, fishing, boating and driving my Classic MG."

Continued

> CLOSE-UP CLASS OF 1963

## A License for Loyalty



**Tom McAvinew** is arguably the biggest River Hawks fan in Colorado. Just look at his license plate.

After graduating from Lowell Tech in 1963 and getting his first engineering job in Connecticut, McAvinew says that subsequent transfers and job changes took him and his wife, Karen, and their family to Los Angeles, back to Connecticut, to New Jersey, Pennsylvania—and finally Colorado in 1983, where they've remained since.

But McAvinew has always held a piece of Lowell in his heart—and on his car.

He got "RVRHWKS" license plates about 20 years ago as a means of maintaining a connection with UMass Lowell, he says, but retired them with a vehicle change.

"Then last fall at renewal time for the Buick LeSabre, I realized the they were in better condition than the plates on the car, and after the DMV confirmed that no one had taken RVRHWKS in the meantime, I was able to reuse them," he says. "I'm glad I kept them. Go Hawks!"

Now retired, the former instrumentation and control engineer at Colorado firms like Audubon Engineering and at Instrumentation and Control Engineering LLC (where he was principal partner) remains managing director of the ISA's Standards and Practices Board at the International Society of Automation. He's been a member of ISA since 1964, and has held numerous committee and chair positions for the association.

He scaled back more than his job. After 34 years in the same house, the McAvinews downsized to a smaller home eight miles away.

"Now we're busy with projects there," he says. "And we look forward to being able to drive the LeSabre—still a nice car at 14 with only 120,000 miles on it—to visit our daughter and grandkids in Fort Worth, Texas, more often."



1. SAMUEL L. CLOGSTON '48
2. NICK '70 AND LAUREL SIVIGLIA
3. JUAN S. LINARES '74
4. DORI SALOIS SALERNO '75
5. JOANNE ALDRICH '78

CLASS REUNION

In 2019, we will be celebrating alumni with class years ending in 4 and 9—from five-year reunions to 45! Look for information in your email and online as the year approaches: [www.alumni.uml.edu/reunion2019](http://www.alumni.uml.edu/reunion2019).

> CLOSE-UP CLASS OF 1977

## A Man, a Squirrel and the Game of Life

On an afternoon in August 2015, an orphaned baby squirrel, just fallen from a tree, showed up in Randy Hecht's front yard in Huntington Beach, Calif. He took her in and named her Roxy. After researching squirrel care online, he nursed her back to health, and when she was eight months old, he released her.

But Roxy didn't go far, parking herself permanently in a series of nests in Hecht's yard. On Mother's Day 2016, she delivered a litter of babies. "I felt so proud," Hecht says.

With almost anyone else, the story would end there: a critter saved, a good deed done. But Hecht '77 is different. An aerospace engineer for Boeing in California for 28 years, he spent his weekends during the '90s in an improvised Batman costume, driving around in a homemade Batmobile fashioned from a '78 Corvette, hosting parties for kids.

"I was an engineer during the week, the Caped Crusader on weekends," he chuckles, remembering those long-ago days. "It was a kick, and I made some OK money."

With Roxy, he found a new passion—and a muse. Hecht created the board game "It's a Squirrel's Life" in Roxy's honor. Designed for players 8 and older, the game's objective is to gather a certain number of food pieces (like acorns and strawberries) and obtain different-colored tail rings signifying squirrel-life milestones (like nests and babies).

Due largely, Hecht says, to the marketing skills of his wife, Ophelia, the game has sold more than 500 units from its website ([www.moxy-roxy.com](http://www.moxy-roxy.com)) and another thousand or so at retail shops around the U.S.

Meanwhile, Roxy is thriving—and pregnant for the fifth time. She and Hecht visit nearly every day.—GD



**'74** **Juan S. Linares** retired from his career as a chef and moved to Boquete, Panama. [3]

**Edward J. Samowski**, retired and living in Chelmsford, Mass., recently visited the National Baseball Hall of Fame in Cooperstown, N.Y., during the annual Hall of Fame Weekend. Edward was the special guest of Atlanta Braves former third baseman and Hall of Fame inductee Chipper Jones.

**'75** **Dori Salois Salerno** is the executive artistic director for the Vantage Theater in La Jolla, Calif., and recently retired from 18 years of working as a geriatric certified nurse case manager. In her spare time, Dori authored a novel, "Mrs. Bennet's Sentiments." A "Pride and Prejudice" spinoff, the novel tells the story from the perspective of the character of Mrs. Bennet. The book was selected as a top fiction pick by People magazine. [4]

**'76** **Edward Yang** is president of the U.S. operations of a billion-dollar IT service corporation, iSoftstone, headquartered in Beijing. He is responsible for cross-U.S. and China business investment, partnership, marketing and distribution. He has also written a book on teaching the western world about Chinese culture, "Confucius Says ... There Are No Fortune Cookies in China," that won Penguin Publishing's Rising Star award.



**Kenneth R. LaCerte** was recognized by Continental Who's Who as a Pinnacle Lifetime Member in the field of psychotherapy, in recognition of his role as a psychotherapist in private practice.

**'77** **Joseph Zenga** writes, "Wow, 40 years, it seems like yesterday that I was parading thru the halls going to and from the Ratskeller ... lol, truly miss the days and all the friends I made, it was a great time and experience to truly cherish and remember."

**Joseph Donahue**, the former site vice president for Duke Energy's Intergraded Coal Gasification Plant, is now the company's VP of nuclear engineering.

**'78** **Matthew Doyle '78, '79** serves as head/chief product safety officer, R&D and vice president of The Live Well Collaborative, The Procter & Gamble Co., in Cincinnati, Ohio. He was recently elected as a distinguished fellow of the American

Association for the Advancement of Science and the American Association of Dental Research and previously served (via a congressional appointment) as a member of the National Research Advisory Council for NIDCR at the National Institutes of Health.

**Joanne Aldrich** has retired from officiating women's basketball after 38 years of refereeing. She spent 30 of those years refereeing women's Division I college games, including at UMass Lowell. [5]

**'80** **Thomas Galvin** was appointed to the Massachusetts Clean Energy Center by Gov. Charlie Baker in 2015. He currently serves on the board of directors of two renewable energy technology companies in Scotland.



**'81** **Howard Kangas** is now semiretired and looking for new opportunities.

**Georgiana (Gina) LaFortune** is a partner at her own law firm, LaFortune and LaFortune, in Andover.

**Timothy Crowley**, a former captain with the Lowell police department, is now the new police chief in Atkinson, N.H.

**'82** **Leslie Whiting-Poitras '82, '88** worked as a family nurse practitioner for 28 years in two local family practices before retiring in 2016. After a brief hiatus, she was hired on as an adjunct faculty member at Rivier University. She continues in the leadership of the Merrimack Valley Nurse Practitioner Group, which she co-founded back in 1989. When not working, she bakes a lot of cookies and takes a lot of pictures for the UML cross-country and track and field teams while cheering on her son, **Tim Poitras**, who graduated in May with a degree in environmental studies. She also rings a mean cowbell at UML hockey games (her husband **Artie Poitras '85** is the head of athletic health care and head trainer for UML hockey).

**MaryEllen Doherty** joined the compliance team at SAK Environmental LLC as a senior EH&S specialist. MaryEllen was awarded "Champion of Excellence" by ACHMM.



Continued



- 6. JOHN LAVELLE '83
- 7. TRISHA GALLAGHER BOISVERT '91
- 8. TIM MORRISSETTE '06
- 9. KATE MUNOZ '14

**CLASS REUNION** In 2019, we will be celebrating alumni with class years ending in 4 and 9—from five-year reunions to 45! Look for information in your email and online as the year approaches: [www.alumni.uml.edu/reunion2019](http://www.alumni.uml.edu/reunion2019).

**Ed Manzi**, chairman and CEO of Fidelity Bank, was featured in the Worcester Business Journal as a Business Leader of the Year.



**Charles W. Davis** has been named president of SweeGen Inc., a producer of noncaloric sweeteners for the food, beverage and flavor industries.

**'83 John Lavelle** is CEO of GE Renewable Energy's Offshore Wind business. Based in Nantes, France (though you'll rarely find him there, or anywhere else, he says, "for much more than three days at a time"), John leads the company's mission to parlay a \$400 million investment into the deployment of the world's largest offshore wind turbine, which will rise 260 meters above sea level, roughly four-fifths the height of the Eiffel Tower. John has been with GE since 1986. [6]

**'84 Robert Peirent '84, '88** has recently been hired as the city engineer for Holyoke, Mass. He was previously the public works superintendent and acting town manager in East Longmeadow, Mass.



**Jim Driscoll** has joined Elaine Construction Co., a Newton-based construction management firm, as a project executive.

**'85 Mounzer M. Aylouche** has been promoted to vice president of homeownership programs at MassHousing. He oversees all aspects of MassHousing's homeownership business, including production, lending operations and servicing.



**Richard Sarnie** recently joined United Natural Foods Inc. as national vice president of risk & safety. He was also recently named a fellow of the American Institute of Chemical Engineers in recognition of his 30 years of providing process safety to nonchemical industries.

