UNIVERSITY OF
RHODE ISLAND
MAGAZINE
SPRING 2019

Dream Team

Aperture

"NIZAM ZACHMAN FISHING PORT, JAKARTA, INDONESIA"

by Fery Sutyawan, Ph.D. '19

Fery Sutyawan took this photo in summer 2017, when he did a field observation at Nizam Zachman for his dissertation research. The fishing port is the largest in Indonesia, home to more than 1,200 industrial-scale fishing vessels. Indonesia is the second largest marine fisheries producer in the world, and there is not enough port space to accommodate the country's fishing boats. URI is involved in numerous projects and partnerships with Indonesia, most of which relate to fisheries, marine affairs, and sustainable development. Sutyawan explains that this photo depicts the strength of the country's fishing fleet, while also illustrating the problem of increasing global exploitation of fisheries resources. This spring, Sutyawan will defend his dissertation, which focuses on marine fisheries governance in Indonesia.

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Aria Mia Loberti '20 and her guide dog, Ingrid, are extraordinary. They share the routine of a typical day with us, from classroom etiquette for working dogs, to navigating the grocery store, to teaching yoga.

At left: Popular in landscapes, Madagascar periwinkle is grown in URI's Medicinal Gardens. It contains two of the most toxic substances on Earth, which are used in chemotherapy. Story on page 34.

COVER PHOTO: AYLA FOX
PHOTOS, THIS PAGE: NORA LEWIS; COREY FAVINO

Qubits and Quahogs

An unexpected juxtaposition. And the unexpected is often what leads us to new ideas.

READING THIS ISSUE OF THE *University of Rhode Island Magazine* repeatedly reminded me why I am honored to be the president of this great university, whose history laid a lasting foundation for excellence, upon which we can build a bright future.

The intellectual and creative diversity on our beautiful campus continues to amaze me. On any given day, you may find theater majors huddled with celebrated artists such as Tony Estrella ’93 and Rachel Walshe ’01, while students enjoy lunch in our medicinal garden, a national resource for natural products research with more than 200 medicinal plants that help treat diseases ranging from anxiety to heart disease to cancer.

Speaking of not knowing what will happen next, in January, President Dooley surprised a group of students who were studying in Indonesia for J-Term. The students and their professors, Tom Boving and Nancy Karraker, were joined by President Dooley for a day in Rawa Aopa Watumohai National Park in South East Sulawesi. The students were impressed that Dooley made the difficult trip and spent the day with them, trapping, tagging, measuring, and determining the age and sex of the Southeast Asian box turtle.

Where else but in this magazine will you find the story of aquaculture wizard Brendan Breen ’18, the first person to make pearls from quahogs, running alongside the story of Christopher Savoie ’92, head of Cambridge, Massachusetts-based Zapata Computing, a cutting-edge company modeling chemical reactions at the subatomic level using powerful quantum computers that could lead to a new generation of materials and medicine?

Qubits and quahogs—a fascinating juxtaposition. Not exactly what you might expect from the smallest state’s public research university. Think again. This is the place where award-winning British-Iranian journalist Christiane Amanpour ’83 started her remarkable career. And this is a university dedicated to ensuring access to the highest quality education that changes people’s lives: Henock Constant ’18, a father of four from Haiti—and recent 10 Under 10 alumni award honoree—attempted college twice without finishing. Through our Finish What You Started Program, he completed his degree last year.

In short, we are an amazing kaleidoscope of experiences, talents, and dreams. And our perspective continues to evolve in unexpected ways as we imagine new possibilities.

Ryan Vallee ’19, who is now mentored by Christopher Savoie, clearly gets this. He traces his love of chemistry to the fact that “You never know what’s going to happen.” He explains: “Say you’re doing synthesis and you have to leave the reaction overnight—you can’t see if it works until the next day. I like not knowing what will happen next. It’s all about infinite possibilities.”

Our confidence in the power of infinite possibilities spurred the launch of three exciting new Innovation Campuses: URI and Arizona State University Innovation Hub; the Rhode Island Innovation Hub, or “iHub”; and the URI AgTech Park. Each campus, publicly and privately funded, will catalyze academic research into new commercial products and businesses. Together they are expected to create hundreds of jobs in cybersecurity, data analytics, the Internet of Things, and agricultural technology, bridging the gap between world-class research at Rhode Island’s universities and high-tech jobs.

These campuses exemplify how thinking big has translated into taking bold actions with new partners Cisco, IBM, MassChallenge, RI Agricultural Technologies, Verinomics, and VoloAgri. While much of this work revolves around industries that no one could have imagined when URI was founded as a land-grant college in 1892, the URI AgTech Park is fittingly built on URI’s agricultural foundation.

And that makes perfect sense. Because connecting our past and our future is what URI—and the *University of Rhode Island Magazine*—is all about.

Like Ryan Vallee, we should all be excited at the prospect of not knowing what will happen next.

Until next time,

David M. Dooley
President, University of Rhode Island

At right: A selection of exotic mushrooms from Rhode Island Mushroom Company, which is a partner in the URI AgTech Park. The project will secure Rhode Island's position as the agricultural technology hub of the northeast.

PHOTOS: BROOK WILLIAMS ROSS; COURTESY RHODE ISLAND MUSHROOM COMPANY

Feedback

Write to us: urimag@uri.edu
Visit us and comment at uri.edu/magazine

From the Editor

We invited you to share your ideas, stories, and feedback, and you did! We heard from many of you. You told us what you liked and what you didn't. You reminisced. You gave us ideas for stories. You sent Class Notes. You entered the photo caption contest. You told us about your newly published books. And, much to our delight, you shared surfing stories and photos! You can see them all at uri.edu/magazine/sharing-waves.

Shortly after the last issue of the magazine went out, I received a phone call from an alumnus who is the assistant principal of a middle school in the Bronx. After reading the stories on hip-hop and Masta Ace, he was inspired to reach out and ask Ace to come and speak to the kids at his school. An alumni magazine has many roles to play. A couple of its most important roles are to inspire readers and to connect them with their alumni community. This exchange exemplifies both in the best possible way.

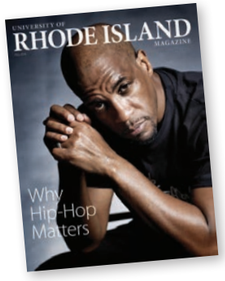
Both of these alumni make me proud to be part of this community: a middle school educator who sees and pursues a novel way to inspire his students, and a legendary hip-hop artist who sees the value in that pursuit and is willing to share his time and talent to make it happen.

Please keep sharing your feedback by email at urimag@uri.edu or online at uri.edu/magazine.

—Barbara Caron, Editor-in-Chief

We want to hear from you! Tell us about your most memorable URI class or professor. urimag@uri.edu

Lots of Love for Masta Ace and Hip-Hop on Social Media



INSTAGRAM

@mastaacepics shared his cover story from the Fall 2018 issue, generating lots of comments:

@atreble1 "Thank you for this brutha. Too many people make the assumption that hip-hop cats are uneducated, both formally and informally. The reality is that MOST of the pioneers were well-educated dudes, with the paper and without, including @mastaacepics #koolmoedee @traceyleeesq and a host of others! You can't build the platform for an entire culture without being bright, gifted, and driven. Those qualities mirror what is needed to earn a college degree as well. Much luv Ace! Oh, and I'm still bumpin. Acknowledge!!!"

@calvindidit "Putting Rhode Island on the map."

@lisalovejones1972 "Yes Rhode Island on the map."

@sabir_talib_muhammad "Yes! Of All Universities, URI…gets it!!"

TWITTER

Hip Hop Hall of Fame @HipHopHoF tweeted: "HipHopHallofFame Approved! #Salute Hip Hop Icon! Way to Go URI! #Respect!

SOCIAL SNAPS

You Know You've Made It When…
Shout-out to Vladimir Duthiers '91 for being featured in a Jeopardy clue! @CBSThisMorning on Twitter

Crescent Moon Over Green Hall
Great twilight shot by: Brandon Fuller. @universityofri on Instagram

Rhody Swimming Celebrates Seniors
Rhody helped celebrate Senior Day and a win over Central Connecticut. @rhodyswimdive on Instagram

Ever Heard of the Funky Timberdoodle?
It's not a dance, or a cartoon character. It's a nickname for the American woodcock, and URI students are investigating its habitat in Rhode Island. @universityofri on Facebook

At the Colosseum
J-Term Instagram Takeover spotlighted our students in Hawaii, Roatán, and Rome. @universityofri on Instagram

College Student Personnel Representing

I love the fall issue of the *URI Magazine*. As I read it, I was just filled with Rhody pride and a longing for campus! Beautiful photos and interesting stories. I was especially happy to see a variety of alumni years and programs represented. I've never seen anything about College Student Personnel represented and I was thrilled to see Charlie Scott's winning photo on the first page. I don't know Charlie, but I certainly am proud! I am looking forward to the next issue!

—Jen O'Neill '13

Poignant Memories

The new magazine is fantastic, a home run. I go back many years for my memories of life on campus, and those memories remain poignant. My great luck in meeting, and later marrying, my wife of 40 years, Rosemary LeVasseur '53, is the most memorable. But there was also a special prof, John Stitely, who convinced me to follow URI at Michigan in pursuit of a city manager career. In 1978, I left city management to become vice chancellor of the University of Colorado, Boulder. A few years later, a Phi Mu brother, Bob Crandall, hired me to help him run American Airlines. I retired to Santa Barbara where I have lived since. Sadly, Rosemary died in 1995. URI has meant so much to me over the years and I try to follow and support its various achievements…now, including this new magazine!

—Ted Tedesco '56

Feeling Old

Nice job on the new magazine. I enjoy the old pictures and short history info. I enjoyed the "All Quiet Undersea" article (good length). But 14 pages on hip-hop? Wow, I feel old. Sure doesn't interest me. Keep up the good work. Best wishes.

—Matt Perry '63

CORRECTION:
The caption for the photo of the ram statue in front of the new Welcome Center in the Fall 2018 issue mistakenly stated that the statue was a gift from Joan Libutti and Dean Libutti '63. The statue was a gift from Joan Libutti and Dan Libutti '63. Our apologies to the Libutti family for the error, and our sincere thanks for their generosity.

The *University of Rhode Island Magazine* is published by the University of Rhode Island Alumni Association.

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Loved "Falling for Film"

The new design is terrific! Both my wife and I are alumni (B.F.A. studio art/photography) and really enjoyed the new issue we got today. Kyla Duffy's story, "Falling for Film," really touched a note for me. I also worked in the Cage and spent many hours in the Fine Arts Center darkroom. I wish you and URI continuing success. I am and will always be a proud URI alumnus.

—Stan Strembicki '75

Kudos

Congratulations! The magazine is outstanding! I love the short articles—"Language Lessons" and "Why I Teach: Scientific Method" were two favorites, but I was also happy to see in-depth coverage of one idea through the longer central articles on hip-hop. I loved Ann Hood's piece, as well, and shared many of her memories, especially of Dr. Warren Smith's class.

—Debra De Jesus Marble '81, '16

I very much like the new format! Good stories of URI and its folks.

—Lewis Collier, M.S. '86, Ph.D. '14

Delighted to see the major upgrade to the URI Magazine. The quality of the contents has always been high. Now you have the packaging to match it.

—Tony DiBella, M.B.A. '86

Gratitude for a URI Education

I appreciated your new and improved URI Magazine—the photos, the articles, and the whole layout. I also wanted to express my appreciation for my wonderful education at URI. It was the first time that I left home. Even though I lived in Milford, Connecticut, and it was only 100 miles to Kingston, it seemed like a long way from home. I was a surfer then and loved the ocean and beaches so close to our campus. My undergraduate education got me off in the right direction, both as I was to continue to develop as a person and toward my rather unconventional career.

—Jeffrey Fortuna '71

PHOTO: STAN STREMBICKI; ILLUSTRATION: ANTHONY RUSSO

= SYLLABUS =

How to Read *Moby-Dick*

2019 marks the bicentennial of Herman Melville's birth. For lit lovers, reaction to this news will depend almost entirely on their feelings about just one of his novels: *Moby-Dick*.

MOBY-DICK IS ONE OF those novels that, let's face it, many readers avoid or abandon. For those readers, mere mention of the novel may trigger anxiety that looms like its namesake: an intimidating, inscrutable monster.

If Melville's 200th spurs you to take on the tale of the great white whale, English Professor Martha Elena Rojas has a few suggestions:

Martha Elena Rojas, professor of English

Pick a version that works for you.
In addition to the familiar editions you might remember, there are *Moby-Dick* picture and pop-up books for children, and graphic novels for young adults. A favorite of Rojas' is Matt Kish's monograph *Moby-Dick in Pictures: One Drawing for Every Page*. The book is 600 pages long with a shipping weight of 4.3 pounds. Melville would be proud.

Commit to reading the first 50 pages.
"Even if you read only one chapter, you will take something from it," Rojas says. "I think of the first chapters as Melville's long ramp into it, his way of drawing you into the text. Ishmael's perspective as a somewhat experienced sailor who nonetheless ventures into unknown territory is much like the reader's, and the friendship that unfolds between Ishmael and Queequeg models a positive encounter with the new and unfamiliar."

Begin at the end.
If you get really impatient, stop and read the last three chapters. "Most people already know the plot of *Moby-Dick*, so that's one of its challenges: We think we already know it," Rojas says. "So read the end first, and then pick up the book again to experience how Melville gets us there."

Listen to the audio.
On the website *Moby-Dick* Big Read, each chapter is read by a different person. Actor Tilda Swinton reads the opening chapter. Beloved poet Mary Oliver, who died in January, reads the epilogue. In between, you hear the voices of Royal Shakespeare Company actors. The novel with its scenes of sailors telling yarns and tall tales, of sermons, speeches, and soliloquies is inherently theatrical.

Get in the mood.
Tracks from Laurie Anderson's multimedia translation, "Songs and Stories from *Moby-Dick*" appear on her album Life on a String. "I'm partial to 'The Island Where I Come From,' with its strains of calypso, and the haunting, poetic 'Pieces and Parts,'" says Rojas.

Set aside time, but not too much.
The key to success, Rojas says, is setting aside time specifically for the purpose of reading. In the classroom, she gives her undergraduates three weeks. "Two weeks is not enough and four is too much," she says.

Be ready to be rewarded.
National Book Award-winner Nathaniel Philbrick argues in *Why Read Moby-Dick* that the novel is "as close to being our *American Bible* as we have." It's also a great read, says Rojas. "And *Moby-Dick* has proliferated and permeated modern culture. There are plays, movies, paintings, operas, even rap songs devoted to it." •

—Marybeth Reilly-McGreen

ENG 396
The Oceanic Nineteenth Century: What is Oceanic Literary Studies?
The Rumowicz Seminar in Literature and the Sea
Martha Elena Rojas

This course introduces oceanic literary studies and aims to broaden students' conception of maritime literature. Readings include:

The Odyssey
by Homer

The Interesting Narrative of the Life of Olaudah Equiano, Or Gustavus Vassa, The African Written by Himself
by Olaudah Equiano

A Tale for the Time Being
by Ruth Ozeki

Moby-Dick
by Herman Melville

PHOTOS: AYLA FOX; NORA LEWIS

= QUAD ANGLES =

Exploring Space and Time

By Ben Leveillee

In one way or another, all of our learning is connected to exploring space and time. Sometimes, just not in ways we can calculate.

FOR AS LONG AS I CAN REMEMBER, I've been passionate about understanding the universe—learning about the rules that govern space and time at their most fundamental levels. Entering URI as a wide-eyed freshman in the fall of 2000, I set swiftly on that course. By the end of that year, I had earned a scholarship from the physics department. The next fall, I landed a teaching assistantship for the introductory physics labs in East Hall. I was on track to become a scientist, like those I had revered since I was enraptured by NOVA specials as a child, setting out to explore all the big ideas in the cosmos, so many of them yet to be discovered.

One of my favorite spaces to contemplate those big ideas was the expanse of green fields behind Mackal Field House. Throughout my first two years, I would jog from Barlow Hall down to those fields and run. In the early days, I'd think about the mysteries of the universe, but over time, I began to focus on a growing uncertainty about my place within it.

In the spring of my sophomore year, it was on one of those runs that I admitted to myself that I was not going to become the physicist I had dreamed of being—a revelation sparked by a brief, but dramatic, chapter of my college life that could best be titled, "Math Is Very Difficult and I Am Very Bad at It." I was disappointed and embarrassed—still am, to be honest. But I accepted it as entropy at work, and searched for a direction that would allow me to continue exploring big ideas—just with less calculus. It wasn't long before I found the Honors Program, where I could do exactly that. Through courses that blended critical thinking, peer teaching, and cross-disciplinary studies, I was exposed to a range of big ideas, and I found a path for myself—teaching.

My choice to pursue a career in teaching was cemented by a 2002 Honors Colloquium lecture given by the renowned scientist and author, Oliver Sacks. He spoke enthusiastically about exploring the wonders of the human mind and shared a contagious enthusiasm for chasing the spark of curiosity that is part of what makes us all human.

Fifteen years later, I am fortunate to continue teaching and learning at URI. These days, I spend most of my time in Chafee Hall, helping professors and students use technology to explore space, time, and all the topics that inspire and fascinate them. Still, every now and then, I head back down to the fields behind Mackal to clear my mind, contemplate big ideas, and simply feel present in a universe full of beautiful uncertainty. •

Ben Leveillee is a 2004 graduate of URI. He is an information technologist in URI's Instructional Technology and Media Services. He spoke at the February 2019 TEDxURI event. See his talk at uri.edu/tedx.

= AROUND THE CLOCK =

An Extraordinary Team

Aria Mia Loberti '20 is a triple major, honors student, world traveler, activist, yoga teacher, United Nations youth delegate, aspiring philosophy professor, and Harry Potter fan. This inspiring young woman also happens to be visually impaired. Her guide dog, Ingrid, is her exceptional teammate.

ON THE FIRST DAY OF HER junior year, Aria Mia Loberti '20 learned just how far her guide dog, Ingrid, would go to keep her safe. The pair left their dorm room in Burnside Hall—Ingrid in her harness on Loberti's left—and approached Lower College Road. Loberti, who was born legally blind, didn't hear the approaching car, whose driver was texting and careening toward them. But Ingrid knew what to do. The petite black Lab made a sharp and sudden right, body-bumping Loberti back to the safety of the curb.

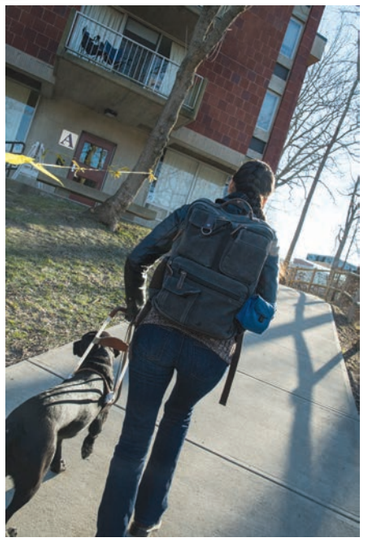
Ingrid, who will turn 4 in September, is one in a million, quite literally. Only a tiny percentage of dogs have the temperament and intelligence to become guide dogs. Ingrid is the best of the best, learning commands that 99 percent of her peers would fail. Ingrid began her training with California-based Guide Dogs for the Blind in her first month of life, and was schooled intensively for 20 months before being matched with Loberti.

