

# OnWisconsin

FOR UNIVERSITY OF WISCONSIN-MADISON ALUMNI AND FRIENDS **SPRING 2020**

## **Earth's Bright Future**

Despite bleak environmental news, the UW's Nelson Institute finds reasons to hope.

*Page 22*









## Vision

In an emotional night for Badger men's basketball, 13-year-old Jerell Moore took the court as an honorary sixth man before the team's home opener at the Kohl Center. Jerell is the son of Assistant Coach Howard Moore '95, who was severely injured in a May 2019 car crash that took the lives of his wife and daughter. The Badgers won the November 8 game against Eastern Illinois, and Jerell — who survived the crash himself — enjoyed a poignant moment amid his family's painful year.

*Photo by Darren Lee*





Come home again to Wisconsin, it's more **you**.

NAME: **MATT KALVA**

SCHOOL: **UW-MADISON**

STUDIED: **BUSINESS**

YEAR GRADUATED: **2007**

MOVED TO: **WASHINGTON, DC**

MOVED BACK TO WISCONSIN: **2012**

REASONS: **I CAN THRIVE  
WITH MY FAMILY AS  
WELL AS MY BUSINESS.**

See more of Matt's story  
at [InWisconsin.com/Matt](http://InWisconsin.com/Matt)





# OnWisconsin

Joan Cusack '84  
digs Christopher  
Lloyd in *Addams  
Family Values*.  
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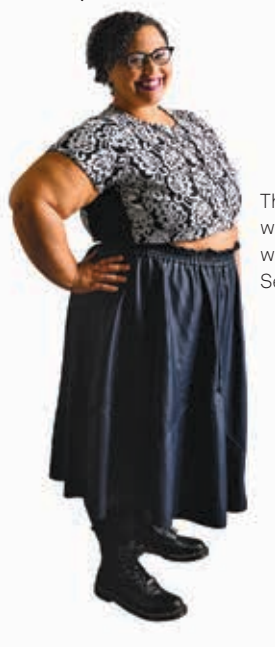
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JEFF MILLER



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DAVID STLUKA

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## Cover

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N. B. Rinehart;  
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## Unforgettable André

Thank you for the article by Jenny Price about André De Shields ["A Star Was Born," Winter 2019 *On Wisconsin*]. It really brought back memories, as I attended De Shields's unforgettable performance as Martha in *Who's Afraid of Virginia Woolf?*, held in a large apartment over a movie theater in Madison. Ms. Price is correct that the performance began in the middle of the night and ended at dawn. I think the audience at first wondered why a black man was playing Elizabeth Taylor's role, but he was so clearly good at it that, after a bit, we just began to get into the play. The attendees were as exhausted as the actors by the end.

I also saw the not very "nude" *Peter Pan* show at Memorial Union, which got national attention when it was covered in *Time* magazine. The nudity was well camouflaged with colored lighting, and the scene was tasteful and appropriate in the context of the play. I must admit that I remember these cultural events more than most of the classes I took at the UW.

**Gary Saretzky '68, MA'69**

*Lawrenceville, New Jersey*

## What Is Your Emergency?

Bygone ["Landlines," Winter 2019] showed several ladies at work at the university switchboard in the 1930s. In the late 1950s the switchboard had women operators during the day, but the 11 p.m. to 7 a.m. shift was manned by a single male student. I was an operator for a semester or so. I think the pay was six dollars a shift, or 75 cents an hour.

We occasionally had students call in after the 11 p.m. curfew, attempting to call friends in the dorms. Usually, the call ended when we politely told the caller that calls were not permitted after 11. Occasionally, a more brazen student, often a male trying to talk to his sweetheart in a women's dorm, would declare

that the call was an emergency. We were allowed to listen in briefly, and when a caller would start bragging about how he had fooled the stupid operator, he would find himself suddenly disconnected.

**Henry J.C. Schwartz '61, MD'65**

*Fredericksburg, Virginia*

## Dow Protest Prequel

"The Travel Detective" [Winter 2019] about Peter Greenberg was nicely written. [Many people don't realize that] the first Dow protest was in 1966, before Mr. Greenberg arrived. Innocent students were victimized and lumped in with a then-small group of anti-war protesters. I was in an accounting class on the second floor of the Commerce Building when we were forcibly removed by police with plexiglass shields on their helmets, herded downstairs to the exit, and gassed. I witnessed police swinging clubs randomly at students. The actions of the police on that day were a catalyst that mobilized [the anti-war movement].

**Ron Sager '70**

*Milwaukee*

## Thanks from Down Under

I received my Winter 2019 *On Wisconsin* last week. As always, it is a wonderful read and a high-quality magazine, which I feel proud to display on the coffee table in my office. *On Wisconsin* is informative and engaging and brings back a bit of nostalgia and longing for the University of Wisconsin. Thank you for continuing to send the magazine all the way to my home in Sydney, Australia. You make this Badger feel connected.

**Stephen Mally '86**

*Glebe, New South Wales, Australia*

**Editor's Note:** Our thoughts go out to all of the alumni and friends who have been affected by the devastating fires in Australia.



BRYCE RICHTER (2)

## BUT WAIT, THERE'S MORE!

We know you like to hold a magazine in your hands. That's why you're reading *On Wisconsin* right now. We like print, too, but we're just as fond of the magazine's online version. The web allows us to enrich our stories with videos and additional photos — for example, emotional images for "Six Lessons from the Rose Bowl" (page 36) and rare film clips for "Hair-Raising Performances" (page 30). See these and others at [onwisconsin.uwalumni.com](http://onwisconsin.uwalumni.com), where there's more of us to love.



## THE WORLD IS WATCHING

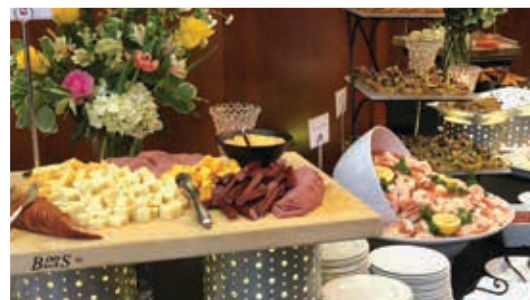
Lisa Kamal '19, the student speaker at winter commencement, has gone viral. Videos of her inspiring speech have received millions of views on social media, making her a hero not only on campus, but also in her home country of Malaysia. Kamal opened the speech by singing a few lines from the Broadway musical *Hamilton*, which she said helped her cope during tough times. That caught the attention of *Hamilton* creator Lin-Manuel Miranda, who tweeted his high hopes for Kamal's future: "Mira, Lisa, no me preocupo por ella ... 🙏❤️(thank YOU)"



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## OnWisconsin

Spring 2020

### COEDITORS

Niki Denison, Wisconsin Foundation and Alumni Association (WFAA)  
Dean Robbins, University Communications

### PUBLISHER

Wisconsin Foundation and Alumni Association  
1848 University Avenue  
Madison, WI 53726-4090  
608-263-4545  
Email: onwisconsin@uwalumni.com  
Web: onwisconsin.uwalumni.com

### ASSOCIATE PUBLISHER

John Allen, WFAA

### WRITER

Preston Schmitt '14, University Marketing

### CLASS NOTES/DIVERSIONS EDITOR

Stephanie Awe '15, WFAA

### ART DIRECTOR

Nancy Rinehart, University Marketing

### DESIGNERS

Christine Knorr '97 and Danielle Lawry,  
University Marketing

### PRODUCTION EDITOR

Eileen Fitzgerald '79, University Marketing

### PHOTOGRAPHERS

Jeff Miller and Bryce Richter, University Communications

### DESIGN, LAYOUT, AND PRODUCTION

Kent Hamele '78, Kate Price '09: University Marketing; Nicole Heiman, Chelsea Schlecht '13, Erin Sprague '94: WFAA

### EDITORIAL INTERNS

Allison Garfield x'20 and Megan Provost x'20

### ADVERTISING REPRESENTATIVES

Madison Magazine: 608-270-3600

### ADDRESS CHANGES AND

### DEATH NOTICES

888-947-2586

Email: alumnichanges@uwalumni.com

Quarterly production of *On Wisconsin* is supported by financial gifts from alumni and friends. To make a gift to UW-Madison, please visit [supportuw.org](http://supportuw.org).