**Elena Yee** is enjoying her new job as a mental health counselor at Alfred University in upstate New York.

**Eileen Cirino '85, '87** was elected a fellow of the American Association of Physicists in Medicine, an appointment that honors members who have distinguished themselves by their contributions in research, education or leadership in the medical physics community. Eileen is a medical physicist at Lahey Hospital and Medical Center in Radiation Oncology.

Continued

> CLOSE-UP CLASS OF 1980

## Diane Feeney Mahoney '80: Five Decades of 'Doing What Needs To Be Done'

BY KAREN ANGELO



Growing up in Cambridge, Mass., in the 1960s, Diane Mahoney (then Diane Feeney) wanted to be a firefighter like her dad. But in high school, her teachers urged her to aim for a more "woman-friendly" career and become a secretary, a teacher or a nurse. Reflecting on her long career as a nurse, educator and researcher, she has no regrets.

"What intrigued me about what firefighters do was their involvement in first aid and emergency care to help people, so nursing was a natural choice for me," she says.

In a career nearly 50 years long, Mahoney has cared for patients in hospitals and in homes, developed training programs for hospital personnel and families, taught college students and received millions of dollars in grant funding.

The first person in her family to go to college, she graduated from Boston College School of Nursing to become a registered nurse in 1969.

"This was back in the day when older people were not respected," she says. "Providers tied up and medicated confused elders. I would always ask, 'Why are we doing things this way?' and the answer was always, 'That's the way we've always done it.' Well, that wasn't good enough for me."

Mahoney learned about the UMass Lowell gerontology nurse practitioner program at an event.

"I knew right at that moment that I needed to enroll in the UMass Lowell gerontology program so that I'd have the knowledge that I needed to change policies that would improve lives," she says.

When Mahoney shared her frustrations with May Futrell, who at the time was chair of the Department (now School) of Nursing, the direction of her career changed.

"May Futrell's advice tapped into my pioneering spirit by telling me that if I didn't like it, then I should figure out how to change it," she says. "The UML gerontology program gave me and a new cohort of nurse practitioners the expertise and confidence to blaze a new trail for improving the lives of patients."

After earning a master's degree at UML, Mahoney went on to earn a Ph.D. at Brandeis University because, she says, "I needed to learn the language and methods of policymakers."

Her next stop was Washington, D.C., where she did influence policy.

"I testified at a D.C. hearing back in the Reagan days on the issues of overmedicating elders," she says. "And I published several papers on overmedicating and on restraint-free nursing homes, which pointed to better alternatives."

Mahoney also established Massachusetts' first licensed nurse-directed Senior Citizens' Health Center at Riverside Towers Senior Housing in Medford. The award-winning center offered community-based primary health care by nurse practitioners and screenings designed to empower elders. Seniors learned how to take and understand their vital signs, medications and caloric intake, and they worked on fall prevention and how to check for skin cancer and other maladies.

Initially, policymakers argued that preventative care screenings would be used as a way to admit more people into the hospital, says Mahoney, who secured a grant from the International Council of Nurses to conduct research and proved them wrong.

"While preventative care may seem like common sense today, back in the '70s, it was not understood or encouraged," she says. "I found that I loved collecting data. We showed that doing free health care screenings, combined with follow-up and care coordination by nurse practitioners, kept more people out of the hospital."

Mahoney was an early champion of using technology to help people with dementia or disabilities; 15 years ago, she worked on home monitoring systems for vulnerable people. Her systems sent messages reminding people to do things like wake up, eat lunch and take their pills. Each system was tailored to the patient's specific concerns.

She also developed a "smart dresser" that senses and interacts with people in middle-stage dementia. A voice guides them in real time through the dressing process, reducing the demand on caregivers. DRESS—Developing a Responsive Emotive Sensing System—won the 2014 International Society of Gerontechnology Leading Edge Award for best innovative technology.

Mahoney retired a year ago from her role as the inaugural Jacque Mohr Professor of Geriatric Nursing Research at the MGH Institute of Health Professions, but she is still involved in research as a consultant and grant advisor. To pass the torch to the next generation, she's teaching grantsmanship and advising young researchers at NIH's Summer Institute on Aging workshop.

"UMass Lowell empowered me to do what I knew needed to be done," she says. "Throughout my career, I've tried to do the same for others." UML



> CLOSE-UP CLASS OF 1986

BY GEOFFREY DOUGLAS

## What Goes Around, Comes Around

One day in the fall of 1988, Ty McConney '86, '88 met an older man on a train. Fresh out of ULowell with an MBA, McConney was on the lookout for opportunities. As the two men chatted on the train, McConney shared his résumé, the older man his business card. The result was the younger man's first real job: with Digital Equipment in Littleton, Mass., a top employer in Massachusetts at the time.

Ten years in ever-more-senior positions at Digital, Compaq and IBM/Lotus were followed by 16 years with NetApp, the \$20 billion Fortune 500 data-services company in California. He retired from there three years ago, having first headed the company's Japan operations (he is half-Japanese himself and married to a Japanese woman). He also oversaw global production of one of its principal product groups.

"I'd spent enough years, I'd made enough money; it was time for other things," says McConney, who adds that the plan was to spend more time with his teenage son, and with his 91-year-old mother, back in his home state of Massachusetts.

He hadn't figured on any new business ventures. But it was at that point that a second older man would figure prominently in his life—only this time around, the roles would be reversed.

The man's name is Masao Nakagawa, a Japanese sushi chef in Santa Cruz, Calif.—a 10-minute drive from where McConney now lives—and the owner of Naka Sushi, one of that city's best-loved restaurants. The two men have been friends for 20 years.

About two years ago, the restaurant, facing financial woes, was struggling to stay open. McConney, just retired and with the time and money to invest, decided to get involved.

"I'm not a restaurant guy," he says. "But he'd put a lot of his life into that place, and he was close to going out of business. He's been a friend a long time. So I wanted to help."

Over the next several months, the restaurant, now with funding from McConney, closed its doors and reopened in a new location and with a distinctly new look: "light and vibrant, sleek, spotless and colorfully appealing," according to a local reviewer, "with chic banquettes, modern light fixtures [and] a gleaming, tile-and-granite sushi bar."

McConney put in much of the legwork, and still does: "hiring, firing, money stuff, interacting with people, pulling the right levers—a lot of the same things I did [in business], just on a smaller scale," he says.

"We've been open now a year and a half, and we're doing well. And it's given my friend a second lease on life."



Above: Ty McConney, left, with Masao Nakagawa, owner of Naka Sushi in Santa Cruz, Calif.

**'86 Bob Driscoll**, CEO of Salter HealthCare, has retired after 15 years with the company. A Medford resident, Bob has over 41 years in the health care field.

**'88 Loretta Girard Dougherty** has been in the transportation industry for 28 years, focusing on project engineering and management,



bridge inspection, and design for transit, railroad and highway bridges on a variety of projects throughout New England. She has been with HDR for 13 years and was promoted to transportation program manager for New England.

**John G. Dubuc '88, '16** assumed authority as the Command Chief Master Sergeant of the 102nd Intelligence Wing at Otis Air National Guard Base. A double River Hawk, Dubuc began his military career in the Army National Guard in 1984. Most recently, he has worked in information technology for the school district of Amesbury.

**James Dunn** is retiring after 42 years at GE Aviation & Power.

**Kelly O'Neill** has been appointed to the role of transportation market sector leader at BSC Group, a leading consulting firm providing planning, design and environmental services to the transportation, energy and land development markets. In this capacity, she will apply 30 years of industry experience to strengthen BSC's relationships with existing and future clients in New England's transportation marketplace.



**'89 Jeff Coutu** joined the sales team at CGL Electronic Security Inc., where he will be responsible for developing new business opportunities, sales and managing customer relations.



**Dennis Gallagher** was appointed president at the manufacturer Jacobs Vehicle Systems.

**Mark Hibbard** is currently building custom kayaks and canoes and rebuilding vintage motorcycles.



**'90 Robert Cole** has been named chief of the Billerica fire department. He's been with the department for 23 years.

**Christopher Flaherty** joined Rakks Shelving Systems as general manager in March 2017.

**'91 Trisha Gallagher Boisvert** is co-founder and executive director of Haverhill-based Sailing Heals Inc., which offers sailing cruises to cancer patients and their families. [7]

**Edward Hogan** is the senior vice president of clinical operations for Invicro LLC, a Konica Minolta company and leading provider of imaging services and software for research and drug development.

**Cheryl Morrison** is the assistant director of nursing at Brockton Neighborhood Health Center.

**John Regan '91, '93** writes, "After 22 years at GZA, I moved to GTR Inc. in North Chelmsford, taking an ownership position. We currently employ nine UML alumni, all in civil/geotech."

**'93 Patricia Cason** has worked for Bridgewell Counseling Services since graduating from UMass Lowell. She also interned at Bridgewell for two years prior to graduation. Patricia writes, "Perhaps I will one day retire from this wonderful agency."

**Erin Clavo-Bacci** was named Businesswoman of the Year by the Lynn Area Chamber of Commerce. Erin is the owner of the Swampscott-based national specialty chocolate manufacturer Bacci Chocolate Design, which owns and operates CB Stuffer, another specialty line of chocolate products.

