DELICIOUSLY GREEN

> COMBATING CORONAVIRUS
> REMEMBERING GE CEO JACK WELCH '57
Justin Dandurand ’20, a horticultural sciences major in the Stockbridge School of Agriculture, at work repotting plants in the Research and Education Greenhouse in late February.

The UMass Amherst campus has 28,900 square feet of greenhouse facilities: the Research and Education Greenhouse, with teaching and research capacities; six Morrill greenhouses, which are primarily devoted to teaching; and the Durfee Conservatory, the university’s oldest greenhouse, which opened in 1867.

LONG READS

06 A VIRUS CHANGES EVERYTHING
UMass steps up to combat the coronavirus

12 FEET FLEET
How UMass brought science to footwear worn by millions

20 DELICIOUSLY GREEN
If ‘you are what you eat,’ then I want to eat sustainably—but how?

28 HOW TO BOUNCE
Teaching the elusive quality of resilience

38 HIGH ENERGY
UMass innovations power the world through wind, water, and air

SHORT READS

10 THE MOST DANGEROUS MAN IN AMERICA
Daniel Ellsberg brings his archive—and activism—to UMass

18 GRAB THAT DREAM BY THE TAIL
Remembering Jack Welch ’57

42 REVITALIZATION BY THE PINT
Chemical engineer turned craft brewer toasts his adopted hometown

IN BRIEF

16 AROUND THE POND

26 STATE OF THE ARTS

32 INQUIRING MINDS

36 SPORTS TALK

BITS

2 Seen

4 In Other Words

34 Accomplished

44 Connections

48 In Memoriam

52 Teachable Moment

PHOTO BY LISA BETH ANDERSON

In Other Words: Need some green immersion? Tour the Durfee Conservatory in a student-created video umass.edu/magazine
The Wellbeing, Access, and Prevention (WAP) group within Student Affairs and Campus Life (SACL) recognizes that loneliness and isolation are critical challenges to students’ wellbeing, and the ability to reach out to one another creates a culture of active caring that supports health, safety, and learning for the campus community.

Pete Smith, director of SACL Communications and Professional Development, says that as the group was thinking of ways to reach the most vulnerable students and connect them with helpful strategies, they realized that they needed a new approach to capture the attention of everyone. They decided to launch a poster campaign with eye-catching artwork and a link to resources.

Papercut artist Nikki McClure grounds her work in the very themes that WAP was looking to reinforce—connection, community, and resilience—so her art was a natural choice for posters that would, as Smith notes, “stop anyone in their tracks for a moment of reflection.”
FROM THE EDITORS

So much has changed since we first started planning and reporting this issue. In the middle of our production cycle—as we were editing photos and marking up article drafts—the coronavirus pandemic hit.

Instead of interviewing faculty members in labs, we posed questions on shaky video calls; when we would have unrolled layouts on a conference table, we found ourselves squinting at laptops.

From our “home offices” perched in kids’ bedrooms, on porches, and at kitchen tables, we read with awe and hope the dozens of stories that unfolded about our alumni, students, faculty, and staff responding to the medical emergency and its ripple effects with their expertise and inexhaustible creativity.

We asked ourselves: What does the UMass community need from us now?

You hold in your hands the product of those conversations—a magazine brimming with the UMass inspiration that existed before the coronavirus, and which will continue long after it is vanquished. But we’ve also included coverage about our community’s response to the pandemic (see pages 6–9), and throughout the issue we’ve noted where the pandemic has touched lives, changed plans, and rearranged ideas.

Undoubtedly, countless other heroic acts and life-changing findings will come to light before this issue is printed and delivered to your mailbox.

And now we want to hear from you. How have you pitched in to help your community during this pandemic? Whether harrowing, heartwarming, or hilarious, we want to hear what this unprecedented time has looked like from your vantage point.

Post your story to any social media channel, tag it #umassmagazine, and we’ll collect and share selections here: umass.edu/magazine/coronavirus.

Happy (and safe) reading,
Candice Pinault Novak, Editor
Lori Shine, Managing Editor

Tag your posts #umassmagazine on any social platform and you could be featured!

UMASS MAGAZINE SPRING 2020
VOLUME 24 • NO. 2

EDITOR
Candice Pinault Novak
Managing Editor
Lori Shine '04MFA

STAFF
Alivia K., writing
Judith B. Cameron '16MA, writing
Daniel Filletta-Domingues '14, design
Sarah Jarman, design
Jason Johnson, web production
Heather Kamin, writing
Convy Shaya '20, editorial assistance
Emily Wallace, web production

CONTRIBUTORS
Lisa Beth Anderson, photography
Xenia Ariñez de la Vega '20, writing
Brigade LLC, art direction and design
Molly B. Burnham, writing
Michael C. Carolan '09MFA, writing
Molly Donzanski '14MFA, writing
Tom Hoogendyk, web production
Desiree Jackson-Croaly '19, writing
Li Knight ’91, ’10MEd, copy editing
Ezra Markowitz, writing
Dominick Perni, photography
Naomi Shults, writing
John Solom, photography
Jordan Stan, writing

University of Massachusetts Amherst
Chancellors
Kumbia R. Subbaswamy
Vice Chancellor for Advancement
Mark A. Fuller
Interim Assistant Vice Chancellor
for Alumni Relations & Interim Executive
Director, Alumni Association
Deborah Goodhind

UMass Magazine
UMass Amherst Advancement
259 Whitney Administration Building
181 Presidents Drive
Amherst, MA 01003
magazine@umass.edu
umass.edu/magazine

Address Changes
Records Office
(413) 545-4721
updates@umass.edu

UMass Magazine is published twice a year by the commonwealth’s flagship campus, the University of Massachusetts Amherst.

Copyright © 2020 by the University of Massachusetts Amherst. All rights reserved. Reproduction in whole or in part without permission is prohibited.

FROM THE EDITORS

So much has changed since we first started planning and reporting this issue. In the middle of our production cycle—as we were editing photos and marking up article drafts—the coronavirus pandemic hit.

Instead of interviewing faculty members in labs, we posed questions on shaky video calls; when we would have unrolled layouts on a conference table, we found ourselves squinting at laptops.

From our “home offices” perched in kids’ bedrooms, on porches, and at kitchen tables, we read with awe and hope the dozens of stories that unfolded about our alumni, students, faculty, and staff responding to the medical emergency and its ripple effects with their expertise and inexhaustible creativity.

We asked ourselves: What does the UMass community need from us now?

You hold in your hands the product of those conversations—a magazine brimming with the UMass inspiration that existed before the coronavirus, and which will continue long after it is vanquished. But we’ve also included coverage about our community’s response to the pandemic (see pages 6–9), and throughout the issue we’ve noted where the pandemic has touched lives, changed plans, and rearranged ideas.

Undoubtedly, countless other heroic acts and life-changing findings will come to light before this issue is printed and delivered to your mailbox.

And now we want to hear from you. How have you pitched in to help your community during this pandemic? Whether harrowing, heartwarming, or hilarious, we want to hear what this unprecedented time has looked like from your vantage point.

Post your story to any social media channel, tag it #umassmagazine, and we’ll collect and share selections here: umass.edu/magazine/coronavirus.

Happy (and safe) reading,
Candice Pinault Novak, Editor
Lori Shine, Managing Editor

Tag your posts #umassmagazine on any social platform and you could be featured!
With the Amherst campus all but shuttered in mid-March, UMass community members have been responding to the coronavirus pandemic in a variety of ways at press time—from epidemiology to microbiology to computer engineering. Faculty members have visited the White House virtually, helped crunch national estimates, conducted research on face masks and virus detection devices, and converted classes and labs to remote learning platforms for their students. And at the Centers for Disease Control and Prevention (CDC), a UMass alumna has been working to keep the public safe from the new coronavirus.

**DATA INFORMS STATE AND NATIONAL RESPONSE**

UMass epidemiologist Andrew Lover, assistant professor for the UMass Institute for Global Health, was halfway through the semester of teaching his course People, Pathogens, and Politics when he was called to switch gears. “I had a set of lectures planned out earlier and now I’m reworking them to bring in current events,” says Lover. “This is just beginning to evolve.”

Lover and others in the Department of Biostatistics and Epidemiology, including postdoctoral researcher Thomas McAndrew, have been aggregating data from expert models to determine how many cases of Covid-19 there might be in the United States. “There’s a big push to estimate that gap—between the known and unknown number of cases,” says Lover. “This will help calibrate the scale of the U.S. response. I can tell you that everything will look remarkably different in just two weeks’ time.”

**FLU FORECASTING PIVOTS TO CORONAVIRUS**

Biostatistician Nicholas Reich and a host of collaborators developed a novel device to monitor, track, and forecast the seasonal flu and other viral respiratory outbreaks such as the Covid-19 pandemic. The device, called FluSense, is a platform that processes a low-cost microphone array and thermal imaging data with a Raspberry Pi and neural computing engine. Models like FluSense can save lives during an epidemic by helping determine the timing of important public health responses such as potential travel restrictions, the allocation of medical supplies, and more.

Reich’s flu-forecasting collaborative has produced some of the world’s most accurate models. He was also among the world’s leading infectious disease and pandemic forecasting modelers who gathered in March (virtually, of course) to advise the White House Coronavirus Task Force.

**SOMETHING OLD, SOMETHING NEW**

Initial results from urgent UMass research in March revealed that N95 medical face masks, which have fallen into short supply during the Covid-19 pandemic, might be safely reused after sterilization. To help address the shortage of N95 masks that’s endangering both frontline health care workers and
There’s a big push to estimate that gap—between the known and unknown.

As environmental health scientists, we are always looking for opportunities to improve public health,” says Peltier. “These results show that there is no real difference in filtration between a new mask and one that has been sterilized.”

The research is already making an impact. The Battelle Memorial Institute, a scientific research nonprofit in Columbus, Ohio, received emergency authorization from the U.S. Food and Drug Administration for its technology to decontaminate N95 masks using vaporized hydrogen peroxide. In March, Battelle teamed up with the City of Somerville and Partners HealthCare to install a machine in Somerville that sterilizes up to 80,000 face masks a day. “There’s nothing remarkable about this science, but in terms of a public health message, this is a positive thing,” Peltier told the Wall Street Journal on March 31. “If I were faced with no mask or a sterilized mask, I would take a sterilized one any day.”

In addition to helping address the face mask shortage, UMass researchers are also working to supply needed face shields for health care workers. Peter Bunnell, founding director of the Institute for Applied Life Sciences, helped to organize a number of UMass Amherst Covid-19 response teams, one of which developed a design for protective plastic face shields that was informed by clinical feedback. K+K Thermoforming, a company in Southbridge, Massachusetts, is producing the first order of 80,000 shields placed by the UMass Face Shield Covid-19 Response Team, which is staffed with engineers, nurses, and other health care professionals.

It’s all new to me, and to all of us,” says Hamilton of the way the pandemic has shifted the semester. “I can tell you that students are stunned, nervous, and afraid. Not only are professors called to teach—for many of us, in a completely different way—but to work with students so they know they are being heard.”

The research is already making a difference in filtration between a new mask and one that has been sterilized.