The Wisconsin Foundation and Alumni Association (WFAA) is open to all alumni, students, and friends of the university. WFAA encourages diversity, inclusivity, and participation by all of these groups in its activities and does not discriminate on any basis.

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UW ARCHIVES

UW-Madison's Gaylord Nelson Institute for Environmental Studies is one of the most well-known legacies of Nelson LLB'42, the former Wisconsin governor and senator. But it's not the *most* well-known legacy. That would be Earth Day, the environmental teach-in that Nelson sponsored beginning in 1970. Fifty years ago this April 22, some 20 million Americans, including students at more than 2,000 colleges and universities and thousands more primary and secondary schools, took part in a national conversation about conservation and the environment. (Because it was a teach-in, those students didn't get a day off from school. If they had, the Earth might be more popular today. Well — hindsight.)

Nelson left the Senate in 1981, and his record showed how important he felt conservation is. He authored the Wilderness Act, the National Trails System Act, the National Wild and Scenic Rivers Act, and the National Environmental Education Act, and he worked to ban the use of DDT (drawing in part on the research of fellow Badger Joseph Hickey MS'43, who connected the pesticide to declining bird populations). He argued that environmental health and economic health go hand in hand. "The wealth of the nation is its air, water, soil, forests, minerals, rivers, lakes, oceans, scenic beauty, wildlife habitats, and biodiversity," Nelson wrote. "That's the whole economy."

Five decades later, Earth Day continues to garner attention every year. On the parts of Earth that are inside Wisconsin, we try to remember Nelson's connection with the holiday and his importance to environmental studies. That's one of the reasons we decided to run this issue's cover story. While environmental science seems to grow more important than ever, the UW continues to produce the people who further our understanding of the planet we live on.

JOHN ALLEN

*Gaylord Nelson (right) celebrates Earth Day in 1988 with a tour of Wisconsin's Schmeeckle Reserve in Stevens Point.*





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INVISIBLE  
CURRENTS  
BEFORE  
THEY  
FORM?

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WORK TOGETHER, WE ARE BOUNDLESS.

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## Lessons of the Past

*Public History Project seeks the truth.*



JEFF MILLER

Butcher's goal is to give voice to those who experienced, challenged, and overcame prejudice on campus.

As a public historian, **Kacie Lucchini Butcher** believes history is not just in the past. It weaves through everything we do every day.

Her professional work, which focuses on helping marginalized communities tell their stories, has brought her to UW-Madison. Butcher was hired in August as director of the new Public History Project.

The multiyear project grew out of a 2018 campus study group that looked into the history of two UW-Madison student organizations in the early 1920s that bore the name of the Ku Klux Klan. The study group concluded that the history the UW needed to confront was not the aberrant work of a few individuals but a pervasive campus culture of racism and religious bigotry that went largely unchallenged at the time.

"The study group's findings pointed to a need to build a more inclusive university community through an honest reckoning with our past," says Chancellor **Rebecca Blank**, who commissioned the Public History Project.

The project seeks to give voice to those who experienced, challenged, and overcame prejudice on campus. The effort is expected to culminate with a museum-quality exhibit in fall 2021, accompanied by digital materials accessible to everyone.

Butcher, who grew up in La Crosse, Wisconsin, earned a bachelor's degree in art history at Augsburg University in Minneapolis. In her studies and later as a museum intern, she noticed that museums often struggle to tell stories that accurately reflect diverse populations and viewpoints. The issue motivated her to return to college, and in May 2019, she earned a master's degree in heritage studies and public history from the University of Minnesota.

At UW-Madison, she has begun the research phase for the Public History Project, assisted by student workers.

"The stories we are uncovering will push us as a campus community to question not only our past, but our present," Butcher says. "Yet, at the end of the day, this is *our* story. Knowing our past is the first step to learning from it."

**DOUG ERICKSON**

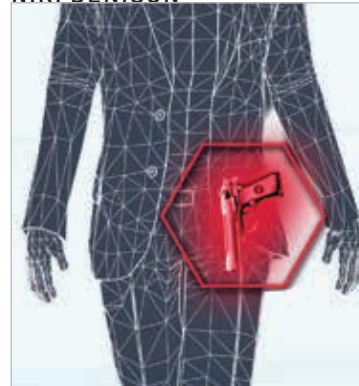
## SAFETY GOES UNDERCOVER

Imagine attending a Badger football game or commencement and enjoying airport-level security — but without the need for long lines; pat-downs; and removing shoes, belts, and jackets. UW-Madison is among several sites in the nation that are beta-testing a new technology that provides noninvasive weapons screening.

The UW Police Department has partnered with a company called Liberty Defense to test the HEXWAVE technology at selected events this spring. The tool uses low-power, 3D radar imaging and artificial intelligence to detect weapons and other threats. It can be installed unobtrusively in existing structures or behind signs so that fans are not aware that it's searching for concealed handguns, knives, suicide vests, or assault rifles as they walk by. Police can monitor HEXWAVE's findings via computers set up at venue command centers and take appropriate action when a threat is perceived.

"We hope this will be a great tool for us to use in our already well-equipped toolbox when it comes to event security," says **Kristen Roman '88**, the university's chief of police.

NIKI DENISON



LIBERTY DEFENSE

## PAY TO PLAY

Forget March Madness selections — the biggest debate in college athletics is player compensation.

The NCAA indicated in late October its intention to allow student-athletes at UW–Madison and other member schools to profit from their names, images, and likenesses. Potential revenue streams could include endorsement deals, jersey and autograph sales, and video-game royalties, though it's not clear yet what types of sponsorships will be permitted. The NCAA expects to adopt changes to its rules by January 2021.

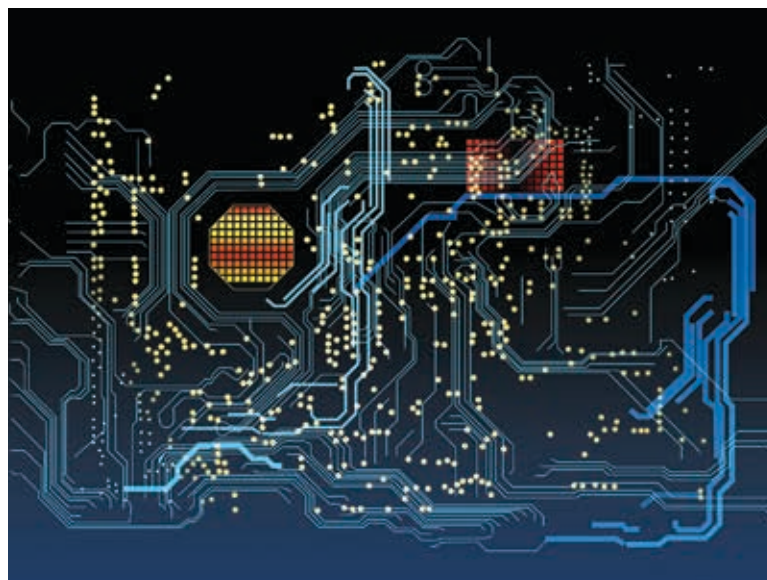
The move is a reversal from the NCAA's past position, which argued that financial compensation beyond scholarships would compromise amateur status and influence the recruiting process. The policy change follows increasing pressure from state and federal lawmakers. In September, California governor Gavin Newsom signed a "Fair Pay to Play" bill that, starting in 2023, will allow student-athletes in the state to earn money from endorsement deals and protect them from any repercussions from their schools. State legislators in Wisconsin have considered introducing a similar bipartisan bill.

UW athletics director **Barry Alvarez** initially expressed concern with California's law. Following the NCAA's decision, however, UW Athletics issued the following statement: "Wisconsin supports the efforts of the NCAA and the [Big Ten] Conference to enhance support of student-athletes that is tethered to education. We look forward to working with [them] as appropriate rules for the use of name, image, and likeness are developed."

The actions reflect a big shift in public opinion on player compensation. In 2013, 71 percent of Americans believed that providing scholarships was sufficient compensation for college athletes, according to the Seton Hall Sports Poll. Last year, only 32 percent of respondents opposed further compensation for use of name, likeness, or image.

**PRESTON SCHMITT '14**

## Riding the Quantum Wave



The computers that we know — and mostly love — do what they do so well because they predictably perform their duties at lightning speed. But in many arenas of research and technology, classical computers will not be able to crack the next-level enigmas researchers are confronting in chemistry, artificial intelligence, medicine, and other fields.