Loberti, who has a passion for philosophy and rhetoric, gave a TEDxURI talk last spring on the importance of speaking up and being a good ally. "We should never stay silent in the face of our own or others' oppression," she asserts. She envisions and works tirelessly for a future in which disability is not seen as weakness, stereotype, or a fault of the body, but instead as a positive and enriching part of cultural diversity. •

—Ann Martini

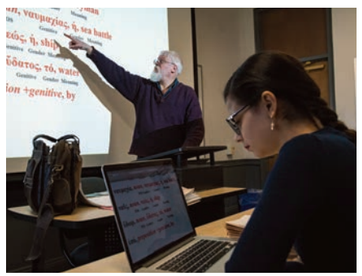
8:25 A.M.
Rise and Shine

Braiding one's hair can be a challenge—but Loberti has this down from her years studying ballet. "People assume that because I can't see, I shouldn't care how I look. It's the exact opposite." Loberti admits to having a "slight obsession" with Doc Martens, and Ingrid, equally fashion-conscious, wears her pearls daily.



9:30 A.M.
Morning Commute

"Take me to Quinn Hall," Loberti commands in a soft voice. Ingrid knows the locations of 15 campus buildings just by name, shows Loberti which elevator buttons to push, has learned the days of the week, and how to count from 1 to 5. "Now she is learning to count from 5 to 10," says Loberti, who lovingly adds, "Nerd."



9:40 A.M.
It's All Greek to Me

Ingrid rests quietly under Loberti's chair in Quinn Hall during Greek 101 class. "Most of the class didn't even know she was here for the first two weeks," says Professor Daniel Carpenter. "But on Ingrid's third birthday, Aria brought her in wearing a birthday hat, and everyone took note. Now she's just part of the class."

PHOTOS: NORA LEWIS

12:32 P.M.
Working Lunch

Loberti's majors in philosophy, political science, and communication studies mean long hours of studying, reading, and collaborating with other students and professors. Ingrid stays on duty during lunchtime in the Honors study lounge in Lippitt Hall.

3:10 P.M.
Playtime

Ingrid enjoys daily playtime on the volleyball court next to Loberti's dorm. When Ingrid's leather harness and head collar are on, she's been trained to be all business. But when the harness comes off, Ingrid knows she can play and snuggle to her heart's content.

4 P.M.
Peas and Carrots

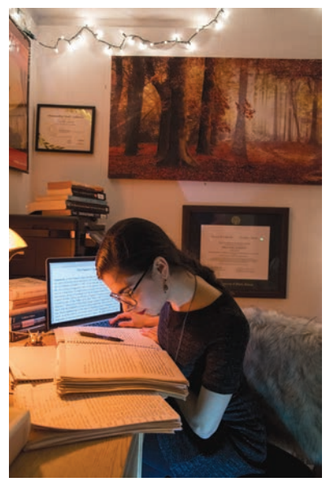
"Can you take me to the carrots, Ingrid?" Loberti asks as they enter Belmont Market in Wakefield, Rhode Island. Ingrid moves quickly, past the greeting cards and the butternut squash, stopping squarely in front of the carrots. Ingrid has memorized the locations of Loberti's favorite foods, including cheese, bread, and frozen peas. Loberti also uses a special app on her phone to read and enlarge food labels.

6:27 P.M.
Downward Facing Dog

Loberti teaches a yoga class in the Fascitelli Fitness and Wellness Center each Sunday. Ingrid, who has her own mat and a spot right next to Loberti, is an excellent teaching assistant.

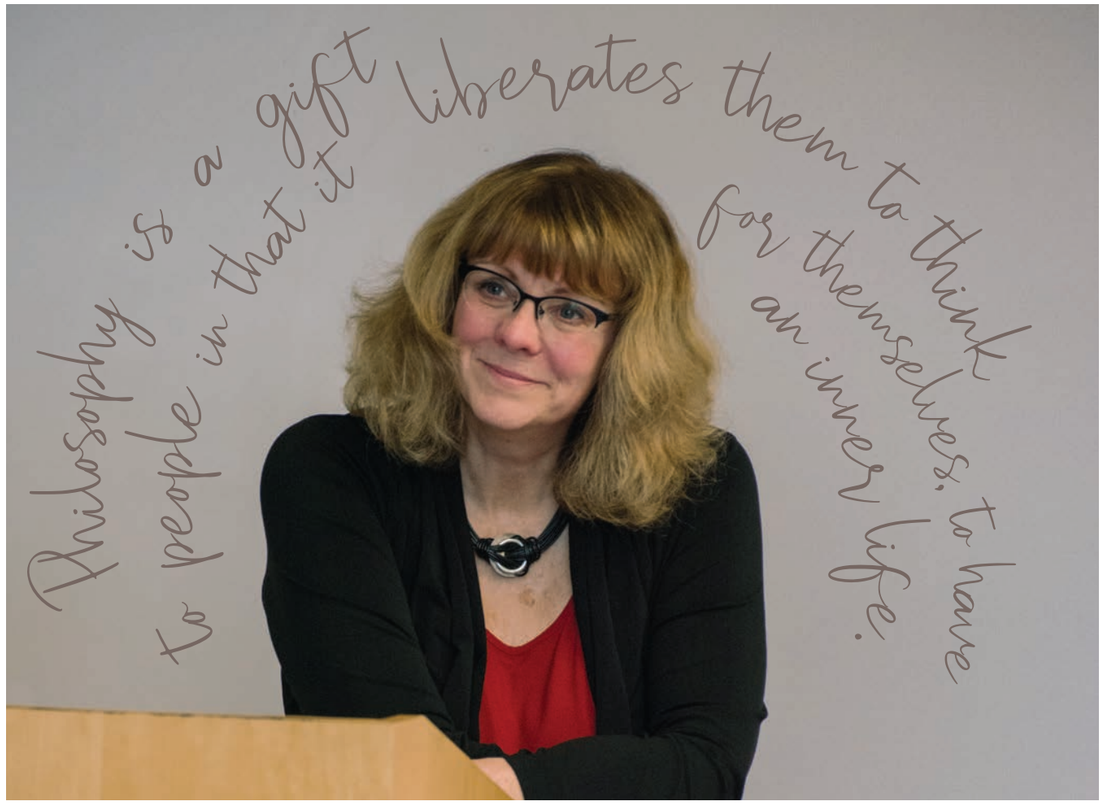
7:15 P.M.
She's Got This

Taking a sharp knife to a tough butternut squash is a hazardous task. But Loberti handles it deftly. Her petite frame belies remarkable strength and determination. Whether she's speaking as a youth delegate in front of the United Nations, running across the Quad to class, or making dinner, she exudes confidence.



9:55 P.M.
Learning Curve

Ingrid rests while Loberti studies. With glasses and the right lighting, she can make out large fonts and her own handwriting by getting very close. Loberti is a lover of literature, art, and architecture, and she uses her exacting sense of touch to help her feel and perceive the beauty of things. She is also a huge sci-fi and fantasy fan.



= WHY I TEACH =

Freedom of Thought

Cheryl Foster, Professor of Philosophy

AS A GRADUATE STUDENT AT THE University of Chicago, Cheryl Foster found herself at a crossroads. She'd decided to take a leave of absence from her graduate program at the University of Chicago, but for what? Dramaturge for a local theater? A Marshall Scholarship? A career at PBS? More than options, two were offers and the third was being pushed by her boss, a respected Chicago journalist.

Foster took the scholarship and enrolled at the University of Edinburgh, Scotland, to pursue a master's in English. She joined a theater workshop facilitating stripped down performance projects—radical theater, letting the disenfranchised tell their own stories. She studied the philosophy of beauty and aesthetics.

When Foster transferred into Edinburgh's philosophy Ph.D. program, she unexpectedly found she could apply her prior experiences as a journalist and a director to teaching first-year moral philosophy. Additional teaching gigs in philosophy as well as her specialty, aesthetics, materialized at the Open University, which created one of the world's original distance-learning models: flexible learning of the highest standards for adults, the working class, those with disabilities—anyone at all. She loved the idea of education as democratizer. That idea brought her to URI in 1992.

Foster says teaching at URI enables her to honor her commitment to public service while practicing her discipline. A 2013 Kennedy Center/Stephen Sondheim Inspirational Teacher, and the recipient of numerous URI teaching and advising awards, Foster says, "I have a whole box of notes from students who have written to me over the years. I have kept them all. On my hard days, I go look at some of them and they remind me why I do what I do."

And why philosophy? "Philosophy is a gift to people in that it liberates them to think for themselves, to have an inner life. That's why I'm a believer in the discipline," Foster says. "How I came to teach was something of an accident; why I'm still doing it is because it's transformative." •

—Marybeth Reilly-McGreen

PHOTO: NORA LEWIS

= RHODE TAKEN =

The Pearl Maker

BRENDAN BREEN '18

WHEN A FOREIGN ENTITY ENTERS the body of an oyster—be it a grain of sand, a parasite, or some other material—the animal attacks the invader by encapsulating it in a crystalline substance. That encapsulated invader eventually becomes a pearl.

When Brendan Breen '18 learned in his URI aquaculture class that the natural pearl production process can be induced by implanting a foreign object, he was inspired. He had known since his teenage years that he wanted to be an entrepreneur in the fishing industry, and that lesson in culturing pearls pointed him in the direction he sought.

He decided to become the first person to make pearls from quahogs, Rhode Island's official state mollusks.

"Quahogs produce pearls naturally, but it's a very rare process because they have a good means of expelling objects," Breen says. "Only about a dozen wild quahog pearls of notable quality are found on the Eastern Seaboard each year."

Since no one had ever tried to culture pearls from quahogs before, his first challenge was figuring out how to induce the shellfish to produce pearls without expelling the implanted foreign object. So he consulted with Professor Michael Rice and devised a plan. Breen then applied for a grant from the University, and during his junior year he began his work.

"I hit the books," he says. "I spent every waking second studying pearl culture and the biology of mollusks. Then I had to be creative and come up with my own method of culturing pearls."

After a semester of trial and error, and another semester of waiting for the quahogs to grow, he harvested some of his crop and found that most had produced pearls.

"I was pretty emotional that day," Breen says. "I'm a dreamer, and I had put a lot into it. I was overjoyed to have created something so unique and beautiful that could bring joy to others."

By the time he graduated last May, Breen had applied for a patent for his culturing process and started work on a business plan. His company, Mercenaria—Latin for quahog—now has hundreds of quahogs growing pearls in an undisclosed coastal location in southern New England. By late 2020, he'll be ready to harvest his first commercial crop and market the pearls to jewelers and other prospective clients.

"I'll be bringing something to the market the likes of which there hasn't been before, so it's already generating lots of excitement," he said. •

—Todd McLeish

PHOTO: COURTESY OF BRENDAN BREEN

RHODE TO A DEGREE

First Job in High School
Artisanal rod and reel fisherman

College Decision Moment
Sold on URI at an open house during discussion of career goals with Professor Marta Gomez-Chiarri, chair of the Department of Fisheries, Animal and Veterinary Science

Turning Point
Molluscan aquaculture class and a lesson about how oysters make pearls

Mentor
Fisheries professor Michael Rice, who provided inspiration and guidance on research techniques, grant funding, and patents

Funding
URI Undergraduate Research Grant to develop procedure for inoculating quahogs to trigger pearl development

Work Space
A laboratory in the Aquarium Annex at the Narragansett Bay Campus

Unexpected Challenge
Reading thousands of pages of aquaculture patents to be sure his procedure qualified for a patent—while also taking classes during his last semester before graduation

Leadership Outside the Classroom
President of the Aquarium Club, URI 101 Mentor

Degree
B.S. '18, aquaculture and fishery technology

= IN BRIEF =

URI Launches Alzheimer's Drug Trial

IT'S A FIRST FOR URI, AND A BIG one: the first time the University has sponsored a clinical trial of a drug treatment. Its outcome could change how we treat Alzheimer's disease. Based on the research of Paula Grammas, executive director of the George & Anne Ryan Institute for Neuroscience at URI, the BEACON Study will be the first Alzheimer's drug trial to explore whether a specific kind of inflammation in the brain's blood vessels plays a role in Alzheimer's—and will help shed much-needed light on the disease.

Most Alzheimer's research has focused on the beta-amyloid protein that over-accumulates in the brains of people with the disease. Hundreds of clinical trials have sought to remove this buildup, but so far have not been effective in stopping or slowing the disease. "When you repeatedly test the same hypothesis and it doesn't work, a broader approach is necessary," Grammas says. "I hope the BEACON Study will help shift the paradigm of how we think about Alzheimer's disease."

The Grammas lab has shown that "injury" to the brain's blood vessels—caused by high cholesterol, high blood pressure, diabetes, or other factors—helps drive a dysfunctional cycle of inflammation that contributes to the death of brain cells. The BEACON Study will repurpose an existing drug, dabigatran, to try to break the inflammation cycle and potentially stop or slow the disease. The trial will be led by Grammas and John Stoukides '85, medical director of the Rhode Island Mood and Memory Research Institute. The new Pharmaceutical Development Institute in the College of Pharmacy will manufacture the study placebo.

For Grammas, the BEACON trial is validation of her decades of research, and is also a sign of progress in Alzheimer's research. Amid growing evidence of the connection between heart, gut, and brain health, she is encouraged by the shift away from a single line of attack. "This is a highly complex disease," says Grammas. "The puzzle of Alzheimer's won't be solved without looking into the multiple factors that are likely part of its development and progression."

The BEACON Study, which is funded by the Alzheimer's Drug Discovery Foundation, will begin enrolling in April. For information, contact the study line at 401.874.5650 or beaconstudy@uri.edu. •

Get more news at today.uri.edu

= NEWS TICKER =

Resolution
The $125 million research vessel that will replace *Endeavor* in 2021 will be known as the R/V *Resolution*.

Healthier Babies
A URI nursing study shows that a five-minute delay in the clamping of healthy newborns' umbilical cords results in benefits for early-life functional development.

History of the Papacy
URI history professor Joëlle Rollo-Koster is leading a team of scholars and editors in creating a landmark history of the papacy. This historic project is expected to be released in 2022.

Support for Business and Engineering
Cynthia Marcille Deysher '78 and the Deysher family have committed $1 million to bolster scholarships, experiential learning, and strategic growth through operating and capital priorities.

Health Begins at Home
Poor diet is the leading risk factor for death and disability in the U.S. URI nutrition and food sciences professor Alison Tovar is leading a study that aims to improve the diets of preschool children through home-based interventions.

Languages Prospering
Foreign language studies at URI are booming, while enrollments in other university foreign language programs have declined nationally. A key to URI's growth is interdisciplinary global education programs.

Staying Power
The Association of Public and Land-grant Universities named URI one of five top universities in the nation for its innovative approach to increasing retention and degree completion.

PHOTO: MARION O'SULLIVAN

= GO RHODY =

Milestone Game

URI men's club hockey coach Joe Augustine on the job at game 1,002.

Video at uri.edu/magazine

GAMES 999 AND 1,000 DIDN'T TURN OUT TOO well for University of Rhode Island men's club hockey coach Joe Augustine and his players. Game 1,001 was definitely better—a win.

But game 1,002 on January 26 was outstanding. More than 1,000 fans, dozens of URI men's hockey alumni, and family and friends turned out to honor Augustine for reaching the 1,000-game milestone a week before.

They not only had a chance to applaud Augustine, they saw the second win of a two-game set with Delaware. The 1–0 thriller featured great goaltending, end-to-end action, crunching hits, and a blistering one-timer into the bottom right corner by defenseman Alex Lund for the only tally of the game.

In pregame ceremonies, Augustine was presented with a congratulatory plaque by Kathy Collins, vice president for student affairs, and Joe Wilbur, coordinator of club sports. "The University offers its huge congratulations on all of his accomplishments," Collins said. "He has not only coached 1,000 games, but I am sure he has had an impact on thousands of young people. He is a teacher who helps his players learn how to work effectively in groups, how to be patient, and how to shoot for big goals." •

—Dave Lavallee

= ASK OUR BIG THINKERS =

Be Greener. Here's How.

URI's campus sustainability officer, Marsha Garcia, shares tips for living more sustainably. Most are simple, and the upshot—they just might make you happier and healthier.

Ban disposables, especially plastic
Embrace reusable everything—straws, bags, utensils, coffee pods, cups. More than 8 million tons of plastic end up in the ocean every year. Don't add to the collection.

Produce less waste, and divert it from the landfill
Landfills are finite spaces, and they are running out of room. Compost, reuse, buy in bulk, and reduce consumption. If you have less stuff, less stuff ends up in landfills.

Buy responsibly
Curb unnecessary shopping. When you shop, choose organic foods, grown without pesticides; locally grown foods, to support the local economy and minimize transport emissions; and goods produced by socially responsible companies that respect their workers and the environment.

Reduce single-occupancy driving
Use public transportation, walk, bike, or carpool. Save money on gas, reduce your carbon footprint, and enjoy a little extra exercise and conversation.

Conserve energy
Greenhouse gas emissions are environmental enemy #1. Shut off energy hogs like lights and computers. Also, just because it's off doesn't mean it isn't using energy —unplug and/or flip the switch on power strips. Finally, 90 percent of the energy used by washing machines is for heating water. Go cold!

Video at uri.edu/magazine

PHOTO: MICHAEL SALERNO; ISTOCKPHOTO.COM

= GREEN SCENE =

Catch of the Month

What's new on the menu at URI dining halls? Fresh, locally caught fish.

> "Economically, this project is good for Rhode Island because it keeps dollars in the state. Socially, it helps provide work for local fishermen year-round, furthering their sense of purpose. Environmentally, the fish are caught sustainably and travel a shorter distance before arriving at their destination."
>
> — *Jacob Albernaz*

URI DINING SERVICES NOW FEATURES sustainable, locally sourced fish through the Catch of the Month Program. The initiative began in September 2017 when the department hired graduate assistant Jacob Albernaz to help design and promote the effort. "Instead of relying on frozen fish from large distributors, we decided to look for fresher, cheaper fish that is better for the environment," says Albernaz '17, who is currently a URI M.B.A. student. "Since we are the Ocean State, we focus on sourcing local fish that are underutilized."

Albernaz explains that fishing for underutilized fish helps the local marine ecosystem by alleviating pressure on overfished species. Dining Services has included bluefish, scup, John Dory, monkfish, and skate in recent Catch of the Month offerings.

The fish is often served with produce from local farms or the URI Agronomy Farm. The local seafood is offered at Mainfare in Hope Commons and Butterfield Dining Halls.

"The program is beneficial for local fishermen since we can schedule with them and pay a slight premium to target the fish we need," says Mark Pirri, a consultant at Tony's Seafood, one of the distributors Dining Services works with. "Any time you pull product locally instead of using imported species, you are helping the local economy. Long term, we are helping to introduce local species to students who otherwise would not be consuming them, which potentially creates a customer for these locally fished items. For example, John Dory, a little-known species, is a bycatch of Rhode Island's huge squid fishery. The more exposure this fish gets, the more it can become a part of people's consumption habits. If we create demand, it increases the value and the boats will potentially be paid more for this bycatch."

Albernaz earned his undergraduate degree in supply chain management from URI's College of Business. After working for five years as a caterer with URI Dining Services, he welcomed the opportunity to deepen his connection with the Ocean State since, as a Tiverton, Rhode Island native, he grew up near the water.