The research is already making an impact. The Battelle Memorial Institute, a scientific research nonprofit in Columbus, Ohio, received emergency authorization from the U.S. Food and Drug Administration for its technology to decontaminate N95 masks using vaporized hydrogen peroxide. In March, Battelle teamed up with the City of Somerville and Partners HealthCare to install a machine in Somerville that sterilizes up to 80,000 face masks a day. “There’s nothing remarkable about this science, but in terms of a public health message, this is a positive thing,” Peltier told the Wall Street Journal on March 31. “If I were faced with no mask or a sterilized mask, I would take a sterilized one any day.”

In addition to helping address the face mask shortage, UMass researchers are also working to supply needed face shields for health care workers. Peter Bunnell, founding director of the Institute for Applied Life Sciences, helped to organize a number of UMass Amherst Covid-19 response teams, one of which developed a design for protective plastic face shields that was informed by clinical feedback. K+K Thermoforming, a company in Southbridge, Massachusetts, is producing the first order of 80,000 shields placed by the UMass Face Shield Covid-19 Response Team, which is staffed with engineers, nurses, and other health care professionals.

It’s all new to me, and to all of us,” says Hamilton of the way the pandemic has shifted the semester. “I can tell you that students are stunned, nervous, and afraid. Not only are professors called to teach—for many of us, in a completely different way—but to work with students so they know they are being heard.”

The research is already making a difference in filtration between a new mask and one that has been sterilized.

The research is already making an impact. The Battelle Memorial Institute, a scientific research nonprofit in Columbus, Ohio, received emergency authorization from the U.S. Food and Drug Administration for its technology to decontaminate N95 masks using vaporized hydrogen peroxide. In March, Battelle teamed up with the City of Somerville and Partners HealthCare to install a machine in Somerville that sterilizes up to 80,000 face masks a day. “There’s nothing remarkable about this science, but in terms of a public health message, this is a positive thing,” Peltier told the Wall Street Journal on March 31. “If I were faced with no mask or a sterilized mask, I would take a sterilized one any day.”

In addition to helping address the face mask shortage, UMass researchers are also working to supply needed face shields for health care workers. Peter Bunnell, founding director of the Institute for Applied Life Sciences, helped to organize a number of UMass Amherst Covid-19 response teams, one of which developed a design for protective plastic face shields that was informed by clinical feedback. K+K Thermoforming, a company in Southbridge, Massachusetts, is producing the first order of 80,000 shields placed by the UMass Face Shield Covid-19 Response Team, which is staffed with engineers, nurses, and other health care professionals.

It’s all new to me, and to all of us,” says Hamilton of the way the pandemic has shifted the semester. “I can tell you that students are stunned, nervous, and afraid. Not only are professors called to teach—for many of us, in a completely different way—but to work with students so they know they are being heard.”

The research is already making a difference in filtration between a new mask and one that has been sterilized.

The research is already making an impact. The Battelle Memorial Institute, a scientific research nonprofit in Columbus, Ohio, received emergency authorization from the U.S. Food and Drug Administration for its technology to decontaminate N95 masks using vaporized hydrogen peroxide. In March, Battelle teamed up with the City of Somerville and Partners HealthCare to install a machine in Somerville that sterilizes up to 80,000 face masks a day. “There’s nothing remarkable about this science, but in terms of a public health message, this is a positive thing,” Peltier told the Wall Street Journal on March 31. “If I were faced with no mask or a sterilized mask, I would take a sterilized one any day.”

In addition to helping address the face mask shortage, UMass researchers are also working to supply needed face shields for health care workers. Peter Bunnell, founding director of the Institute for Applied Life Sciences, helped to organize a number of UMass Amherst Covid-19 response teams, one of which developed a design for protective plastic face shields that was informed by clinical feedback. K+K Thermoforming, a company in Southbridge, Massachusetts, is producing the first order of 80,000 shields placed by the UMass Face Shield Covid-19 Response Team, which is staffed with engineers, nurses, and other health care professionals.

It’s all new to me, and to all of us,” says Hamilton of the way the pandemic has shifted the semester. “I can tell you that students are stunned, nervous, and afraid. Not only are professors called to teach—for many of us, in a completely different way—but to work with students so they know they are being heard.”

The research is already making a difference in filtration between a new mask and one that has been sterilized.

The research is already making an impact. The Battelle Memorial Institute, a scientific research nonprofit in Columbus, Ohio, received emergency authorization from the U.S. Food and Drug Administration for its technology to decontaminate N95 masks using vaporized hydrogen peroxide. In March, Battelle teamed up with the City of Somerville and Partners HealthCare to install a machine in Somerville that sterilizes up to 80,000 face masks a day. “There’s nothing remarkable about this science, but in terms of a public health message, this is a positive thing,” Peltier told the Wall Street Journal on March 31. “If I were faced with no mask or a sterilized mask, I would take a sterilized one any day.”

In addition to helping address the face mask shortage, UMass researchers are also working to supply needed face shields for health care workers. Peter Bunnell, founding director of the Institute for Applied Life Sciences, helped to organize a number of UMass Amherst Covid-19 response teams, one of which developed a design for protective plastic face shields that was informed by clinical feedback. K+K Thermoforming, a company in Southbridge, Massachusetts, is producing the first order of 80,000 shields placed by the UMass Face Shield Covid-19 Response Team, which is staffed with engineers, nurses, and other health care professionals.

It’s all new to me, and to all of us,” says Hamilton of the way the pandemic has shifted the semester. “I can tell you that students are stunned, nervous, and afraid. Not only are professors called to teach—for many of us, in a completely different way—but to work with students so they know they are being heard.”

The research is already making a difference in filtration between a new mask and one that has been sterilized.
Daniel Ellsberg brings his archive—and activism—to UMass

Even through the dimmed house lights of the Campus Center Auditorium, you could still see the standing ovation that welcomed Daniel Ellsberg, 89, to the stage last October. He effortlessly commanded the audience’s attention as he regaled them with the story of how he obtained and exposed alarming government secrets about the Vietnam War in the Pentagon Papers.

The keynote address capped a whirlwind week of appearances, including a visit to WGBH television in Boston, a talk and panel session sponsored by the Political Economy Research Institute (PERI), and guest lectures in various UMass classes.

A few buildings south of the thundering applause, the Special Collections and University Archives (SCUA) at the W.E.B. Du Bois Library prepared to receive the more than 500-box collection of Ellsberg’s private papers. The archive documents the majority of Ellsberg’s life, which, as he has noted, coincided with the development of the United States’ nuclear program and the subsequent proliferation of nuclear weapons. Ellsberg first learned of the possibility of an atom bomb as a 13-year-old from his teacher. Months later, the first use of the bomb would spark his fervor for activism.

In the summer of 2019, Robert Pollin, distinguished professor of economics and the codirector of PERI, fortuitously heard that Ellsberg was seeking a home for his papers. Pollin, recognizing the significance of the collection, seized the opportunity and immediately reached out to Ellsberg. After only a few weeks—thanks to a $1.35 million gift from an anonymous donor—the university’s proposal was accepted, and UMass Amherst was able to purchase the papers for $2.2 million, becoming the new home of the Ellsberg archive.

The motivation to acquire the Ellsberg papers—now among the papers of other agents of social change at the SCUA—stems from UMass’s mission to improve the lives of people around the world by illuminating our need for government transparency and accountability, in tandem with what Ellsberg calls “a moral revolution.” In addition, the papers create a profound research opportunity—as History Professor Christian Appy notes, “I wouldn’t be surprised if I start to get interest from prospective graduate students who want to do a PhD on the Ellsberg papers.”

In the short week he spent here, Ellsberg inspired students, faculty, and staff who caught a glimpse of his moral courage. After a guest lecture, Economics Professor Michael Ash noticed the impact that Ellsberg’s analytical mind and intensity had on his students. “There was a certain sense of awe simply to be in the presence of Ellsberg,” he says. “As the awe passed, the students appreciated the depth that could emerge from simple, accessible thought experiments.”

The papers aren’t the only way UMass Amherst will benefit from Daniel Ellsberg, however. He has also graciously accepted the positions of Distinguished Researcher at the Du Bois Library and Distinguished Research Fellow at PERI. Ellsberg will offer seminars, classes, and guest lectures and is available to meet with those interested in working with his archive. And as Rob Cox explained, “When I talk about teaching and research, Dan himself is an incredible asset. The students here, getting a chance to meet a guy whose name you see in the history books, and hear directly his version of events—it’s a key part of the undergraduate experience.”

The publicly accessible collection will provide an inside look into the government decision making that led to the Vietnam War. Also part of the collection are Ellsberg’s personal notes, which show the compelling inner thoughts of a dissenter in the making and how he became a catalyst for social change. “I so much appreciate the fact that my archive will be here,” Ellsberg says.

The late Rob Cox, who was head of the SCUA, noted that having the archives of W.E.B. Du Bois and Ellsberg together creates “an archival bulwark for the study of some of the major moral and ethical issues of the 20th century.”

Hear a conversation with Daniel Ellsberg and Charles Sennott ’84: umass.edu/magazine

> ALEXIS ALI
Look down—at your shoes. Chances are UMass had something to do with what’s on your feet. Think Reebok, Brooks, New Balance, Nike, and even Cole Haan.

For over three decades, professors and students in the Department of Kinesiology in the School of Public Health and Health Sciences have implemented the scientific method alongside the stopwatch. They have quietly changed the game in design, technology, and comfort across the footwear industry—for hikers, marathon runners, golfers, and even those who favor high heels.

“I knew that UMass was the place to be to get into the shoe industry,” says Laura Healey, a researcher in the department’s Integrative Locomotion Lab in the basement of Totman Gym. “It’s unique to be in brainstorming meetings working on shoes that, within the next year, will be on the shelf for people to buy.”

On the day I visit the laboratory, a student wearing shorts is running on a treadmill at a solid clip. He’s at the far end of the long, brightly lit room that contains computers, desks, sensor equipment, treadmills, and floors that move called force platforms.

Five mounted high-speed retroreflective 3D cameras capture the student’s movements and convert them into 3D images. Sensors measure airflow, oxygen concentration, and carbon dioxide output so the researchers can calculate how much oxygen the student is using to burn carbohydrates and fatty acids. Computers combine kinematic and kinetic information to calculate forces and movements at the knee to determine which muscles are moving and how.

Scientists here are testing prototypes for an athletic footwear manufacturer that is developing a new line of marathon running shoes. The measurements reveal the real energy expenditure per minute and are calculated in joules, a derived unit of energy used in physics, explains Assistant Professor Wouter Hoogkamer. “The testing is speed specific.”

I ask how long the student test subjects have to run. After all, doesn’t it take hours to run a marathon? “Actually, after just five minutes the body is using as much oxygen as it does after an hour,” explains Hoogkamer. “It remains fairly constant. He’s running just under nine miles an hour. We do five minutes in each shoe and we test each one twice to get more data points.”