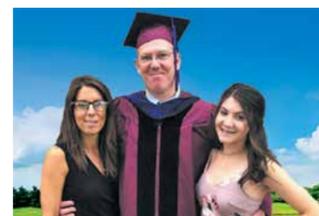
**Sean Cox** is currently a professor and director of the School of Resource and Environmental Management at Simon Fraser University in Burnaby, B.C., Canada. He is a fisheries scientist interested in applying mathematical, statistical and technology solutions to fisheries stock

Continued

assessment and management challenges. Sean is known within Canada and internationally for his quantitative stock assessment modeling expertise and systems design approaches to managing some of North America's largest and most valuable fisheries, including sablefish, Atlantic halibut, Pacific halibut, Pacific herring, and Pacific hake.

**Armen Najarian** has been appointed as the chief marketing officer at Agari, a leading cybersecurity company. Najarian has more than 15 years of Silicon Valley enterprise technology and cybersecurity marketing expertise. As the first CMO for Agari, Najarian is charged with strengthening the Agari brand worldwide and enabling market demand for Agari solutions across direct and partner channels.

**'94 Lisa Autio** earned an M.M.Ed. degree from Gordon College.



**Michael M. Burke** graduated from Massachusetts School of Law after a career as a police officer abruptly ended with a serious injury sustained in the line of duty. Finishing top in his law school class, Michael delivered the graduation speech and now plans to start a firm specializing in education and juvenile law.

**Thomas P. Browne** has been promoted to deputy chief of the Burlington, Mass., police department. He lives in Burlington with his wife, Michelle, and their three daughters.



**'95 William Breault** has been named police chief in Dover, N.H. He has been with the Dover police department since 1998.

Continued

BY GEOFFREY DOUGLAS

> CLOSE-UP CLASS OF 1983

## Out of the Wood

He was 13 years old, in a carpentry program at vocational school in Lowell, when he first came face-to-face with his calling—though he didn't know it at the time.

"There was just something about working with wood," says Tom McLaughlin '83, "something about expressing things that way, that really appealed to me."

Years later, that calling led to an invitation to serve as the new host of the Public Television program "Rough Cut," a weekly woodworking instructional show now in its eighth season—a job McLaughlin began earlier this year.

The show, which partners with Fine Woodworking Magazine (1.8 million readers), features instruction on the latest woodworking tools and techniques. It airs Saturday afternoons on 91 stations nationwide.

As a math major at ULowell (which he was the youngest of four siblings to attend), McLaughlin did not foresee his current career—though he recalls a lot of back-and-forth traveling between his math classes on North Campus and the art courses he signed up for on South. "I guess I couldn't quite give up on the artistic end of things," he says.

And he never did. Not during a post-UML stint as an electronics salesman, not even through the four years in the late '80s—first as a youth minister in Lexington and Foxboro, later in earning a master's degree in divinity—that he pursued the ministry. That early passion for fine woodworking never released its grip.

"It gives you the power to say something beautiful without words," McLaughlin says. "It just took me some time to realize that it could be a viable choice for a career."

The message eventually took hold. In 1990, only a year out of seminary, he moved to North Carolina to begin a three-year apprenticeship making 18th-century-style custom furniture under the tutelage of a master craftsman, P.A. "Pug" Moore, who would remain McLaughlin's mentor through the rest of Moore's life. It was from Moore, he says, that "I first learned the difference between good and great—why some pieces make it into museums while others don't."

In 1993, he set up his first shop in Wilson, N.C., from which he designed and sold the earliest of what became a career's worth of custom period-style furniture—what he refers to as "the classical music of woodworking." Four years later, by then a husband and father to three young children, he returned to his roots in New England, settling in Canterbury, N.H., where he remains today.

Things happened fast after that. He soon began teaching furniture-making classes at the Canterbury Shaker Village. Then, in cooperation with the New Hampshire Furniture Masters Association (of which he would later be chairman), he helped form the Prison Outreach Program, visiting prisons throughout the state to hold monthly woodworking seminars—a program that continues today. In 2002, he launched McLaughlin Woods, employing a team of apprentices to help fill the custom orders of a growing client list.

But teaching claimed increasingly more of his time. Four years ago, McLaughlin established Epic Woodworking, an online and on-site tutorial featuring four-and five-day classes on different aspects of the woodworking craft. In 2016, he announced that he would no longer be accepting custom commissions.

"It was time," he says. "But I miss it. I miss the creative edge. And it's hard to say no to people."

Meanwhile, word of his work had spread. There were articles in The New York Times, Fine Woodworking, Traditional Home Magazine and others. A series of guest appearances on "Rough Cut" went well, and led to the hosting gig.

"We tape from January through March—13 episodes, half an hour each," he says. "It's been pretty hectic. And it still seems sort of surreal."

But at the same time, McLaughlin says, it feels like the right thing at the right time.

"I'm all in on teaching now," he says. "I've been designing furniture almost 30 years and I've learned a lot—from Pug to start with, and a lot more since. It's time to pass it on." **UML**



"There was just something about working with wood, something about expressing things that way, that really appealed to me."

> CLOSE-UP CLASS OF 1994

## From Haverhill to Hollywood: Chasing the Dream

Sometimes, a dream is nurtured over years. Other times, it takes shape overnight. For Beth Petrou '94, the dream of Hollywood overtook her like a bolt from the blue. "One day, almost out of nowhere," says the Haverhill native, "I just heard this voice saying to me, 'Why don't you go to LA and try acting?'"

In 1997, Petrou packed up and moved west and followed in the footsteps of thousands who had gone before: acting classes, script readings, audition calls. She was rewarded over the years that followed with several TV infomercials, a part in an independent film and a dozen or so auditions. Meanwhile, to make ends meet, she managed a restaurant.

The last skill determined Petrou's next big move. In 2009, her brother and sister-in-law were planning to open a restaurant in Haverhill. She agreed to come back and run it for them and since then has been the manager of Butch's Uptown, on Locke Street in Haverhill.

But that wasn't the end of her acting plans. She signed on with a Boston casting agency, and before long, the calls started coming: auditions for more films than she can recall—films like "Crooked Arrows," "Labor Day," "Ted," "I Feel Pretty," "The Judge" and "Slender Man." In September 2016, a call came that connected: a reading for the role of Joseph P. Kennedy's niece and caretaker, Ann Gargan, in the movie "Chappaquiddick." She landed the part, and filming began soon after in an oceanfront mansion in Beverly. The movie opened nationwide in April.

"It was a lot of work," Petrou says. "You had to be on the set at 3:30 a.m., and you worked right through until the director was happy."

Meanwhile, she continues to manage Butch's, to take any audition calls that come in and to raise her 17-month-old daughter, Lyla, who was born last year to her and her husband, Michael Finn.

The East Coast is working out fine for now, says Petrou—"As an actress, I'm a bigger fish in a smaller pond here, as opposed to LA"—but longer term, California remains the goal.

"With the 'Chappaquiddick' role, I've got something now to show them, something to work from," she says. "But I need to get back out there, by next year anyway, probably June or July. They're going to have to find someone else to run the restaurant."

In the meantime, her goal is two more movie bookings for this year, and hopefully a national TV commercial. She's known all along, she says, that "if I kept going I'd eventually get somewhere with this. But I've got to keep moving forward, keep soaking up stuff, stay focused on the goal."—GD



**Tracey (Laorenza) Geary** recently completed co-writing and editing a book entitled "The Resilient 911 Professional." After received a degree in criminal justice, she spent 19 years in Michigan as a 911 dispatcher and supervisor and currently works in public safety at Fisher College.

**'97 Char Brouillard** was elected partner on March 27 at the law firm of Foster & Eldridge LLP.



**'98 Kris DeMoura** received the Excellence in Teaching Award for his outstanding work as a music teacher at Oakmont Regional High School in Ashburnham, Mass., and as director of the school's six ensemble groups. Kris is described as a caring and brilliant teacher who is able to get the best out of each student.

**Greg Lessard** is the band director in the public school system of Scituate, Mass. He recently conducted a 100-plus-member band at the 2018 Junior SEMSBA Music Festival Concert.

**'00 Michael Blanchard** has been appointed assistant town administrator for the town of Easton, Mass. He brings 15 years of municipal experience to the job.



**'02 Christine (Lescarba) Eaton** was married on Sept. 10, 2016. After seven years as an admissions director at Northeastern University, she is now working at Lawrence Family Development Charter School, counseling eighth graders as they apply to private high schools and prepare for the high school transition.

**Heather (McWatt) Pellegrino** writes, "I made the decision to go back to school for my MBA! I'll be in the UMass Lowell MBA program part-time and look forward to what's to come!"

**'03 Mark Homs** graduated from the Federal Law Enforcement Training Center in Glynco, Ga., in April 2017. He is now employed as a special agent with IRS Criminal Investigation in the Boston field office.

**James Martin** was married on May 21, 2016, and welcomed his daughter a year later, born on June 3, 2017.

**'05 Kim Gillespie** ran her first Boston Marathon this past April in honor of her father, who passed away last June from amyotrophic lateral sclerosis. Kim raised over \$6,000 for the ALS-ONE Foundation in his memory.

**Jessica Huizenga '05, '12** has been appointed interim superintendent for the Milford Public Schools.

**'06 Chad Gosselin** is a multi-instrumentalist, songwriter and entrepreneur. He recently performed at Exhibit 'A' Brewing Company in Framingham, Mass.