"Supply chain is often thought of globally, but can be local when you think about the food industry," says Albernaz. "It is important to focus on not shipping food across the world and instead focus on agriculture and seafood sourced locally to keep miles down and food fresher.

"Local and sustainable sourcing is economically, socially, and environmentally beneficial," says Albernaz. "Economically, this project is good for Rhode Island because it keeps dollars in the state. Socially, it helps provide work for local fishermen year-round, furthering their sense of purpose. Environmentally, the fish are caught sustainably and travel a shorter distance before arriving at their destination."

"We feel that dining should not only be a feast for the senses, but also a feast for the mind," says Pierre St-Germain, URI's director of dining and retail services. "Exposing our student body to delicious recipes utilizing underappreciated fish, informing them about local fisheries and the processes of bringing these fresh-catch meals to campus is just part of how we can help create a more holistic dining experience."

This is not Dining Services' first sustainability initiative. In 2017, it established a relationship with a local vendor for compost waste, which has allowed the University to divert a large amount of food waste from landfills. The vendor turns the waste into beneficial compost for local farmers and gardeners.

In addition, Dining Services serves fresh, local produce in the dining halls through a partnership with Roch's Fresh Foods. •

—*Olivia Ross*

Olivia Ross '19, is public relations major and an intern in URI's Marketing and Communications Department.

ILLUSTRATION: ANTHONY RUSSO

= GREEN SCENE =

Sustainability by the Numbers

Sustainability efforts at URI, including multimillion-dollar upgrades to steam heat and lighting systems, have resulted in energy and cost savings and reduced environmental impacts. URI was selected as a 2018 U.S. Department of Education Green Ribbon School, Postsecondary Sustainability Awardee.

89B
Reduction in BTUs of steam heat used per year

26M
Reduction in pounds of CO_2 emissions per year

11M
Kilowatt hours of energy saved per year

8–10%
Savings in energy costs and reduced carbon emissions per year

30%
Reduction in greenhouse gas emissions

11
LEED-certified buildings

1M
Square feet of LEED-certified building space

1M
Plastic bottles kept from landfills by hydration stations*

20,800
Pounds of compostable waste diverted from landfills

1,900
Exterior lights replaced with efficient LED lamps and fixtures

2,600
Gallons of waste cooking oil converted to biodiesel (in 2016)

30
Degree programs (undergraduate and graduate) that include sustainability as a learning outcome

1,000
Gallons of gasoline saved by electric vehicle charging stations

$50M
Grants received for research and projects related to energy, sustainability, and climate (2013–17)

SOLAR ENERGY INITIATIVE

The South Kingstown Solar Consortium's (URI, South Kingstown, and Narragansett) three solar fields will produce renewable energy and economic benefits from selling energy back to the R.I. electrical grid.

Projected benefits:

$1.2M
Net metering credit savings URI will receive

750
Homes can be powered by the energy our solar fields produce

1,500
Cars' fossil fuel consumption will be offset by our solar project

48,000MWhr
of electricity delivered to the R.I. energy grid per year

OTHER INITIATIVES

- The Cupanion Fill It Forward program is encouraging and rewarding bottle refills to reduce plastic use and waste.
- Improved campus shuttle system and RIPTA bus service are reducing the number of single-occupancy vehicles on campus.
- A 2-mile extension will connect the O'Neill Bike Path to the Kingston Campus, making local bike commuting easier.

—*Dave Lavallee*

**Five-year total as of March 2018.*

Most data reported is since 2006.

Quantum Quest: Entrepreneur Christopher Savoie contends qubits will change everything.

By Lawrence Goodman

Christopher Savoie '92 has founded a string of cutting-edge, high-tech companies. He developed a natural language interface that became the basis for Siri. Now, he's set his sights on revealing the deepest secrets of chemistry through quantum computing—and changing the world in the process.

A Revolution Begins

When Christopher Savoie was 7, he got a chemistry set for Christmas. A smart, inquisitive child, he set about mixing and matching compounds. He produced multicolored liquids, heated beakers over Bunsen burners, and took measurements of compounds' pH levels. Then he set his mind to mischief. "What can I get away with?" he remembers thinking. One day, he sprinkled powdered potassium with water and set it ablaze. Boom—it exploded. It was pretty much the coolest thing he'd ever seen. Other highly combustible experiments followed, though thankfully he never did very much harm. "I survived," he says. "I still have all my digits."

In fact, Savoie did more than survive. Combining an extraordinary intellect (he earned an undergraduate degree in biology from URI in just three years, has a doctoral degree in molecular medicine, and also has a law degree) with uncanny business acumen, he's founded a string of cutting-edge, high-tech companies. In the early 1990s, the fledgling days of the internet, he built a web design firm that made millions. Later, at the Japan-based Gene Networks International (GNI), Savoie pioneered the application of big data and bioinformatics to genetics in pursuit of new drugs. A few years ago, the world's largest financial newspaper, Japan's *The Nikkei*, cited Savoie as one of the nine most influential leaders in global biotechnology.

> Quantum computing could lead to 100 percent-efficient fuel cells, sweeping advances in drug discovery and personalized medicine, and possibly even a catalyst for removing pollution from the air.

Now at the helm of Cambridge, Massachusetts-based Zapata Computing, he's back to doing chemistry experiments. "I still get to play with toys," he says, although these days, the toys are quantum computers, potentially the most powerful computers ever designed. Zapata uses quantum computers to model chemical reactions at the subatomic level. Far from causing mayhem or destruction, these "toys" could reveal the deepest secrets of chemistry and enable Zapata to create a new generation of materials and medicines. According to Savoie, quantum computing could lead to 100 percent-efficient fuel cells, sweeping advances in drug discovery and personalized

PHOTOS: TONY LUONG; ISTOCKPHOTO.COM

Christopher Savoie at the Kingston, Rhode Island, train station, where he begins his daily commute to Zapata in Cambridge, Massachusetts.

medicine, and possibly even a catalyst for removing pollution from the air.

Savoie lives in Kingston, Rhode Island, with his wife, Amy Vican Savoie '93, a patent attorney with a Ph.D. in immunology from Dartmouth Medical School. He commutes by train each day from Kingston to Cambridge, where his partner at Zapata is scientist Alán Aspuru-Guzik. Aspuru-Guzik named the company for Emiliano Zapata Salazar, leader of Mexico's early 20th century peasant uprising. Savoie quickly grasped the significance of the name. If Zapata succeeds, he says, "It's going to be a revolution."

Brains and Blackboards

Zapata Computing's Cambridge office doesn't look like ground zero for a scientific revolution. Housed in The Engine, MIT's startup incubator, it comprises a few small rooms filled with filing cabinets and tables pushed together to create makeshift workspaces. The 15 staffers scribble linear algebraic formulas on blackboards and pass around hand-drawn diagrams of computer circuitry on paper. They are a cutting-edge tech company, but they keep it old-school.

Amy and Christopher Savoie

Zapata designs software for quantum computers, content to let the big players—Microsoft, Google, IBM, and others—design the hardware. Of course, you can't program a quantum machine with HTML or Java. The programmers "have to have a new intuition, a different type of intuition," says URI physics professor Leonard M. Kahn. Savoie says there are only a few dozen people in the whole world who have that kind of intuition. A good percentage of them trained with Aspuru-Guzik in his lab at Harvard, then made the move to Zapata.

Savoie met Aspuru-Guzik in 2016 at Harvard. Savoie was then CEO of the company Kyulux, which developed cutting-edge organic light-emitting diodes (OLEDs) used in computer and electronics displays. For seven years, the founding chemists at Kyulux worked in the lab on designing new molecules and materials for use in OLEDs. Aspuru-Guzik, who had no previous affiliation with Kyulux, came up with machine-learning algorithms that could discover equivalent materials in just six months. "I was like, 'OK, touché, you beat us,'" Savoie recalls. "'How can we work together?'"

As they talked over a burrito lunch, Savoie says he realized that Aspuru-Guzik was "an absolute genius." Aspuru-Guzik was likewise impressed by Savoie's extensive business experience and "bali bali," a South Korean phrase describing the country's "hurry hurry" work culture. "It means, 'Quick—let's get this done. No BS,'" says Aspuru-Guzik, now at the University of Toronto. "That's Chris—friendly, affable, but also very bali bali.

PHOTOS: AMY SAVOIE; AMELIA MOORE; TONY LUONG

Zapata staffers in the company's Cambridge, Massachusetts office, which is housed in The Engine, MIT's startup incubator. Left to right: director of technical and strategic alliances Borja Peropadre, application scientist Max Radin, and quantum scientists Peter Johnson and Yudong Cao.

And I can only work with bali bali people."

The hard-charging Aspuru-Guzik insisted that Savoie join him in starting Zapata. In fact, he was introducing Savoie as the CEO before Savoie had officially accepted the job.

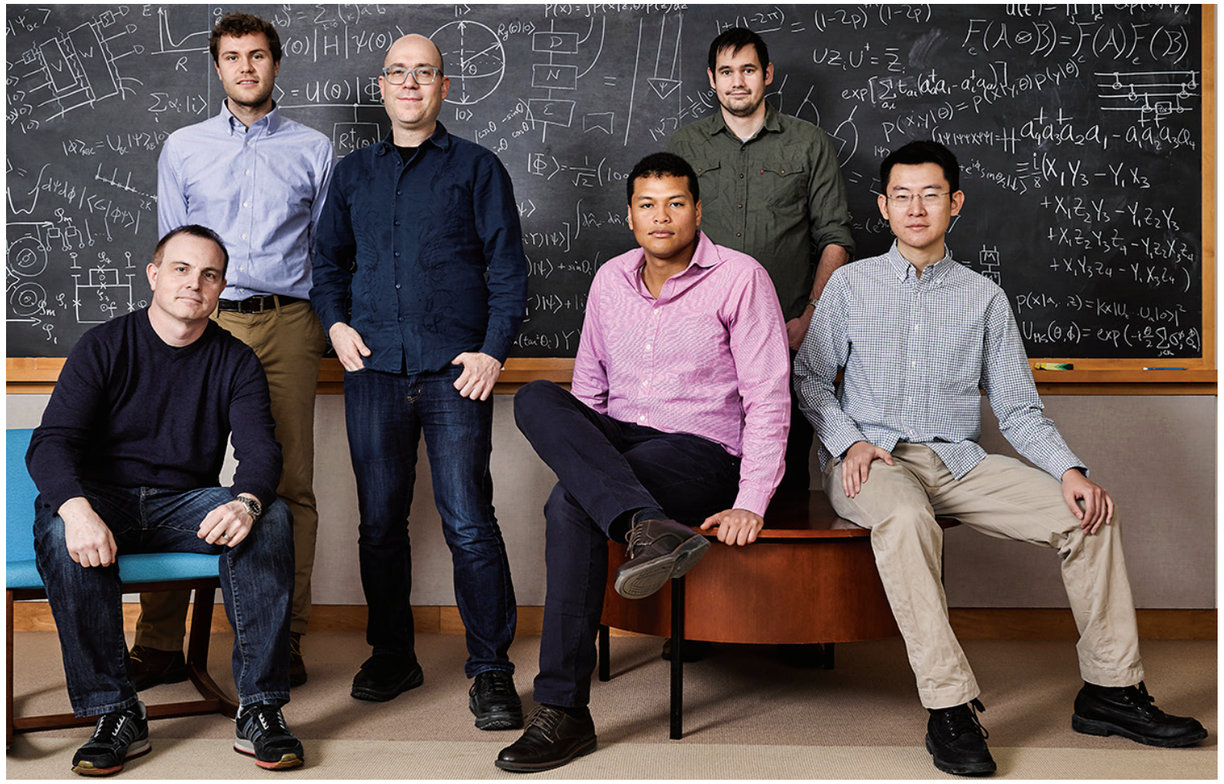
To date, the company has raised $5.4 million in venture capital, a remarkably large sum in a short period of time for a startup in a nascent and unproven technology. Savoie says they are well on the road to profitability. He's already inked partnership deals with IBM, Google, and Rigetti Computing in Berkeley, California.

Peter Carre, an Australia-based technology financier who invested in Savoie's previous companies, says what investors want to know about a startup is, "Can these people actually execute their technology commercially, and can they do it with the amount of money they are given, in the time it has to be executed? A guy like Chris," he says, "makes investors feel sure that the answer to those questions is, 'Yes.'"

The Strange World of Quantum Mechanics

The idea for a quantum computer originated in 1982 in a lecture by Nobel Prize-winning scientist Richard Feynman. Reality at its most fundamental level, the level of subatomic particles, is governed by the very strange, counterintuitive laws of quantum mechanics (QM). Therefore, Feynman said, to understand reality, you need a computer that runs according to the laws of QM—to wit, a quantum computer.

Traditional computers interpret the world as 0s and 1s. Whatever the machine



The founding team of Zapata Computing. Left to right: CEO Christopher Savoie, quantum scientist Peter Johnson, CSO Alán Aspuru-Guzik, and quantum scientists Jhonathan Romero Fontalvo, Jonathan Olson, and Yudong Cao.

processes, from a sentence to a video stream, is translated into 0s and 1s. In computer-speak, URI is "01110101 01110010 01101001." These 0s and 1s are stored on bits. Each bit can be only one of those two values.

Quantum computers use quantum bits, or qubits, which can be a 0 *and* a 1 simultaneously. This might sound impossible, but qubits obey the principles of QM. With QM, "what we anticipate from our intuition about how the world works is completely violated," says URI physics professor Leonard Kahn. "What you think will be the answer to a problem isn't necessarily anywhere close to what the real answer is." Under the laws of QM, the location and energy level of an electron in orbit around an atomic nucleus can have many values at once. For reasons we don't fully understand, when you take a measurement of energy level or location, the value becomes fixed and you get a single answer; but until then, there is a range of possible values. This state of indeterminacy is called superposition. Qubits can simultaneously have a value of 0 and 1 because they are in a state of superposition.

The difference in computing power between a bit and a qubit is stark. Sixty bits can hold 120 possible values, each either a 0 or a 1. Sixty qubits can hold more than a quintillion.

Much of Aspuru-Guzik's research has focused on understanding chemical reactions. The subatomic particles in chemical elements follow the principles of QM, which is why quantum computers can be so useful in analyzing their behavior. Only a quantum computer, whose qubits can hold an exponentially large number of values, can handle the exponentially large values of the subatomic particles involved in chemical systems.

Using traditional computers in chemistry, Savoie says, leaves huge gaps in our knowledge. We can't tell what's happening at the subatomic level. We fill in the blanks with our best guesses. "Chemicals are inherently quantum things, yet we are using classical approximations of what they are," he says. "Right now chemistry is still alchemy—trial and error." Quantum computers, Savoie says, will enable us to model and understand chemical systems at a fundamental, subatomic level, where they will give up their secrets, enabling us to see vast new possibilities. "What quantum computing in chemistry will allow us to do is to authentically simulate the system," Savoie says. "We will know exactly how materials are put together."

PHOTOS: DOUG LEVY FOR THE ENGINE; AMY SAVOIE

Christopher Savoie at Beavertail State Park in Jamestown, Rhode Island.

From Scholar to Entrepreneur

Savoie was born in Warwick and grew up in North Kingstown, Rhode Island. His parents were both schoolteachers. His mother, Crystal Brown Savoie, was a 1965 URI graduate; she died when Savoie was an infant.

As a child, Savoie got his first computer around the time he got his chemistry set. He taught himself Logo, an early computer programming language for kids. When he arrived at URI, a graduate of Bishop Hendricken High School in Warwick, he'd already taken several AP science classes. As a result, "I got to take some very advanced classes at URI starting out," Savoie says. "This allowed me to really stretch my mind."

Marian Goldsmith, professor emerita of biology, accepted Savoie into her 500-level molecular biology class. "He aced it," she says. "He loved solving problems and he thought outside the box."

For his senior project, Savoie analyzed a data set from the federal government on what happens to kids who suffer childhood trauma. "It was my first crack at doing big data," he says. He found that suffering emotional neglect and having alcoholic parents left a longer and more damaging impact on children than physical violence. "I wasn't expecting that outcome," he says.

Former URI sociologist Richard J. Gelles, who guided Savoie's research, says, "Right away, you could tell Chris was really smart and highly motivated. The average undergraduate is not inclined to plunge into statistical analysis, but he was really good at it."

The summer after his sophomore year at URI, Savoie interned at an immunology lab at Kyushu University in southern Japan. When he graduated from URI, he returned to Kyushu, enrolling in the molecular medicine Ph.D. program there. He intended to become a doctor, but—a hypochondriac with an aversion to blood—he thought better of it (though not before completing his medical degree). He also gravitated away from academia. "I was not happy doing medical research that would only become useful 20 or 30 years in the future," he says.

A new platform called the internet was starting up around this time. Kyushu was installing what, by today's standards, was a very rudimentary campus network. Savoie was asked to help with the implementation. He agreed, and in the process of programming the network, learned the web's lingua franca, HTML.

People began asking him to design their websites, and Savoie realized this could become a side business. He called his company Atmark, and it soon became much more than a side gig, raising $8 million from investors. "It grew and grew," Savoie says. Atmark designed the first-ever website for a Japanese professional baseball team—not a coincidence, as Savoie is a huge fan of the sport. It broadcast live scores from the stadium via a 14,400-bits-per-second modem.

Savoie also served as Atmark's pitchman. He traveled around Japan by bullet train, returning in the afternoon or evening to work on his Ph.D. "I would race back to Kyushu, change out of my suit, and put on my lab coat," says Savoie. "It was an interesting double life for a while."

Then, one night at a dinner party in 1997, Savoie complained to his friend, Babak Hodjat, about how hard it was to program a VCR. He thought there should be a way to give the machine voice commands in natural language. He wanted to be able to say, "Can you record all the baseball games on TV over the next month?" and have the VCR do it.

Savoie began working on a computer program utilizing artificial intelligence to achieve this. Hodjat, skeptical at first, joined the effort. Eventually, they built a system for talking into a microphone connected to a computer. The computer parsed the instructions and relayed them to the VCR. "We basically had Amazon Echo working in our living room by 1998," Savoie says.

They called their company Dejima, after the Dutch trading post in Nagasaki Bay that linked Japan and the rest of the world in the 17th and 18th centuries. Dejima was eventually sold to software company Sybase, now part of the German conglomerate SAP. But the natural language user interface Savoie and Hodjat developed eventually found its way to Apple, where it became the basis for Siri.

Clearing the Entanglement Hurdle

Last year, a report from the National Academy of Sciences (NAS) cast doubt on the possibility of creating a fault-tolerant quantum computer—one that remains operational even if one of its components fails or encounters an error. Significant technical hurdles remain, the report said. URI's Kahn agrees with the report's conclusion that it may be at least a decade before we see a completely fault-tolerant quantum computer that can live up to the technology's full promise and potential. "This is something that's been on the threshold for at least a couple of decades," he says. "With all the resources and the great minds that have been working on this, we've made some progress, but we're very far away from having something that's workable."

The difficulties stem, in part, from a feature of QM called entanglement. When two particles are entangled, they exert a mysterious influence over each other. To understand this, picture two spinning coins. If the coins behaved like entangled particles, the way one coin landed would determine how the other coin would land. In other words, if one landed on heads, that would cause the other to land on heads, too. If one landed on tails, so would the other.