Hoogkamer is part of a department with a rich history. When it was created in 1965 it was the nation’s first Department of Exercise Science. Today, researchers in what is now the kinesiology department investigate the mechanical, neurological, biochemical, physiological, and behavioral components of human movement.
ANATOMY OF A MARATHON SHOE

Professor Joseph Hamill came to UMass in the mid-1980s. His research projects focused on lower extremity function and injury, particularly overuse injuries such as plantar fasciitis, anterior compartment syndrome, and iliotibial band syndrome. The Massachusetts shoe company Saucony approached Hamill after hearing about his work in injury.

“This company wanted to help prevent footwear-related injuries,” says Hamill. But footwear is a “very, very, very small contributor to injury,” Hamill explains. One’s anatomy, gait, and injury history are more significant factors. Still, he says, certain parameters of shoe design are thought to ward off injury.

“Our job is to make sure the shoe falls within those parameters, and if they do, you can be assured they are as close to being as safe as possible,” says Hamill. “Though it’s not a guarantee,” he adds wryly.

After Saucony, more athletic footwear firms approached the department, including Brooks and FootJoy. “We use multiple disciplines like physiology, the physics of human motion, engineering, anatomy, biology, psychology, computer science, and mathematics,” explains Hamill. “This work with industry is simply an application of my research in lower extremity motion and injury.”

The next to come knocking was Boston-based company New Balance. Today, five of Hamill’s former students work for New Balance—one is the director of their biomechanics lab. Other alumni of the department include Paul Litchfield ’86MS, a leading product creation expert who spent many years as vice president of Reebok Advanced Concepts and created innovations like the famous Reebok Pump basketball shoe; and Denise Gravelle ’94, senior manager of Footwear Product Testing for PUMA North America. “I fell in love with Joe’s class and biomechanics,” says Gravelle. “It’s the perfect melding of biology, math, and physics that really interested me.” After UMass, she ran Reebok’s human performance and engineering lab for nine years, doing fit and wear testing and innovation work in biomechanics research. Today she is helping PUMA reemerge in the competitive running shoe marketplace.

“I am certain there are a lot of people and athletes with shoes in their closets that Professor Hamill has helped develop over the years,” says Gravelle.

“People anecdotally say these flip flops feel different, much better, but we don’t yet have any real evidence. The team is measuring the differences in injuries and pain, and to see whether there’s a positive impact over six weeks. “The best work we do is to use technology and science to advance sports performance, to increase mobility, and to prevent injuries,” says Boyer. “That’s what we hope for.”

Runners take note: with every additional 100 grams of shoe mass, your need for oxygen increases by 1 percent.

The department has been instrumental in the movement of the department. Jeremy Determan ’03, director of Advanced Concepts at Adidas in Portland, Oregon, concurs. “The department built the scientific foundation for me and really set me up for a career—the fundamental principles of human movement and footwear performance testing that I still use today.” At UMass, Determan worked on a skateboarding footwear project. Today, he oversees product innovation for football, baseball, ice hockey, and lacrosse.

UMass’s innovative contributions aren’t limited to just the playing fields, however. Associate Professor Katherine Boyer and several graduate students in the department have been helping solve the riddle of the high heel: limited real estate.

“There are many well-documented negative impacts of wearing high heels in terms of foot health—developing bunions, pain, and general discomfort,” explains Boyer. “Yet women are still required to wear them in many professions around the world.” Enter Cole Haan, a foot-wear and accessories brand out of Chicago that wanted a new line of comfortable heels.

“We provided the scientific background data that informed their design,” says Boyer. “We were able to show that with different shapes of the forefoot and shapes of the arch, and how steeply the shoe went down, you could change movement mechanics slightly.” The result is a heel with more arch support and cushioning in front, which the company calls Grand Ambition: “for the aspiring, urban, and on-the-go woman.”

Now Boyer is collaborating with OOFOS recovery footwear. "I am certain there are a lot of students, athletes and researchers that are able to show that with OOFOS flip flops, says Boyer. “People anecdotally say these flip flops feel different, much better, but we don’t yet have any real evidence. The team is measuring the differences in injuries and pain, and to see whether there’s a positive impact over six weeks. “The best work we do is to use technology and science to advance sports performance, to increase mobility, and to prevent injuries,” says Boyer. “That’s what we hope for.”

Assistant Professor Wouter Hoogkamer made his mark with Nike’s Vapoflyr competitive running shoe—arguably the fastest in the industry. He helped prove that the shoe improves running economy by 4 percent. Running economy is the measure of a runner’s energy utilization at an aerobic intensity, plus the multiple contributing physiological and biomechanical factors.

Nike was the first to integrate curved carbon fiber plates into foam cushioning, and Hoogkamer and his team measured multiple parameters—both physical and biological—such as oxygen intake and carbon dioxide output in runners, and confirmed the 4 percent improvement. “There’s a missing ingredient we are still looking for,” says Hoogkamer. “Now, we are trying to figure out if we can change the parameters—both physical and biological—such as oxygen intake and carbon dioxide output in runners, and confirmed the 4 percent improvement. “There’s a missing ingredient we are still looking for,” says Hoogkamer. “Now, we are trying to figure out if we can change the geometry of the plate and see if it can apply to walking and uphill running.”

Hoogkamer is a marathon runner himself. He ran his best time—2 hours, 32 minutes, and 56 seconds—wearing the Nike AlphaFly NEXT% a prototype version of the same shoe that Eliud Kipchoge wore when he ran a marathon in Vienna in under two hours last October. Hoogkamer hasn’t yet decided what shoes he is going to wear for his next marathon.

Nike was the first to integrate curved carbon fiber plates into foam cushioning, and Hoogkamer and his team measured multiple parameters—both physical and biological—such as oxygen intake and carbon dioxide output in runners, and confirmed the 4 percent improvement. “There’s a missing ingredient we are still looking for,” says Hoogkamer. “Now, we are trying to figure out if we can change the geometry of the plate and see if it can apply to walking and uphill running.”

Hoogkamer is a marathon runner himself. He ran his best time—2 hours, 32 minutes, and 56 seconds—wearing the Nike AlphaFly NEXT% a prototype version of the same shoe that Eliud Kipchoge wore when he ran a marathon in Vienna in under two hours last October. Hoogkamer hasn’t yet decided what shoes he is going to wear for his next marathon.

Nike was the first to integrate curved carbon fiber plates into foam cushioning, and Hoogkamer and his team measured multiple parameters—both physical and biological—such as oxygen intake and carbon dioxide output in runners, and confirmed the 4 percent improvement. “There’s a missing ingredient we are still looking for,” says Hoogkamer. “Now, we are trying to figure out if we can change the geometry of the plate and see if it can apply to walking and uphill running.”

Hoogkamer is a marathon runner himself. He ran his best time—2 hours, 32 minutes, and 56 seconds—wearing the Nike AlphaFly NEXT% a prototype version of the same shoe that Eliud Kipchoge wore when he ran a marathon in Vienna in under two hours last October. Hoogkamer hasn’t yet decided what shoes he is going to wear for his next marathon.

Nike was the first to integrate curved carbon fiber plates into foam cushioning, and Hoogkamer and his team measured multiple parameters—both physical and biological—such as oxygen intake and carbon dioxide output in runners, and confirmed the 4 percent improvement. “There’s a missing ingredient we are still looking for,” says Hoogkamer. “Now, we are trying to figure out if we can change the geometry of the plate and see if it can apply to walking and uphill running.”

Hoogkamer is a marathon runner himself. He ran his best time—2 hours, 32 minutes, and 56 seconds—wearing the Nike AlphaFly NEXT% a prototype version of the same shoe that Eliud Kipchoge wore when he ran a marathon in Vienna in under two hours last October. Hoogkamer hasn’t yet decided what shoes he is going to wear for his next marathon.

Nike was the first to integrate curved carbon fiber plates into foam cushioning, and Hoogkamer and his team measured multiple parameters—both physical and biological—such as oxygen intake and carbon dioxide output in runners, and confirmed the 4 percent improvement. “There’s a missing ingredient we are still looking for,” says Hoogkamer. “Now, we are trying to figure out if we can change the geometry of the plate and see if it can apply to walking and uphill running.”

Hoogkamer is a marathon runner himself. He ran his best time—2 hours, 32 minutes, and 56 seconds—wearing the Nike AlphaFly NEXT% a prototype version of the same shoe that Eliud Kipchoge wore when he ran a marathon in Vienna in under two hours last October. Hoogkamer hasn’t yet decided what shoes he is going to wear for his next marathon.
IN BRIEF | AROUND THE POND

READ AND HEARD—IN 12 LANGUAGES
> REBECCA DUKE WIESENBERG ’20

I remember the pain in Peike’s voice. As we were catching up over dinner, she told me that she was stressed about her homework, since she had mountains of reading each week. Although she is fluent in English, it was her first year attending school in the United States, where she was expected to study, work, socialize, and advocate for herself in her nonnative tongue.

Seeing the exhaustion on her face, I realized the amount of energy students expend to not only exist, but also excel in spaces where their own language is not the language of power. Like many native-English speakers in the United States, I had taken for granted the privilege I have of being able to go almost anywhere I want and have other people accommodate to my language preference.

When in September 2017 the Massachusetts Daily Collegian cut down on print and turned our attention toward digital, I started thinking about new opportunities to serve the community. I thought of Peike. I asked my editor if the Collegian could have articles in Spanish and Chinese, since those languages have large speaking populations on campus. She green-lighted my idea, and I got to recruiting. By November, we were translating articles into Spanish and Chinese—and Vietnamese, Korean, Italian, and Portuguese. This was the start of the Translations Department.

In two years, the department has swelled to over 20 translators and editors who translate articles into 12 languages—soon 13, we’re working on finding a Hindi translator. Not only are we of a variety of ages, races, genders, religions, ethnicities, and nationalities, but we also have a variety of language and translation experience. At our monthly staff meetings, I look around a table and see the future of U.S. community journalism.

> JUDITH B. CAMERON ’16MA

Sustainability as a value shows itself at UMass Amherst not only in facilities design and composting, but across the curriculum, thanks in part to the Sustainability Curriculum Fellowship program. Established in 2013, the faculty fellowships cultivate teaching excellence in sustainability, often by integrating fresh perspectives into existing courses. Faculty from more than 33 departments across all disciplines have participated since the program’s inception.

Research Professor of Chemistry and Digital Media Lab Coordinator Steve Acquah is one of the 2019-2020 sustainability fellows. He is using his Makerspace and Leadership Outreach course to support student-directed projects including a low-cost lighting system with locally sourced materials and an affordable chlorine sensor for testing public water supplies.

“Our students have shown that there is really no limitation to achieving their goals if we help provide the tools for their success,” explains Acquah.

The curriculum fellowships support faculty in the humanities and social sciences as well. Rachel Green, assistant professor in the comparative literature program, is incorporating topics on the Anthropocene into her Good and Evil Literature class.

Students are not the only ones learning. Part of the program brings faculty together to consider new teaching methods and curriculum ideas. “The faculty teaching demonstrations are transforming the way we approach team-based learning activities,” says Acquah. “Through the network of fellows, both post and present, there is a wealth of knowledge and best practices to call upon.”