**Tim Morrisette** works for a private company under contract with the National Weather Services to collect data on the upper atmosphere that's priceless to weather forecasters and aviators. Twice a day, in all kinds of weather, Tim and two colleagues launch radiosondes under weather balloons from a hangar on Morris Island in Chatham. **[8]**

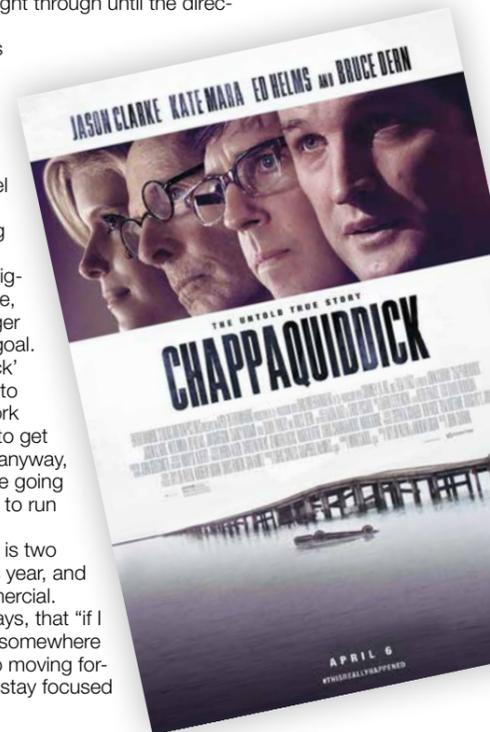
**Michael Penta** received the National Institute for Staff and Organizational Development Award for Excellence, a national honor that recognizes outstanding faculty and staff in the country's community colleges. Michael has been an assistant professor at Northern Essex Community College since 2012.

**Catherine Rose** spent 15 years in supply chain management, finance and product management at Proctor & Gamble, Duke Energy and Philips Healthcare. She now leads development efforts for technical skills, software tool adoption and innovation at Skanska USA Building.

**Frank Tiano**, former assistant superintendent for community development and engagement for the Framingham public schools, was selected as the next superintendent of schools for Uxbridge, Mass.

**Deborah Zabriskie** is engaged to Stephen Stiles and the pair welcomed their daughter Vivienne Rose on Oct. 7, 2016.

Continued



> CLOSE-UP CLASS OF 2015

BY KATHARINE WEBSTER

## Crowley Champions Literacy in Schools



Literacy, high expectations and social capital—connections with people who can be helpful—are key to helping students succeed in school and go on to college, says Matt Crowley '15.

Crowley should know. He and a handful of other teachers at Brockton High School led one of the most storied—and studied—school turnarounds since standardized testing became mandatory in Massachusetts and nationally more than a decade ago.

Crowley, now superintendent of schools in Woburn, says Brockton High School's turnaround began with a wake-up call. Massachusetts passed an education reform law in 1993 requiring that by 2003, all high school students would have to pass a standardized test, the MCAS, to graduate.

When the first MCAS was administered in 1998, 44 percent of Brockton High School students failed the English portion of the exam, and 75 percent failed in math. Crowley, a history teacher and senior class advisor, knew Brockton needed to act quickly. "We had to improve. It was a moral question," he says. "If we didn't act, three-quarters of our students weren't going to graduate."

He and a handful of other teachers began meeting on Saturdays to analyze the data. They knew they faced challenges. Brockton High School was the state's largest, with more than 4,000 students. Nearly two-thirds qualified for free or reduced-price lunches. Many were immigrants, and the number of English-language learners was growing fast.

The self-appointed "restructuring committee" decided they should start with a literacy campaign, training teachers in every class, from gym to math, to incorporate writing into their lessons. Students would run, and then write about how they felt while running. They would write about the art they were creating. They would write down every step they took to solve a math problem. "Writing is thinking," Crowley says. The administration backed the teachers' plan, as did the teachers' union.

It paid off: The next year, the district's 10th-grade MCAS English scores rose dramatically. And year after year, the gains continued. Fewer students dropped out, and more went on to college. Now more than 93 percent of Brockton High School students pass the English portion of the MCAS, and 78 percent pass in math. "What we did over time was raise expectations and allow kids to achieve things they didn't think they could achieve," Crowley says. "Expectations matter."

The turnaround inspired Crowley to become an administrator at Brockton High. And he went back to school himself in 2007, attracted by UMass Lowell's reputation for working effectively with public schools in Lowell, another city with a large population of immigrants. UMass Lowell also offered flexibility: With a handful of other Ed.D. students on the South Shore, Crowley took classes in real time by videoconference. "UMass Lowell was really quite progressive," he says.

Crowley took a break after completing his coursework, unsure what to research for his dissertation. The answer came to him in 2013 as he was flying home from an education conference in Brazil, where he'd been invited to speak about Brockton's turnaround. He thought about his Creole- and Portuguese-speaking students from Cape Verde, whose numbers at Brockton High had more than tripled since 1999. "I thought, 'What if I were coming here from Cape Verde and landing at Logan Airport for the first time?' That's how and why it became personal to me."



Matt Crowley '15 pushes for literacy to be a part of every class, including art, in which students painted scenes inspired by books they've read.

The Cape Verdean students worked hard and wanted to succeed so they could help their families, but many were leaving high school before graduating to take jobs, while others went on to college. "I saw some amazing kids make different choices, and I wanted to know why," Crowley says.

Under the guidance of Assoc. Prof. Phitsamay Uy, Crowley found answers. Chief among them was social capital—connections with caring adults who could help them navigate the educational system. "For example, one student befriended a custodian who spoke Creole and English. The custodian sent him to the guidance counselor's office for information about college," Crowley says.

Just as Crowley was finishing his dissertation in 2015, Woburn offered him a job as assistant superintendent. The district has a growing number of economically disadvantaged students and English language learners, mostly immigrants from Brazil and Central America, and that year, state authorities had downgraded Woburn Memorial High School, designating it a school in need of intervention.

Crowley was the intervention. He instituted the same kind of literacy campaign that had worked in Brockton. In 2017, the International Center for Leadership in Education named Woburn Memorial High one of 25 National Model Schools for its rapid improvement—and this January, Crowley was named superintendent.

Now he can work on aligning the curriculum throughout the district, using everything he learned in Brockton and drawing on his own social capital—his connections at UMass Lowell. "I have great relationships with professors. They're top-notch, and available and willing to be helpful to public schools," he says.

"It's fun, it's exciting and it's a great job. Woburn is uniquely positioned to improve, because students and teachers are so talented and the community caring for each other here is truly off the charts." [UML](#)

'07 **Ryan Pouliot** is an assistant professor of anesthesiology at the Geisel School of Medicine at Dartmouth College and an attending anesthesiologist at Dartmouth-Hitchcock Medical Center.



'08 **John Avagianos** reports that he got married in 2015. His hobbies include international mountain climbing and traveling. He owns and operates a contracting company based on the North Shore.



'09 **Forrest Carter Jr.** received the 2018 New Hampshire School Administrators Association's Champions for Children Award this past May for his dedication to the children of Seabrook. Forrest runs Seabrook Adventure Zone, a summer program for middle-school-aged kids.

**Krista (Paduchowski) Titone** is happy to announce her new position as an assistant professor of psychology at Northern Essex Community College—and her recent marriage to Cheryl Titone in June. Krista is also teaching at UMass Lowell in the Continuing Education Department, as she has for the past 10 years.

'10 **Kory Falite**, who played four seasons of men's hockey at UMass Lowell and then spent three seasons in the ECHL, became the girls' hockey coach at Wakefield High School.

**Craig Heatherly** has been promoted to an assistant coaching role at the University of North Dakota. He spent the previous three seasons as the Fighting Hawks' director of basketball operations. Prior to his time at UND, he was an assistant coach at Davenport University.

**Matthew Jensen** married Portia Corsetti on Oct. 7, 2017. Matthew is a musician and music teacher.

**Guido Marchionda** was selected as the 2018 Police Officer of the Year by the Nashua, N.H., Lions Club.

**Eric Watson** was promoted to captain of the Chicopee, Mass., police department. He's been with the department since 1999.

**Bruce Workman** founded Citizens Against Russian Election Tampering, soon to be a 501(c)(4) corporation.

'11 **Alex DeFronzo** is the executive director of Piers Park Sailing Center in East Boston. Last summer, Piers Park Sailing served 1,100 children, 300 of whom self-reported a physical or cognitive disability. This summer marked Piers Park's 20th year in operation.

'12 **Brian Bishop** was recognized by the Somerville News Weekly for his contributions to the city of Somerville, Mass. As the Veteran Service Director for the city, Brian helps local veterans and their families access both federal and state benefits. "He has put his heart and soul into the Somerville Veteran Services Department, proudly representing our veterans, and it shows that he really loves this city and its amazing veterans!"



**Stacey Chadwick '12, '17** is now working at UMass Lowell in the International Students & Scholars Office as an international student & scholar advisor.