To answer those questions, physicists and computer scientists are developing a class of computers that exploit the mysteries of quantum mechanics, a theory that traffics in probabilities rather than certainties. If they live up to the hype, quantum computers will be able to harness the strange behaviors that occur at the smallest scale of the universe to solve in minutes problems that would take a classical computer decades, says **Shimon Kolkowitz**, a UW–Madison assistant professor of physics.

Through its Wisconsin Quantum Institute, the university has been exploring the field for almost two decades. This past fall, the campus debuted a master's program in quantum computing.

The one-year master's program offers students expertise in the growing field at a time when the market for scientists competent in quantum computing is extremely tight. The *New York Times* and *Wired* both reported in 2019 on the difficulty quantum computing firms are having finding qualified prospects.

The UW master's program is the first of its kind in the nation and only the second in the world, says its director, **Robert Joynt**. "We decided to put this together when it became clear that there was going to be a lot of interest from the commercial sector in quantum computing," he says. "There's a huge ramp-up in activity at places like Google, Intel, Microsoft, and Northrop Grumman. No one else had anything like this, so it was a natural thing to do, and the master's program seemed like the best option, as students can spend a year here, get a good education in quantum computing, and be very marketable."

The 30-credit degree program capitalizes on the UW's deep foundation of fundamental research. "We are truly lucky to have quantum computing experts in three different subareas of quantum computing," says **Sridhara Dasu**, professor and chairperson of the Department of Physics. "Given our expertise, we thought we had a unique ability to train students in a professional-level master's program."

**CHRIS QUIRK**





UW ARCHIVES S05453

When wartime struck the United States, it wasn't just the men of the military and Rosie the Riveters getting in on the action.

Legislation in the early 20th century prohibited women from serving in the Navy or Naval Reserve. However, in 1941, as the reality of World War II encroached on the United States, a shortage of manpower led the Navy to revisit the employment of women in its ranks.

The creation of Women Accepted for Volunteer Emergency Service (WAVES) mobilized some much-needed (wo) manpower for the naval war effort.

After boot camp on the East Coast, recruits arrived at college campuses across the country for specialized training programs, and WAVES seeking careers as radio operators set their sights on the University of Wisconsin and its Radio School for Enlisted Women.

The first WAVES descended

on campus on Friday, Oct. 9, 1942, under the command of Lt. (jg) Elinor Rich.

Civilian students living at Chadbourne and Barnard Halls were moved to private, off-campus housing in order to accommodate the 480 recruits, but they joined them at the following Saturday's football game, where the WAVES cheered on the likes of Badger football legends **Elroy "Crazylegs" Hirsch x'45** and **Pat Harder x'44** (who later also left the UW to join the war effort with the U.S. Marines in 1943).

Later that month, Memorial Union's Great Hall was overrun by Marshall Field's employees tasked with outfitting the WAVES in the uniforms that earned them the nickname "bluejackets." (The uniform operation worked so smoothly that it claimed it could outfit 58 WAVES in only an hour and a half.)

The UW has been coeducational since the 1860s, but nev-

**Ranks of WAVES march at Camp Randall Stadium during a football game. At the UW, WAVES trained to earn the rating of "radioman," for which they matched the skill set if not the gender.**

ertheless, the WAVES classes were kept separate from those of male sailors, though the curriculum was the same.

The UW's first class of WAVES recruits graduated on January 27, 1943, in a ceremony that featured more than 100 honor grads. Later that year, female Marines arrived, as did members of the Coast Guard's SPARS (an acronym taken from the Coast Guard motto in Latin and English: *Semper Paratus*, Always Ready).

By the war's end in 1945 — 75 years ago this summer — 100,000 women had served as WAVES. All were discharged in the following months, but the WAVES were not about to recede with the tide of war. With the signing of the 1948 Women's Armed Services Integration Act, women were permitted to enlist not only in the Naval Reserves, but in the Navy itself.

Wisconsin WAVES, over and out.

**MEGAN PROVOST X'20**

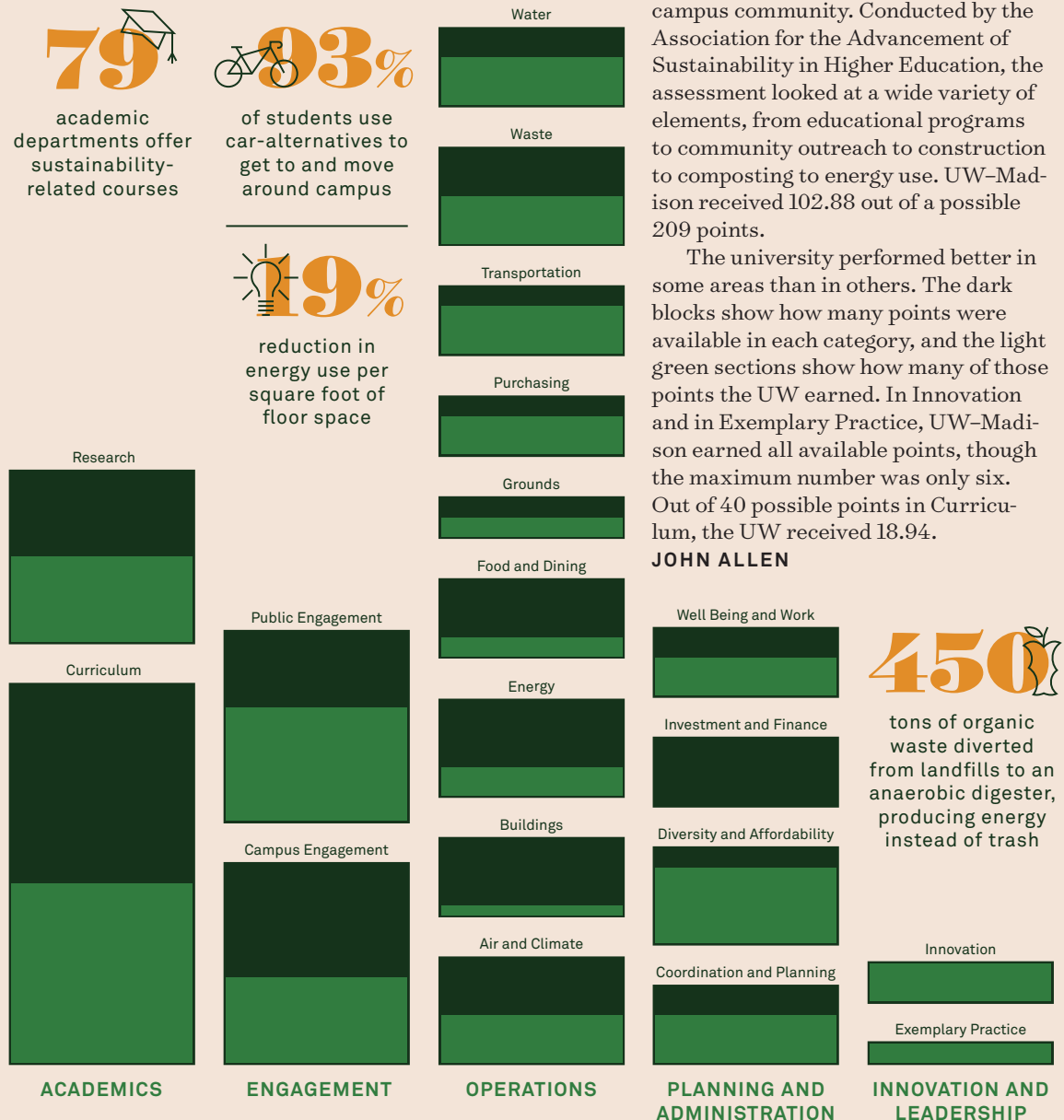
## Green Score

*A recent survey counts up all the ways the UW is sustainable — and all the ways it can improve.*

**79**  
academic departments offer sustainability-related courses

**93%**  
of students use car-alternatives to get to and move around campus

**19%**  
reduction in energy use per square foot of floor space



In October, UW-Madison received the results of its first broad-based sustainability assessment, and the results were not too shabby. The university took a silver rating for its efforts to create an environmentally sustainable campus community. Conducted by the Association for the Advancement of Sustainability in Higher Education, the assessment looked at a wide variety of elements, from educational programs to community outreach to construction to composting to energy use. UW-Madison received 102.88 out of a possible 209 points.