HABITATS FOR HAPPY POLLINATORS

Just about a third of the food we eat owes its existence to small pollinators—including bees, butterflies, birds, and bate—but their habitats are threatened on a global scale. UMass Amherst recognized the need to create a pollinator-friendly campus that demonstrates ways to nurture pollinator ecosystems. So far the campus is home to two award-winning pollinator gardens, one of which is registered through the Million Pollinator Garden Challenge. The campus has also applied to become an official Bee Campus—the program recognizes institutions committed to creating sustainable habitats for pollinators.

The various native plants of the pollinator gardens were chosen to allow continuous blooms throughout the growing season. “What we’re trying to demonstrate is that you can have overlapping flowering plants,” explains Stephen Herbert, professor of agronomy at the Stockbridge School of Agriculture and manager of the pollinator gardens. “Then there is potential for pollinators to get nectar all summer long.” One of the gardens includes 36 different native perennials that provide food and shelter for pollinators and a shallow rock pool for safe access to water.

Individuals can also help support pollinators by creating small gardens of native plants in whatever spaces they have, with advice and research from UMass experts.

SPRING 2020 17

> Illustration: Anjana Iyer

See how to manage your own pollinator-friendly landscaping: umass.edu/magazine

> Photo: John Solem

See how to manage your own pollinator-friendly landscaping: umass.edu/magazine

> Illustration: Anjana Iyer

See how to manage your own pollinator-friendly landscaping: umass.edu/magazine

> Illustration: Anjana Iyer

See how to manage your own pollinator-friendly landscaping: umass.edu/magazine

> Illustration: Anjana Iyer

See how to manage your own pollinator-friendly landscaping: umass.edu/magazine

> Illustration: Anjana Iyer

See how to manage your own pollinator-friendly landscaping: umass.edu/magazine

> Illustration: Anjana Iyer

See how to manage your own pollinator-friendly landscaping: umass.edu/magazine

> Illustration: Anjana Iyer

See how to manage your own pollinator-friendly landscaping: umass.edu/magazine

> Illustration: Anjana Iyer

See how to manage your own pollinator-friendly landscaping: umass.edu/magazine

> Illustration: Anjana Iyer

See how to manage your own pollinator-friendly landscaping: umass.edu/magazine

> Illustration: Anjana Iyer

See how to manage your own pollinator-friendly landscaping: umass.edu/magazine

> Illustration: Anjana Iyer

See how to manage your own pollinator-friendly landscaping: umass.edu/magazine

> Illustration: Anjana Iyer

See how to manage your own pollinator-friendly landscaping: umass.edu/magazine

> Illustration: Anjana Iyer

See how to manage your own pollinator-friendly landscaping: umass.edu/magazine

> Illustration: Anjana Iyer

See how to manage your own pollinator-friendly landscaping: umass.edu/magazine

> Illustration: Anjana Iyer

See how to manage your own pollinator-friendly landscaping: umass.edu/magazine

> Illustration: Anjana Iyer

See how to manage your own pollinator-friendly landscaping: umass.edu/magazine

> Illustration: Anjana Iyer

See how to manage your own pollinator-friendly landscaping: umass.edu/magazine

> Illustration: Anjana Iyer

See how to manage your own pollinator-friendly landscaping: umass.edu/magazine

> Illustration: Anjana Iyer

See how to manage your own pollinator-friendly landscaping: umass.edu/magazine

> Illustration: Anjana Iyer

See how to manage your own pollinator-friendly landscaping: umass.edu/magazine
Jack Welch ’57, longtime CEO of General Electric (GE), died March 1 at the age of 84. Born in Peabody and raised in Salem, Massachusetts, Welch was the first person in his family to graduate from high school. At UMass Amherst he excelled as a chemical engineering student, and he always attributed his meteoric rise at GE to the opportunities he seized on campus.

In 1981 he became the youngest CEO in company history—a position he held for 20 years—transforming GE from a lighting and appliance maker to a behemoth with thriving divisions in many industries, including financial services. As CEO, Welch implemented bold tactics that were often polarizing yet undeniably successful—GE’s revenue grew nearly fivefold under his leadership.

After Welch’s passing, Chancellor Kumble R. Subbaswamy issued a statement in which he acknowledged Welch’s deep connection to UMass, noting that “Jack and his wife Suzy have been great friends of the university, providing extraordinary support to our community and creating life-changing opportunities for students.” Welch established the John and Grace Welch Endowed Scholarship Fund (named for his parents) to support promising Salem High School graduates admitted to UMass Amherst, to which he and his wife have given over $4.5 million. In honor of Welch’s retirement in 2001, the GE Foundation established the Jack Welch Scholars, donating another $5 million.

Welch’s work ethic made him an inspirational leader, and his legacy continues to propel the next generation of leaders getting their start at UMass. “Education is the American dream,” Welch said, “and UMass is still a great place to go grab that dream by the tail.”

‘GRAB THAT DREAM BY THE TAIL’
Remembering a business icon

Jack Welch talks about UMass and opportunity:
umass.edu/magazine

He was a whirlwind. And he absolutely loved business—the competition, the winning and the theater of it. Business was everything to him.

JOHN A. BYRNE, COAUTHOR OF JACK: STRAIGHT FROM THE GUT

You can’t even say hello to Jack without it being confrontational.

RALPH D. KETCHUM, FORMER HEAD OF GE’S LIGHTING BUSINESS

He became the gold standard of greatness, the icon of industrial imagination. His track record over those 20 years as CEO is hard to see excelled anywhere.

JEFFREY SONNENFELD, SENIOR ASSOCIATE DEAN, YALE SCHOOL OF MANAGEMENT

Jack was a driven, high-energy leader, who shook up GE from day one and never stopped. Being around him was a bracing experience, as you visibly felt his almost superhuman focus and intensity.

STEVE FORBES, PUBLISHER, FORBES

He was always direct, but his frankness was appealing and effective. We all loved working for him because he wanted the people around him to succeed. Jack was the best boss I have ever seen.

JEFF IMMELT, WELCH’S SUCCESSOR AS CEO OF GE

Jack was larger than life and the heart of GE for half a century... To have Jack Welch ask me how I am running GE is pretty humbling.

H. LAWRENCE CULP JR., CURRENT CEO OF GE

Control your destiny, or someone else will.

JACK WELCH
Several years ago, my teenage daughter dropped what felt like a little grenade at the dinner table. She had been doing some research and had come to a decision: she wanted to go not just vegetarian, but vegan. It was better for the earth, she said, and for her health. I wasn’t so sure—and not just because I foresaw difficult dinner prep in my future. If we wanted to eat sustainably, should meat be off the table? All meat, or just beef? Wasn’t chicken kind of OK? If I veered to soy meat alternatives, how did those square with concerns about land use, water waste, pesticides, and growing cycles? Was dairy really a problem? And if it was, what was the best alternative? Almond milk? Oat milk? What even was oat milk?

We all get lots of mixed messages from the mainstream media (to say nothing of social media) about what’s healthy for both body and planet. But the good news is that I’m not alone in trying to figure it out. Rather than stand in the grocery aisles and scratch my head, I decided that if I really wanted to know how to eat sustainably, I should ask the experts. And as luck would have it, I could follow one of the main tenets of sustainability: keep it local. I spoke to four UMass researchers—all approaching the same question from different directions.

**DIG IN!**

John Gerber, professor of sustainable food and farming, has watched the trajectories of environmentalism and agriculture converge on a shared goal, which is essentially sticking it to the Man. “The idea of sustainability was generated by farmers who were struggling to compete with an industrial food system designed to exploit people and drive prices down,” Gerber explains. As someone who grew up in a world filled with margarine and Tang, I can attest that the industrial food system worked very effectively. “The farming community said, ‘We need to get more sustainable and grow food in ways that are environmentally and socially sound.’ And the farmers did it,” says Gerber.

But not overnight. The sustainable food and farming major was created just before Gerber came on board at UMass’s Stockbridge School of Agriculture 20 years ago. “There were 5 students,” he recalls. “Today, there are 200 students in the major,” with Sarah Berquist ’11, ’15MS at the helm as program coordinator.

If “you are what you eat,” then I want to eat sustainably.
About half of those students are on campus and the other half are online—but they are still on the ground, so to speak. This program attracts a particular kind of student: one who has a love of the land, doesn’t necessarily feel most at home in the classroom, and is interested in bucking the system.

“In the early 2000s, there was a real change in the world, an antiestablishment kind of thing,” Gerber says. “There were people who probably wouldn’t have been in college at all if not for this major.” Sustainable food and farming offered a new path of action for a generation of future farmers. “It helps them protest the inequities of the food system,” Gerber points out. “But there are also folks who want to work outdoors and do something tangible that they can share with others.” Gerber could be describing idealistic kids of any generation. “At another time these students might have been in the software industry,” he laughs. “But right now, many of these folks are creating new and do something tangible that they can share with others.”

But McClements is also interested in other highly sustainable protein sources: bugs. “I have a box of Mexican spice worm snacks on my wall right now,” he points out. Thanks to the miracle of food science, bug-based products can easily be disguised as just another crunchy, salty snack. “Do you want a snack that causes heart disease and obesity, or one that’s full of protein and minerals? It’s possible that instead of picking up a bag of potato chips you’ll pick up spiced maggots or larvae or crickets.” Pause. “They might have to come up with other words for these.” It’s hard to imagine digging into a bag of spiced maggots, I have to say. But if we really want our food supply to be sustainable, we’re going to have to think more broadly about what we consider food. “Two billion people in the world already eat insect food. In the West, we’re just not used to it,” McClements says. “There’s a yuck factor for lots of people, but that was the same with lobster two hundred years ago. If you’ll eat lobster, why not a bug?”

Sustainable? Responsibly sourced? Distinguished world, an antiestablishment kind of thing,” Gerber says. “In the Netherlands you can get bug burgers. They’ve got huge bug factories there with around seven billion insects in one factory—the same as the number of people on the planet! A lot of them are used for animal feed, but some of them are used in human foods too. It’s a great way of turning a waste product into something valuable.”

Hold up. Why are we even talking about bug burgers? It’s because the old-fashioned beef burger has become notorious for being one of the least sustainable food choices we can make. But both McClements and Gerber pointed out to me that things aren’t quite that simple. A factory-farmed burger is undeniably bad from an environmental standpoint. “So much land use, lots of pollution,” McClements says. Gerber agrees that industrially raised meat is “a disaster,” but points out that a locally raised, grass-fed beef burger can actually be a beneficial part of the food chain. “When you buy a locally raised beef product that’s grown on grass, in the local area and includes Apex Orchards (Becca Drew ’13, wholesale manager), Mapleline Farm (Chad Dizek ’01, farm manager; Richard West ’91, herd manager; John Kokoski ’69, business manager), Queen’s Greens (Matt Biskup ’95, co-owner), and Riverland Farm (Meghan Arquin ’99, co-owner).

The collaborative offers no-contact delivery of fresh local fruit, milk, greens, and other produce straight to their customers’ doors. Some of the same farms also participate in Mass Food Delivery, which serves the entire state. “I am so impressed by how quickly the local farmers responded to the pandemic by offering a home delivery service to our community,” says Hannah Jacobson Hardy, 10, owner of Sweet Birch Herbs and Full Moon Ghee, one of the participating purveyors. “Within days of the farmers’ market cancellations being announced, Julia Coffey of Mycoterra Farm invited me to participate in the Mass Food Delivery program, and I did not hesitate. It has allowed my company to reach more people in a time of much need,” she says.
"When you buy a locally raised beef product that’s grown on grass, in your region, you’re contributing to your own personal health, the health of that community, and the health of the planet,” Gerber maintains. "You have to have animals in a sustainable system to cycle the nutrients." It’s not all about what we eat—it’s also about where the food we eat comes from.