Men's basketball alumnus **John Corbacio** is coaching in Canada and, since 2014, has been coaching and mentoring Rowan Barrett Jr., who is the No. 1 ranked prospect in the U.S. and projected No. 1 pick the 2019 NBA draft. John has been working with the Toronto Raptors since 2015 and is currently assistant video coordinator on Nick Nurse's coaching staff. In 2016, he was an overseas head coach in the ABL/TBL in Asia, and became the youngest head coach to win a league championship in Asia at the age of 26. He attributes much of his success to UML and former coach Greg Herenda.

*Continued*

> CLOSE-UP CLASS OF 2015

## Restoring Dignity, Preserving Privacy

Over the course of his time in the early 2000s as an interventional radiology technologist, Brian Mohika '15 witnessed firsthand the discomforts and indignity endured daily by patients living with a catheter and leg bag.

"The Velcro straps make life so difficult for them," Mohika says. "They can't wear shorts or skirts or bathing suits—there's always embarrassment from the bag sliding up and down the leg, and the straps can cause rashes or infections."

That may not be the case for long. Mohika's new invention, CathWear, which he designed with a partner, Hector Arce '13, and has recently seen patented, is an adaptation of conventional boxer briefs, with a catheter pocket on each thigh and a built-in catheter channel tract to enable drainage. The design was completed in 2010, with the patent issued three years later. It will be underwritten, according to Mohika, by Mill City Community Investments of Lawrence (Mohika is a Lawrence native). Another resident, Edwin Alvarez, has helped with a business plan, he says.

The three men are now investigating sites in the Lawrence area in hopes of locating a manufacturing plant there.

They aim to begin sales soon, though they already have pre-orders from a California hospital, says Mohika, who earned his bachelor's in nursing from UML and has worked for Home Health VNA.

"This product is going to help so many patients," he says. "There are already many of them waiting for its release. It'll restore their dignity during treatment and recovery, and save them embarrassment and pain. It's going to make a big difference in a lot of lives."—GD



Hector Arce '13 (top) and Brian Mohika '15

BY GEOFFREY DOUGLAS

> CLOSE-UP CLASS OF 2015

## Wimbledon Champ Aced Online Degree

College or tennis? Vania King '15 had a decision to make. She was 17, the daughter of Taiwanese immigrants, and a top-ranked junior tennis player from California. She could go pro (as had her older brother two years before), or she could go to college. The latter seemed the wiser choice. Stanford had just offered her a full scholarship; she could play tennis there, earn her degree, then join the WTA tour.

Instead, in 2006, she went pro. Four years later—the same year she would have graduated from Stanford—she won the women's doubles title at Wimbledon ("I screamed for 10 minutes straight," she recalls. "I was just a kid"). Two months after that, with the same partner, she won the U.S. Open doubles crown.

King remains on the tour today. Her earnings to date are \$4.3 million.

She never took Stanford up on its offer. She never even set foot on a college campus. But she did earn her degree. Two degrees, actually: the first in 2015, from UMass Lowell, summa cum laude with a major in psychology; the second three years later, from Northeastern, a master's in nonprofit management. Both were earned online. She never even considered leaving the tour to earn them.

And though she'd expected to miss out on the going-to-college experience, in the case of UML, it wasn't much of an issue, she says: "There were really good discussions, good interactions with the other students. Some days, I almost felt like I was there."

Still, it hasn't been an easy road. There have been up years and down years: her world singles ranking has swung between 50 and 900 (though she's been ranked in the top 100 most years), and in doubles, she's been as high as number three, as low as 275. For most of 2017, she was out with an ankle injury ("for a while, I couldn't even put my foot on the ground"), which dropped her ranking into the cellar and cut deeply into her earnings.

"It's a constant uphill battle, the price you pay as an athlete," King says. "It can feel like a tough way to make a living sometimes. You're away from home most of the time; you miss out on a lot of things. It's not the glamorous life some people assume."

But so far, she says, the good outweighs the bad. And ironically, her recent injury has helped her understand just how true that is: "I missed tennis; I missed the competition," she says. "The longer I was away from it, the more I appreciated what I had. I wanted to get back on the court."

But she'll be 30 in February. And professional tennis is a young woman's game. It's been two years since she was ranked in the top 100 in singles, and it could be a long climb back. King has no illusions about this: "I'll play for as long as I still enjoy it, and as long as my body will let me."

She's invested enough of her tour earnings, she says, to allow her some freedom. But eventually, she'd like to work for a nonprofit, she says. She's already involved with two—one for autistic children, another that distributes bed nets to combat malaria in Africa. "Maybe something in mental health, or with teenage athletes, or maybe coaching," she says. "Something where I can use my experience, the perspective I've gained on the tour."

"But definitely nothing nine-to-five." [UML](#)



**Reynaldo Santana** was recently recognized in El Mundo Latino Top 30 under 30. He is the founder and CEO of Marketing with Experts and business development director for Green Light Insights. He is also a professor of leadership in the MIT Educational Studies Program and serves as a guest conductor at Boston College.

**Ashley N. Urena '12, '13** is teaching math at her alma mater, Methuen High School, and welcomed a baby boy last March with her husband, Argenis.

**'13 Ryan Green** is a co-owner of RS Fireworks, LLC, providing professional pyrotechnic displays throughout New England, such as the Hampton Beach fireworks display, Lowell Spinners games and other occasions.



**Helen M. Rowan-Taber** married Ira Taber in April 2014.

**Melissa Szulga '14, William Gavin '17** and **Danielle Barden '13** were recognized by the Middlesex District Attorney's Office for their hard work and performance assisting prosecutors.

**'14 Jennifer A. Burns** was named by the Massachusetts Commission of the Status of Women as a 2017 Unsung Heroine.



**Michelle Coppi** is the resident service coordinator for Peabody Properties at Rogers Hall apartments in Lowell. She had achieved designation as a Licensed Social Worker. Michelle works with area provider agencies to coordinate wellness, education, cultural and other enrichment programs to enhance the overall quality of life for residents.

**Zachary Durant** is working at GE Healthcare and is living in Worcester. He works as a photographer on the side.



After a landslide social media contest win, **Kate Munoz** was named the Chief Taco Officer for Moe's Southwest Grill. Kate, who also works full time as an employee experience associate at Bonobos in New York City, led charge of spreading Southwest flavor across the country with Moe's first-ever summer Taco Tour. The traveling, multicity food truck tour gave Moe's fans more than 10,000 free Three Amigos tacos. "I've been training to be Moe's Chief Taco Officer my entire life,

and earning this title is one of my biggest accomplishments," says Kate Munoz, Moe's Chief Taco Officer. [\[9\]](#)



**Jordan Russell** has been named the new varsity field hockey coach for Tewksbury High School. She has spent the last seven years as the assistant coach. Jordan is also an education assistant teacher at Wilmington High School.

**'15 Piotr Butkiewicz** has recently joined Providence-based multidisciplinary brand culture and communication firm (add ventures as a manager in their engineering and digital areas.



Former River Hawk all-conference baseball player **Geoff DeGroot** arrived at UMass Lowell a shortstop, transitioned to a center fielder and graduated a pitcher. This summer, he was at the 2018 Major League Baseball Draft in Secaucus, N.J., as a representative of the Miami Marlins. From June 4 to 6, Geoff was stationed with baseball legend and MLB Network analyst Juan Pierre, taking calls from Derek Jeter. "I feel very honored that the Miami Marlins asked me to represent them at the draft. It was an incredible experience," he says. Day to day, Geoff (who previously worked for the New York Yankees organization in player development) works in front office operations in addition to scouting talent.

**Kevin Dwyer** is the new executive director of the Lowell Folk Festival. He was previously a special event assistant for the Lowell Summer Music Series. [\[10\]](#)

**Kimberly A. Mack** completed her Master of Arts degree in Irish Studies at Queen's University Belfast in Northern Ireland in July 2017.

Former corrections officer **David Moloney** sold the North American rights to his debut novel "Barker House" to Bloomsbury. The novel, slated to be released in winter 2020, "follows the lives of nine guards inside and beyond the concrete walls of a New Hampshire jail as they grapple with addiction, loneliness and regret."



> CLOSE-UP CLASS OF 2017

## The Future of the Long-Haul Trucker

By the time Joe Bendor '17 arrived at UMass Lowell in the fall of 2014, he had a pretty good idea of what he wanted to do with his life. He'd spent the previous two years at community college outside Boston, and the five years before that driving a truck around New England delivering metal, printed media and heating oil. And the more that time passed, he says, the surer he was.

"I just knew I wanted something more," he says. "I wanted to make a difference, I guess. I wasn't sure how it would happen, but I figured I was good at mechanical stuff, and maybe I could help make things better than they were."

Better than anything else, Bendor knew trucks. So his senior-year mechanical engineering capstone project was a natural choice: a series of aerodynamic studies to determine the optimum "platooning" distance between two pairs of connected 28-foot trailer rigs—or "double pups"—traveling at highway speeds. The studies were done for Peloton Technology in California, a Silicon Valley startup whose whole business is the safety and fuel efficiency of long-haul tandem trucks.

For the trucking industry, the potential benefits of such a project—in both safety and fuel costs—are enormous. With the computers on truck-pairs regularly "talking" to each other, it's possible to greatly reduce the safe following distance, thereby improving drag and lowering fuel costs by about 7 percent. While safety is assured by the computer links—a truck's computer, says Bendor, "can read and react to a threat way, way faster than a human"—the cost savings for a single rig would amount to nearly \$5,000 a year. Multiply that by the number of tractor-trailers on the road, and the savings could be in the billions. Finally, there's the "green" benefit, with much less carbon dioxide being released into the air.