So, with entangled particles, when you measure one, the second will have the same value. It's as if the particles are somehow in communication with each other, the first telling the other what to do. In theory, entanglement can stretch over vast distances, even in cases where the particles are on opposite sides of the universe. Einstein called this phenomenon "spooky action at a distance."

Qubits also become entangled. This offers a huge advantage because you need less computing power to manipulate the qubits. A change in one instantly transforms the other. "You can do multiple things at once," Kahn says. "It's much more efficient than having to deal with traditional bits one at a time." But entanglement is a very transitory state, lasting milliseconds. And when qubits fall out of entanglement into what's called decoherence, they no longer possess the special properties that make them so powerful inside a quantum computer.

Designers of quantum computers need to go to extreme lengths to ensure entangled qubits stick around long enough to carry out the desired calculations. "It's a technologically daunting problem," says Kahn. IBM's solution is to lock the qubits into an entangled state by freezing them. Its quantum computer is chilled to almost -459.67 degrees Fahrenheit, almost absolute zero. This is one reason you shouldn't expect to see a quantum computer in your home or in your iPhone any time soon.

Quantum computers also need to be heavily shielded from the outside environment. Stray heat, electromagnetic noise, or vibration can disrupt a qubit's functioning and cause the loss of data. It's no easy feat to build a quantum computer's contaminant-free container.

But the NAS report talked about another type of quantum computer that's easier to build, known as Noisy Intermediate-Scale Quantum (NISQ) technology. A fault-tolerant quantum computer will need millions of qubits to reach its full potential. NISQ-era quantum computers only require between 50 and a few hundred. NISQ machines already exist, built by IBM, Google, Microsoft, and others. The most powerful one to date runs on 79 qubits. Zapata's software is designed to run on the NISQ platform. Even if the full error-corrected quantum revolution isn't here yet, the company can still be profitable and the solutions will still far exceed what traditional computers are capable of.

And Zapata is seeking business opportunities beyond chemistry. It's looking to sell its algorithms to Wall Street investors. Quantum computers excel at calculating probabilities with an exponentially high number of outcomes, making them ideal for predicting market fluctuations.

They may also be ideal for tackling the so-called traveling salesman problem, which is a classic mathematics conundrum with real-world financial implications. Suppose your business is sending a salesperson on a multi-city trip. You want her to take the shortest route. This is fairly easy to figure out if the trip involves only a small number of stops. You calculate the distances of all the alternate routes and choose the shortest.

But what if the trip involves 15 cities? Then there are 87 billion possible routes. And if you have to coordinate the routes for numerous salespeople? Or the shortest route and the cheapest airfares? Even a supercomputer will soon find itself overwhelmed. But a NISQ quantum computer could be very useful.

As Savoie points out, if Zapata's software can shave even three-quarters of a percent off a Fortune 500 company's supply chain or sales expenses, it would result in tens—if not hundreds—of millions of dollars in savings. Savoie thinks Zapata could become a major player in business logistics.

The Next Challenge

Lately, Savoie has been thinking about another opportunity—curbing global warming with RuBisCo. It's an enzyme involved in photosynthesis that enables plants to draw carbon dioxide out of the atmosphere. The molecular structure and chemical makeup of a RuBisCo molecule are well-known, but we still don't know how it works at the subatomic level.

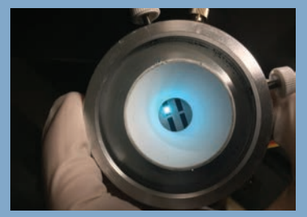
Zapata's algorithms could potentially reveal this, Savoie says. We might be able to harness the power of RuBisCo to remove carbon dioxide from our atmosphere to combat global warming. The field of chemistry "is about to change, because we will know exactly what the system is doing on a quantum level," Savoie says. "It's going to be groundbreaking." •

Savoie points out that if Zapata's software can shave even three-quarters of a percent off a Fortune 500 company's supply chain or sales expenses, it would result in tens—if not hundreds—of millions of dollars in savings.

Infinite Possibilities
Ryan Vallee '19

Why does Vallee love chemistry? "It's mysterious," he explains. "You never know what's going to happen."

A chemistry and physics double major, Ryan Vallee '19 spent last summer working in the Center for Organic Photonics and Electronics Research lab at Kyushu University in Fukuoka, Japan, where he developed three molecules involved in organic light-emitting diodes (OLEDs). Vallee says the technology is evolving for the next generation of electronics displays, such as phones, watches, and TVs. The goal is to develop light displays that are effective, efficient, and nontoxic, an elusive combination in the industry.



A prototype OLED display created in the lab at Kyushu University. It contains eight layers of chemical compounds, with the synthesized light-emitting compound in the middle. The compounds work together to produce the light blue color shown here. The applications for this quickly emerging technology include screens for phones and other devices, in which hundreds or thousands of these lights together act like pixels to make up the display.

His internship at Kyushu affirmed his desire to work hands-on in a lab. Learning the theory behind the research he was doing was monumental. Living and working in Japan was a challenge of almost equal stature—he met the challenges, and he's ready for more.

Vallee, who is from Cumberland, Rhode Island, considered a pre-med track, or majoring in music. But in the spring semester of his first year at URI, he dropped a psychology course, replacing it with organic chemistry. He was hooked and became a chemistry major without looking back. "I can't see myself doing anything but science," he says. "There's so much to know about how the world works."

Why does Vallee love chemistry? "It's mysterious," he explains. "You never know what's going to happen. Say you're doing synthesis and you have to leave the reaction overnight—you can't see if it works until the next day. I like not knowing what will happen next. It's all about infinite possibilities. You achieve things by manipulating compounds and seeing what works and what doesn't. With experiments, even if they don't succeed, you can still learn a lot about the science you are doing and what paths your research can take."

In some ways, that's Vallee's life philosophy. Wise beyond his years, he's learned you just have to "put yourself out there, be confident, and take responsibility for your decisions." The Kyushu internship, in fact, came about after Vallee attended a lecture given by Christopher Savoie '92 at URI on hyperfluorescence technology.

The lecture was on a Friday, late afternoon. Savoie recalls that Vallee stayed after the lecture, "peppering me with insightful questions. I took an immediate liking to him and could see there was something special about him."

Vallee, who followed up the meeting with an email asking about internship opportunities, says he thinks maybe Savoie "sees himself in me." Vallee clearly admires Savoie's career and intellect. "Just talking with Chris is amazing. He's smart and crazy successful. I want to be like Chris one day," Vallee humbly discloses. "His interest in my work and my development in this field is just…" he trails off. "He just cares a lot. It's great to have someone like that helping you."

Vallee plans to become fluent in Japanese and hopes to return to Japan for grad school—but the possibilities are infinite. •

—Barbara Caron

PHOTO: NORA LEWIS

Vallee's internship at Kyushu University was funded in part by the College of Arts and Sciences Annual Fund, to which Christopher Savoie is an enthusiastic contributor. Savoie, who also interned at Kyushu University when he was a URI undergrad, feels strongly that funding internship experiences is critical, because those internships can be life-changing for the student interns.

CENTER STAGE

URI Theatre Department faculty and guest artists are innovating the New England theater scene and giving students opportunities to practice their craft with the pros. It's never been a better time to be a theater major.

By Marybeth Reilly-McGreen

FINALS WEEK:

The Theatre Department is buzzing. Students run lines outside the Robert E. Will Theatre, sing in G Studio, and, in J Studio, double paddle turn and twist to Hairspray's "The Nicest Kids in Town." No finals fatigue here; it's opening-night energy.

With more than five productions each year, URI's theater production schedule is on par with a professional theater's, says department chair David T. Howard. Without the budget, though. "We'll do a whole show for around the price of a single costume on Broadway," Howard notes.

How? Hard work, dedicated faculty, and a group of artists—most of them URI graduates—recruited both for their skills as educators and their impressive theater pedigrees.

EDITOR'S NOTE: THERE'S A METHOD TO OUR SPELLING MADNESS

Why do we sometimes write 'theatre' and other times 'theater'? The answer dates to the 1800s, when Noah Webster's 1828 dictionary established the American spelling of many words, like 'color' instead of 'colour,' and 'center' instead of 'centre.' Likewise, theater, spelled '-er,' has become (mostly) standard in the U.S. But many theaters and schools of theater—including URI, the GAMM, and others—honor the British '-re' spelling. So when we write about them, we use their spelling. But when we write about theater in general, we use the standard American '-er' spelling.

TONY ESTRELLA '93

Theatre 411: Acting

Artistic Director, The GAMM Theatre

On a sunny Friday afternoon, David Howard and Tony Estrella chat in Howard's office about a recent theater graduate working in software systems processing. Inadvertently, their conversation turns to the question that dogs theater professionals, their students, and their students' parents: What's the ROI on the B.F.A.? "The thing about theater is, you build skills you can use in new ways," Estrella says. "Theater is an entrée, a foray, into a lot of different worlds."

Estrella is in his 17th year as artistic director of the GAMM Theatre in Warwick, Rhode Island, and in his 21st year teaching at URI. Students will tell you that Estrella's approach is to treat students as professionals, collaborators engaged in essential work: the exploration of radical, challenging, and even ugly ideas. "An art form needs a place where it's safe to be unsafe," Estrella says. "There's a danger in art. It has the power to unsettle, to provoke, and to entertain, of course.

"Great playwrights are looking at the true complexity of ideas and making them public. Our responsibility is to challenge, provoke, illuminate, and entertain," Estrella says. "Theater is an act of citizenship. It is an act of engaging with the community."

"We're helping to create people who can deal with adversity, who can work collaboratively, and who can think creatively."

And engaging through teaching, Estrella says, has made him better at his craft. "You learn so much. You have to be honest—interrogating, practicing what you preach, examining, articulating, and making it all plain to students who are not as experienced. It makes you a better actor. No question."

Estrella's method for teaching acting is rigorous engagement with the material. "You're using the text, the language, doing a deep dive, a close reading. You follow that with your own experience and what those experiences cost you. It's not always a direct one-to-one correlation, of course," Estrella notes. "None of us has died yet, but we have to die on stage. You build off what you have.

"After all, what is our job as actors but to walk in each other's shoes?"

PHOTOS: NORA LEWIS

KIRA HAWKRIDGE '12

Director, URI Theatre's *Women and War*

Founding Artistic Director, OUT LOUD Theatre

"You're getting a well-rounded education that prepares you to enter the professional world."

You will find URI graduates working in almost every theater in the state, from the established—Trinity Repertory Company, Theatre By The Sea, and the GAMM Theatre—to up-and-comers such as the Wilbury Theatre Group, OUT LOUD Theatre, the Burbage Theatre Company, and the Epic Theatre Company.

One reason URI's theater graduates are sought-after is the nature of URI's B.F.A. program, which requires concentrated study in acting, design and theater technology, directing, and stage management. While students specialize in one of the four areas, they must be familiar with all.

It's an education directors appreciate, says Hawkridge, who directed URI Theatre's production of *Women and War* last fall. OUT LOUD's last ensemble boasted four URI alumni among the eight members. "That's a testament to how the department creates a community that people like me want to return to," Hawkridge says. "There's something about how we were all trained that is special. All students participate in every role at least once: costume shop, box office, design, auditions for shows."

Students develop an appreciation for one another's work and have ample opportunities to do the work they want to do. "And jobs lead to other jobs and collaborations are born," Hawkridge says.

ERIC LUTES '91

Theatre 413: Acting for the Camera

Sitcoms: *Frasier, Ellen, Caroline in the City*
New movie: *Vault*

For Eric Lutes, deciding to become an actor was an act of rebellion. His father wanted him to become a painter, but Lutes was drawn to the stage. Ultimately, his father, marine artist John D. Lutes, embraced his son's decision. "My father said, 'Go. Do it,'" Lutes says.

Lutes' first television show was the NBC juggernaut, *Frasier*, starring former *Cheers* star Kelsey Grammer. That gig led to a lead role on the NBC sitcom *Caroline in the City*, which ran for four seasons and was in syndication for 11 years. In his 30-plus-year career, Lutes estimates he's been in nearly 200 sitcom episodes in addition to feature film work. This June, he plays a gangster in the film, *Vault*. Set in the 1970s, the film chronicles the notorious Bonded Vault heist, in which thieves made off with $30 million from a fur storage facility in Providence, Rhode Island, which was being used as a bank by members of the

"When students say, 'What if I go out for it and don't get it?' I say, 'Well, what if you do?' Go. Try. This is what we do."

Raymond Patriarca crime family. Martin Scorsese is one of the film's backers.

"The main thing I try to instill in students is that you've got to keep showing up. And being on time is a huge thing for me," Lutes says. "After that, it really is about the work. Do your homework. The only time I was nervous for auditions was when I wasn't prepared. No one else is going to do it for you."

And be multifaceted. "Don't just be an actor. Have other interests. You bring all that to acting anyway, and there's so much else to life," Lutes says.

RACHEL WALSHE '01

Theatre 211, 321, 338G, 383 Acting and Playwriting

Director and Teaching Artist, The GAMM Theatre

Classes, rehearsals, and soccer practice: These are the things that occupy Rachel Walshe's mind at the moment. She's directing *Gloria* at the GAMM Theatre and casting URI Theatre's production of *The Wolves*, a drama about teammates on a high school girls' soccer team. She's got the URI women's soccer team consulting on the play and is arranging for the student actors to attend the team's 6 a.m. practices.

The University's only Rhodes scholar, Walshe always intended to teach at a public institution. "My four years as an undergraduate were transformative. I feel I became me here," Walshe says. "So I wanted to work with undergraduates, where, I believe, teaching matters most."

"I get to practice what I do all day, every day. I coach actors, I think structurally, I use practical techniques, and I get hired to direct plays professionally."

And Walshe's students get to see the collaboration among URI's faculty and guest artists on a daily basis—from the inception to the conclusion of a project. "They're witnessing discussions with professional artists who are doing this for real, figuring things out in the moment. It's a tremendous benefit having that kind of contact with your collaborators."

And what does she hope students take away from the experience?

"I want students to recognize the value of the arts, to recognize that the act of storytelling is as primal as anything else we would consider essential to the human experience," Walshe says. "We tell each other stories as a survival skill."

"Art can accommodate complexity, nuance, and ambiguity like little else in the human experience. It is a practice and a technique I would regard as core to the human experience and necessary to do this thing called life."

JOSEPH SHORT '06

Theatre 213, 313, 417: Voice and Movement

Production Technician for the Office for the Arts at Harvard; Production Manager for the Gloucester Stage Company; Host, *High School Quiz Show: Rhode Island*

"URI is driving the Rhode Island theater scene."

Joe Short teaches presence. "Voice and body are the two tools of the performer," he says. "Sophomore year is spent talking about how to use those tools through, in part, the study of habits and tendencies. Junior year is the study of rhetoric and pitch, how to format an argument, and how to reflect all with the body. Senior year those skills are further refined.

"We move you through increasingly rigorous training to extract the best actor, director, or production manager," Short says. "It's an intensive and personalized journey."

And local theaters are the beneficiaries. "It's exciting that there are so many opportunities right now," Short says. "And many of those opportunities are in companies and productions being started, managed, or influenced by our alums."

JOSHUA SHORT '08

Founder and Artistic Director, The Wilbury Theatre Group

"Storytelling, creating empathy: It's a noble thing."

Two years after graduation, Josh Short (yes, he's Joe's brother) founded the Wilbury Theatre Group in Providence as a way to act and be in plays more often. Eight years later, he accepted a 2018 National Theatre Company Grant from the American Theatre Wing—the organization behind the Tony Awards. Trinity Repertory Company is the only other Rhode Island theater that has received this recognition from the American Theatre Wing. "Our goal is to become a nationally recognized theater that provides a platform to show new work from diverse voices," Short says.

Short credits URI with hammering home discipline and commitment to the craft. "URI's theater students are trained to work hard. They have an understanding of what it takes to be good."

The Wilbury's commitment to new work and diverse voices extends to education outreach, youth programs, including a "pay-what-you-will" acting class; Camp Shakesweird, a two-week camp for children ages 8 to 11; and the Youth Playmaking Program, an all-expenses-covered opportunity for teens interested in producing theater. And through the annual Providence Fringe Festival, the Wilbury Group and other arts organizations draw more than 250 artists from around the world to Providence for a weeklong celebration of the arts.

PHOTOS: NORA LEWIS

WHAT'S THE ROI ON THE B.F.A.?

URI's B.F.A. program requires concentrated study in acting, design and theater technology, directing, and stage management. While students specialize in one of the four areas, they must be familiar with all. That's an education directors appreciate. It also prepares URI grads to enter the professional world—in theater or in a variety of other fields.

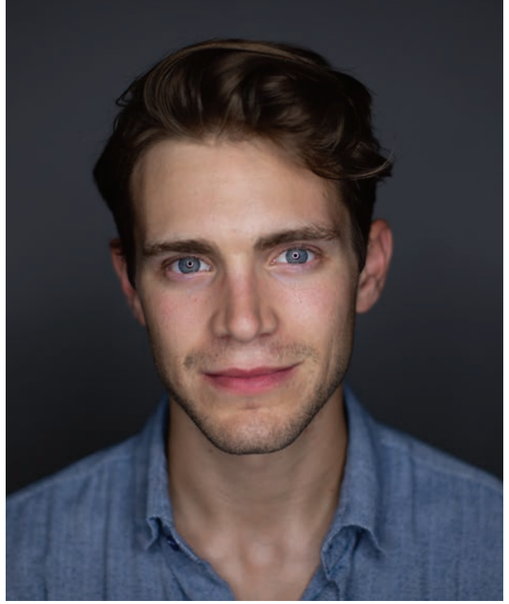
PHOTO: AYLA FOX

ENSEMBLE CAST

Front row: **Brooks Shatraw '19**, acting and directing student; **Emily Turtle '19**, acting and management student

Middle row: **Tony Estrella '93**, acting instructor; **Bonnie Bosworth**, publicity director and administrative assistant; **Kira Hawkridge '12**, guest director; **Gavin DiFranco '20**, management and directing student; **Lorraine Guerra '20**, acting and communications student; **Paula McGlasson**, acting and stage management professor; **Sil DelSignore**, Theatre Department secretary

Back row: **Eric Lutes '91**, theater instructor; **Rachel Walshe**, acting and playwriting lecturer; **Jake Hegenauer**, resident technical director and instructor; **Max Ponticelli**, theater and theater design instructor; **Dean Hernandez '20**, acting performance and costume and lighting design student; **Magenta Kolakowski '20**, acting and costume design student.



A PORTRAIT OF THE ARTIST AS A YOUNG MAN

By Marybeth Reilly-McGreen

He's acted with Vanessa Redgrave in London's hottest play, *The Inheritance*. *The New York Times* says he's an actor to watch. And Broadway.com gushes that he "burns with a bulb-shattering voltage." For Andrew Burnap '13, though, real success is seeing an audience moved by a story well-told.

SCENE: *Much Ado About Nothing*. URI's Robert E. Will Theatre, 2013. Andrew Burnap '13 as Benedick. Olivia Khoshatefeh '13 as Beatrice. Offstage, Burnap's nose is bleeding. Onstage, Olivia shoots him an I-am-so-not-going-to-kiss-your-bloody-face look.