**I’LL DRINK TO THAT**

Of course, sustainable eating isn’t just about eating. It’s about everything we put in our mouths—and I’ll be the first to admit that for me, that includes the occasional glass of wine. Which brings us to Elsa Petit, a lecturer in viticulture and plants, who focuses on diseases of grapevines and how viticultural practices can influence disease-causing evolution—and disease-resistant evolution as well. It was one thing for Petit to study grapes in her native France. But when she first landed in Western Massachusetts... "I was thinking, OK, what can I do with grapes here?" she admits. "Then I saw grapes everywhere in the wild!"

New England grapes are actually hardier and more resilient than many others because the weather demands it. The rest of the world depends on American grapes too. More than a century ago, an American root insect—a pest—infected vineyards across Europe, devastating grape crops. Farmers responded by importing the rootstocks from American grapes and grafting them onto European varieties. "American grapes were resistant to the pest because they evolved along with it," Petit explains. "So now the tops of European grape plants are native to Europe, but the bottoms are all American."

In that past success, Petit sees an elegant answer to eating local in a truly sustainable way. When a species has adapted to a particular region, it’s resistant to disease. "So I started looking at microorganisms—fungi that help support grapevines at the root level—but how would I know which are best for American rootstocks? Here in the center of New England is the perfect place to look at all those natural wild grapes to find the good microbes for vines all over the world.” Petit’s research, in other words, isn’t only about roots of grapes; it’s about getting at the roots of resilient agriculture. "We have many American hybrids. It would be much more sustainable to eat local grapes because you don’t have to ship them—and they’d be more interesting for your palate!” Spoken like a true French native.

**TAG IT**

All the local, sustainable, disease-resistant grapes in the world won’t mean much, however, if they go bad before anyone can eat them. One of the major considerations in food sustainability is waste, and one of the most exciting inventions to combat food waste just came from UMass last fall, and here’s the kicker: that great idea came from someone about my daughter’s age.

Harsha Prakki ’22 saw firsthand the effects of poor food storage practices when she lived in India as a middle schooler and suffered foodborne illness herself. Food spoilage creates two problems—either consumers throw away good food too early, contributing to massive food waste, or they eat it too late and get ill. "When I came back to America for high school, I drew on these experiences in order to find a solution,” Prakki says. She developed Qualtags, which are chemically activated stickers that work with both time and temperature to ascertain whether produce is safe to eat. "They look a little like the stickers on bananas," she says. "The chemical inside changes color over time depending on the temperature changes."

Prakki has gotten a lot of positive feedback, to put it mildly. Last fall she made it to the regionals awards a $1 million grand prize to the project with the most innovative approach to solving tough social problems. Qualtags definitely fit that bill. According to the United Nations Food and Agriculture Organization, food waste creates 3.3 gigatons of greenhouse gas emissions per year—and that doesn’t even touch on all the land use, water, and pesticides that went into creating the food that spoiled. There’s not much point in dithering over locally grown, ethically sourced food if it ends up in the trash. And perhaps it makes perfect sense that Prakki invented this game-changing technology while still in her teens. Who has more at stake in combating climate change than the youngest members of society? Which brings me back to the dinner table at my house. The teen who announced her veganism several years ago is now at college herself. Beyond paying for her meal plan, my involvement in her dietary choices is slim to none. But the other night her younger sister, as if on cue, announced that she wants to go vegetarian and zero waste, and could I please start buying oat milk instead of cow milk? This time, I’m ready.

In this article: Sarah Buquet ‘11, SEMI page 25; Julien McClamert, page 22; Elsa Petit, page 24; Harsha Prakki ‘22, page 25.
CONSENT, CONDOMS, AND COMEDY

SEX IS . . . FUNNY. WHY NOT MAKE SEX ED FUNNY TOO?

> DESIRÉ JACKSON-CROSBY ’19

What happens when sex education, comedic skits, and a group of UMass students collide? The result is something like colorful confetti personified in the form of the Not Ready for Bedtime Players (NRBP).

Founded in 1988 to shed a factual light on the AIDS crisis, NRBP became a peer-led sex education troupe that uses comedic skits and theatrics to inform student audiences about sex-related topics ranging from healthy sexuality to relationship abuse.

The group is always developing new material, offering fresh and relatable approaches. One recent bit adapted Lizzo’s hit song “Truth Hurts,” replacing the original lyrics about dysfunctional connections with a tongue-in-cheek version about indicators of a healthy relationship, like good communication and respecting each other’s space. NRBP hosts free performances all over campus on Wednesday nights during the academic year. The spring season was cut short due to Covid-19 and the resulting campus closure, but given the riotous responses to their shows, it’s safe to say they’ll be back.

History undergraduate Shai Bocarsly ’23, who wants to be an educator, joined the troupe so that one day he can be a well-rounded source of knowledge for his students. “Sex ed is super important and super underutilized—it’s not very well implemented in schools across the board,” he says. “So, for me in being an educator, this is just something that I should be better at. I’m developing skills here so when I’m actually working I can be helpful.”

Regional planning graduate student Nathalie Irmer ’19, ’23MS says she’s found a “soulful fulfillment” in participating in NRBP by “doing work that genuinely engages people and educates in a way that doesn’t feel overbearing, especially on a college campus.”

“This is really members of UMass giving back to the community,” says group director Tommy Claire ’12MS. “They’re dedicating themselves and their time and their passion for the subject and showing their commitment to each other and their school.”

Photos: Lisa Beth Anderson

Watch a short documentary about the Not Ready for Bedtime Players, featuring a cameo from Captain Condom, umass.edu/magazine
HOW TO BOUNCE

HOW DO YOU TEACH THE ELUSIVE QUALITY OF RESILIENCE IN A CLASSROOM?
A NURSING PROFESSOR HAS SOME IDEAS THAT ARE GAINING TRACTION.

BY MOLLY B. BURNHAM
PHOTOS BY LISA BETH ANDERSON

Resilience—once a trait for gurus and yoga classes—has come to be seen by academics and scientists as an important life skill. Genevieve “Ginny” Chandler, a professor in the College of Nursing, defines resilience as “recognizing your internal and external supports to manage stress,” and she has spent more than two decades studying the nuances and complexities within that simple definition. As interest has grown in what constitutes resilience and how one might cultivate it, Chandler’s long-standing research focus is fast becoming an educational precept. Now her techniques for building resilience are empowering UMass students with a new set of skills that will strengthen them for a lifetime.

Myth: Either You Have It or You Don’t

Chandler’s work began years ago when she was brought into Putnam Vocational High School in Springfield, Massachusetts, to lead writing groups. Employing the methods of Amherst Writers & Artists, her goal was to build coping and self-efficacy skills.

At the time, resilience was seen more as a character trait—something you either had or didn’t have. As Chandler describes it, “Adolescents who were resilient were those who had high GPAs, were involved in school, extracurricular activities, were not doing drugs.” And although the students she was working with were the opposite of that, when she asked if they were resilient, they all said yes.

As Chandler dug into this, she noticed that their resilience often came from isolating or insulating themselves. She recognized that although behaviors like substance abuse or disengagement from school were not necessarily beneficial, they may have started out as a way to manage stressful situations. This essential insight led Chandler to publish two scholarly articles and create a new framework with her coauthor A.J. Hunter called the Continuum of Resilience.

The ‘Continuum of Resilience’

Chandler’s research broadened the concept of resilience by recognizing a spectrum of behaviors associated with resilience—both health-defeating actions and health-promoting ones. Health-defeating resilience might include substance abuse, promiscuous sex, or any other strategy that might get one through a stressful moment but is not healthy for the body and mind in the longer term. Chandler’s goal is for people to draw on health-promoting skills as opposed to health-defeating ones, and she firmly believes that...
health-promoting resilience skills can be taught, so that people can move up the continuum as they adopt better coping skills. By understanding that some actions that are destructive to health are actually attempts to handle stress, Chandler took away the shaming language that had previously existed and created an opportunity for positive change.

**Changing Minds**

It was out of this realization and her passion for teaching these coping skills that Chandler developed her class Changing Minds, Changing Lives. Approaching this curriculum from a strength-based pedagogy, Chandler drew from her own research, from the latest data in this ever-expanding field of study, from social justice education, and even from business strategies, all of which support students having a deeper awareness of their own resilience while introducing them to more health-promoting skills.

About the same time Chandler was debuting her course on campus, Jim Helling—a clinical social worker at UMass and a counselor in the Athletics Department—was looking for a different approach to support student athletes who, for a variety of reasons, have heightened stress levels. Helling wanted something that would teach them more health-promoting skills, something that would lead them “toward growth, health, and wholeness.” Chandler’s class was just what Helling was looking for.

Together, Chandler and Helling began by teaching the class to students who were first-year football student-athletes. Then they taught it to the women’s and men’s basketball teams. The outcomes were more transformative than either Chandler or Helling could have anticipated—the pre- and post-class surveys showed that as students learned about resiliency, they developed important, empowering skills.

“In terms of my education, this class has helped me relieve the pressure I put on myself as a student,” says Hailey Leidel ’20, a UMass women’s basketball player. “I’m always so worried about my grades and GPA, but after taking this class I’ve been able to take more of a breath and just do my best and not expect perfection with everything I do, which ultimately isn’t realistic or sustainable anyway,” she observes.

Women’s basketball cocaptain Vashnie Perry ’20 noticed a change in how she handled overwhelming workloads. Now, she says, “I take a moment and breathe, and I tell myself everything will get done.”

“Negative thoughts stick to us like Velcro,” Chandler explains. “We have to train our brain to hang on to the positive things. We are experts in stress, so we need to practice building up the calm side of the brain, the focused side.”

Football player Jermaine Johnson ’22 says he had learned from the class that “to actually overcome the past, you have to talk about the past and be able to share with others.” Kolton Mitchell ’23 of the men’s basketball team agrees, noting that the class helped him and his teammates to “better understand one another and grow our friendships and bonds together.” Studies show that this increased sense of belonging and community, as well as an improved ability to manage stress, are key elements that contribute to academic success.