Even with the Peloton platooning system, however, the business of steering would still be left to the driver. "It's very different than with passenger cars," says Bendor, who has been working for Peloton—as a "validation engineer," designing and executing test plans and analyzing fuel economy—since his UML graduation last year. "There's a lot more involved with these rigs—larger risks, more responsibility, than you have with cars."

From the company's perspective, this may be a strategic advantage: Most of Peloton's competitors, he says, are working toward the goal of self-driving models, which is going to take them a while to realize. Peloton, meanwhile, is focusing on a driver-assisted model. "That should get us to market sooner," Bendor says.

The company's goal, says Bendor, is to see its first commercial customers launch with its truck-platooning system by the end of this year.

"Platooning is going to be the standard for the trucking industry, there's no doubt about it," he says. "As time passes, you're going to see higher and higher levels of remote assistance, maybe even including steering. At some point, we might see some infrastructure changes, maybe with dedicated lanes on the highways for platooning rigs. But that's still a while away."—GD



> CLOSE-UP CLASS OF 2018

## UML GLOBETROTTERS

After four brilliant seasons with the UML men's basketball team, Jahad Thomas '18 is taking his talents to Ukraine. Thomas, who led America East in scoring (and was 28th in the nation) with 21.1 points per game as a senior, signed his first professional contract with BC Zaporizhya of the Ukrainian Basketball SuperLeague in August.

"I'm just looking forward to starting my professional career," says Thomas, a 6-foot-2, 210-pound guard from Williamsport, Pa., who majored in criminal justice. "I'm really excited that this is the next step and feel blessed to be able to continue to play basketball."

Thomas ranks seventh on UML's all-time scoring list with 1,864 points and third with 862 rebounds. As a senior, he became just the second Division I player in the last 25 years to average 21 points, eight rebounds, four assists and 1.5 steals per game in a single season (the other was former NBA great Anfernee "Penny" Hardaway, who did it for Memphis in 1992-93).

Thomas, who considered offers to play in Portugal and Korea, is eager to join the highest tier of Ukrainian hoops. "I don't really feel too much pressure," he says. "I'm just going to go out there and play my game."

Thomas follows in the international footsteps of former River Hawk teammate Tyler Livingston '17, who averaged 7.6 points and 2.4 rebounds for the Spanish team Arcos Albacete Basket last season. Livingston, a 6-foot-6, 210-pound forward from Hudson, N.H., is looking to return overseas this winter.—EB

➔ **WEB EXTRA:** Read about Tyler Livingston's first season abroad at [uml.edu/magazine](http://uml.edu/magazine).

**Johanna Rodriguez** is happy to report that she got a job doing what she loves. "Working with the elderly is a job that shows my compassion for others. As a health services coordinator, I must make sure that those who are 65 and older are getting the best of their health insurance coverage. Thanks to my degree and everything I learned at UMass Lowell, I am where I am today! Dreaming is believing!" [11]

'16 **Nathan Keegan** has created a career-change podcast called "Wanderless: The Career Change Podcast" to help professionals find their passion for work and get on their best career path. You can subscribe on iTunes, Stitcher and GooglePlay.

'17 **Eleonore Agneessens** is in Madrid, Spain, to pursue her master's degree in economics. As a UML field hockey alum, she also joined the Honor Division Women's team of the Field Hockey Club SPV Complutense of Madrid.

**Brendon Alves** moved to the Washington, D.C., area shortly after graduating.

**Marisel De Jesus Vega** recently published an article in Embedded Computing Design, "Manufacturing MEMS (microelectromechanical systems) to the quality standards of multiple industries." She currently works at Sensera as a program manager. Her interests are microfluidic devices, microfabrication and materials.

**Michael Kapla** made his NHL debut with the New Jersey Devils on March 31, 2017, just a few days after his college season ended. Kapla captained UMass Lowell to the Elite Eight and is now a member of the AHL's Binghamton Devils, New Jersey's top minor-league affiliate.

**Matthew W. Leece** is attending graduate school at UMass Lowell.

**Andrew Luce** is currently pursuing a graduate degree at UMass Lowell.

**Yefry Matos** is currently working as a decision science analyst for JPMorgan Chase within the Merchant Services subline of business.

**Catherine Phamduy** is pursuing a graduate degree at Wright State University's Boonshoft School of Medicine.

**Umesh Poudel** started a new job in law enforcement.

**Ashley Simmons** is happy to report that she bought her first condo and is enjoying being a UML alum and resident of Lowell.

**Justice D. Stiles** received a job offer from his current employer two days after commencement. He is working as a software engineer at Infineon Technologies in California. [12]

**Michael Sutherland** graduated from the Police Academy in April and is working as an officer for the Millbury Police Department. He resides in Millbury with his wife Julie.

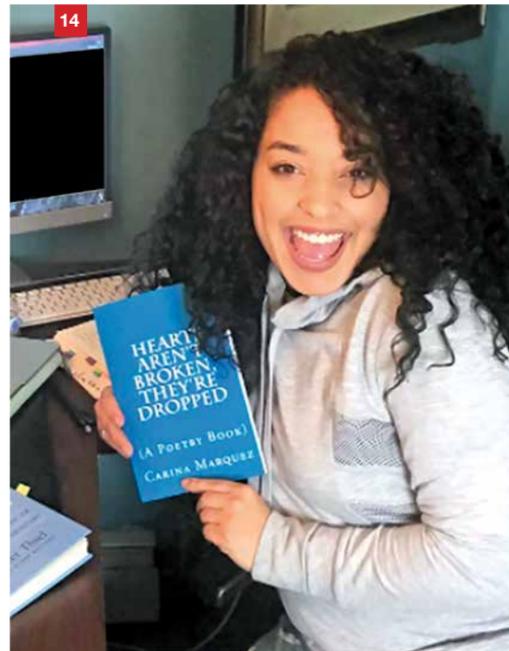


Biology alumna **Monica Tawadros** took a two-week medical mission trip to the West African nations of Ghana and Togo this summer, helping visiting doctors care for local patients. Now a second-year medical student at UMass Medical School, Monica says she looks forward to taking her licensing exam and getting into emergency medicine rotations. She also plans to continue helping others abroad. "Hopefully I can go back and do more," says Monica, who assisted in nine surgeries while in Ghana and Togo, partnering with an oncologist to remove tumors from patients' neck areas. [13]

**Jeremy Williams** recently started a new job as special projects manager at ADI.

**Mehmet Yavuz** is currently working as an HIV case manager in Lowell.

'18 **Carina Marquez** published a poetry book, "Hearts Aren't Broken, They're Dropped." Carina says, "This poetry book I created is for everyone who has ever had their heart broken." [14] UML



**CLASS REUNION** In 2019, we will be celebrating alumni with class years ending in 4 and 9—from five-year reunions to 45! Look for information in your email and online as the year approaches: [www.alumni.uml.edu/reunion2019](http://www.alumni.uml.edu/reunion2019).

- 10. KEVIN DWYER '15
- 11. JOHANNA RODRIGUEZ '15
- 12. JUSTICE D. STILES '17
- 13. MONICA TAWADROS '17
- 14. CARINA MARQUEZ '18

UMASS LOWELL ON THE ROAD



1. The UMass Alumni & Friends Reception brought together alumni from all campuses for a gathering in Palm Beach, Fla. Pictured, from left: UMass Lowell alumni Dick Russell '61, Jim '80, '18 (H) and Deb Dandeneau, Doug Reader '83, Chancellor Jacquie Moloney '75, '92 and John Pulichino '65, '14 (H).

2. Saba '75 and Nancy Joseph enjoy the warmer weather during UMass Lowell's Palm Beach event in March.

3. Alumni join the chancellor for lunch in Sarasota, Fla., during annual events in the Sunshine State. From left: Edward Keon Jr. '77, Chancellor Jacquie Moloney '75, '92, Mary Jo Spinola '66, '17 (H) Miriam Smith '57, Frank Spinola '66, '17 (H) and Robert Smith.

4. Alumni enjoy lunch together in St. Armand's Key, Fla. From left: Jean '73 and Gerry LaCroix '62, Mary Jo '66, '17 (H) and Frank Spinola '66, '17 (H), Herb '72 and Ruth Zaritsky, Howard '64 and Irene Hartley, Ed '66 and Andrea Nove, and Barb and Ed '66 Freshman.

5. Manning School of Business Asst. Prof. Elizabeth Altman shares her insights on the digital economy with alumni from all five campuses during a lecture series in Florida.

6. Alumni and friends gather with Chancellor Jacquie Moloney '75, '92 during the UMass Reception in Washington, D.C.

7. Alumni, current students and friends met in Orlando, Fla., for the NPE2018 Plastics Show in which Prof. Stephen Driscoll '66, '72 was honored with the 2018 Russel W. Ehlers Plastics Engineering Lifetime Achievement Award. Pictured, from left: Chair of the Plastics Department, Prof. David Kazmer poses for a photo with Driscoll and Rowdy after the award was presented.

8. World travelers David and retired Director of Alumni Relations Diane Earl meet with Bonnie Comley '81 and Stewart Lane during a trip to Jerusalem.