The university performed better in some areas than in others. The dark blocks show how many points were available in each category, and the light green sections show how many of those points the UW earned. In Innovation and in Exemplary Practice, UW-Madison earned all available points, though the maximum number was only six. Out of 40 possible points in Curriculum, the UW received 18.94.

JOHN ALLEN





## We Are UW

Last September, the student Homecoming Committee released a video that failed to represent the diversity of UW–Madison. The committee had invited students of color to participate in the taping but didn’t include them in the final product, stirring anger on campus and regret from those in charge.

“We apologize that the video produced by the committee gave only a partial representation of the UW–Madison student body,” says **Sarah Schutt**, executive director of the Wisconsin Alumni Association (WAA), which sponsors the Homecoming Committee. “WAA is deeply committed to diversity and inclusion and will listen to our student, alumni, and campus partners on ways to move forward.”

In response to the Homecoming video, a new group called the Student Inclusion Coalition partnered with university administration on a video about students of color and their struggles on campus. Called “We Are UW,” the video played at halftime during the Badger football game on October 12 and affirmed that “we learn lessons best when we learn them together.”

WAA has committed to changes that would make student Homecoming a more inclusive event. The plan includes better training and oversight, as well as measures to diversify student organizations. The Student Inclusion Coalition offered its own ideas for a more inclusive campus, working with Vice Chancellor for Student Affairs **Lori Reesor** and Deputy Vice Chancellor for Diversity and Inclusion **Patrick Sims**.

“We stand with our students of color and hear their voices with a clear commitment to action,” said a joint statement from UW–Madison and WAA, “not only about the video, but their broader experiences of exclusion on campus.”

**DEAN ROBBINS**



BRYCE RICHTER

## ALMOST PERFECT

The UW volleyball team nearly pulled off a championship run in December, cruising through the NCAA tournament before falling to Stanford in the finals.

Led by All-Americans **Molly Haggerty x’21**, **Sydney Hilley x’21**, and **Dana Rettke x’21**, the squad won the Big Ten Conference title and the number-four seed in the national tournament. The Badgers then raced through the regional rounds of competition without losing a set before knocking off top-seeded Baylor in the final four. (Above, **Tiffany Clark x’20** digs the ball during an early-round match against Illinois State.) But the Stanford Cardinal — winners of three national titles in the last four years — were once again the bane of the Badgers. Stanford had ended the UW’s season in 2016 and 2017, and in 2019, they knocked the Badgers off in the title match.

**JOHN ALLEN**

## NEWS FEED

**Veteran UW administrator Aaron Bird Bear MS’10** has assumed the newly created position of tribal relations director. He’ll work to foster strong ties between UW–Madison and the 12 First Nations of Wisconsin, emphasizing “respect, revitalization, and reconciliation.”



**UW undergrads are completing their degrees in record time.** The average for 2018–19 bachelor’s degree recipients was 3.96 calendar years, the first time the number has dropped below four. “This is excellent news for Wisconsin families concerned about the cost of higher education,” says Chancellor **Rebecca Blank**.



**The search is on to replace Ray Cross**, who’s stepping down after six years as UW System president. Tony Evers ’73, MS’76, PhD’86, Wisconsin’s governor and a former member of the UW Board of Regents, praises Cross as “a fierce advocate for kids and the pursuit of knowledge.”

# 848

new UW–Madison in-state undergraduates (one in five) are receiving free tuition this year through Bucky’s Tuition Promise — up from 796 students last year. The initiative guarantees four years of tuition and segregated fees to freshmen from Wisconsin whose families have an adjusted gross income of \$58,000 or less. Wisconsin-resident transfer students who meet the same income criteria receive two years of tuition and segregated fees.

NIKI DENISON



JEFF MILLER



BRUCE RICHTER

## Robot at Your Service

Food delivery at UW–Madison just got a lot more adorable. University Housing Dining and Culinary Services has deputized a fleet of 30 cute robots to deliver food orders throughout campus. Giving R2-D2 a run for his money, the squat, white vehicles roll along sidewalks on six wheels, with an orange flag announcing their presence to bemused passersby.

The UW has contracted with Starship Technologies to become the largest U.S. college campus to offer “autonomous delivery.” Students, faculty, and staff can use an app to place orders from campus dining halls and unlock the food-storage chamber when the trusty robot arrives.

The contraptions are electrically powered, using artificial intelligence and sensors to cross streets and avoid obstacles. And happily, there’s no need to worry about these robots running amok. A team of humans can monitor the fleet and take control before the machines get too autonomous for their own good.

DEAN ROBBINS

## NEWS FEED



**A UW study suggests that exercise can slow the development of diseases** such as Alzheimer’s. Ozioma Okonkwo, an assistant professor at the School of Medicine and Public Health, and his colleagues found that aerobic fitness increases blood flow to parts of the brain that help improve an individual’s cognitive function.

**UW students had the second-highest voter turnout among Big Ten Conference peers for the 2018 election midterms.** A report found that turnout increased to 52.9 percent from 35.6 percent in 2014, thanks partly to the university’s efforts to encourage voting. November, here we come.



**How good is UW cross country star Alicia Monson x’20?** For the second year in a row, Monson was named both Big Ten Conference Cross Country Athlete of the Year and NCAA Great Lakes Regional Women’s Athlete of the Year, leading the women’s team to a top-10 national ranking.

TOM LYNN



# Conversation *#TwerkWithLizzo*

While many people hope to meet their favorite pop stars, few have the chance. And even fewer get to twerk with them.

**Sami Schalk** is the exception. An associate professor in the UW Department of Gender and Women's Studies, Schalk focuses on the intersection of disability studies and black feminist theory. She's interested in how identities can influence the way we move through the world — and that led her to the superstar rapper and singer Lizzo. In October, the two shared a moment.

Before Lizzo's tour stop in Madison, Schalk posted a video of herself on Twitter in a silver cape, announcing that she wanted to #TwerkWithLizzo. The campaign caught Lizzo's attention, and at the concert she called Schalk onstage. They danced. And then, Schalk went viral. The video has more than 120,000 views on Twitter. Now, she's incorporating the experience into her work as an example of "pleasure activism."

**Demonstrating "pleasure activism," Professor Sami Schalk went viral after twerking with pop superstar Lizzo in a silver cape.**

***How did you get into researching disability, race, and gender in contemporary culture?***

My sophomore year of college I took a course called Women and Disability. I was a newly out, black, queer woman and thought I knew everything about oppression. Then I got in this class, and it blew my mind. I realized that if I was going to keep asking white folks and men and straight folks to be allies to me and understand their privilege, I needed to do that work myself. I started taking as many classes as I could on disability studies and fell in love with the field.

***What prompted your #TwerkWithLizzo campaign?***

I identify with Lizzo a lot as another fat black woman.

I love her music and the message of her music. I've

included it in classes, in terms of body positivity and resisting body shaming. I realized that the relationships between my identities and Lizzo's — as well as the fact that we both like to twerk — were a chance to get her attention. I made a shiny cape for the concert and a video of myself dancing in it, and it got viewed over 40,000 times before the concert.

***How was twerking with her?***

It was surreal. Lizzo said, "There's someone here, I can't remember their name, but they want to twerk with me." I was in the second row, so I just screamed that it was me, and it happened very quickly. I put on the cape and went onstage in front of 2,500 people. I could barely hear because it was so loud. And then we danced. Afterward, it was almost impossible to leave the concert because so many people were stopping me. It just blew up.

***What's been the response?***

People were excited for me, but others body-shamed me because I was dancing and having fun. I believe we all have the right to be full and complicated people. Pleasure and joy are often denied to marginalized people. We spend so much time trying to end oppression and violence that we deny ourselves access to the things that make life worth living. Claiming that publicly is really important in this contemporary moment.