**Far and Wide**

Changing Minds, Changing Lives continues to bloom across the university, as both the nursing and engineering departments now offer the course. A version is also being taught in Springfield Central Public High School, where UMass student-athletes serve as mentors and role models by facilitating the weekly classes. Chandler and Helling received funding from the NCAA to study how the course supports players in transitioning to college. The educational community both on and off campus recognizes that a strong education includes both academic passion and mental wellbeing. Elizabeth “Betsy” Cracco, the university’s executive director of Wellness, Access, and Prevention, is working with Chandler to develop ways for more students to access the benefits of the practices taught in the course. “We recognize the essential skills that are being developed here and want to translate that to help all of our students,” she says.
Embracing an uncomfortable form of protest

XENIA ARRIÉZ DE LA VEGA ’20

IN THE COURSE OF HUMAN EVENTS

Born and raised in La Paz, Bolivia, I moved to the United States almost four years ago to attend college. In October 2019, I watched from my apartment in Amherst, Massachusetts, as elections took place in my home country of Bolivia. My eyes were glued to my phone while my family reported the results back to me, and I felt hope for the first time in a long time. But it hurt, too. I was far away, unable to cast a vote and have my voice heard. I watched from a distance as the preliminary results reporting suddenly stopped. The protests didn’t stop for the next three weeks. As they went on, I experienced the strange dichotomy of my life staying exactly as it was and yet not being the same at all. I still had to wake up, go to class, do my homework, and study as if I were just another regular day. Meanwhile, my sisters back home were trapped in the house because even walking down to the corner store could put their lives in danger. Rioters supporting Morales’s party burned down civic leaders’ homes, journalists’ homes, buses, and hospitals. They attacked people on the street. And where was I? I was staying exactly as it was and yet not being the same at all. I still had to wake up, go to class, do my homework, and study as if it were just another regular day. Meanwhile, my sisters back home were trapped in the house because even walking down to the corner store could put their lives in danger.

Morales’s party burned down civic leaders’ homes, journalists’ homes, buses, and hospitals. They attacked people on the street. And where was I? I was thinking about an assignment I had due next week. I felt like everything should’ve stopped. The life of my friends and family had changed dramatically, so why hadn’t mine?

As the protests raged on, the military recommended that Morales step down in order to restore peace. He went into exile in Mexico, and an interim government stepped in. Morales claimed that the protests against him were a coup and that the election had been fair, and I’ve seen a lot of people buying into Morales’s “coup” narrative. But as a journalism major, my job is to gather and report the facts, no matter how loudly Morales protests. Now that the dust has settled, I realize that despite not being there, I do have a role to play in the fight: to inform people as much as I can. I have the privilege of being able to write about this issue without fear of retaliation, something even professional journalists back home don’t have.

Moreover, at the Massachusetts Daily Collegian I have a platform for my writing, and I’ve learned that people listen. It’s a great responsibility, and one that I don’t take lightly. Rioters may not be in the streets anymore, and new elections may be on their way, but our fight is far from over. There’s still a lot of misinformation out there, and if there’s anything I’ve learned from being abroad while Bolivia was fighting for democracy, it’s that good journalism is extremely important. Seeing so many journalists work relentlessly to bring the truth to light no matter where they are in the world inspires me to always do the same, no matter the risk. That feeling of being torn between two places can be an asset, continually motivating me to amplify the voices of many who are not free to speak for themselves.

I didn’t get to march in protest with my people in 2019. And I didn’t get to march with them as Morales claimed victory in 2019, even though he didn’t seem to have the numbers and claims of election fraud began circulating. The protests didn’t stop for the next three weeks. As they went on, I experienced the strange dichotomy of my life staying exactly as it was and not being the same at all. I still had to wake up, go to class, do my homework, and study as if it were just another regular day. Meanwhile, my sisters back home were trapped in the house because even walking down to the corner store could put their lives in danger. Rioters supporting Morales’s party burned down civic leaders’ homes, journalists’ homes, buses, and hospitals. They attacked people on the street. And where was I? I was thinking about an assignment I had due next week. I felt like everything should’ve stopped. The life of my friends and family had changed dramatically, so why hadn’t mine?

As the protests raged on, the military recommended that Morales step down in order to restore peace. He went into exile in Mexico, and an interim government stepped in. Morales claimed that the protests against him were a coup and that the election had been fair, and I’ve seen a lot of people buying into Morales’s “coup” narrative. But as a journalism major, my job is to gather and report the facts, no matter how loudly Morales protests. Now that the dust has settled, I realize that despite not being there, I do have a role to play in the fight: to inform people as much as I can. I have the privilege of being able to write about this issue without fear of retaliation, something even professional journalists back home don’t have. Moreover, at the Massachusetts Daily Collegian I have a platform for my writing, and I’ve learned that people listen. It’s a great responsibility, and one that I don’t take lightly. Rioters may not be in the streets anymore, and new elections may be on their way, but our fight is far from over. There’s still a lot of misinformation out there, and if there’s anything I’ve learned from being abroad while Bolivia was fighting for democracy, it’s that good journalism is extremely important. Seeing so many journalists work relentlessly to bring the truth to light no matter where they are in the world inspires me to always do the same, no matter the risk. That feeling of being torn between two places can be an asset, continually motivating me to amplify the voices of many who are not free to speak for themselves.

A version of this piece originally appeared in the Massachusetts Daily Collegian and is reprinted here with permission from the author.
For 50 years, students in the Bachelor’s Degree with Individual Concentration (BDIC) program have marched to their own beat—more than 4,500 of them all told. The program—founded in 1970 and one of the first in the country at the time—allows students to design their own majors. BDIC students often comment on the pride and satisfaction they derive from designing their own majors, as well as the confidence and focus they develop as part of the process.

Today there are about 30 programs similar to BDIC at universities across the country, says BDIC Department Head and Faculty Supervisor Thomas Brashear Alejandro, but the UMass BDIC program stands apart because of its emphasis on interdisciplinary majors. Some examples of BDIC majors include communication of social justice, fashion merchandising and communications, marketing and corporate psychology, and the biomedical relevance of belly dance.

Susan Howard ’76 was one of the first BDIC graduates. She decided to major in women’s studies before the existence of the Women, Gender, Sexuality Studies Department. Howard says, “I thought if I want to learn history I want to learn about women’s history, and if I want to learn about political movements I want to learn about women’s political movements.”

More recent alumni continue to innovate, including Philip Scarfi ’16, who combined his entrepreneurial spirit with a knack for creating mobile apps. He took courses in computer science, business, communication, and economics to create a computer and information sciences systems management major. He has followed his passion—and his father’s footsteps—and works as a firefighter in New York City while creating apps with his company Pioneer Mobile Applications to support others in his field.

Some 1,000 first responders are now using his Mobile MDT app to locate the nearest hospitals. “Here I am, doing exactly what I love doing—and BDIC gave me that opportunity,” Scarfi says.

Machine learning—the process of teaching computers to make decisions—is used in a growing number of areas, from hiring to banking to medicine. But guaranteeing safe and fair machine behavior is still an issue, says UMass researcher Philip Thomas. “When someone applies a machine learning algorithm, it’s hard to control its behavior,” Thomas says. This risks undesirable outcomes from algorithms that direct everything from insulin pumps to criminal sentencing.

Thomas and his colleagues have introduced a new framework to help control the behavior of these algorithms, making it easier for users to specify constraints on undesirable behavior and “apply them responsibly to real-world problems,” says Thomas. To test the new framework, researchers used it to predict grade point averages in a data set of 43,000 students in Brazil, and it successfully avoided several types of gender bias. In another test, they showed how an algorithm could improve the controller in an insulin pump without increasing the frequency of hypoglycemia.

“We hope machine learning researchers will go on to develop new and more sophisticated algorithms using our framework,” Thomas says.

The study will gather data points about everything from gambling addiction and other mental illnesses to local economic stimulus effects. Based on their findings, SEIGMA will make annual scientifically based recommendations to the MGC.

Speaking from over 30 years of experience studying gambling and problem gambling across the world, Volberg says this kind of research opportunity is rare. The researchers have proposed including research on how the coronavirus pandemic and related casino closures affected gambling behaviors as well.

“There are very few jurisdictions worldwide that have mandated that research be done to monitor the impacts of gambling over time,” she says. “And I’m particularly proud of the fact that we were able to house the project at the UMass flagship campus.”
PLAYING IT FORWARD
SAMBA DIALLO ’22
> ALEXIS ALI

From his very first game as a UMass Minuteman, Samba Diallo ’22 looked at home. The 6-foot-7 forward showed fans the spark that had drawn the interest of more than 11 collegiate teams. You would never know he was coming back from an ACL injury and from a bittersweet visit back home.

Diallo grew up in the small town of Rufisque, Senegal. He and a friend took turns sharing a pair of shoes so they could play pickup basketball games with the other neighborhood kids after school. Diallo dominated their outdoor court and dreamt of pursuing basketball in the U.S. Through a series of fortunate events, Diallo was invited to finish high school in Sparta Township, New Jersey. He lived with a host family, the Breslins, and exhibited such enthusiasm and versatility as a player that he caught the attention of UMass Coach Matt McCall.

Besides his raw talent, McCall saw an incredibly positive spirit and work ethic during Diallo’s recovery. McCall wanted that kind of attitude on his team. “He was the first one who called me,” Diallo recalls. “He was like, ‘Hey, look, I know you’re hurt and this is going to be a long process. And I just wanted to let you know that we’re here to support you.’”

The summer after committing to play at UMass, Diallo flew back home to renew his visa. Upon his arrival, Diallo found out his mother was terminally ill. He struggled with the decision of whether to return to the U.S. or stay and care for his ailing mother. At the urging of his father and siblings, he flew back to the U.S. to begin training. It was during training for the first game of the season that Diallo learned that his mother had passed.

Now a sophomore, Diallo is known as the heart of the team. He makes a point of absorbing as much as he can from his coaches’ instruction and learning from the adversity he faces. During his games, he honors his mother by writing messages on his shoes like “RIP Mother” and “I know you’re in a better place” as a way to thank her for her support and sacrifice. Whenever he travels back to Senegal, Diallo brings a load of shoes with him for the kids in Rufisque. Injury and loss have taught him to live in the moment. “Once I step on the court, I’m going to give everything I have,” he says. With that approach to the game, and to life itself, it seems inevitable that Samba Diallo’s story has just begun.

More about Diallo’s shoes and his journey: umass.edu/magazine

ONCE I STEP ON THE COURT, I’M GOING TO GIVE EVERYTHING I HAVE.
—SAMBA DIALLO ’22
UMass innovations power the world through wind, water, and air

By Heather Kamins

IN THE WIND
Chances are you’ve seen a modern three-blade wind turbine in action—as of last year there were more than 58,000 of them dotting plains and hillsides across the country, with another 3,000 being installed each year. According to the American Wind Energy Association, the amount of wind energy generated in the United States has more than tripled over the last decade, becoming the largest source of renewable energy in the nation. What you may not realize is how instrumental UMass has been in the development of this technology.

In 1967 Captain William Heronemus, recently retired from the U.S. Navy, came to UMass to establish a new ocean engineering program. But he also had a more expansive vision: to completely replace both fossil-fuel-based and nuclear energy. He and a group of other faculty members established the energy alternatives program at UMass, designed to educate the next generation of engineers to fulfill his ambitious goal.

Few wind energy converters existed at that point, so Heronemus built a turbine that would both generate power and serve as a basis for ongoing experimentation. Wind Furnace-1 (WF-1), as this turbine was called, was completed in 1976.

Although small compared to today’s turbines, WF-1 was the largest operating wind turbine in the U.S. at that time. It also introduced many elements that are standard on turbines today—three fiberglass blades, near-optimal blade shape, blade pitch regulation, variable speed operation, and computer control—and it was considered by many to be the first modern turbine produced in the country.