CELEBRATION & MILESTONES

9. UMass Lowell's second annual Days of Giving was a success with over \$314,000 raised in just 48 hours. These students were among the 2,719 students, alumni, friends, faculty and staff who made a contribution.

10. University Alumni Award honorees gather with campus leadership during the University Alumni Awards ceremony. Back row, from left: Provost Michael Vayda, Richard Lynch '87, Dean Shortie McKinney, Dean Sandra Richtermeyer, Dean Luis Falcon, Dean Eleanor Abrams, Chancellor Jacquie Moloney '75, '92, Dean Brenda Evans '94, '95, Elizabeth Brackett '84, Dean Noureddine Melikechi, Richard Grande '72, Dean Joseph Hartman and Lisa Brothers '84. Front row, from left: Pauline Dyer-Cole '57, Nana Bonsu '10, '15, Miriam Smith '57 and Dick Grande's grandson.

11. Scholarship recipient Justis Peace '20 shows his appreciation of Theresa Ogonowski during the Celebration of Scholarship. The John Ogonowski Memorial Scholarship Fund was established by her late husband, Alexander Ogonowski, in memory of their son, John Ogonowski '72, pilot of American Airlines Flight 11 on Sept. 11, 2001.

12. Commencement Eve honorees participate in a conversation moderated by author and English Prof. Andre Dubus III. Pictured, from left: Andre Dubus III, U.S. Rep. Niki Tsongas '98 (H), Mark Russell '83, Jim Dandeneau '80, '18 (H) and Temba Maqubela '18 (H).

13. The university dedicated a historic North Campus building in honor of Jim Dandeneau '80, '18 (H), shown, in recognition of his and his family's generous and longstanding contributions to the university. Dandeneau Hall (formerly Pasteur Hall) will house robotics and computer labs, as well as space for computer science and engineering faculty. Dandeneau, who took classes as a student in Pasteur Hall, also received an honorary degree during the 2018 UMass Lowell Commencement exercises.

14. Lauren Scannell, Jacob Ashley '17 and Chris MacKenzie '84 enjoy the Chancellor's Leadership Society dinner at the UMass Club in Boston.

15. The Golden Alumni Reunion was an opportunity to connect with alumni and classmates who have already celebrated their 50th reunion and to welcome the Class of 1968 in the Golden Alumni family. Pictured from left are Sharon (Gibson) Slavin '66 and Patricia (Apostolakis) Mahoney '64.



16. Pictured are Massachusetts State College alumni celebrating their 50th reunion. The three alumni studied music education at the university. From left: Patricia Fitzpatrick '68, '75, Daniel Evans Jr. '68, and Richard Leombruno '68, '76.

17. Lowell Tech graduates from 1968 and friends meet for their 60th reunion. Pictured, from left: Jack Denny-Brown, Preston Cooper '68, Paula (Molloy) Petrone '68 and Toby (Koffman) Hodes '58.

HOCKEY NIGHTS



18. A group of fraternity brothers gather for the Delta Kappa Phi Alumni Night at a River Hawks hockey game.

19. Fraternity brothers reconnect during the Pi Lambda Phi hockey night. Pictured, from left: George Soucy '90, Lou Sacco '88 and Jim Guarnotta '84.

20. The Francis College of Engineering celebrated reaching 500 alumni donors during their alumni appreciation hockey night. Pictured, from left: Dean of the Francis College of Engineering Joseph Hartman, Clara Camilo, Tony Quaglietta '89, Bill Vaillancourt '83, '88 and Traci Vaillancourt.

River Hawk Road Show

LONG ISLAND, NEW YORK ALUMNI RECEPTION & MEN'S BASKETBALL GAME

Saturday, Feb. 9, 2019  
5 p.m. River Hawk Rally,  
7 p.m. Game  
Stony Brook  
University, N.Y.

Connect with fellow alumni at a pre-game alumni gathering and cheer on the River Hawks as our men's basketball team takes on Stony Brook.

ARIZONA ALUMNI RECEPTION & BASEBALL GAME

Saturday, Feb. 16, 2019  
11:30 a.m. BBQ,  
1 p.m. Game  
University of Arizona

Meet up with alumni in Arizona and cheer on our baseball team.

YOUNG ALUMNI & SENIOR NETWORKING NIGHT

Thursday, March 7, 2019,  
6 p.m.  
UMass Club, Boston

Join us for an evening of networking and help us welcome our seniors to the alumni network.

HERE, THERE AND EVERYWHERE

21. Members of the Saab family pose with two UMass Lowell history students who created the award-winning exhibit, "Immigration from the Atlantic Islands to Lowell, Massachusetts: Continuity and Change in the Mill City's Portuguese Community." Pictured from left: Analise Saab Brown, Kady Phelps '17, Molly Mahoney '18, Elisia '13 (H) and Mark Saab '81, '13 (H). The Saab Center for Portuguese Studies funded the project.

22. Chemical Engineering alumnus David Peters '82 connects with student Leo Kutlowski and his classmates during the Chemical Engineering Night for Alumni and Students.

23. As a benefit for the UML History Department, renowned historian Eric Foner took the stage on campus to deliver his talk "The Second Founding: How the Civil War and Reconstruction Changed the Constitution." Pictured at a reception prior to the lecture are, from left: Eric Foner, Dean Luis Falcón and Sean McDonough '18.



Alumni Events Calendar

For more information or to register for events, visit [alumni.uml.edu](http://alumni.uml.edu).

NOVEMBER

FINANCIAL FITNESS SERIES:

Charles J. Hoff Alumni Scholarship Center

Stay ahead of the new changes without threatening your financial future. Free

Financial Planning and the New Tax Laws

Thursday, Nov. 1, Noon

New Tax Codes, Investments, Savings, Retirement and More

Tuesday, Nov. 13, 5:30 p.m.

UMASS SYSTEM ALUMNI RECEPTIONS

Connect with alumni & friends from across the UMass system and learn more about what's happening across all the campuses.

Atlanta Alumni Reception  
Friday, Nov. 16, 5:30 p.m.  
Mandarin Oriental, Atlanta, Ga.

DECEMBER

MARCHING BAND 40TH ANNIVERSARY AND ALUMNI REUNION

Saturday, Dec. 1, 6:30-11 p.m.  
UMass Lowell Inn & Conference Center

Marching band alumni are invited to be a part of this milestone event with current marching band members.

MIAMI ALUMNI RECEPTION

Monday, Dec. 10, 5:30 p.m.  
Ritz-Carlton Bal Harbour, Miami, Fla.



CHANCELLOR'S SPEAKER SERIES: OPRAH WINFREY

Thursday, Nov. 15, 7 p.m.

Tsongas Center

Purchase tickets now—they are sure to sell out! For info on tickets, visit [uml.edu/oprah](http://uml.edu/oprah).



HOLIDAY POPS 2018

Sunday, Dec. 16, 1:30 p.m.  
Reception, 2:30 p.m. Show  
Lowell Memorial Auditorium

Enjoy an afternoon of holiday music favorites and traditional pops sing-a-longs with the renowned Boston Pops.

MAY 2019

50TH, 60TH AND GOLDEN ALUMNI REUNIONS

May 17-19

UMass Lowell Inn & Conference Center

Celebrate the past, present and future of UMass Lowell and its predecessor institutions while enjoying one of the university's most exciting occasions of the year: Commencement Weekend. All those who have celebrated their 50th Reunion are invited back for the Golden Alumni Reunion on May 17.

ON THE ROAD: NYC ALUMNI RECEPTION

Thursday, Nov. 29

8:30-10:30 a.m.

The Offices of Estee Lauder  
Network with alumni in NYC at the Estee Lauder headquarters.



DON'T MISS THE EXCITEMENT OF RIVER HAWKS HOCKEY!

2018-2019 Alumni and Friends Pregame Receptions

Alumni pregame receptions start one hour before game time. All events are at the Tsongas Center. All games start at 7 p.m. unless otherwise noted.

Date	Opponent	Alumni & Friends Program
11/9	vs. University of New Hampshire at 7:15 p.m.	
11/17	vs. University of Connecticut at 5 p.m.	Manning School of Business Alumni & Friends Night
11/23	vs. Rensselaer Polytechnic Institute at 4 p.m.	
12/8	vs. Boston University	
12/29	vs. Denver	United in Blue Fund Appreciation Night
1/18	vs. University of Vermont at 7:15 p.m.	
1/19	vs. University of Vermont	Football Alumni Reunion
1/26	vs. Boston College	George Davis Track & Field Alumni Night Sigma Phi Omicron Reunion
2/8	vs. Boston College	Zuckerberg College of Health Sciences Alumni & Friends Night College of Education Alumni Appreciation Offer
2/9	vs. UMass Amherst	Delta Kappa Phi Reunion
2/15	vs. Providence College at 7:15 p.m.	College of Fine Arts, Humanities and Social Sciences Alumni & Friends Night
2/22	vs. Merrimack College at 7:15 p.m.	Francis College of Engineering Alumni & Friends Night
3/2	vs. University of New Hampshire	Kennedy College of Sciences Alumni & Friends Night

Register online at [www.alumni.uml.edu/hockey](http://www.alumni.uml.edu/hockey).