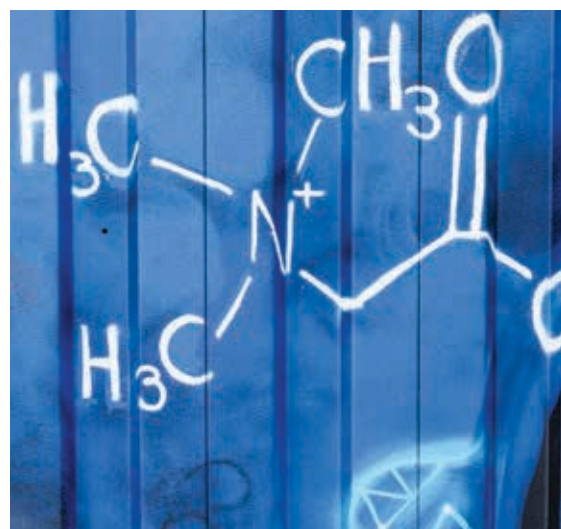
Interview by Allison  
Garfield x'20  
Photo by Jeff Miller







BRUCE RICHTER (3)



There's an unusual new attraction in the UW Discovery Building: a mural that takes a street-art approach to scientific subjects. *Diversity of Scientists* has a spray-paint immediacy, incorporating drips, hand-prints, and graffiti lettering. Los Angeles artist Melanie Stimmell depicts scientists across a range of eras and cultures, from ninth-century Persian astronomer Muhammad ibn Musa al-Khwarizmi to 19th-century Native American doctor Susan La Flesche Picotte. The composition is cluttered yet coherent, suggesting a common thread among these far-flung thinkers. Each used science to make the world a better place.

*Diversity of Scientists* is part of an ambitious project called Science to Street Art, developed by the Wisconsin Institute for Discovery (WID). Street artists worked with UW researchers on five murals to inspire an interest in science, particularly among residents of underserved Madison neighborhoods.

"Art's power to connect people is an untapped resource for science," says project director **Ginger Ann Contreras '12**. "Science to Street Art is a way to engage people across cultures, including those with traditionally less access to science education."

To launch the initiative, Contreras formed five teams combining street artists and scientists. Stim-

*Diversity of Scientists* (top) suggests a common thread among far-flung thinkers. The big data/precision medicine mural (bottom, two details) is painted on the exterior of a Madison grocery store to inspire an interest in science among passersby.

mel, for example, dreamed up *Diversity of Scientists* with **Laura Knoll**, a UW professor of medical microbiology and immunology, and **Dave Lovelace PhD'12**, a research scientist for the UW Geology Museum. Other teams brainstormed visual concepts based on astrophysics, big data/precision medicine, molecular structure, and the periodic table. Locations for the murals include the exteriors of a Madison grocery store and shopping center — places where young folks might run across them in their everyday lives.

"Repeated exposure to the art creates an opportunity for learning," says Contreras, who plans to place several murals a year in Madison and other locations around Wisconsin and the world. "They'll see DNA strands in the big data/precision medicine mural, for example, then go to their high school biology class and think, 'Oh, I've experienced these concepts before. It's right out there in my community.'"

Science to Street Art offers a learning experience for the UW researchers, too. They have a chance to communicate with a different audience and to collaborate with a different set of campus colleagues.

"For the scientists, it creates new ways of thinking about their research," says Contreras, "along with new camaraderie."

**DEAN ROBBINS**



## The “Smart Toilet” Knows All

Wearable, smart technologies are transforming the ability to monitor and improve health, but a decidedly low-tech instrument — the humble toilet — may have the potential to outperform them all.

That’s the conclusion of a team of metabolism scientists at UW–Madison and the Morgridge Institute for Research that is working to put urine’s tremendous range of metabolic health information to work for personalized medicine.

Urine contains a virtual liquid history of an individual’s nutritional habits, exercise, medication use, sleep patterns, and other lifestyle choices. It also contains metabolic links to more than 600 human conditions, including major killers like cancer, diabetes, and kidney disease.

A pilot study suggested that frequent monitoring and testing of urine samples can provide useful real-time information about an individual’s health. So the team is now working on technology to make the collection process simple, accurate, and affordable: in other words, a “smart toilet.”

The toilet will incorporate a portable mass spectrometer to recognize individual users. The researchers plan to install it in their building — the Biotechnology Center — and incorporate a user group of a dozen or more subjects.

Urine tests could show how an individual metabolizes certain types of prescription drugs in ways that are healthy or dangerous. They would also indicate whether people are taking medications properly.

The smart toilet could be a major step for population health, according to **Joshua Coon**, a UW professor of chemistry and biomolecular chemistry. “If you had tens of thousands of users and you could correlate that data with health and lifestyle, you could then start to have real diagnostic capabilities,” Coon says, adding that it might provide early warning of viral or bacterial outbreaks.

**BRIAN MATTMILLER ’86**



SPENCER MALTS

*“The average Wisconsin student now graduates in less than four years. ... Modern Badgers, I hate to say this, but you are doing it entirely wrong. What is the hurry? I say: stay in Madison as long as possible. Have you been in the real world? Have you seen what it’s like out there? Have you watched screaming lunatics on cable news? Life does not get any better than this. It gets warmer, yes. But it does not get any better.”*

— Jason Gay ’92, sports columnist for the *Wall Street Journal*, speaking at the December 2019 commencement

## NEWS FEED

**Would you believe there’s a video game** that’s good for middle-school brains? The UW Center for Healthy Minds helped develop *Tenacity*, in which players use a touch screen to count their breaths in a particular sequence. A study shows that the game improves a child’s attention.



**This fall, the UW will begin renovating Camp Randall Stadium’s south end zone to add premium seating, premium concessions, and other amenities.** “We are continually trying to provide our fans a first-class experience when they come to our events,” says Athletics Director Barry Alvarez.

**Jonathan Taylor x’21 decided to forgo** his senior season with the Badger football team and enter the NFL draft. Taylor won two Doak Walker Awards as the nation’s top tailback and ranks second in rushing yards in Big Ten Conference history. Well, it was fun while it lasted.



MARIANNE SPOON: JEFF MILLER

## Contender *K'Andre Miller*

Hockey is not for the weak-spirited, and Badgers star defenseman and top NHL prospect **K'Andre Miller x'22** has made a habit of proving his mettle.

As the smooth-skating Miller glides to the puck during a practice drill in October, he's struck in the neck by a teammate's stick. The hit leaves the 6'5" sophomore slumping and noticeably aching — but still skating. No one consoles him when he heads to the bench for a line change, save for an assistant coach who encouragingly taps him on the kneepads with a stick. Minutes later, still wincing, he reenters the fray and swiftly bulldozes the offending teammate. No one flinches at the act, and the feud is over, because this is how hockey works — even among friends.


"I'm fine," Miller says nonchalantly after practice. It's just another day at the rink.

Many players say it, but Miller means it: hockey is his life. He started skating when he was two years old as his uncle taught him the sport. What does he want to do after his hockey career? "Hockey," Miller responds without hesitation. Why did he pick communication arts as his major? "Easy credits, I guess," he says with a laugh and his wide smile. That smile came in handy in his younger years, when he briefly modeled

Miller isn't sure how long he'll play college hockey, but he's already had an outsized impact on the UW program.







for Target ads and appeared in a Honda commercial with former NHL star **Mike Richter x'88**.

The New York Rangers traded up to the 22nd pick in the 2018 draft to select Miller, whom they now consider a top-three prospect in the organization. The team has been content to let him develop in Madison, where head coach **Tony Granato '17** and defensive guru **Mark Osiecki '94** have earned a reputation for cultivating professional talent. Osiecki has coached more than a dozen future NHL defensemen, and Miller will soon join the pro ranks of Badger legends like **Chris Chelios x'83**, **Ryan Suter x'04**, and **Ryan McDonagh x'11**. (An ESPN article in October referred to UW–Madison as “Defenseman U.”)

“The coaching staff here you won’t find anywhere else,” Miller says, noting that it’s the top reason he chose to attend the UW over other colleges.

The Minnesota native, an only child of a devoted single mother, takes none of his success for granted. When asked to describe his upbringing, his long pause — for a poised person scarcely at a loss for words — says it all.

“Tough,” he says after collecting his thoughts. “Not the most fortunate. But my mom did everything she could do for

me, and I got here through all of her dedication and pursuit.” One sign of his mother’s commitment: working overtime to replace broken hockey sticks.

Among Amy Sokoloski’s other sacrifices was allowing her son to leave home at age 16 to play for the USA Hockey National Team Development Program in Plymouth, Michigan, where he quickly impressed both the Badgers and the Rangers with his elite combination of size and speed.