Today, UMass continues its legacy of educating students to become innovators in the field of wind energy. The university’s Wind Energy Center (WEC) has become a national leader in wind energy education, academic research, and service to government and industry. In addition, the WEC’s interdisciplinary educational program includes undergraduate and graduate classes in engineering, environmental science, and social science, preparing students for careers in the booming wind energy industry.

OFFSHORE INNOVATION
Heronemus may have drawn upon his experiences at sea when he listed offshore wind among the avenues he wanted to pursue. The challenge faced by researchers is creating systems that can be placed farther out to sea to avoid negatively impacting shipping lanes, recreational boating, the fishing and shellfish industries, wildlife migratory paths, and ocean-bottom ecosystems.

But locating offshore systems farther from the coast poses a challenge too, as fixed-bottom turbines are not a viable choice for deep waters. Matthew Lackner ’08PhD, associate professor of mechanical engineering and associate director of the WEC, is working on a solution: floating turbines.

A floating turbine sits atop a platform that is anchored to the sea bottom. It has the benefits of being less costly to install, less disruptive to wildlife, and more accepted by the public (out of view for coastal residents). But this design presents its own challenges. “You have a platform that can move in three dimensions and rotate in three dimensions,” says Lackner. “It’s harder to model, and it could impact reliability.”
By bringing in multiple disciplines to study floating turbines, the WEC is helping advance the development of this renewable technology that will be present in our oceans in the coming years. “We’re one of the few programs in the country that has such a broad and diverse set of experts all interested in wind,” says Lackner. “I think our success lies in our ability to find solutions that require people from different disciplines working together.”

**MAKING WAVES**

One of the biggest challenges with offshore turbines is how they interact with water. Professor and Endowed Chair in Renewable Energy Krish Thiagarajan Sharman joined the College of Engineering in 2018, and one of the first things he did was to start building a lab to address the water side of renewable energy.

An expert on marine renewable energy and energy-producing offshore structures, Sharman focuses his studies on harvesting energy from waves in marine environments. The new lab will allow him to create waves and currents in a controlled environment, which will also help offshore wind researchers test new equipment designs in more realistic conditions. Bucking the trend toward computer simulations, this physical lab will feature a combined wave-current flume consisting of a 6,000-gallon water tank and a commercial-grade marine thruster.

“This facility is unique in that it can simulate tidal environments with waves and currents in line or opposing each other,” says Sharman.

Sensors, high-speed photography, and laser illumination capabilities will allow researchers to gather many types of data. To date, there are no commercial wave energy converters providing power to the U.S. electricity grid. But the new lab, currently under construction in Guinness Hall, will allow a model to be tested as part of Sharman’s work with the National Renewable Energy Laboratory. The lab offers exciting possibilities for a variety of experiments, including those done by undergraduates and postdoctoral researchers who, Sharman notes, have been instrumental in helping to create the lab. In addition to testing offshore wind energy systems, wave energy devices, and tidal systems, researchers will be able to test fish cages, ropes, and marine systems for equipment failure in realistic scenarios and to examine the potential impacts of climate change. The only limits are those of researchers’ imaginations.

**OUT OF THIN AIR**

A recent collaboration between researchers in the electrical and computer engineering and microbiology departments seems like science fiction—but it’s real. The laboratories of electrical engineer Jun Yao and microbiologist Derek Lovley have developed a device that uses a natural protein to create electricity from moisture in the air.

Their “Air-gen”—or air-powered generator—connects electrodes to electrically conductive protein nanowires produced by the microbe Geobacter in such a way that electrical current is generated from the water vapor naturally present in the atmosphere. The technology is nonpolluting, renewable, and low cost, and it can generate power even in areas with extremely low humidity. “We are literally making electricity out of thin air,” says Yao.

The current generation of Air-gen devices are able to power small electronics, and the researchers expect to bring the invention to commercial scale soon. Yao says, “The ultimate goal is to make large-scale systems. For example, we may develop stand-alone air-powered generators that supply electricity off the grid.”

As we mark the 50th anniversary of Earth Day this year, the UMass community can look back with pride over its last half-century of contributions to the renewable energy field.
Chemical engineer Mike Pratt ’07 first started playing around with fermentation in a lab he took as a senior. Though he admits the wine he made that semester “came out terribly,” the class had piqued his curiosity—he wanted to learn more. After graduation, Pratt started home brewing. Though he initially took it up as a hobby, his love for the craft evolved into a desire to open his own brewery. But then life got busy, as it often does, as he and his wife, Catherine M. Pratt ’07, grew their family by two. A few years later, with their daughters approaching school age, the time was finally right to revisit that dream.

And that dream, as it turned out, was twofold. After moving to Holyoke, Pratt fell in love with the city and could see enormous potential in the unoccupied buildings of the once-thriving industrial town. He points out that Holyoke, with its former paper and textile mills and brick warehouses, is set up for producing things. The new Arts and Innovation District on Race Street, which includes Gateway City Arts, the Holyoke Community College (HCC) Culinary Center, and Freight Farms—two shipping containers turned hydroponic farms, in which a team of Holyoke residents and HCC students are growing food—seemed like an obvious choice for a new brewery and taproom.

“This beer is an homage to where we come from.” — Mike Pratt ’07

“We need to do this now,” he says, “and on Race Street.” At 208 Race Street, precisely. In February 2019, Holyoke Craft Beer officially opened its doors to the public in the basement of the historic STEAM Building, a former factory that had once produced valves and steam lines. The brewery itself is a one-barrel kettle with six fermenters, which allows them to keep a rotation of a variety of beers on tap. Ninety-five percent of the grain they use comes from Valley Malt, just up the river in Hadley.

The beers themselves pay tribute to Holyoke, with names like Revival Pale Ale, Dreamers & Makers Belgian Table, and Podoke Porter—a reference to the Podokesaurus holyokensis, a dinosaur fossil that was discovered in a hill near Mount Holyoke College. Holyoke Craft Beer’s head brewer Adam Copeland, the creative mind behind the names, also wrote the recipe for 413—a session New England IPA comprising four types of grain, one hop variety, and three yeast strains. “This beer,” he explains, “is an homage to where we come from and what put the area on the map: making hazy New England IPAs.”

When Massachusetts Governor Charlie Baker issued a stay-at-home advisory beginning March 24 closing “nonessential” businesses, liquor stores were allowed to remain open, and Pratt’s shop began offering a weekly pickup time for their growing group of customers to bring home a variety of their beers in cans and growlers. Pratt continues to urge local businesses to set up shop in downtown Holyoke, even naming one of their beers for this vision—it’s called No Vacancy.

A version of this story was published in Edible Pioneer Valley and is reprinted here with the permission of Jordana Starr and Dominic Perri.
Cynthia and Jose Escribano ‘00 met 20 years ago during their first year at UMass. The two clicked over their shared involvement with student organizations: Jose founded the university’s first Latino fraternity, and Cynthia cofounded the university’s first Latina sorority. Both students held a love for the advancement of their community, stemming from their own experiences as children in low-income households.

Now they’re both principals of public schools in Springfield, Massachusetts—two of just three Latinx principals in the city’s school system.

“At age 26, Varshini Prakash ‘15 is casually shattering the status quo of climate politics. As executive director and cofounder of the Sunrise Movement, she has harnessed the political power of a wave of unapologetic young people determined to shape the future of our planet.

With confrontational tactics like sit-ins and strikes, the Sunrise Movement has attracted attention from leaders like Alexandria Ocasio-Cortez and Bernie Sanders, but Prakash is focused on the grassroots community building needed to sustain the long-term power necessary for massive change. She aims to mobilize millions of people for the Green New Deal, a climate plan built around jobs and economic justice.

Her leadership was forged at UMass Amherst, where she advocated for the university to divest from fossil fuels. She found herself speaking to a hundred fellow students at a rally during finals week. “There was a magic that happened when I got onstage and felt the power of being with hundreds of other people. It tapped into something really deep inside of me,” she told Boston magazine. The student movement Prakash energized ultimately led to the university committing to extricate from fossil fuel investments, becoming the first major public university to do so.

Will social distancing for the coronavirus pandemic slow down Prakash and a movement built on in-person confrontation? The Sunrise Movement recently tweeted “So you’re telling me, an entire generation of organizers, raised on social media, are now stuck inside with nothing to do but be online and organize. . . . Yea . . . we got big stuff coming, and being quarantined won’t stop us.”
James E. Laprel ‘75 started recording the miles he ran during his first year at UMass. Those campus runs, plus 86 marathons and runs for joy, health, and fitness, now total a whopping 5,000 miles—more than twice around the earth. He often wears a UMass shirt or sign during marathons, generating loud and proud cheers from fans lining roadways.

Two UMass alumni are among this year’s winners of the Whiting Awards for fiction writing. The prestigious prize recognizes excellence and promise and provides a $50,000 award.

Genevieve Sly Crane ‘10 caught the judges’ attention with her debut novel, Sorority, which they call “an unflinching examination of the kinds of cruelty women perpetrate against another and against themselves.”

Andrea Lawlor ‘12 MFA is the author of the novel, Paul Takes The Form of a Mortal Girl. Their writing is described as “mythic and gritty, lyric and witty, hauntingly dirty and teeming with life.”

1973 Margaret L. Andersen ‘73, ’76PhD, a highly regarded sociologist, contributes to the national discussion on racial tension with her new book, Getting Smart about Race: An American Conversation.

1974 Robert “Bo” Warren ‘74, ’77MS conquered the world last year by completing visits to all 195 countries—an adventure he began 36 years ago. “Don’t let your fears rob you of your dreams. You should know that the world is not nearly as dangerous as one might think,” he said in a newspaper interview. Read about his adventures at worldtravellearning.org.

1977 David Milofsky, professor emeritus at Colorado State University and an award-winning fiction writer and journalist whose work has appeared in the New York Times Magazine, has published his latest book, A Milwaukee Inheritance.

1983 John Moynihan is a frequent court-side fan at Minutemen basketball games and an engaged alumnus whose many accomplishments now include mentoring students. Moynihan reconnected with Khalea Turner-Morris ’20, the 6-foot-9 former center, at a Student and Alumni Networking Night. After practice interviews and job search advice with Moynihan, Turner-Morris accepted an offer to join the IT staff of Oxford Global Resources.

1983 Maureen P. Stanton, a creative writing professor at UMass Lowell and winner of the 2012 Massachusetts Book Award, has released her second book, Body Leaping Backward: Memoir of a Delinquent Girlhood. She details her troubled teenage years in Walpole, Mass.

1991 Thyme M. Sullivan is cofounder of The Organic Project (TOP), a woman-owned socially responsible company on a quest to make organic feminine hygiene products widely available. The founders have received an infusion of $1.6 million to grow their Duxbury, Mass., company from Marion Venture Partners Fund, a fund that invests in companies started by UMass Amherst alumni, faculty, and other entrepreneurs.

1998 Karen Skoﬁeld draws on her experience in the U.S. Army for her second poetry collection, Battle Dress: Poems, which won the 2018 Barnard Women Poets Prize. She shared with Poets & Writers her best advice: “It’s necessary to write terrible lines, awful drafts, half-hearted poems. Write ten in a row if needed. Throw pencils, get mad, take a walk. Swear off poetry, read a chapter of a post-apocalyptic novel, wash the dishes. Feel better? Back to writing. Repeat as necessary.”