It was the pivotal moment in *Much Ado About Nothing*: Bickering leads Beatrice and Benedick to share their first kiss. But this night, Shakespeare's comedy was careening toward tragedy. "His whole face was bloody," Khoshatefeh recalls. She watched as Burnap tried in vain to stop the blood flow, which only made more of a mess. Time was up.

"He came onstage, put his hand over my mouth, and kissed his hand. It went with the show because Beatrice and Benedick spend the whole play bickering. It was such a great moment: beautiful and kind of perfect," Khoshatefeh says. "It showed how well he knew his character."

"I had to do something," Burnap says. "There's no improvising Shakespeare. And when something is undeniably real, it sparks new life into the story. The audience is participating in the magic of live performance. I panicked for a moment, but for everyone else, it was a beautiful mess."

At 27, Andrew Burnap has had more than a few beautiful moments: a stellar undergraduate career at URI, graduating first in his class from Yale School of Drama, making his professional debut as Troilus in *Troilus and Cressida* in Central Park's Delacorte Theater. He was one of the youngest actors in Matthew Lopez's *The Inheritance* at the Noël Coward Theatre in London after a sold-out, critically acclaimed run at the Young Vic.

Tony Award-winner Stephen Daldry directed this epic, seven-hour play about gay men living in New York City a generation after the AIDS crisis. Burnap played Toby Darling. Burnap's friend Sam Gross, who saw him in *The Inheritance*, has an awed-but-not-surprised response to his success. "*The Inheritance* is one of the most emotional things I've ever experienced," he says. "People were crying. People were stunned at intermission. It's incredible seeing him in the roles he plays and to think that's the same guy I grew up with. He fills every stage," Gross says. "He's outstanding in every setting."

Burnap appreciates accolades but has his own ideas about success. "To me making it is when others in your field come to see your work," he says. "My goal is to tell the stories I want to tell, to be with the people I want to be with, to have a life and a family and to walk down the street unnoticed. Theater gives me the opportunity to understand what it means to be human—flawed, a walking contradiction," Burnap says. "I get to celebrate the beauty and the horrors of this life. And I've learned that love is the greatest thing life has to offer."

SCENE: *The Rocky Horror Picture Show*. URI's J Studio, 2010. Burnap as Dr. Frank-N-Furter in black leather corset, fishnet stockings, and 6-inch heels belting out "Sweet Transvestite."

Allison Burnap will tell you her son started performing early.

"We'd play this mishmash of Christmas songs and, all of a sudden, he'd stop in his tracks and this thing took over: He'd go into a trance," she recalls, laughing. He was 5, maybe 6. "That Christmas he asked for a top hat and cane."

Things got serious his sophomore year at URI, Burnap's parents say, with *Rocky Horror*. "It was the start of feeling like I could do this," Burnap says. "Dr. Frank-N-Furter came to me surprisingly naturally. It opened up a whole new world within my own person."

Best friend and neighbor Austin Madden remembers the day his mother called to say she'd seen Burnap walking their South Kingstown, Rhode Island, neighborhood in 6-inch heels, practicing for the role. While amusing, it wasn't surprising. "He'd always be in the basement playing piano or practicing accents," Madden recalls. "I saw him in *Rocky Horror*. To see him in these big roles. Oh, my God. That's my best friend playing a transvestite, playing a drag queen. He's amazing."

Rocky Horror required Lady Gaga-esque command of platform heels. *Singin' in the Rain* called for dancing on a slick stage. Burnap did not come by either skill naturally. Hard work underpinned those seamless performances. "You can practice walking in heels or tap dancing six hours a day. That's muscle memory. By the time you're on stage, it doesn't feel like effort," Burnap says. "In *Singin' in the Rain*, Gene Kelly's dancing is gorgeous because it's effortless. It's transcendent, and you can feel it."

"After *Rocky Horror* and *Singin' in the Rain*, I knew that he had the talent to do anything," says Burnap's father, Tim.

URI Theatre Professor Paula McGlasson directed him in both shows. "The 'It Factor.' He had it," McGlasson says. "He exuded sincerity, confidence, great comic timing, and that thing you can't teach: charisma. He was someone you wanted to watch," she recalls.

URI Theatre Department Chair David Howard was Burnap's first-year advisor. "It was *Rocky Horror* that solidified him in people's minds," Howard says. "Dr. Frank-N-Furter is the exact opposite of how I perceive Andrew. He completely embraced the whimsy and the depravity of the role. It felt mature and knowing.

"Andrew is incredibly reserved, humble, gracious, and inclined to underplay his place in the world," Howard continues. "That he can transform into a character who is braggadocious and loud and extravagant shows that he has the ability to plumb the depths of a character."

Tony Estrella '93, Burnap's Shakespeare teacher at URI, smiles to hear of his *Much Ado About Nothing* mishap. "It is tough to improvise in iambic pentameter," he notes. "And you don't want to break the bond with the audience. It's a testament to his ability, to his investment in the character, and to keeping the story moving forward."

Estrella is disinclined to take credit for the younger actor's success. Burnap entered URI already almost fully formed as an actor, Estrella says. "I saw him in *Two Gentlemen of Verona*, a jukebox musical version; he was playing trumpet live in front of 4,000 people on the Boston Common, and I'm like, 'Jesus, what else does he have in his toolbox?'"

SCENE: Spacious bachelor pad, minutes from the Noël Coward Theatre. London. Sunday, sleeping-in day. Burnap wakes up, has coffee, reads the news. Maybe smiles. Maybe rages. Maybe cries.

"*The Inheritance* came to me after I'd worked with Matthew Lopez on *The Legend of Georgia McBride*," Burnap says. "*The Inheritance* was a beautiful surprise. Six hundred pages. I started reading it at 9:45 p.m. and read until 3 a.m., weeping through the pages." The anecdote underscores one of Burnap's observations: "You have to go to the emotional space where the character has no choice but to be."

It raises a question: What does it take to enter the interior world of a character? A teacher once told Burnap, "You don't have to convince us that you are that person, you just have to convince us that you understand the experience."

As a cisgender man playing a gay man in *The Inheritance* or a transgender transsexual from Transylvania in *The Rocky Horror Picture Show*, Burnap notes that the characters are signifiers meant to highlight some aspect of a shared human experience. "My job is to show you that I understand the experience," he says. "I don't know what it is to be a young, ostracized, gay man grappling with his sexuality, but I do know what it is to be viewed as other, viewed as weird or not normal.

"You have to become a keen observer of life. I was born with this wonderful and cruel capacity to feel," Burnap says. "Acting makes you want to not only learn more about yourself, but, more importantly, about others. I get to forget my own complications, my own troubles, and step into those of another. And every time I perform, I feel my soul and sense of humanity expanding more and more. Oh, my God, when you're in the trenches of a thing but then float above yourself and say, 'Holy shit, this is where I am!' I am never tired of this, this gift of being able to create."

He launches into a line from his favorite novel, James Joyce's *A Portrait of the Artist as a Young Man*: "Welcome, O life! I go to encounter for the millionth time the reality of experience and to forge in the smithy of my soul the uncreated conscience of my race."

Art, literature, music, theater: They reward, sustain, and drive him. To those who would follow a similar path, Burnap offers this advice:

"If someone tells you, 'No,' ask, 'Why not?' Doubt is a useful thing, but it shouldn't rule you. It should inform and maybe affect some of your decisions, but it should not be the resounding voice in your soul. Then ask, 'What else can I do?' Because this quest isn't easy, and it is filled with people telling you, 'No.' But if, in the smithy of your soul, you feel you cannot do anything other than this, then do it—but know it requires that next level of dedication," he says.

"And if you can start to understand that those things you didn't get weren't supposed to happen for you, you can understand the challenges of this business and go on." •

PHOTO: COLBY BLANCHET

Growing a Cure

By Diane M. Sterrett

The URI College of Pharmacy and the Heber W. Youngken Jr. Medicinal Garden work hand in hand, training students to look for new medical uses for plants.

You may know that echinacea wards off colds, or that garlic reduces blood pressure. But you might not know that here at URI's College of Pharmacy, the medicinal garden and greenhouse help students understand the plant/medicine connection and how to look for new medicinal uses. The College of Pharmacy's founding dean, Heber W. Youngken Jr., planted the original garden in 1957 near Fogarty Hall. In 2013, the garden was expanded and moved next to Avedisian Hall with glass frieze panels and a living art installation.

Today it's one of the largest and most established in the region, with more than 200 medicinal plants that help treat diseases ranging from anxiety to heart disease to cancer.

"URI is one of only a handful of colleges of pharmacy affiliated with a medicinal garden in the U.S.," says Navindra Seeram, a professor in the Department of Biomedical and Pharmaceutical Sciences. "We are well-known for our pharmacognosy leadership. In fact, the University of Iowa College of Pharmacy is planning to start a medicinal garden and they're looking to us for guidance."

The garden is a unique resource that is an important part of URI's prominence in natural products research as well as a resource for students and faculty.

"We can't be a leader unless our students are well-versed in medicinal plants and the molecules they possess; the garden helps us in our teaching and training. It also brings prestige to our college and our research. When we produce and publish research, it demonstrates the quality of our natural products group's work, and we're very proud of that," says David Rowley, chair of the Department of Biomedical and Pharmaceutical Sciences.

The garden is used in pharmacy classes such as Medicinal Plants (BPS 533) and Herbal Medicines and Functional Food (BPS 203), as well as for a graduate course on natural products. It also serves as a home base for the Pharmacognosy Club, which is open to students from all disciplines who are interested in medicinal plants. Rowley calls the garden an organic continuum of the college—a place to meet colleagues, eat lunch, host functions, or just sit, think, and de-stress.

> The medicinal garden is a unique resource, and an important part of URI's prominence in natural products research.

Professors Navindra Seeram (top) and David Rowley, of URI's Department of Biomedical and Pharmaceutical Sciences, are both leaders in the field of natural products research.

PHOTOS: NORA LEWIS; PATRICK LUCE; ISTOCKPHOTO.COM; COURTESY URI COLLEGE OF PHARMACY. ILLUSTRATIONS: ENCYCLOPEDIA OF SOURCE ILLUSTRATIONS

The Heber W. Youngken Jr. Medicinal Garden, with the College of Pharmacy bulding, Avedesian Hall, in the background. To the left is Woodward Hall, and to the right is Tyler Hall.

Take a tour with garden coordinator Elizabeth Leibovitz and you'll find her enthusiasm is contagious as she points out different plant species and their uses: Goji berry to treat inflammation, cinnamon to settle gastrointestinal upset, and foxglove, which is used to make the heart medicine digitalis.

Leibovitz explains that plants are used in three levels of medicine, the first being nutraceuticals, foods you eat for their benefits beyond basic nutrition, like pomegranate. Second is herbs for self care, including dietary supplements and home remedies, like ginger taken for nausea. Third, there are more clinical uses for plants, where are compounds are dried and isolated. She points out a pretty purple-flowered shrub. "The Madagascar periwinkle, for example, is very popular in landscape use, but it contains vincristine and vinblastine, two of the most toxic substances on Earth, which are used in chemotherapy."

Seventy percent of FDA-approved drugs come from natural sources or have been inspired by natural products. That's where Matthew Bertin, assistant professor of biomedical and pharmaceutical sciences, comes in. His class, Techniques in Medicinal Chemistry and Molecular Biology (BPS 451), focuses on the medicinal plants in the garden, which Liebovitz collects and dries. Each student lab group chooses a plant and works with it for nearly the entire semester. Because the garden is on campus, students can analyze the raw plant rather than relying on someone else's data.

Students use high-performance liquid chromatography (HPLC), nuclear magnetic resonance (NMR), and mass spectrometry to identify plant compounds and their properties. It's the same high-tech analytical equipment you'd find in an industrial lab.

"The industry needs folks who can perform analytical techniques. You may find a product from a plant, but there's an analytical procedure you have to conduct to figure out elements such as potency and effectiveness, or if it's not perfect, how to optimize it. The garden helps bring this learning to life. Having hands-on knowledge of these systems helps hone students' skills and makes them more marketable," says Bertin.

Matthew Bertin, assistant professor of biomedical and pharmaceutical sciences, and graduate student Riley Kirk examine a specimen of the fungus *Inonotus obliquus*, commonly know as chaga.

Meet Garden Coordinator Elizabeth Leibovitz

Elizabeth Leibovitz is the medicinal garden coordinator for URI's College of Pharmacy. Armed with an environmental studies degree and a decade of experience in commercial-scale farming, she jumped at the chance to expand her knowledge of medicinal plants when this position opened up last year. Peter Morgan held the position for 23 years until his retirement last year.

To Leibovitz, the most important part of the job is cultivating a space on campus that is enjoyed for both relaxation and learning. "That means both tending to the plant collection and being a resource for students interested in medicinal plants," she says. "I use herbal medicines in my own life, so it's great to understand on a deeper level how plants work to help us. It's a really unique job, giving students a living platform for learning."

"It's a really unique job, giving students a living platform for learning."
—Elizabeth Leibovitz

James Lotti '19 worked with Bertin to analyze the chemical components of the Korean balloon flower, *Platycodon grandiflorus*. "We performed the analytical techniques and ran an assay for antioxidant bioactivity on the various fractions of the extract," says Lotti. "We then compiled the results from these techniques into a publication-style lab report. The experience taught me a lot about the potential pharmaceuticals from natural products."

Students in the medicinal plants class rely on the garden to learn about traditional and modern natural plant medicines, as well as other organisms that potentially contain bioactive components with therapeutic applications. Kelly McManus '19 says she learned more about plant uses through an herbal recipe project in that class.

"We took plants from the garden and created things that can be taken for a chosen indication," she says. "I made gummy bears with elderberry and other supporting herbs to boost the immune system and prevent or treat the common cold. We were able to see the end product of many herbs used in different ways for medicinal purposes." Other projects in the class yielded lip balms, teas, face masks, tinctures, and more.

Beyond the classroom, there is a huge appetite for nutraceuticals and herbal supplements. URI students well-versed in plant analysis can travel many different career paths, says Bertin. "In addition to graduate school, they could work at Merck or Pfizer, or in nutraceuticals, or even in the craft beer industry, which uses hops and engages with chemistry and plants. Having the garden here helps us facilitate those opportunities for students."

At the graduate level, students and faculty are taking research several steps further, and Seeram's work with maple compounds has put URI at the forefront of pharmacognosy.

"When you look at other botanicals, everyone is researching them. But the red and sugar maples only grow in the northeastern U.S. and Canada, and URI is the first to study their bioactive compounds. We are undoubtedly the world's leader in maple research based on the amount of peer-reviewed publications we have on the different species of maple and their derived food products. We have been funded by the USDA twice, and that speaks to our ability to lead research on this unique botanical," Seeram explains.

What's next? Future plans for the garden include a Native American plant collection, where Leibovitz hopes to establish a local medicinal plant collection based on plants the Narragansetts and other local tribes used as medicine.

Students rely on the garden to learn about traditional and modern plant medicines.

One of the many familiar plants in the medicinal garden is black-eyed Susan (*Rudbeckia hirta*). Its roots have medicinal uses, including making teas and juices to treat ailments from snakebites to earaches.

PHOTOS: NORA LEWIS. ILLUSTRATIONS: ENCYCLOPEDIA OF SOURCE ILLUSTRATIONS

Good for What Ails You

"We are undoubtedly the world's leader in maple research. We have been funded by the USDA twice, and that speaks to our ability to lead research on this unique botanical."
—Navindra Seeram

Chaga (*Inonotus obliquus*)

Graduate student Riley Kirk is studying this fungus for its antidiabetic properties, which prevent the production of advanced glycation end products that are partially responsible for diabetes' negative effects. It has been used as a tea and tincture for at least 400 years. Since it only reproduces in the wild every 30 years, overharvesting has become a pressing issue, and Kirk is currently studying how to reproduce the fruiting body reliably in the laboratory.

Pomegranate (*Punica granatum*)

Traditionally, its dried fruit, rind, and fruit pulp were used as remedies for upset stomachs and diarrhea. More recently, Professor Seeram's extensive research found possible positive effects on the brain, improving functions such as memory and cognition. He discovered how pomegranate's polyphenols were biotransformed by gut microflora to produce urolithins, potentially active compounds for treating Alzheimer's, thus opening the door to a new line of research.

Japanese Barberry (*Berberis thunbergii*)

This plant has several benefits: It is antibiotic, astringent, and antifungal, as well as hypotensive, which means that it lowers blood pressure. Interestingly, it is now being used as an herbal antibiotic for Lyme disease, another tool in medicine's arsenal as strains of the disease become antibiotic-resistant. It also has a range of traditional uses for sores, burns, ringworm, and acne.

Red Maple (*Acer rubrum*) and **Sugar Maple** (*Acer saccharum*)

In leading-edge research, Professor Seeram and his team have isolated more than 67 compounds in maple sap and syrup. That includes Quebecol, a polyphenol that could have anti-inflammatory properties and could offer new treatments for diabetes and Alzheimer's. They've also isolated compounds in maple leaves that might prevent wrinkles and licensed it to Verdure Sciences for possible cosmetic uses.

Turmeric (*Curcuma longa*)

In the same plant family as ginger, turmeric has been used extensively in Ayurvedic medicine (a traditional healing system from India) for indigestion and anti-inflammatory conditions. Today it is primarily used to help prevent colds and to prevent inflammation in the body. It also helps reduce bloating and stimulates bile flow.

Green Tea (*Camellia sinensis*)

An extract from green tea was approved by the U.S. Food and Drug Administration in 2006 as the first prescription botanical drug. Named Veregen, the drug's active ingredient is Polyphenon E, a proprietary mixture of phytochemicals extracted from green tea in water. It is used to treat genital warts from HPV. Green tea also has many uses in traditional Chinese medicine for weight loss, skin ailments, and as a diuretic.

A Perfect Fit

By Nicole Maranhas

The Human Side of Wearable Technology

Kunal Mankodiya is a collaborator, a team leader, a people person. Mankodiya and his students are developing wearable technology to monitor, treat, and help people with Parkinson's and other medical conditions. Much of what they're doing is unique, but perhaps the most notable thing about this team is that it is as focused on the people it's designing for as it is on the technology itself.

For a cricket team, you need 11 players. This was a typical problem on Kunal Mankodiya's mind as a teenager in the small town of Dhrangadhra, India, where as a team captain, he spent much of his free time going door-to-door rounding up enough players and strategizing how to use everyone's strengths on the field. He never imagined a future in research, though he was a good student. Off the field, he frequently helped out at his family's business, a clothing and textiles store in town. When it came time to apply to universities, Mankodiya's curiosity was piqued by an unusual major in one course catalog—biomedical engineering—not only because he wasn't sure what it was ("it was before Google," he recalls), but also because there was only one university that offered it. "I figured it must be something new," he says.

The three seem unrelated: cricket, a clothing store, biomedical engineering. For Mankodiya, a College of Engineering assistant professor who is breaking new ground in wearable technologies, they are interconnected keys to his success.

Assistant Professor Kunal Mankodiya demonstrates his smart glove technology, which provides a user-friendly way for people with Parkinson's disease to monitor symptoms and send the information to their doctors. Along with his research, Mankodiya is an active supporter of initiatives such as the annual "HealthHacks" design competition at URI to help students build their creative and entrepreneurial skills.