For more information, contact [Alumni\\_Office@uml.edu](mailto:Alumni_Office@uml.edu), 978-934-3140



## IN MEMORIAM

YEAR	NAME	YEAR	NAME
1937	Catherine (Livingston) Torre	1971	John P. Means
1939	Mary D. (Monahan) LaBay	1972	Stephen B. Kellett
1940	Josephine P. Hourihan	1972	James J. Perrotta
1940	Rudolph W. Meuser	1973	Alfred G. Perron
1940	Malcolm R. Woodard	1974	Louis P. Jacques
1942	Gertrude (Conley) Leavitt	1974	Kenneth H. Wilson
1943	Eliot M. Donnelly	1975	John F. Budrow
1943	Alice L. (Foley) Hill	1975	Cynthia H. (Smith) Looney
1944	Anastacia (Rusomani) Forsley	1975	Kevin L. Treen
1944	Eileen T. (Noonan) Sheehan	1976	William H. Pultar
1948	Barbara L. (Bennett) Elter	1976	Jay E. Stevens
1948	Elvira F. (Ramacorti) Mahoney	1976	William J. Walsh
1948	Robert B. Meister	1977	Michael A. Buscetto
1948	Stuart E. Penner	1977	Gwenyth (Storror) Corzine
1948	Raymond R. Poblocki	1977	Peter J. Michals
1948	Eleanor M. (Stokes) Poirier	1978	Lori A. Sousa
1948	Florence M. (Kevghas) Rizos	1979	Lance A. Holmes
1948	Marjorie R. Sempie	1980	Jacqueline Gourdin
1948	Helen M. (Hudzik) Smith	1981	Christine A. Laird
1948	Anna (Ramacorti) Stephenson	1982	Elaine M. Consalvo
1949	William M. Foley	1983	Anastasia P. (Stergiou) Antoniou
1951	Harvey D. Shapley	1983	Richard W. Wells
1952	Joseph R. Deschamps	1984	James F. Brooks
1954	Neil S. Bartlett	1984	Shih-Kuan Chen
1954	Robert F. Fulton	1985	Linda J. Reilly
1954	Albert J. Marchand	1987	Kan-Ping Chang
1954	Mary E. (Moynihan) Normandin	1990	James M. Kuchler
1954	Shirley I. (Tessier) Swain	1990	Penny J. Lowe
1955	Raymond A. Moissonnier	1991	Michael F. Cote
1956	Thomas L. Ryan	1991	Brian F. Dailey
1957	Nancy A. (Espinola) Bloom	1991	Daniel J. Wagner
1957	Phyllis F. (Anderson) Staples	1992	Jeannine G. Haskell
1958	Donald W. Hornbeck	1992	Barbara E. Ogarra
1958	Edward I. Landy	1993	Susan M. (Duffett) Jozokos
1959	James W. Bell	1993	Kevin M. Stearns
1959	Raymond Gendreau	1993	Jeannine M. Tremblay
1959	George A. Goebel	1994	Lisa M. Gallant
1959	Frederick A. Szmít	1994	Marilyn L. Lutz
1959	James N. Trombly	1996	Thomas F. Harty
1960	Janice (Malloy) Kelly	1998	Thomas M. Ginnard
1962	Ann M. (Daley) Kelley	1998	Susan M. McKenna
1963	Robert J. Bernier	1999	Peter J. Farmer
1963	James W. Johnson	2002	Richard Allen Reddy
1963	Joseph H. La More	2011	Vanessa Rae Freimuth
1963	Mark F. Wood	2012	Katelyn E. Allen
1964	Vincent S. Francescone	2012	Laura Alicia Cote
1964	Alexander W. Lambroukos	2012	Ritchie Strangie
1965	Thomas J. Fernane	2015	Josephine A. Obazee
1966	Thomas R. Stodolski	2018	Richard Holman
1967	Doris M. Sullivan		Hans J. Apfelbaum
1967	Elizabeth A. Yargeau		Andrea Corbett
1968	Paul C. Cote		Aldo Crugnola
1968	John E. Halpin		H. William Flood
1968	Donna S. Michael		George Grinstein
1968	Neal W. Thomas		Mark E. Hines
1969	Edward J. Longton		Alexander V. Kozlov
1970	Sharon C. (House) Redes		Norma M. McQuaid
1971	Victor J. Desrosiers		Charles R. Meehan
1971	Marjorie (Lane) Karabatsos		Rida M. Mirie
1971	Dorothy A. McCaffrey		George Vermette

## The Legacy Scholarship



for UML Families Living Outside of Massachusetts

Annual scholarships up to \$10,000 are now available for children and grandchildren of UML alumni who live outside of Massachusetts.

For more information on applying, visit [uml.edu/scholarships](http://uml.edu/scholarships).

**Freshmen for fall 2019:** Scholarships applications are due March 1.

**Transfer students for fall 2019:** Applications are due June 1.

Do you know someone who is interested in applying for this scholarship, but hasn't applied to the university yet? Visit [uml.edu/admissions](http://uml.edu/admissions).



**B**efore the first Model T rolled out of the Ford Motor Co. in Detroit, the city of Lowell was on the road to making a name for itself in the emerging world of automobiles.

In September 1908 (nearly a month before the Model T made its debut), Lowell hosted its first automobile carnival and road race, a weeklong extravaganza that brought top drivers from around the world to Lowell for a chance to break speed records and grab a \$1,000 grand prize. The event was organized by the American Automobile Association and the Lowell Automobile Club. At the time, Lowell was home to several businesses, including the Heinze Electric Co. and the Lowell Motor Co., both of which manufactured parts for the fledgling auto industry.

More than 100,000 spectators gathered to watch along the Merrimack Valley Auto Course, which began and ended on Pawtucket Boulevard along the Merrimack River. In this photo of the main event, which is from the UMass Lowell Center for Lowell History collection, drivers lapped the course 24 times, traveling 254 miles at an average speed of 53 mph. The races not only brought excitement, but they also helped advance both car and street design to improve performance and safety. The event returned to Lowell in 1909, firmly establishing the city's role in the development of automobiles.

# NOW...



These days, many students spend more time driving on screens than they do on the road. A national 2017 survey conducted by The Washington Post and UMass Lowell found that 73 percent of Americans ages 14 to 21 played an online multiplayer video game or watched someone else play video games online in the past year. Meanwhile, Pew Internet Research found that 70 percent of college students play video games at least “once in a while.”

At UMass Lowell, hundreds of students are members of gaming-related clubs, including the Super Smash Bros. Club, some members of which gathered recently in the second-floor Club Hub at University Crossing to play the racing game Forza Motorsport 6.

“Video games allow your mind to transport itself into another world, letting you relax and think creatively and without pressure,” says Smash Bros. President Seth Kary, a senior electrical engineering major. “Plus gaming gives me a type of motivation I can’t find elsewhere, because the types I play challenge me to be better than everyone else. Competitive games help my reflexes, logic and awareness of situations.”



Office of Alumni Relations  
Charles J. Hoff Alumni Scholarship Center  
1 Perkins St.  
Lowell, MA 01854-2882

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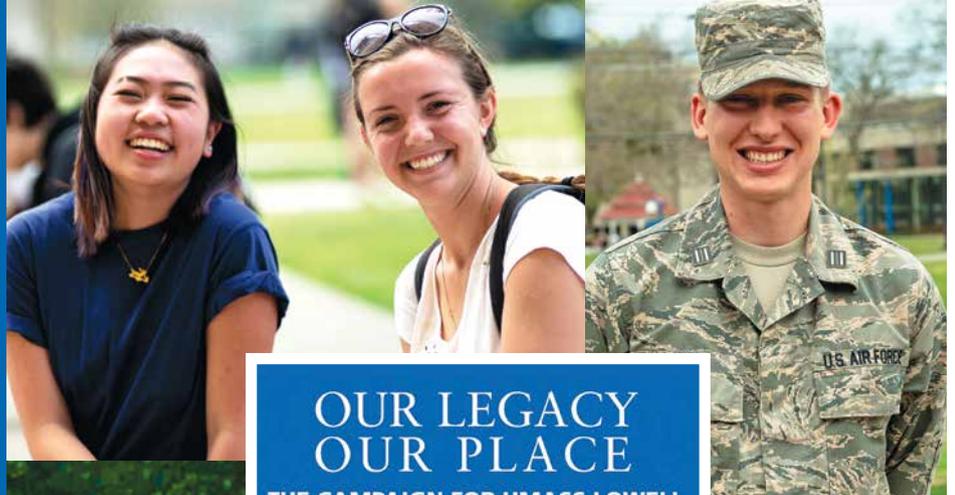
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You did it. You helped UMass Lowell soar. You embraced our first-ever comprehensive campaign, *Our Legacy, Our Place*, and met our \$125 million campaign goal *two years* ahead of schedule.

**Now, you can help us rise even higher.** As we approach our 125th anniversary, we want to raise an additional \$25 million—to invest in our students and our future.

Together, we can leave a larger legacy. For more information about 125 and Rising, visit [www.uml.edu/ourlegacy-ourplace](http://www.uml.edu/ourlegacy-ourplace).



**OUR LEGACY  
OUR PLACE**  
THE CAMPAIGN FOR UMASS LOWELL