Although he’s a defenseman, Miller likes to think of himself as a “fourth forward” — a chase-down defender with a knack for the opportune offensive attack. Last season, the left-handed shooter led the Badgers with 22 points (five goals and 17 assists) before he suffered a season-ending knee injury with 11 games remaining. He earned the team’s Mark Johnson Rookie of the Year award and a spot on the Big Ten All-Freshman Team.

“You see a little bit of flair in my game, where I wish I was still playing forward sometimes,” Miller says, laughing. His versatility stems from playing the forward position until his second year of high school.

One of the NHL players Miller models his game after is Seth Jones of the Columbus Blue Jackets, whose stature

and speed mirror his own. In 2013, Jones became the first African American player to be a top-five draft pick. The league has long lacked diversity, with some 30 active players of color spread across the 31 teams.

“I don’t really see it like that,” Miller, who is also African American, says of the sport’s lack of representation. “I’m different than a lot of these guys, but they see me, and I see myself, as just another hockey player.”

Despite speculation that Miller would turn pro after his freshman campaign, he returned to Madison for a second season. “I want to win a national championship,” he says. He’s not certain how long he’ll play college hockey, but his head coach believes he’s already had an outsized impact on the program.

“The skill part — the size, the mobility — you can see,” Granato told media last season. “What you don’t see as a fan is the work ethic, the competitiveness, and the kid himself, and why he is so special. ... As a coach, when you recruit, you’re looking for character to go along with the skill, and when you find one of those guys, you get real excited. Well, he’s lived up to it.”

**PRESTON SCHMITT '14**

**PHOTO BY BRYCE RICHTER**

# Hope's Eternal



*It's been 50 years since the first Earth Day, but everything we read says things are getting worse. So why is the Nelson Institute for Environmental Studies so upbeat?*

**BY JOHN ALLEN**

I have a theory: people tend to have a tepid response to environmentalism because articles about the environment are, almost invariably, gloomy.

Every day, we read that the climate is warming, the seas are rising, Australia is burning, pollution is spreading and increasingly toxic. According to a study published in *Science* in October, North America has lost three billion birds — about 29 percent of the avian population — in the last 50 years.

What am I supposed to do with that knowledge?

And yet Paul Robbins '89 insists, "Our story is about hope." Robbins is dean of the UW's Nelson Institute for Environmental Studies, and he argues that negativity is the antithesis of environmental studies, at least at UW-Madison.

The Nelson Institute turns 50 this year. It was born, somewhat coincidentally, in 1970, the same year that its eponym, then-Senator Gaylord Nelson LLB'42, saw his proposal for an environmental holiday — Earth Day — come to fruition. It was an inspirational moment for environmentalism.

"I'm sort of a product of Earth Day," says Jean Bahr, a recently retired professor of geoscience who worked in the Nelson Institute. "That was a seminal event in my life, because it inspired me to first help start a recycling center in my hometown and then to go to college with the idea of studying some sort of environmental science."

But the ensuing decades have shown how complicated environmental science can be. "I think when we started out with the first Earth Day, the focus was really on visible pollution, air quality, contaminated water," Bahr says. "I don't think we recognized the scope of climate change."

The Nelson Institute is an oddity on a college campus. Almost all of its faculty are cross-listed in other departments; it offers undergraduate degrees, but only as the second half of a double-major. Its founding director, Reid Bryson, is remembered today partly for his view on climate change: the world, he believed, was cooling.

Yet the Nelson Institute is also remarkable for its insistence on positivity, even though things so often look so bad. I talked to six current and former members of Nelson's faculty to find out where their hope lives.

"There have been a lot of tragic and awful things that have happened in the 50 years since the first Earth Day," says Robbins, "but there's been a lot of problem-solving, too. We want to be about problem-solving. We want our students not to be depressed. We want them to be hopeful."



# Spring

FOULAGE PHOTO BY BRYCE RICHTER



COURTESY OF THE NELSON INSTITUTE

*Arthur Sacks (left) earned his PhD studying poetry. From its early days, the institute has been interdisciplinary.*

## ARTHUR SACKS: Education *One Angry Dude*

Bryson, the founder of what would become the Nelson Institute, was not always an easy person to get along with.

“Reid was one of those brilliant scholars who thought he knew as much about your field — if not more — than you did, even though it wasn’t his field,” says Arthur Sacks MA’68, PhD’75, “and he let you know it all the time, which some people found irritating.”

And Sacks considered Bryson his mentor.

But if Bryson was irritating, he also made spectacular contributions. During the Second World War, he had helped to document the jet stream, and he was one of the few meteorologists to correctly predict the path of Typhoon Cobra in December 1944. (His forecasts were ignored, however, and the U.S. Third Fleet sailed into the typhoon, leading to ascending tragedies: three ships sank, many more were damaged, hundreds of sailors drowned, and Herman Wouk was inspired to write *The Caine Mutiny*.)

Bryson joined the UW faculty in 1948 and helped to found the meteorology department — in part, says

Sacks, because of academic friction. “Reid was basically kicked out of geography,” he says.

In 1962, Bryson established the Center for Climatic Research, having determined that climate change put human society at risk. The change that Bryson thought was coming was a global cooling — he believed that human activity was driving so much dust and aerosolized matter into the atmosphere that it would reduce the amount of sunlight reaching the earth. Accumulated data did not support this prediction, but Bryson remained doubtful. He was skeptical that carbon dioxide had much impact on the global climate or that there was a political means of slowing the use of fossil fuels.

Still, in the 1960s, he decided that the university needed a department to study the environment.

“The institute’s genius was to realize that [science disciplines] are interconnected instead of breaking them up,” says Sacks. “That’s critical to advance our understanding of how the planet works. The goal was to look at how human and environmental systems work together, interacting positively and negatively, and how society could improve and help the environment rather than simply destroy it by digging holes and pumping oil.”

*Monica White hopes to see the concept of the environment broaden beyond nature. “The environment,” she says, is “ubiquitous, in the sense that it’s everything that we do.”*

At its outset in 1970, the institute worked to draw from a variety of disciplines. By 1976, its staff included Sacks, who had received his graduate degrees in English studying obscure Jazz Age poet Maxwell Bodenheim. When Bryson retired in 1985, Sacks became the institute’s next director.

Sacks and other UW environmental studies faculty frequently advised governments on policy — not only the U.S. Environmental Protection Agency, but also organizations in the Soviet Union, Indonesia, India, China, Chile, and other countries.

“Through my own academic international environmental education work,” Sacks says, “as well as the institute’s very significant research, education, and outreach efforts, the institute became known globally as a leader in the environmental education arena.”

Leveraging that interdisciplinary outlook, the institute has grown from geography’s stepchild into an entity with its own standing. In 2002, it was named for Gaylord Nelson, whom Sacks had long admired and supported; in 2019, the Nelson Institute’s top position received a title change from director to dean, signaling that it was approaching equal status to the UW’s 11 constituent schools and colleges.

“Fifty years ago, this institute was, like, one angry dude. That’s what it was,” says Robbins, that angry dude’s successor. “I mean, he did great stuff. Never talk Reid down. But it was just one guy. Now it’s different.”

That growth in recognition is part of what gives Sacks hope — not just that the institute is seen as more important, but that environmental studies in general are a concern across all levels of education.

“What encourages me now is a resurgence of awareness among even young people about the importance of this, not only for themselves but for the future,” Sacks says. “The thing that gives me hope is the fact that environmental education at K-12 levels, at undergraduate levels, at graduate levels, has ... created a new generation of people who see the value and the importance and critical nature of the study of the environment.”

## MONICA WHITE: Gardens *The Environment Is Everywhere*

Unlike most of his contemporaries, Nelson had an expansive view of what environmental studies should study. More than parks and bears and owls and whales and mountains and restored prairies, the environment is everywhere and everything. Factories and pollution are environmental issues, but so are golf courses and homes and playgrounds.

“The economy,” he argued, “is a wholly owned subsidiary of the environment.”

According to Robbins, this ethos runs throughout the Nelson Institute today. “We define the environment as anywhere that people live, work, and play,” he says.

And that means that environmental advocates have a bit of a problem. “Right now, the constituency for ‘the environment’ is way too narrow,” he says. “It comes from a wilderness tradition that is heavily white, older, middle class. If we don’t fix that, all of the other problems are not going to get fixed.”