1998 Kate E. Southwood is an art historian who turned writer whose highly acclaimed debut novel, Falling to Earth, will be made into a movie starring Academy Award winner Ben Affleck.

2002 Lorena L. Leonard writes: “I have a story to tell. It is a story of hardship, loss, passion, and perseverance. It is a story of grit and resilience!” Now, many others will hear her story of fleeing Medellin, Colombia, and the violent drug wars for sanctuary in the U.S. in her appearance on Stories from the Stage, available on World Channel/PBS.

2002 Lisa R. Olstein, a faculty member at the University of Texas at Austin, has just published Pain Studies, a memoir in lyric essay form on her long history with migraines. Olstein also collaborated with her partner Jeffery Foucault to produce two rock albums with their band Cold Satellite.

2004 Jennifer Jensen Wallach, a professor of history at the University of North Texas, traces food culture from Africa before the slave trade to fine dining in Harlem in her new book Getting What We Need Ourselves: How Food Has Shaped African American Life.

2005 William R. Gallagher, a documentary filmmaker, directed his first feature-length documentary, Runner, tells the story of the journey of a South Sudanese teenage refugee who became an Olympic runner.

2011 Nicole W. Sobel was listed in the Boston Business Journal’s “40 Under 40” for making a difference in her company and community. She works as an account manager for Martignetti Companies, a major distributor of wine and spirits in New England, and serves as a director of the Boston nonprofit Mass Mentoring Partnership.

2012 Margaret E. Hersey, a ninth-grade English teacher at Springfield Honors Academy at the High School of Commerce in Springfield, Mass., won a $25,000 Milken Educator Award—considered the Oscars of teaching—for her innovative, creative, and student-centered teaching.

2013 Jillian R. Harvey was appointed the first diversity, equity, and inclusion coordinator for Arlington, Mass. She will serve as a liaison for the town’s Human Rights Commission, Disability Commission, and Rainbow Commission.

2019 Molly J. Hansen was named an Emerging Professional of the Year by the New England College Personnel Association for her work as the food pantry coordinator at Banker Hill Community College and for her graduate work on food security issues.

Submit your note at umassalumni.com/classnotes

Connections
IN MEMORIAM

'A LOSS THAT REVERBERATES'

On March 10, 2019, 24-year-old Samya Stumo ’15 was on her way to Uganda for her first assignment as a healthcare analyst when she and 156 others died in a plane crash near Addis Ababa Bole International Airport in Ethiopia.

Stumo was working for ThinkWell at the time, a Washington, D.C., nonprofit improving health care in developing countries. It was a perfect fit. Stumo wrote that she was “inspired to impact change while rejecting the status quo in global health and development.”

Her family wrote, “She cared most about treating all people and patients as human beings, particularly in the context of their culture, family, and individuality.”

“She was the kind of leader that we hoped to get from our young generation in our world,” explained her great uncle, political activist Ralph Nader. “It’s a loss that reverberates and affects a lot of people.”

In the wake of her death, some of Stumo’s family members have testified on Capitol Hill and worked hard to get the Boeing 737 MAX 8 plane grounded until it can be made safe. Nadia Milleron, Stumo’s mother, continues the fight: “More work must be done to ensure others won’t face the same grief and loss that my family now copes with each day.”

Stumo’s family created the Samya Rose Stumo Memorial Initiative for Universal Quality Healthcare, which aims to find talented young leaders to extend Stumo’s vision and mission.

HONORING A PROFESSOR’S LOVE OF THE LAB

UMass Physics Professor Kenneth Langley died in March 2019. He began his 36-year career at UMass in 1966 when he moved to Amherst with his wife Joan Langley ’72 and their daughter Christine. “There were many new faculty that came about the same time, and so there was a very social aspect with the department at UMass—as well as professional. We were friends,” says Joan.

To honor Ken’s love of teaching and his dedication to laboratory research, Joan created the Professor Kenneth Langley and Joan Langley Research Fund for Future Physicists. The endowment will fund one or more undergraduate students conducting summer research in a physics lab on campus. “What’s great about the endowment is that it’s not only about grades,” says Joan. “It’s about potential.”

In the late 1970s, Ken and fellow UMass Physics Professor Norman Ford cofounded Langley Ford Instruments—one of the earliest high-tech startup companies in Amherst. In the 1980s, the firm designed and built precision light-scattering instruments for use in industrial and academic research.

“Our children and I wanted this endowment to support laboratory research,” says Joan. Of her experience creating the endowment, she smiles and says, “We are beyond thrilled to be a part of this. It feels good in so many ways. To know you are helping future generations of physicists doing something they love, just as Ken loved it, and that it helps change the world, all for the good.”

CHRONICLING LIFE’S CHANGING RHYTHMS

Professor Emeritus Joel Martin Halpern, a cultural anthropologist best known for his six decades of study in the former Yugoslavia, died in July 2019 at the age of 90. Halpern was an adventurer who traveled throughout Europe, North America, and Asia for fieldwork and ethnographic research.

Halpern studied history at the University of Michigan and earned his PhD from Columbia University. For his doctoral study on the modernization of the Balkans, Halpern and his family lived with a local Serbian-speaking family in Orašac, where he and his wife, anthropologist Barbara Kerewsky-Halpern, chronicled the rhythms of village life with a focus on the impact of the introduction of electricity and indoor plumbing and the exodus of young people to cities. His PhD dissertation was published as A Serbian Village and received the Clarke F. Ansley Award from Columbia University Press in 1956.

Halpern, a prolific writer, launched his career as a junior foreign service officer in Southeast Asia and later as a consultant to the RAND Corporation. He was drawn to positions that allowed him to study customs and cultures of a wide variety of peoples and authored or coauthored dozens of books on the Balkans and Southeast Asia, focused particularly on the study of rural life and urbanization, the economy, ethnicity, and cultural change. He taught at UMass from 1967 until his retirement in 1995.

Many of his papers are housed in the Special Collections and University Archives at UMass and in archives at the Smithsonian Institution.

CAPTURING THE BOSTON MOST NEVER SAW

David Akiba ’69, a photographer and teacher who urged students to use inquisitive eyes to create art, died in August at the age of 78.

“On countless walks through parts of Boston many never visit, David Akiba developed a singular vision of the city that he captured in decades of photographs,” begins a Boston Globe remembrance.

In his hunt for photographs of Boston and its residents, Akiba visited urban wastelands, railroad yards, and razed buildings. He captured beauty in mannequins stored in a factory, commuters at a train station, ballet dancers, and a quiet coffee shop on a Sunday morning. His work has been exhibited at the Museum of Fine Arts in Boston, the Library of Congress, and the Brooklyn Museum, among others.

A popular photography teacher, Akiba influenced many students enrolled in Boston-based colleges, including Emerson College and Babson College. According to the Boston Globe, he once told his students, “You can never exhaust the possibilities of the landscape. There are so many different kinds of woods, trees, and shrubs. It’s like Monet in his garden.”

See all remembrances: umass.edu/magazine
Submit address changes and nominations for remembrances to: updates@umass.edu

Photo: David Akiba
**BY PLANNING AHEAD,**
you can put a quality education within reach of deserving students, providing them with the tools they need to accomplish extraordinary things.

“The joy I had mentoring students and watching them grow into extraordinary people.”

PATTY FREEDSON

Kinesiology Professor at UMass Amherst for 35 years, on why she made a gift to UMass in her estate plan.

**Start Planning Today (We Can Help)**

Our **FREE Personal Estate Planning Kit** walks you through the planning process step-by-step. You’ll gain insights to help you create the future you want and establish an extraordinary legacy in the process.

**3 WAYS TO GET YOUR FREE PERSONAL ESTATE PLANNING KIT**

**ONLINE**
Visit umass.myplannedgift.org/kit to download a copy.

**BY PHONE**
Call Theresa M. Curry, JD, at (413) 577-1418 to request your Kit be mailed to you.

**BY MAIL**
Complete the form and cut along the marked line above. Then, mail your request to the address below.

**Name—Please print.**

**Email**

**Telephone**

Office of Gift Planning | University of Massachusetts Amherst
Nelson House South | 505 East Pleasant Street | Amherst, MA 01003-9259

**University of Massachusetts Amherst**

**William Smith Clark Society**

**Rain or shine, virtual or live, show that UMass pride. Get ready for HOMECOMING 2020**

October 22-24  |  UMassAlumni.com/Homecoming
Sometimes it is crystal clear what each of us needs to do to avoid a collective disaster. The coronavirus pandemic, for example, requires us to do our part to slow the spread of the virus through social distancing and vigilant handwashing. But for other challenges, it isn’t always as clear what individuals should do. Climate change can feel that way. But the truth is, there is something each of us can and should be doing a lot more of: talking about climate change with one another.

As social beings, we look to those around us to help guide our own actions and beliefs. The things we hear talked about most frequently—in the media; within our social networks; at our places of work, play, and worship—are the ones we come to prioritize. And they become the issues that we demand our elected officials prioritize as well.

Public polling conducted over the past few years has repeatedly shown that few Americans talk about climate change with their friends, family members, neighbors, and colleagues on a regular basis. A majority of Americans are concerned about climate change—over 70 percent, according to recent data from researchers at Yale and George Mason universities—but many people are reluctant to speak up and voice their concerns. Why?

Research by psychologists Nathaniel Geiger and Janet Swim suggests that this “silencing” effect is due, in part, to people’s misperception that those around them don’t care about this issue. It isn’t true—Americans do care, deeply, about climate change—but because we don’t often hear the people around us talking about this issue in everyday life and sharing their own concerns, many of us worry about how others will look at us if we do speak up.

The good news is that when people actually start talking about climate change, that seemingly simple act can quickly develop into a positive upward spiral in public concern and engagement with the issue. Research published in the Proceedings of the National Academy of Sciences last year shows evidence of “reciprocal causality,” meaning that as people start talking about climate change with family and friends, they begin to learn more about the issue. In turn, this leads people to become more concerned and engaged, which can lead to an even greater willingness to talk with others.

We need such reinforcing, positive trends in climate-change discussions and storytelling because the stories we choose to tell one another shape what is possible in the future; indeed, they help determine the future. Telling the story of climate change matters because the stories we tell affect how we feel, whether we act, and what sort of future we are able to envision—and ultimately create—for ourselves and our communities.

Ezra Markowitz is an associate professor in the Department of Environmental Conservation at UMass Amherst. His research investigates the underlying psychological, social, and contextual factors that influence individual and collective environmental decision making.

Watch a video with tips for starting a climate change conversation: umass.edu/magazine
Living on a tight budget and encountering the ripple effects of the coronavirus pandemic is threatening some students’ ability to remain in school and graduate.

The Student Care and Emergency Response Fund helps students in need cover the cost of housing, food, medical expenses, and other necessities to stay on track toward earning their degrees.

Applications to the fund have already increased more than 300 percent this spring, with the vast majority of students citing a loss of income due to the coronavirus pandemic.