PHOTO: NORA LEWIS

He remembers the morning inspiration struck. Over a cup of chai, Mankodiya was thinking about a smartwatch app he had developed with a neurologist during his postdoc research. Designed to help monitor the symptoms of Parkinson's disease, a nervous system disorder that causes the progressive deterioration of motor function, the watch had potential for Parkinson's treatment, but ultimately wasn't ideal for capturing the data needed. As he sipped his chai, Mankodiya's mind drifted to another past collaboration—a heart-monitoring belt he had developed while earning his Ph.D. at University of Lübeck in Germany. The belt had been designed to measure the heart's electrical activity, an at-home electrocardiogram of sorts. It provided a more accurate reading than an in-office stress test—where a patient's anxiety might skew results—and also could monitor heart activity over a prolonged period of time.

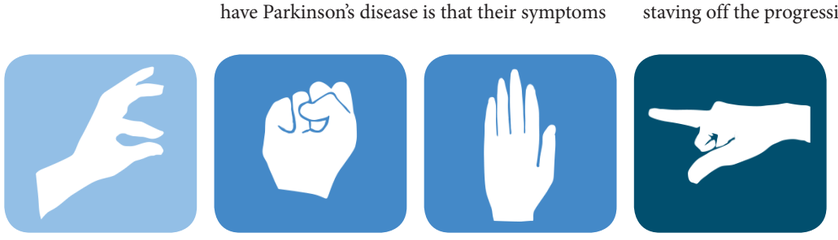
> Mankodiya envisioned that a smart glove could enable patients to perform some of these tests at home, with a tablet or phone app to record data for their doctor to view remotely.

Perhaps in part because of his childhood days spent helping in his family's store, smart textiles intrigued him. As he reflected again on the watch, Mankodiya wondered if a belt, or maybe a glove, would be a better way to measure Parkinson's symptoms. Later that day, in his URI lab, he turned to his students and said, "Let's begin a new project."

Parkinson's disease does not yet have a cure, but its symptoms, which include tremors, rigidity, and slowness of movement, can be helped by medication. However, to treat a person with Parkinson's effectively, doctors must monitor symptoms closely, requiring regular office visits for patients to perform exercises such as finger-

tapping, fist-opening and closing, and foot-stomping to measure how well the medications are working. Mankodiya envisioned that a smart glove could enable patients to perform some of these tests at home with a tablet or phone app to record data for their doctors to view remotely. It would save them trips to the doctor's office and also make it easier to monitor symptoms on a daily basis over an extended period of time—key for a disease like Parkinson's, where decline happens gradually. Working with his students, he devised a glove prototype and brought it to neurologists Umer Akbar and Joseph Friedman at Butler Hospital in Providence, Rhode Island, who were enthusiastic about its potential. "When neurologists think your work is interesting," Mankodiya says, "it's an exciting moment."

Since then, his ongoing collaboration with the neurologists has evolved to include other wearables for people with Parkinson's—including socks, insoles, and, most recently, a trouser that monitors factors such as gait and balance. "One of the difficulties in treating people who have Parkinson's disease is that their symptoms vary throughout the day, sometimes in ways that they're unable to report," says neurologist Akbar, citing as an example the dyskinesia—involuntary, uncontrolled movement—that sometimes causes falls. "It is well-known that these movements are often underrecognized and underreported by patients, and if that is the case, the problem goes untreated. Wearable textiles can help bridge the gap between patient and clinician."



Mankodiya's smart textiles connect to a digital app, which can be viewed on a phone or tablet, that records information for a doctor to review remotely. Icons on the app (pictured) indicate exercises such as finger tapping, fist opening and closing, hand flipping, and finger pointing that the wearer performs to measure movement and other indicators that help the doctor monitor how well a treatment plan is working.

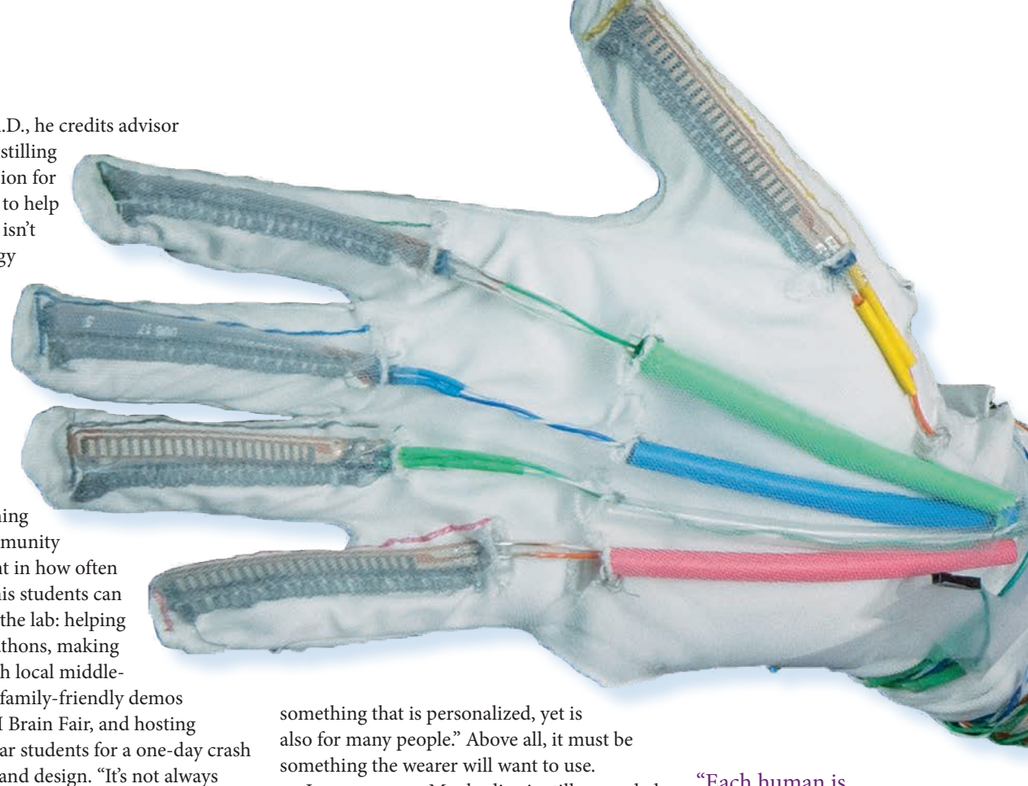
The neurologists are key players on an impressive team. URI faculty in engineering, textile design, kinesiology, nursing, and the Ryan Institute for Neuroscience, and specialists and organizations outside URI are among the lab's collaborators on various in-the-works or upcoming projects. Among them: smart shoes to help detect gait abnormality linked to dementia, wearables for stroke rehab, and even mattress toppers for sleep monitoring. But the collaborators always foremost on Mankodiya's mind are the people who will use the wearables and the students at the heart of his work.

Several times a year, Andrea Hopkins '68 makes a trip to the Wearable Biosensing Lab. There she works with Mankodiya's team, giving feedback on the comfort, practicality, and wearability of their designs and serving as a first tester of new prototypes. Diagnosed with Parkinson's in 2002, Hopkins—who is a former assistant vice president of public affairs for URI—says of her collaboration with Mankodiya's lab, "I can't change the diagnosis, but I can make the best of it by working with those who are trying to help." Hopkins is also a member of Associate Professor Leslie Mahler's speech therapy group for people with Parkinson's, and works regularly with URI's physical therapy department—two other resources she considers "a godsend" in staving off the progression of the disease.

"There's no cure, but medication and exercise can help," Hopkins says. "If the students see how their work helps people like me, I hope it encourages them to continue."

The students certainly continue. Undergrads in Mankodiya's popular Wearable Internet of Things (ELE 491/ELE 591) course have devised wearables including a baby onesie to treat jaundice (created by Joshua Harper '18 and James Baez '18) and a bionic hand to help stroke victims regain movement (Mary Ellen Sweeney '18, Tian Chen '18, and Scott Barlow '18), to name just two. In the course, students from various disciplines create wearable technologies and tap into their inner entrepreneurs; some even market their designs. "If we give students freedom and don't spoon-feed them, they feel ownership," Mankodiya says. "They ask questions, they suggest new ways to think about things. Without that, we won't change the paradigm of smart textiles."

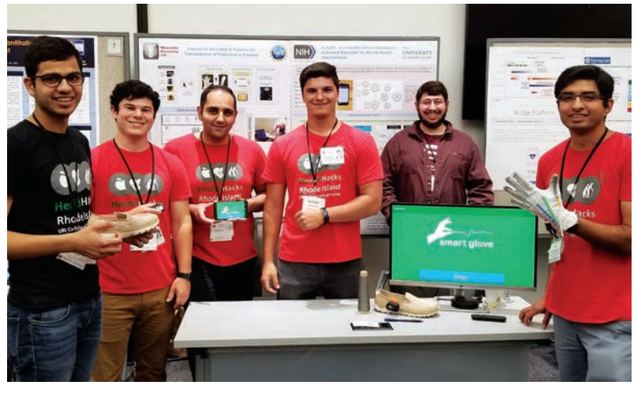
Nick Constant '15 has worked with Mankodiya since 2014, when he was a senior embarking on his capstone project. Now working toward his Ph.D., he credits advisor Mankodiya for instilling in students a passion for using technology to help others. "The goal isn't making technology that does things for a person," says Constant. "It's helping people to do things for themselves." Beyond the cool factor of the lab's work, Constant notes an overarching emphasis on community outreach—evident in how often Mankodiya and his students can be found outside the lab: helping to organize hackathons, making paper circuits with local middle-schoolers, giving family-friendly demos at the annual URI Brain Fair, and hosting incoming first-year students for a one-day crash course in coding and design. "It's not always common for an engineer to be a people person," observes Constant. "Kunal is a people person."



Right now, the glove is a poly-cotton blend. Neoprene might work better, Mankodiya notes, ever experimenting. Comfort and flexibility are only two of the design considerations behind a wearable, which must deliver precise results consistently. Some wearables require delicate sensors; others must withstand pressure. Placement is key, as is stability. Hygiene is a factor—the textile will require frequent use and ultimately multiple users. "Each human is different, each hand or foot is unique," says Mankodiya. "You need to create something that is personalized, yet is also for many people." Above all, it must be something the wearer will want to use.

In many ways, Mankodiya is still grounded in the lessons he learned at his family's clothing store, where pleasing the customer meant paying attention to the individual's needs. In other ways, he's ever the cricket captain, rounding up teammates and strategizing how to maximize their on-field strengths. As he gains increasing attention for his innovative work—he recently helped establish URI's Artificial Intelligence Lab, which opened in fall 2018 —it seems his story is still only beginning—the one that began with a teenager who became curious about biomedical engineering simply because he couldn't fathom what it was. "Our neighbor, who was a doctor, explained that it meant creating medical devices," Mankodiya recalls. "I could only imagine stethoscopes, but I thought I'd give it a try."

"Each human is different, each hand or foot is unique," says Mankodiya. "You need to create something that is personalized, yet is also for many people." Above all, it must be something the wearer will want to use.



The Wearable Biosensing Lab was invited to speak at the National Institutes of Health mHealth Tech Showcase last June. Pictured (left to right): visiting student Sahil Kargwal (Indian Institute of Technology Delhi, India), Nick Constant '15, Mohammadreza Abtahi, M.S. '14, Matt Constant '18, Josh Gyllinsky, M.S. '18, and Kunal Mankodiya.

PHOTOS: NORA LEWIS; COURTESY URI COLLEGE OF ENGINEERING

AMANPOUR ON FAKE NEWS AND THE #METOO MOVEMENT

FAKE NEWS

Amanpour says President Donald Trump's denouncements of "fake news" represent a unique challenge for the journalists who cover him, although she notes that Trump is hardly the first president to charge the media with producing falsehoods. She asserts, "In President Trump's view, fake news is just 'stuff I don't want to hear,'" she says, "'stuff I don't like.'"

#METOO

Energized by the challenge of covering the #MeToo movement, Amanpour notes that the issue directly affects half the world's population. She describes it as "the desire for simple justice and a level playing field. Up until now, if it's happened at all, it's been in teeny-weeny baby steps."

Incidentally, the #MeToo movement indirectly led to Amanpour taking on a new show, *Amanpour and Company*. Her show replaced Charlie Rose's PBS talk show, which was canceled after sexual misconduct allegations against him surfaced.

STAYING STEELY

CHRISTIANE AMANPOUR ON SUCCESS AND STAYING POWER

By Mike Malone

Masterfully negotiating war zones and TV network politics, acclaimed journalist Christiane Amanpour '83 has earned great trust and respect for her award-winning coverage of foreign conflicts—from the Gulf War to the breakup of Yugoslavia.

On October 29, 2018, the CNN anchor and chief international correspondent was inducted into the Broadcasting & Cable Hall of Fame. Mike Malone '91 attended the event and talked with Amanpour about starting her career in Rhode Island, fake news, #MeToo, and her new show, Amanpour and Company.

CHRISTIANE AMANPOUR WAS inducted into the Broadcasting & Cable Hall of Fame for her standout 35-year career in television journalism. She was honored alongside *CBS Morning News* anchor Gayle King, NBCUniversal advertising chief Linda Yaccarino, and Charlie Collier, then-president and general manager at AMC/SundanceTV, among others. She thanked her son, Darius, for making her "a better person, a better journalist, and a better public servant."

Addressing the ballroom, Amanpour pushed for action regarding the murder of Saudi journalist Jamal Khashoggi. Later in her speech, she quoted F. Scott Fitzgerald, who said, "The test of a first-rate intelligence is the ability to hold two opposed ideas in the mind at the same time, and still retain the ability to function."

Amanpour spent her childhood in both Iran and England and aspired to become an ER doctor. But, as she watched the Islamic Revolution unfold in the late 1970s, she decided she wanted to be a journalist instead. Being an ER doctor and a war correspondent are "practically two sides of the same coin," she says. Both deal in trauma, and both push their practitioners to find the resolve to do their jobs amid exorbitant human misery.

With her new career goals in mind, Amanpour took the SATs and applied to the University of Rhode Island. "I had friends and family who helped me navigate the very complex route from being abroad to getting into a U.S. university," she says. "I was very pleased to end up there."

Studying journalism in Kingston, she landed an internship at WJAR in Providence—which she calls "a brilliant news town"—and was mentored by Jim Taricani, who headed the investigative department at the station. "He's always been incredibly helpful and encouraging," says Amanpour, who calls Rhode Island her "home state."

After she graduated in 1983, Amanpour moved on to CNN in Atlanta, Georgia. She started in an entry-level position but moved up quickly to bureau positions in New York and Frankfurt, Germany. After Iraq invaded Kuwait in 1990, she went to the Middle East and promptly established herself as a savvy, steely war reporter willing to go toe-to-toe with world leaders.

September 2018 marked the 35th anniversary of Amanpour's start at CNN. "It's been my training ground, my home," she says, singling out founder Ted Turner for his commitment to 24/7 TV news.

URI is also visibly represented on the national level at CNN, where award-winning journalist John King '85 is chief national correspondent. Amanpour says she first met King when he was an Associated Press reporter during the Gulf War. "That's when we first became friends," she says.

Amanpour's latest project is *Amanpour and Company*, a news and public affairs program that premiered on PBS in September 2018. She still hosts the nightly global affairs interview show, *Amanpour*, on CNN, and says she plans to keep plugging away in news, giving a voice to those who may not have one. "I'm just happy that I'm a woman of a certain age, in this day and age, who can keep on keeping on," she says. "I think that's a triumph." •

Mike Malone is a 1991 graduate of URI and an editor and reporter at the television trade magazine Broadcasting & Cable.

PHOTO: MARK REINERTSON, COURTESY BROADCASTING & CABLE

Caring for Wildlife

By Todd McLeish

Blaine Hymel, Josh Brancazio, Samantha Ward, and Arianna Mouradjian at the Wildlife Clinic of Rhode Island.

Arianna Mouradjian '07 has done just about every job at the Wildlife Clinic of Rhode Island. She calls it a "labor of love." At the clinic, where caring for orphaned and injured wild animals is a rewarding effort, URI students fill an urgent need for volunteers.

When Blaine Hymel '17 was living in Tiverton, Rhode Island, she found an injured bird on her porch and didn't know how to help it. After searching the web, she discovered the Wildlife Clinic of Rhode Island, which cares for sick, injured, and abandoned wild animals until they can be released back into the wild. After dropping off the bird, Hymel investigated the organization further and decided to volunteer.

"I've always known that I wanted to become a veterinarian," she says. "Growing up, I lived next to a cow farm and always had animals at home, and I always tried to take care of any animals I found."

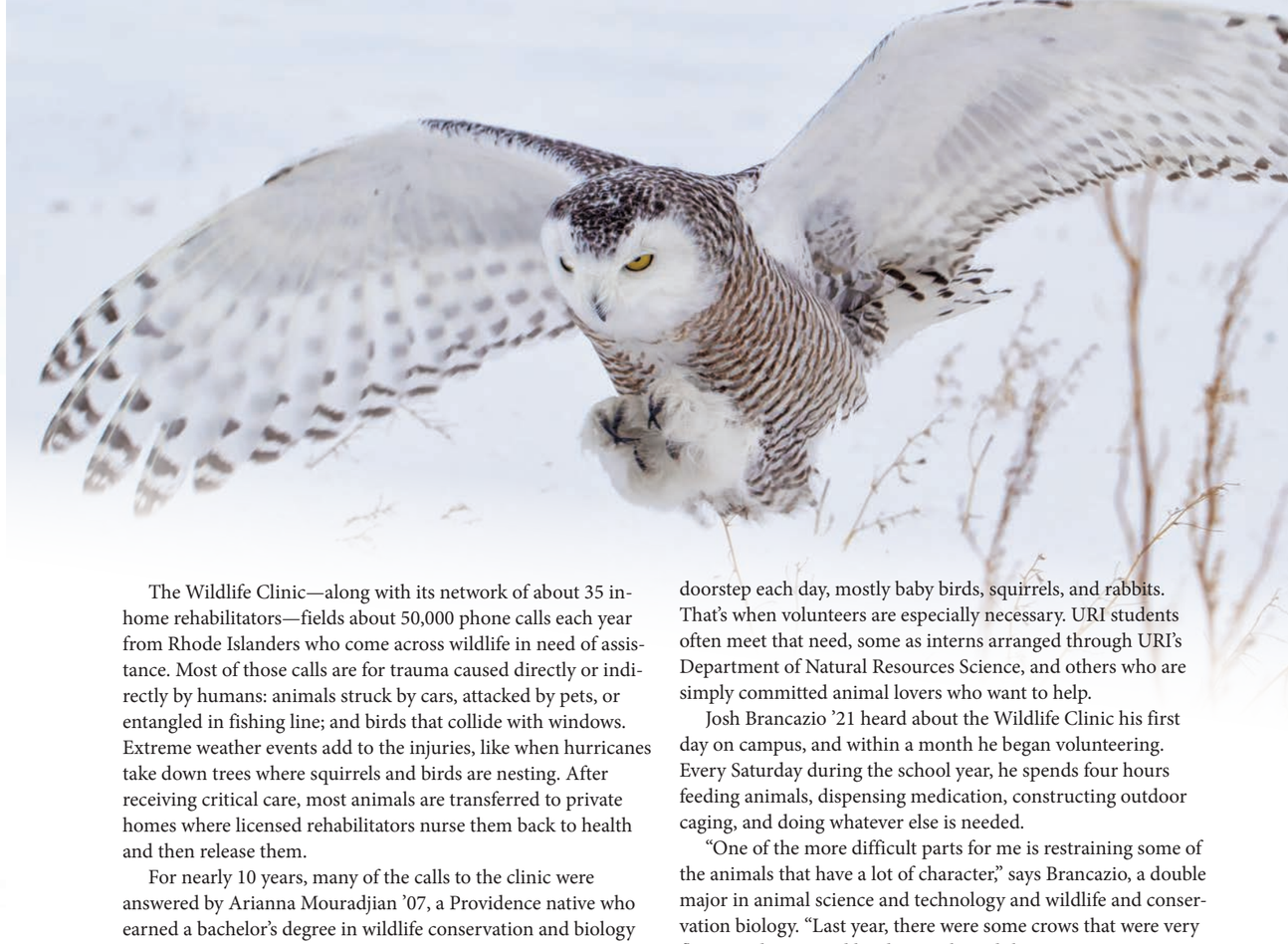
Her first months volunteering at the clinic, located in Saunderstown, Rhode Island, just a few miles from URI's Kingston Campus, found her preparing food for the animals and cleaning their cages.