The trouble with environmental arguments as often presented is that they come across as a luxury — preserving vacationlands for the affluent. Monica White knows that this is a mistake. Ignoring the concerns of the poor is a blind spot for environmentalists, and it’s potentially deadly for the poor.

White is an associate professor of community and environmental sociology in the College of Agricultural and Life Sciences, with half her appointment in the Nelson Institute. She has an office in Ag Hall, as well as one in Science Hall.

“The most interesting conversation I have with folks is helping them understand that being out in the environment doesn’t mean getting in your car and driving somewhere,” she says. “The environment is outside your door wherever you live, and it’s more



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encompassing than hiking trails and mountains. It's also the built environment."

White's journey to environmental studies began in her native Detroit, where people turned to the land to counteract an urban desert. "Everybody in my family grew food," she says. "My dad grew food. My grandmother was in a wheelchair, and she grew food indoors before it was popular."

White's interest is in environmental justice, a concept that leaps across a variety of traditional academic disciplines: sociology, political science, geography, economics, horticulture, and more.

"When we think broadly about the environment, the environment offers us resources," White says. "There are some of us who use more resources than others and benefit from those resources, while the outcome or the residuals impact those communities that don't have access. And so an environmental-justice framework recognizes that some receive more benefit and others more detriment."

White's focus is small-scale: looking in particular at food justice and how poorer communities can overcome being deprived of access to wholesome, healthful sustenance. But on a large scale, environmental justice lies at the heart of many global conflicts. Why is so much rain forest burning in Brazil? Because its president, Jair Bolsonaro, hopes to spark rapid economic growth and believes that first-world environmentalists are holding his country back. "It

is a fallacy to say that the Amazon is the patrimony of humanity," he said in a speech last year, meaning that the region belongs to Brazilians to exploit as they see fit; the rest of humanity may go climb a tree, if they can find one. And yet while the burning will aid farmers, it will damage the lives of the Amazon's indigenous peoples. Preservation aids some communities and restricts others; exploitation benefits some communities to the detriment of others.

When it comes to hope, White looks not at the large scale but at the small: garden plots. When people dig in their own soil and grow their own food, they engage with the environment and find ways to be healthy.

"I am encouraged by children in gardens in places that were previously overrun by tall grass," she says. "I am encouraged by seeing people reconnect with the agricultural environment, using the environment as a place and space to learn new strategies for resilience, resistance, and community health and wellness."

*Jean Bahr came to environmental science early in life. As a teen, on the first Earth Day in 1970, she started a recycling center in her hometown in California.*

## JEAN BAHR: Earth's Resilience

### All Wet

The Nelson Institute began its life in 1970, as the then-Nelson-less Institute for Environmental Studies. But the UW's interest in studying the

*Holly Gibbs sees environmental protection as a growing concern for businesses. “The people that reach out to me to talk about science are increasingly banks wanting to know how to protect their shareholders,” she says.*

environment goes back much further, and in fact there are elements of the Nelson Institute that are older than the parent organization. One of these is Water Resources Management (WRM), a master of science program that began in 1965 out of discussions between political scientist Henry Hart MA’47, PhD’50 and civil engineering professor Arno Lenz ’28, MS’30, PhD’40. Like all of the UW’s environmental studies efforts, it’s cross-disciplinary, recognizing that addressing real-world problems involves drawing on expertise in a wide variety of fields.

Bahr, who led WRM from 1995 to 1999, is a geologist. Her office is in Weeks Hall. “There’s always been a strong connection between this department and Water Resources Management,” she says. “A large number of the master’s students I supervised in hydrogeology did double degrees with Water Resources Management. It was a perfect combination of research thesis plus the interdisciplinary practicum.”

Both in her role with WRM and after, Bahr was an advocate for one of the Nelson Institute’s chief goals: preparing grads to work outside of academia. WRM alumni go on to careers in state and federal

government agencies and at nonprofit groups such as the River Alliance and Sierra Club. Bahr says that WRM’s program requires students to participate in “the workshop,” in which the entire class agrees to tackle a real-world problem, find a solution, and then implement it.

Students “often complain about the workshop while it’s going on. It’s hard to work with other people, and it’s hard to learn a common language of different disciplines and things,” says Bahr. “But then the alumni always say, ‘Oh, that was the best training that I could have gotten for what I’m doing for the rest of my life.’ Most water problems are things that involve the social dimensions and human dimensions.”

Bahr herself works to incorporate real-world solutions into her own life: hers was the first home in Madison to add grid-connected solar panels, meaning that she not only generates her own electricity, but also sells excess to Madison Gas and Electric. And in her academic work, she serves on the federal Nuclear Waste Technical Review Board, helping the nation try to work out how to manage spent nuclear fuel.

And energy use is, to Bahr, one of the world’s great environmental concerns. “It’s the people who use the energy who are causing climate change and putting pressure on all of our natural resources,” she says. “That affects ecosystems and biodiversity. I can get really pessimistic.”

But her study of geology gives her hope. “Our planet is actually quite resilient,” she says. “And geology gives me an appreciation of the longevity of our planet and the evolution of our planet over time. Our species may not survive, but the planet will.”

## **HOLLY GIBBS: Investment Banks** *SAGE Advice*

“Wait, can I change my answer?” says Holly Gibbs PhD’08, a professor of geography at the Nelson Institute’s Center for Sustainability and the Global Environment (SAGE). “Go back. Students. I should have said our students give me hope. Or maybe the children?”

But my no-backsies policy is strict. Besides, other faculty talk about children and students. I’m intrigued by what she says about economics.

It’s raining outside Gibbs’s office in the UW’s Enzyme Research Institute, and in Brazil the rainforests are burning, but her mood is light. “It’s tricky talking about hope,” she says, but things are not quite as bad as they look.

Gibbs is not at the Enzyme Research Institute because she studies enzymes. Her lab is there because the building has space for her and for SAGE. Though the Nelson Institute’s official home is in Science Hall, that ancient building has only so much space, and



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it has to share with the Department of Geography and the State Cartographer's Office and the Robinson Map Library. So SAGE holes up nearly a mile away on the southwest side of campus, in a building it shares with the Research Animal Resources Center and, of course, the Institute for Enzyme Research.

SAGE was founded in 2002 by Jonathan Foley '90, PhD'93 with the purpose of looking at the interconnections between resources, technology, public policy, health, security, and the environment. "Jon was part of another research group that was focused on the nitty-gritty of atmospheric science, but he wanted to do the interdisciplinary work that would change the world," Gibbs says. "In SAGE, one of the things that brings us together is trying to conduct what I would call science that matters."

Gibbs has been busy in recent years. Her particular area of research includes land use in the Brazilian Amazon.

"We've been targeting these corporate promises, where companies have made public promises and sometimes legal contracts to stop buying from farmers that have cleared forest," she says. "They're trying to have deforestation-free supply chains, and we've spent a lot of time trying to understand what is happening on the ground."

And what's happening on the ground is not entirely good. Brazil's president Bolsonaro has not only allowed but encouraged deforestation. According to Gibbs, he has even told agriculturalists

that if trespassers come on their land and try to stop deforestation, they may shoot them without repercussion, making research dangerous.

"It's so unsafe now that it's even difficult for us to feel comfortable hiring a local Brazilian to go out and lead field research," she says. "We've put that part of our work on hold under this new political context."

But at the same time, the situation offers a ray of hope: "Investment bankers," says Gibbs. "Investment bankers give me hope."

This is, she admits, a simplification. But she believes that, increasingly, the global financial sector is seeing the risks of environmental damage and climate change. And where money flows, change happens.

"By working with so many different companies," she says, "from the retailers to the commodity buyers to the investment banks, you start to feel this sense that, well, there's enough good people, there's enough concerned citizens, that by bringing us together, we could start to solve huge problems."

## GREGG MITMAN: People *Beyond the Land Ethic*

Land, says Gregg Mitman MA'84, PhD'88, is a hot topic.

"As much as climate is an issue, a major environmental issue," he says, "land is a huge issue,

*A historian of science, Gregg Mitman wrote his first book, Reel Nature, about the history of American wildlife films. He helped to found the Nelson Institute's Center for Culture, History, and Environment.*

Paul Robbins notes that none of his “holy trinity” of UW environmental thinkers “is actually a Nelson grad.” They include John Muir (classical course), Aldo Leopold (forestry), and Gaylord Nelson (law).

and we’re seeing questions around land — who has access to it and who owns it — asked in a way that is quite different from an earlier land ethic, which became such a touchstone for Wisconsin.”