"At first I was terrified of touching the animals because I was afraid to do the wrong thing or do something that would hurt them," Hymel says. "It took time to get used to it, but it was a good environment to learn in."

She quickly realized that she wanted to become a licensed wildlife rehabilitator, but the initial licensing class is only held once a year and she had just missed it. Eager to get started, she flew to Texas to take a similar class. For the next three years—until she enrolled in vet school last year—she volunteered at the clinic every week, and she even set up a rehabilitation space at her home.

"I was sort of an in-between babysitter," Hymel explains. "I would accept animals and care for them at home until I could get them to the clinic or to other rehabilitators. And sometimes I would care for adult animals that needed a higher level of care."

PHOTOS: NORA LEWIS, COURTESY WILDLIFE CLINIC OF RHODE ISLAND, ISTOCKPHOTO.COM



The Wildlife Clinic—along with its network of about 35 in-home rehabilitators—fields about 50,000 phone calls each year from Rhode Islanders who come across wildlife in need of assistance. Most of those calls are for trauma caused directly or indirectly by humans: animals struck by cars, attacked by pets, or entangled in fishing line; and birds that collide with windows. Extreme weather events add to the injuries, like when hurricanes take down trees where squirrels and birds are nesting. After receiving critical care, most animals are transferred to private homes where licensed rehabilitators nurse them back to health and then release them.

For nearly 10 years, many of the calls to the clinic were answered by Arianna Mouradjian '07, a Providence native who earned a bachelor's degree in wildlife conservation and biology from URI before going to law school. Mouradjian served the clinic first as a volunteer, then as a staff member, and later as the director of the nonprofit clinic. She now serves on its board of directors.

During baby season—April to September—more than 50 animals may be delivered to the clinic's doorstep each day. URI students fill an urgent need for volunteers.

"There's also the emotional toll of dealing with the public—people who are stressed out over an animal they've found and want to make sure it gets taken care of," Mouradjian adds. "We're a small all-volunteer group, and someone isn't always available to rush across the state to assess the situation. Managing the expectations of the public versus the resources we have is a big challenge."

The clinic and the rehabilitators care for between 4,000 and 5,000 animals each year—from bats and bunnies to owls and otters. About 50 to 60 percent are eventually released back into the wild, a higher rate than the national average.

Baby season—April to September—is the busiest time of year, when more than 50 animals may be delivered to the clinic's doorstep each day, mostly baby birds, squirrels, and rabbits. That's when volunteers are especially necessary. URI students often meet that need, some as interns arranged through URI's Department of Natural Resources Science, and others who are simply committed animal lovers who want to help.

Josh Brancazio '21 heard about the Wildlife Clinic his first day on campus, and within a month he began volunteering. Every Saturday during the school year, he spends four hours feeding animals, dispensing medication, constructing outdoor caging, and doing whatever else is needed.

"One of the more difficult parts for me is restraining some of the animals that have a lot of character," says Brancazio, a double major in animal science and technology and wildlife and conservation biology. "Last year, there were some crows that were very flappy and noisy and hard to catch, and that was pretty intimidating for me. The animals were in charge, and I was trying to figure out how to take control."

His favorite animals to work with are baby opossums, which he says are "wonderfully adorable and so funny. They try to be intimidating when you grab them to move them to another cage. They open their mouths wide, showing their tiny baby teeth. It's really funny."

Samantha Ward '19 says the baby opossums are also her favorite animals to care for at the clinic. A marine biology and Spanish double major, she says she "was always that animal girl, always interested in trying to work to mitigate some of the effects that humans have on wildlife."

Like Brancazio, Ward discovered the clinic and started volunteering before the end of her first semester at URI. After three years, she is now comfortable assessing animals as they arrive and developing treatment plans for them.

"I like that every day is different," she says. "I still encounter animals that I haven't cared for before, and every situation is different. Every time an animal comes in, it's a challenge to figure out what's going on with it. I've always appreciated animals, but seeing them up close and getting a feel for their personalities is really rewarding. "And," she adds, "holding a snowy owl is a feeling like no other."

Network

= CLASS NOTES =

= 1977 =

L. Vincent Murray '77, M.C.P. '89 shared this photo, with the simple caption, "Retirement Hobby." He adds, "Go Rhody!"

= 1963 =

Matthew Perry writes, "I just received a copy of the Fall 2018 URI Magazine and thought I should give a yell-out to Phi Sig folks. I note with sadness that Bob Sproul '62 has died. I remember his penny loafers, his good looks, his T-bird, and him being attacked by our Doberman pinscher. The good news is that Dan Libutti and his wife Joan just donated to URI a beautiful life-sized bronze sculpture of a ram in memory of Dan's father (Class of 1925). I welcome any news (and other Phi Sig email addresses) from you."

= 1965 =

Joyce Gunter writes, "At the JetBlue gate in Aruba, my husband and I met the mother of a URI pharmacy graduate. Her daughter graduated soon after it became a six-year program. She is doing well and now works at a hospital near her home outside of Boston."

= 1969 =

Bill Simonson reports, "Our 50th reunion is just about all set! Please save May 17–19, 2019 for a wonderful series of events and plenty of time to socialize with friends. Please visit alumni.uri.edu/50threunion for registration and details. There is only one 50th reunion and we hope to see you!

Stanley Strembicki '75

= 1971 =

Jeffrey Fortuna writes, "I am about to turn 70 years old and am doing more reflecting these days on what was and the changes that came along. In 1981, I was living in Boulder, Colorado, and had just graduated from a master's program in Buddhist and western psychology at Naropa University. I had the great good fortune to meet wonderful teachers and mentors there, as I had at URI. A close group of friends/therapy-colleagues and I founded an innovative approach to providing home- and community-based care for persons with mental illness, based on our study of eastern and western psychology. We called our work the Windhorse Project. We brought the practice, attitude, and way of life of mindfulness to our clinical work, long before mindfulness became fashionable and trendy. Our seminal work has continued to evolve and spread, and there are now eight Windhorse therapeutic communities in the United States and Europe, forming a vibrant international community. I currently work with Windhorse Community Services in Boulder."

= 1975 =

Stanley Strembicki is retiring from teaching this December at Washington University in St. Louis, where he has been teaching photography and studio art since 1982. Stanley says, "I owe my long career as an educator to my mentor and URI professor, Bart Parker who was a lifelong inspiration. My time at URI was very much an important part of my career in the arts and Bart had a very large influence on me as an artist and later as an educator. As part of my retirement, a large exhibition was put together of my work and the work of my students."

= 1983 =

▶ Read about **Christiane Amanpour** on page 42.

John Babb, M.S. '82, M.S. '88 of Somerset, Massachusetts, a mechanical engineer at the Naval Undersea Warfare Center (NUWC) Division Newport, was selected as deputy technical director, technical excellence. John, who leads several efforts focused on technologies, concepts, and knowledgeable personnel for the next generation nuclear attack submarine platform, joined NUWC Newport in 1982. During his 36 years of service, he has led projects focused on advancements in undersea warfare including the Improved Flex-Hose Torpedo Wire Guidance System, unmanned undersea vehicle launch and recovery, early Virginia-class submarine design efforts, Ohio-class guided missile submarine (SSGN) design, acquisition and fielding, and Columbia-class submarine early acquisition. On Oct. 1, 2018, he was presented with the Department of the Navy Superior Civilian Service Award, the second highest honorary award bestowed by the Navy, which recognized his dedication, technical excellence, and unwavering vision for the evolution and advancement of undersea technologies from May 2008 to April 2018.

John Babb, M.S. '82, M.S. '88 receives the Department of the Navy Superior Civilian Service Award

= 1984 =

Violet Krikorian, of Cranston, Rhode Island, has joined Centreville Bank as vice president, regional sales manager. She is responsible for building and managing the mortgage loan origination team, cultivating new business, and increasing profitability for the residential lending division, while improving the bank's visibility. She has been in the financial services industry for over 30 years, most recently as first vice president, regional sales manager at Coastway Community Bank.

Violet Krikorian '84

= 1989 =

Keith Quinton of Warwick, Rhode Island, has joined Centreville Bank as assistant vice president, senior mortgage loan originator. In his new position, Keith is responsible for originating a wide range of mortgages and other loan products. Keith, who specializes in VA and FHA loans, has more than 27 years' experience in the banking industry. Most recently he was assistant vice president at Coastway Community Bank. For the past 10 years, Keith has been named a Top RIHousing Originator by RIHousing.

Kimberly Wolff Thompson resides in Connecticut and continues her career as a clinical specialist in cytogenetics and molecular genetics as well as a new career consulting in pharmacogenomics alongside fellow alum Michael Roberge '89 who recently opened Advanced Genetics Labs. Her two sons now attend URI: Keith Jarret Thompson '20 majoring in cell and molecular biology and Zack Steven Thompson '22 majoring in accounting.

= 1990 =

Kimberly Wolff Thompson '89 with her sons Keith Jarret Thompson '20 and Zack Steven Thompson '22

Michael T. Halliwell accepted the APhA Foundation Group Practice Health System Corporation Pinnacle Award on behalf of Balls Food Stores, where he is director of pharmacy and whole health. After graduating from the School of Pharmacy in 1990 he was a pharmacy intern and then a pharmacist for CVS in Massachusetts until he moved to Kansas City in 1992.

= 1991 =

Jason Farber has been promoted to senior solutions architect at Presidio, a leading IT solutions provider. He joined Presidio in 2013 in a role that engages directly with clients to understand their priorities and challenges, with the goal of recommending a secure architectural design to meet requirements. He recently received Circle of Excellence and Solutions Architect of the Year awards for the New England area.

▶ Read about **Eric Lutes** on page 28.

= 1992 =

▶ Read about **Christopher Savoie** on page 18.

= 1993 =

▶ Read about **Tony Estrella** on page 27.

= 1995 =

Eric Lalime of Upper Saddle River, N.J., was selected by *The Financial Times* for its FT401 Award in September 2018. The award recognizes the nation's top financial advisors for retirement based upon an empirical analysis of assets under management, revenue generated, and client satisfaction.

= 1996 =

Michael Nula '96, M.S. '01, owner and founder of Elite Physical Therapy, announced the opening of the group's 10th location and its first in Massachusetts.

= 1997 =

Erik Johnson, M.A. '97 of Needham, Massachusetts, has joined The Bulfinch Group as managing director. Prior to joining The Bulfinch Group, Erik spent 10 years as a Division I women's basketball head coach, most recently at Boston College in the ACC and previously at the University of Denver. Before becoming a head coach, Erik spent 14 years as a Division I women's basketball assistant coach at Boston College, the University of San Diego, and the University of Rhode Island. Erik also conducts workshops for the Positive Coaching Alliance, which teaches character through sports to young athletes, young coaches, and sports parents.

CORRECTIONS:

We are sorry to have erroneously listed George W. Crowninshield, M.M.A. '84 in the "In Memoriam" section of the fall 2018 issue. Our sincere apologies to Capt. George Crowninshield, USN, Ret., of Middletown, R.I., who wrote to inform us of our error and of his present good health.

Our apologies to the Hydes, the Tyrrells, and the Erb/Fanning family. Their birth announcements appeared with the wrong photos in the last issue. They are included again in this issue, under "Births and Adoptions," with the correct photos.

BIRTHS AND ADOPTIONS

Eric Alexander '11 and **Lauren Alexander '11** welcomed their baby girl Elena Maddalyn Alexander on August 24, 2018.

Jacquelyn Erb '13 and **Kevin Fanning '13** welcomed baby girl Cara Fanning on March 20, 2018.

Janna Tyrrell '08 and **Matthew Tyrrell '06** welcomed a daughter, Alessandra Gia. She joins big sister Lucianna.

Tyler Hyde '15 and **Jennifer (Corvese) Hyde '06** welcomed daughter Anneliese Camilla Hyde on November 2, 2017; she joins older brother Harrison, 3.

= **2001** =

Pamela Derby, M.S. '01 received the 2018 Clinician of the Year award for Hospital Medicine at the Medical College of Virginia in Richmond, Virginia.

Hector Lopez, M.B.A. '01 of Portsmouth, R.I. has been selected as head of the Naval Undersea Warfare Center (NUWC) Division Newport Undersea Warfare Weapons, Vehicles and Defensive Systems Department. In this role, he is responsible for technical leadership and full spectrum engineering in support of research, development, acquisition, and in-service activities associated with torpedoes, unmanned vehicles, countermeasures, and towed defensive systems.

▶ Read about **Rachel Walshe** on page 29.

= **2004** =

▶ Read an essay by **Ben Leveillee** on page 9.

= **2005** =

Elizabeth Cyganoski Decker '05, '06 of Exeter, R.I., recently joined University Gastroenterology (UGI). Dr. Decker is fellowship-trained in gastroenterology and board-certified in internal medicine. In joining UGI, she will contribute to the group's mission to provide cutting-edge care to their community of patients. Dr. Decker received her medical degree from the University of New England College of Osteopathic Medicine in 2011. She trained in Florida at St. Petersburg General Hospital and Sacred Heart Hospital, then returned to Rhode Island for specialty training in gastroenterology at Kent Hospital.

= **2006** =

▶ Read about **Joseph Short** on page 29.

= **2007** =

▶ Read about **Arianna Mouradjian** on page 44.

= **2008** =

▶ Read about **Joshua Short** on page 29.

= **2011** =

Ashlee Hudson was recently awarded the Golden Apple from Patrice Wood at NBC 10 news. Ashlee is a second-grade ESL teacher at Baldwin School in Pawtucket, R.I.

= **2012** =

▶ Read about **Kira Hawkridge** on page 28.

Kris Monahan, Ph.D. '12 of Tiverton, Rhode Island, has been named director of sponsored projects and research compliance for Providence College. Kris has been at PC for seven years, before which she held positions at Wellesley College, Bridgewater State College, and the Tiverton school system.

= **2013** =

▶ Read about **Andrew Burnap** on page 32.

= **2017** =

▶ Read about **Jacob Albernaz** on page 16.

▶ Read about **Justin Bristol** on page 52.

Hector Lopez, M.B.A. '01

Elizabeth Cyganoski Decker '05, '06

Brigid Corcoran has joined Pinckney Hugo Group, a full-service marketing firm in Syracuse, New York, as an assistant digital strategist. Prior to joining Pinckney Hugo Group, Brigid worked at Worldways Social Marketing in Newport, Rhode Island.

▶ Read about **Blaine Hymel** on page 44.

= **2018** =

▶ Read about **Brendan Breen** on page 13.

▶ Read about **Henock Constant** on page 53.

▶ Read about **Corey Favino** on page 51.

▶ Read about **Matt Fuller** on page 52.

WEDDINGS

Lindsay Costa '14, M.S. '16 of Brookline, Mass. to **Stephen Pasquale Petrarca '14** also of Brookline, Mass. on October 6, 2018.

Meghan Menard '12 to **Michael Viscusi '13** on September 17, 2017.

PHOTO: JOE GIBLIN

= YOUR STORIES =

A legacy of sweat, bricks, and mortar.

IT WAS THE FAMOUS SUMMER OF '69, AND MY junior year at Rhody was history. Now it was time to get my summer job lined up.

I had worked as a construction laborer for the previous two summers in the Providence area, but in May, my fraternity brother, Dave Destefano, told me they needed help building some new dorms on campus that summer. Four friends were going to be living down the line and they had room for one more. How could I pass on this adventure?

I was used to hard work, but I was assigned to assist the brick layers, lugging their bricks and stirring their mortar. Not easy duty but I got a terrific tan, became very strong, and was making more money than my father. The rooms of that dorm became like my day home. When I punched out at 5, the "down-the-line" party atmosphere of Narragansett kicked in. The summer of '69 was a wonderful time for me. I don't recall if I even knew what that dorm would be named, and I really wasn't concerned.

Thirty years later my daughter Katie was accepted at Rhody and was assigned a dorm room. I drove down and brought her some of her clothes. As I looked around the building, it started to look familiar. Turns out I had lugged nearly every brick that was used to construct that section of Heathman Hall!

Some students leave a legacy of sports accomplishments or financial donations after college. My legacy was sweat, bricks, and mortar. That will have to do!

Go Rhody!

—Norm Schoeler '70

= YOUR STORIES =

Music Can Bring People Together

After reading "Why Hip-Hop Matters" (November 2018), **Mike O'Neil '83** wrote to tell us about his son, **Sean O'Neil '14**, an engineering/business grad and URI hockey alum, who collaborated with hip-hop producer Metro Boomin. Mike said, "Sean's story of how he met Metro and began collaborating with him is a wonderful testimony to how music can bring people together. Music can be an incredible unifier!"

Here is Sean's story.

I STARTED PLAYING GUITAR WHEN Guitar Hero became too easy on expert mode, much like Post Malone. Guitar made me feel powerful and in control. I could play entire songs just by listening to them and breaking them down into specific parts with my ear. At URI, I was so busy; I didn't have much time for music. When I moved back home after graduation, I rediscovered guitar, and started messing around with music production on the weekends.

Sean O'Neil '14 with hip-hop producer Metro Boomin at Atlanta's Lenox Square Mall on the day they met.

I got a job offer in Atlanta and decided to take it. I was spending the weekend there, looking for a place to live, when I decided to stop by Lenox Square Mall—which I'd heard of in underground hip-hop songs. In Atlanta, the mall is like a Mecca—people pull up on the weekends in their nicest 'fits, with cash to spend. I strolled into the Adidas store and noticed a guy with a Goyard bag, just sitting there minding his own business. I thought, 'That's an expensive bag; this might be someone.' In fact, it was hip-hop producer Leland Wayne, aka Metro Boomin. I didn't say anything to him in the store, but I knew I had to make my mark. It was either seize this moment, or wonder in regret forever. I stalkishly timed my mall exit with his—to elude the crowd he was attracting and try to have a conversation. I called his name and he turned around. I blurted out something like, 'Hey man! I'm a huge fan! Dirty Sprite 2 with Future is absolutely legendary. Mind if I get a picture?'

While we took the photo, I mentioned my songwriter/guitarist/producer aspirations and said he should hit me up if he wanted to spice up any of his instrumentals with live guitar samples. We exchanged info; I figured he gave me a fake number. Turns out he's a legit, down-to-earth dude.

We started collaborating. He would invite me to studio sessions with other artists, but I could never really get a second with him to build a new song from scratch. Being in the studio with him and other famous artists was amazing—and stressful. Initially, I didn't possess the confidence in my abilities, and worried too much about others' opinions. But over the next two years, I perfected my craft and gained that confidence. I started consistently sending tracks to Metro. Then one night he hit me up for some guitar samples to inspire his session. My girlfriend was already asleep in our small studio apartment. I knew I had to stay up and get to work. It was go time. I might never have this opportunity again. So I put on my headphones, plugged in my guitar, and started playing a spooky loop in a minor key that occurred to me after listening to some ideas I had laid down with my best friend and primary collaborator, Matt—we operate under the moniker, "Hypothetical" on all streaming platforms (shameless plug).

I sent Metro the recording that night, and a few days later he responded with a fire emoji. A few days after that, he responded again, saying 'I'm using that guitar for something.'

Fast forward a couple months, and he's rolling out some cryptic promo for his No. 1 debuting album on the Billboard 200, "Not All Heroes Wear Capes." He released the track listing on Halloween night and told me my guitar was on the last song, "No More." I couldn't believe it. I listen to the song now and I still have a hard time believing it. The hottest rappers in the game—Travis Scott, Kodak Black, and 21 Savage—are flowing over my guitar track.

If hockey taught me one thing, it's this: Shoot your shot. You never know if the puck will go in. I have to thank Metro for the assist though. My dad always said, "Sometimes the assist is just as pretty as the goal." •

—Sean O'Neil '14

PHOTO: COURTESY SEAN O'NEIL

= SOCIAL NETWORK =

Next Stop: Everywhere

COREY FAVINO '18

SCROLL THROUGH SHOE BRAND Sperry's Instagram feed and, if you've spent time at URI, you'll see some familiar scenes. A skateboarder at the Narragansett Sea Wall and someone sitting on the shoreline wearing Sperry sneakers, among others.

The skateboarder is Corey Favino, who, less than a year after graduating with a communication studies degree, has a fledgling career as a digital content creator. Besides Sperry, he has also worked with the yerba mate maker Guayaki, and bracelet brands Lokai and 4ocean.

"For me, it's all about the photography," says Favino, who grew up in Warwick, Rhode Island, and currently lives in Narragansett. "So I steer more toward the content development side of social media." There's a difference between what he does and being a brand ambassador or influencer, he explains. As a content creator, he creates images for companies to use on their own marketing and social media channels, rather than spreading the word via his accounts.

In addition to surfing and sea photography, Favino shoots adventure and landscape images, often including himself subtly in the frame. "I try not to make myself the focus of the photo," he says. "It's more about what I'm doing, so you could imagine yourself there. I want to inspire people to get out and explore."

Favino has also become known for his striking astral photography. His 12 mm, wide-angle lens, with a wide f/2 aperture, allows him to capture the Milky Way and stars while shooting in complete darkness. He purchased the lens with help from a $1,000 URI undergraduate research grant, and the resulting images have been used in gallery shows and for promotional purposes around campus.

With all he's accomplished, it's difficult to believe that Favino first picked up a professional camera only three years ago. A longtime lover of the ocean, he entered his first year at URI as a marine biology major. It wasn't a good fit, and he spent the summer before sophomore year trying to figure out what to do. "A friend told me, 'Dude, you're always taking photos, why not pursue that?'" Favino says. "So I invested in a real camera, and haven't put it down since."

—Jenna Pelletier

Follow Corey on Instagram @cjfavino

PHOTO: COREY FAVINO

Matt Fuller and Justin Bristol with the VizaVi Solar Food Cart, which they designed and built for Julia Rhode, who operates it from her home in Vermont. That's Julia's dog, Zelda, in front of Matt.

= NICHE =

The Future of Food Trucks is Here

JUSTIN BRISTOL '17 AND MATT FULLER '18

WHEN JUSTIN BRISTOL '17 WAS A first-year student, he imagined how fun it would be to have a solar-powered food cart where people could charge their phones, socialize, and enjoy smoothies and snacks. A year later he bought a trailer and spent the next year converting it into an eye-catching, mobile venue for selling crepes.

Today, the company he established with friend Matt Fuller '18, SolarCart Co., builds solar-powered food carts that are operated by chefs and other entrepreneurs in a partnership agreement.

"What kept us going was the thought-provoking qualities of the business," said Bristol. "We were interested in making people think about the food they're eating and the setting it's served in. Eventually we realized that we were more interested in the process of building the carts than we were in serving food. So now we're creating a unique setting for chefs and customers."

Bristol describes his carts as "creatively built, solar-powered, prefab, affordable restaurants." And the business is taking off.

"A food cart like this can create just as much volume as a restaurant but in a smaller space," he said. "And it can be more creatively designed because we don't have to be restricted by building permits."

After modifying their original design multiple times, Bristol and Fuller came up with a standard design that chefs can personalize based on their menus, themes, and styles. They built one that looks like a tiny house for a client in Vermont, and another—seen selling poke bowls at URI football games last fall—is operated by Jen Wells Fogarty '99 and business partner Michelle Frank. And now they're working with Roaming Hunger, a California food truck-booking service that provides food trucks to corporate clients and major promotional events.

"Cities are starting to get concerned with the noise and pollution that food trucks produce," Bristol said. "But ours are quiet and don't pollute, so we're optimistic for our future."

This spring, Bristol hopes to have a solar cart operating as an outdoor café in a permanent location somewhere close to the Kingston Campus.

"It will have seating cabanas, industrial planters, and an inviting eating experience around green energy and social interaction with good people," he said. "But it will still have the flexibility to travel to events. In 10 years, we'll be franchising them." •

—Todd McLeish

PHOTO: JULIA RHODE, VIZAVI FOOD CART

= CLOSE UP =

Finishing Is Just the Beginning

HENOCK CONSTANT '18

AS A SPECIAL EDUCATION TEACHING assistant at E3 Academy in Providence, Henock Constant '18 toured URI's Kingston Campus so often with his students that he memorized the tour. But the parent of four who attempted college twice without finishing never imagined attending himself.

So, for Constant, the October 13, 2018, URI football game proved surreal. He sat in the president's box as a URI 10 Under 10 Alumni Award recipient after a college career spanning two decades. "Sometimes I forget I'm a college graduate," he says. "People have to remind me."

Constant emigrated from Haiti in 1994 at age 19. He attended various schools in New York—earning a certificate, but no degree. Marriage and children came next. At E3 Academy, his colleagues saw his potential. The principal encouraged him to earn a college degree. In 2013, he called URI's Alan Shawn Feinstein College of Education and Professional Studies.

He met with now-Assistant Dean Tammy Warner and mapped a plan to earn a bachelor's degree. The degree was within reach and he could enroll in evening classes in Providence—close to home. "I just sat there and said, 'Why didn't I do this before? Why did I wait that long?'" Constant says.

For the next five years, Warner and academic advisor Jeff Johnson rallied Constant to finish. When he hit low points, a perfectly timed, encouraging email would arrive from Nancy Rabidoux, coordinator of Finish What You Started, a program that's steered more than 300 people like Constant to a URI degree. Johnson says the team effort, and Constant's genuine desire to learn, set him apart. "We could all see a person who was going to be successful," he says.

At home, Constant was motivated by his children and wife, Daphney, who was seeking her first college degree at the Community College of Rhode Island.

Now, with a bachelor's degree done, he's considering a master's program with hopes of returning to Haiti to improve education for students with special needs. "Going in, I just wanted to finish college. Then I realized there are so many other things I can do now," he says. "A degree has opened a lot of doors." •

—Chris Barrett

PHOTO: NORA LEWIS

= IN MEMORIAM =

Miriam Feinstein ’41
William Higginbottom ’41
Frank Bellino ’43
Francis Gilman ’43
John Sperry ’43
Dorothea Nabseth ’44
Madeleine Boisvert ’48
Paride Ombrellaro ’48
John Rusk ’48
Virgina Bescherer ’49
D. Barbara Ciampa ’49
Diana Smith ’49
Elizabeth Thompson ’49
Thomas Caldarone Jr., ’50
Corrado Delmatto ’50
Miasnig Hagopian ’50
B. Alvan Johnson ’50
Anthony Cardillo ’51
Burton Little ’51
Kenneth Resnick ’51
Joan Boynton ’52
Barbara Cormier ’52
Reginald Gadrow Jr., ’52
Norman Rancourt ’52
Lotta Jagolinzer ’53
Dorothy Stevens ’53
Hollis Thomas ’53
Mary Brousseau ’54
Barbara Hopkins ’54
Henry Passarelli Jr. ’54
William Rivard, M.S. ’54
Richard H. Clarke III ’55
Kenneth Dellner ’55
James Donovan Sr. ’55
Bruce Loring ’55
Robert MacDonald ’55, M.B.A. ’69
Arthur Ohlsten ’55
James Sheehan M.S. ’55
Richard Weekes ’55
Cynthia Ann Borden ’56
Jean Ellston ’56, M.L.S. ’69
Charles Gibbons ’56
John Leyden ’56
David Pollack ’56
Alan Weiser ’56
Patrick Bolger ’57
Ross Feinberg ’57
Richard Lendrum ’57
Leo Minisce ’57
George Vincent Morris, M.S. ’57, Ph.D. ’62
Richard Gammage ’58
Donald Horton, M.S. ’58, Ph.D. ’65
Joseph Ludovici ’58
William Weidanz, M.S. ’58
Phillip Kerkhoff ’59
Beverly Kimner ’59
William Nangle ’59
Anthony Soave ’59
Robert Gustave Timko ’59
Bruce Turner, M.A. ’59
Louis Lepry, M.S. ’60
Judith Ramsden ’60
Raymond Corry ’61
George Hadfield III ’61
Paul Cravinho ’62
Irene Denning ’62
James Hardeman ’62
Anthony LaSala ’62
Joseph Filippone ’63, M.A. ’71
Dorcas LaPointe ’63
Paul Lemont ’63
John Martinelli ’63
Carol Ulmschneider ’63, M.L.S ’72
Raymond Carr ’64
Robert Marshall ’64
Rose Maxwell, M.A. ’64
Harold Ware ’64
Richard Zinno ’64
Henry Annotti ’65
Julie McAlpine, M.L.S. ’65
Edmund Miller, M.A. ’65
Alan Winterbottom, M.A. ’65
Kevin Wrenn ’65
Melvin Schrieberg ’66
Gary Bogue ’67
Joseph Graham ’67
Helen Kelly, M.A. ’68
Louis Roger Leveillee, M.L.S. ’67
Bernard Alderson ’69
Walton Leach Jr. ’68
Robert Leach, M.A. ’68
Mark Spangler ’68
Louis Zanella, M.S. ’68
Joseph Amaral ’69, M.S. ’72
Michael Cohen ’69
Thomas Crosby ’69
Wilfrid Godin ’69
Dorothy Latham ’69
Raymond McDermott ’69
Raymond Reilly Jr., M.A. ’69
Lance Remsen ’69
Everett Testa ’69
Peter Bradley ’70
Russell Ferrara, M.B.A. ’70
Doris Kirshenbaum ’70
Leonard Dantone ’71
Carol Livellara ’71
Rear Adm. Gerald W. MacKay ’71
Ronald Shaver ’71
Mary Thatcher ’71
Judith Wright ’71, M.S. ’76
Kimberlee Culf ’72
Robert Klementz ’72, M.P.A. ’73
David Marshall ’72
Clare Renasco, M.A. ’72
Colette Souliere ’72
Gerit Fenenga ’73
Barbara Michel ’73
Loretta Bernier, M.L.S. ’74
Jane Glover, M.L.S. ’74
Douglas Mehne, M.A. ’74
Thomas Scarduzio Jr. ’74
John Greaney Jr., M.B.A. ’75
Vida Hellmann, M.S. ’75
Sheila Tita, M.S. ’75
Colleen Bernardo ’76
Mary Zayat ’76
James Fahy Jr. ’77
Drazna Svoren ’77
Kevin Vuono ’77
Edward Charpentier ’78, M.B.A. ’82
Adele Hopf ’79
Eric Mack ’79
Louis Marshall ’79
Anthony Pesaturo, M.P.A. ’80
Laurence Walsh, M.P.A. ’80
Thomas Gattinella ’81
Marlene Lendrim ’81
Paul Panaroni Sr. ’81
Eric Sherman ’81
Leslie Withers ’81
George Zane ’81
David Zielinski, M.P.A. ’81
Henry Molumphy, M.L.S. ’82
Jane Powers ’82
Deborah MacDonnell ’86
Gloria Gianola ’87
Louis Spaziano ’87
Catherine Fitta ’89
Maureen Porter ’90
Scott Andrews ’91
Diane Hughes ’93
Marci Snell ’94
Steven Drager ’95
Christine Flaherty, M.L.I.S. ’95
Melissa Saccoccio, M.S. ’95
Kristine Bell ’97
Joanne Corr ’97
Keith Joseph Farrelly ’98
Mariana Wood, M.S. ’99
Jeremy Wallace ’00
Michael Scully ’01
Margaret Guillet ’02
Chelsea Buck ’12, D.P.T ’14
Marissa Napolitano ’14
Jordan Sebastian ’15
Miles Dodd ’22

Faculty and Staff

Leslie J. DeGroot, former research professor and member of the Institute for Immunology and Informatics

Abner Gaines, former associate professor of library science

Edward Grove, professor emeritus of mathematics

Richard Lessmann, professor emeritus of mechanical engineering

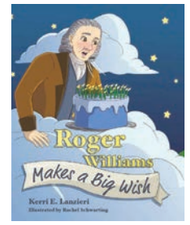
Yuzuru Shimizu, professor emeritus of biomedical and pharmaceutical sciences

George H. Willis, professor emeritus of education

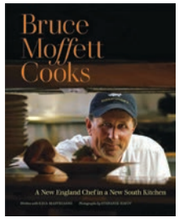
= BOOKSHELF =

Check out the latest books by alumni authors—and share yours! Please send a cover image, along with author, title, and year published, to urimag.uri.edu.

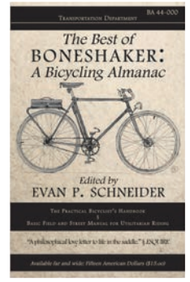
Julien Ayotte ’63, M.B.A. ’69
Code Name Lily: Legend of the Belgian Resistance (2018)



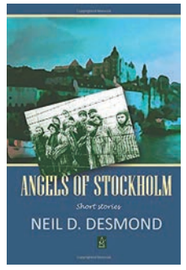
Kerri Lanzieri ’97
Roger Williams Makes a Big Wish (2019)



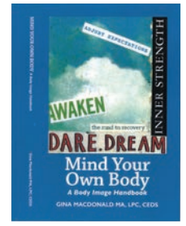
Bruce Moffett ’87, with Keia Mastrianni
Bruce Moffett Cooks: A New England Chef in a New Southern Kitchen (2019)



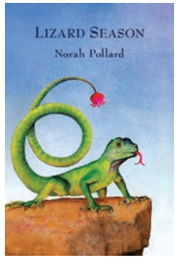
Evan P. Schneider, M.A. ’07
The Best of Boneshaker: A Bicycling Almanac (2018)



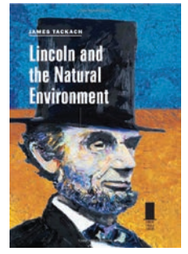
Neil D. Desmond ’92
Angels of Stockholm: Short Stories (2018)



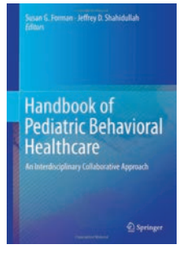
Gina Macdonald ’75
Mind Your Own Body: A Body Image Handbook (2018)



Norah Pollard, M.A. ’68
Lizard Season (2018)

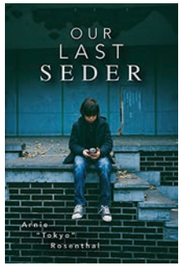


James Takach, M.A. ’78, Ph.D. ’86
Lincoln and the Natural Environment (2019)



Susan Greenberg Forman ’69, M.S. ’71
Handbook of Pediatric Behavioral Healthcare: An Interdisciplinary Collaborative Approach (2018)

Patsie McCandless, M.A. ’75
Becoming Jesse: Celebrating the Everyday Magic of Childhood (2018)



Arnie Tokyo Rosenthal ’73
Our Last Seder (2013)

Debra Levine Weissman ’81
Lucky Twice (2018)

= CAPTION THIS =

Photo Caption Contest

Do you have a funny idea for a caption for this photo from the URI Archives? Email your caption to urimag@uri.edu or respond at uri.edu/magazine.

Submit entries by May 15, 2019

FALL WINNERS: BLIZZARD ON THE QUAD, 1969

Winning Caption
"I'm freezing, I'm late for class, and I'm pretty sure the Marlboro Man is following me."
—John Levesque '72

Runners-Up
"I think I'm still on the Quad…"
—Denise Van Tassell '82

"Winter be damned! I'm wearing my new skirt!"
—Tara Simonetti Mohn '90

THIS PHOTO FROM THE 1969 GRIST GENERATED LOTS of caption ideas and notes from alumni who remember that year's snowy weather. The undated photo was likely taken during the "1969 Nor'easter," which blanketed Rhode Island with more than a foot of snow in early February of that year. Mike Pilla '72 wrote to say, "I remember the two back-to-back storms in February 1969 that begot this photo!"

We were surprised and delighted to hear from Jane Owen '72, who wrote, "OMG! I'm too young to be in a throwback photo. By the way, I'm the girl in the minidress." Jane recalls:

"I was getting out of class and heading toward the Student Union for a cup of hot chocolate. This idiot with a big camera was blocking the walkway in front of the Union. I was thinking of pushing him into a snowbank if he didn't move out of the way—pedestrian rage."

Jane continued, "I remember that storm. There was no snow on the ground when it arrived. It went from zero to 10 inches in three hours while my family was attending a Cub Scout Banquet at Wright's Farm. Needless to say, I missed classes the next day since I couldn't get back to school that evening."

We also heard from Cap Frank '70, M.S. '73, who said, "It's fun to think that I was probably walking across campus when this photo was taken, and my mother, who graduated with me in 1970 after returning to URI to complete her degree after leaving during WWII, was perhaps also there, going to class in the snow."

Another note from Marilyn Bator Goktuna '68 said, "This photo reminded me that it was sometimes challenging to make those Saturday morning classes. My grown children were so surprised to hear that I had Saturday classes way back when! Thanks for the memories!"

We received lots of captions that were variations on the "No school Foster-Glocester" theme, the "Wish I'd gone to school in Florida/Hawaii/California" theme, and the "Wish I hadn't worn a miniskirt today" theme. Hopefully, by the time you're reading this in the spring issue of the magazine, snow will not be in the forecast. Thank you, readers, for all your fun, creative, nostalgic captions! •

PHOTOS: 1969 GRIST; URI SPECIAL COLLECTIONS

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Kingston, RI 02881 USA

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Gulf Stream Mission

This wind- and solar-powered ocean drone was launched from Newport Shipyard in January to spend a month in the Gulf Stream collecting data about heat transfer and carbon exchange. The data will help researchers better understand the ocean's effect on the Earth's climate. Assistant Professor Jaime Palter of URI's Graduate School of Oceanography received a Saildrone Award from California-based Saildrone, which provided use of the drone for 30 days of data collection.