The land ethic was a concept put forward by Aldo Leopold, the UW professor and author whose philosophy dominated 20th-century conservation movements. Robbins considers Leopold, John Muir x1863, and Nelson to be the “holy trinity” of Wisconsin environmental thought.

Leopold wrote that the land ethic “enlarges the boundaries of the community to include soils, waters, plants, and animals, or collectively: the land. ... [It] changes the role of *Homo sapiens* from conqueror of the land-community to plain member and citizen of it. It implies respect for his fellow-members, and also respect for the community as such.”

Mitman, whose field is history of science, led the Nelson Institute as interim director for four years leading up to Robbins’s arrival. His office is in the Medical Sciences Center. He sees environmental studies growing beyond the land ethic to consider not just how the human species is part of the land community, but how land has been shaped by histories of racism and violence that have led to inequitable environmental burdens.

“If you look at the places that will be most affected [by climate change] — say, Africa,” he says, “it’s a continent that has contributed the least in CO<sub>2</sub> emissions. There’s a real inequity there in terms of the burdens that people will bear, in relationship to their involvement in producing the problem.”

For instance, Mitman worked with Emmanuel Urey MS’13, PhD’18 to produce a documentary and website called *The Land beneath Our Feet* about history, memory, and rights in Liberia. The film played a part in the passage of Liberia’s Land Rights Act in 2018, which recognizes indigenous people’s customary rights.

In Liberia, multinational corporations control between a quarter and half of all public land and use it for plantations to produce raw materials such as palm oil. People are displaced in the process, losing access to land that may have been held in common for generations.

“Liberia is very much an agricultural nation,” says Mitman. “Many people live by subsistence agriculture and have a west-African understanding of land, where it belongs to a community, which is custodian of the land. Private property, individual ownership of land, is an alien concept that runs counter to customary rights. These [corporate] concessions really deprive people of their livelihood by taking away access to land that was once held in common.”

The film project, Mitman says, flows from the tradition created by the UW’s Land Tenure Center, which began in the College of Agricultural and Life Sciences in 1962, before the creation of the Nelson

Institute. It was folded into Nelson in 2003, though it’s “now pretty much defunct,” Mitman notes. “But when I travel, people know the Land Tenure Center. A lot of the people that were working as consultants on land reform in Liberia had some connection to the Land Tenure Center at Wisconsin.”

For Mitman, hope flows from those same people — people like Urey, who refuse to give in to despair.

“[Urey’s] village was taken over by rebels when he was a young boy,” Mitman says. “He first learned to read and write at the age of 14. But he found his way to the Nelson Institute and got his PhD. He’s now helping to build a school and sustainable agriculture to support that school. That kind of resilience of the human spirit gives me a lot of hope.”

## PAUL ROBBINS: Ingenuity *The Modernist*

Environmental studies are global: they look at sea levels, planetwide temperatures, atmospheric gasses, continental bird populations, and so on. But they are also local. Among the Nelson programs that Robbins is most proud of is the Wisconsin Initiative on Climate Change Impacts (WICCI), even though it was developed before his arrival in 2012.

“It comes from an encounter with a state legislator who said, ‘Okay, I believe you, climate change is real. Why does my constituency care? Why do I care? The people who vote for me, why do they care?’ That was a good question,” Robbins says. “That’s a good Wisconsin Idea question.”

WICCI launched in 2007 in a partnership between the Nelson Institute and Wisconsin’s Department of Natural Resources, and it considers the ways in which climate change will affect the state: agriculture, fisheries, forests, health, and more. It looks at not just how the climate is changing, but how that change will affect local communities and what those communities can do about it.

Climate is the top concern for Robbins, as it was for every Nelson faculty member I spoke with. “Catastrophic climate change and the collapse of global biodiversity: that’s the story,” Robbins says. “There’s no going back is what we say around here. I mean, minimally, you’re talking about a degree and a half. That’s a fundamentally altered planet.”

But doom is not inevitable. We may not go back, but we might adapt. WICCI has an adaptation working group to help develop strategies so that Wisconsin can prepare for a warmer world.

“I don’t think [*restoration*] is a good word. I think we should be calling it *ecological design*,” says Robbins. “People act on the land or they don’t act on the land. You either put your hands on it to change it, or you put your hands on it to keep it from changing. Those are your choices. That’s what they are.”



Robbins can put his hands on a piece of environmental inspiration anytime he wants. In his Science Hall office sits Nelson's desk — the one on which he worked out proposals for Earth Day. But Robbins doesn't use it as a desk. It sits in a corner far from the windows: a museum piece or holy relic.

Robbins sees the threats that his fellow environmental scientists have forecast for the world, and he knows that not all of them have come to pass: humans can, when pressed, make changes that ameliorate environmental damage.

"Systems have thresholds and tipping points," he says. "And we talk about tipping points as all bad, right? So enough biodiversity collapses that the oceans die, and then we all die. That would be bad. But there are tipping points for other systems, too. Urbanization is a classic example."

A few decades ago, the human population was rising so fast that environmentalists feared that resources would be used up, leading to conflict and devastation. But urbanization, coupled with women's education, rights, and labor force participation, led to a rapid decline in birth rates.

"[Now] half the world is under the replacement rate for population," Robbins says. "We think of

overpopulation, but the truth is half the countries in the world are shrinking. ... If you had told me 40 years ago, 30 years ago, that that would happen and it would happen within two generations, I would have said that was a fairly optimistic prediction."

And this is what gives Robbins hope: the human ability to adapt and change. Smaller rural populations, for instance, have allowed forests to return in many parts of Latin America and Asia. In Wisconsin, Robbins notes, there is more forested land than at any time in the last century, even after years of brutal deforestation by European settlers. Technology has made solar energy much cheaper today than it was a decade ago. And though the world still burns a lot of natural gas, it's an improvement on coal, which was itself an improvement on previous energy sources. "Remember," he says, "we used to burn whale oil."

So human ingenuity gives Robbins hope. "We get better at things all the time," he says. "My inner modernist is still alive. There's still some part of me that clings to modernity, to progress." ●

John Allen is associate publisher of *On Wisconsin* magazine. He regrets using so much paper to draft this article.

*Paul Robbins describes himself as a "recovering archaeologist." He began learning about environmental politics while on archaeological digs in India.*



BRUCE RICHTER



*Joan Cusack is  
Marilyn Monroe  
crossed with  
Cruella de Vil in  
Addams Family  
Values.*







ALAMYA F. ARCHIVE

# Hair-Raising Performances

*Our critic rates UW movie stars and their greatest roles.*

**BY DEAN ROBBINS**

There are many ways to choose the best American movie performances. If you're looking at comedians, you might pick Eddie Murphy, Cary Grant, or Katharine Hepburn. If you're looking at dramatic actors, you might pick Meryl Streep, Marlon Brando, or (yes, again) Hepburn. But what about the best UW alumni performances?

Looking at movie history from that angle yields an impressive list of films, from the early sound era to the present. UW actors have starred in cinematic classics and collected Academy Awards, although statuettes don't necessarily indicate their finest work. As we all know, the Oscars can pick the wrong winners or overlook greatness entirely.

So what do you say we judge greatness for ourselves? After a monthlong binge on alumni films, I hereby offer my own awards for the best Badger performances of all time, including one that's only 10 seconds long.

## **FREDRIC MARCH 1920**

**in *A Star Is Born* (1937)**

Fredric March is UW-Madison's biggest movie star, winning Oscars for *Dr. Jekyll and Mr. Hyde* and *The Best Years of Our Lives*. He came up empty-handed for *A Star Is Born*, but his performance as Norman Maine stands the test of time better than his more celebrated roles. It can still make you laugh and cry — not bad for an otherwise dated melodrama.

Norman is a matinee idol on the skids. The soulless Hollywood studio system has turned him into

*Fredric March  
(with Janet  
Gaynor) can  
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COURTESY OF THE WISCONSIN CENTER FOR FILM AND THEATER RESEARCH (3)

a scotch-guzzling buffoon — though, as March plays him, an unusually charming one. He gets you rooting for his relationship with Esther Blodgett (Janet Gaynor), an aspiring actress so angelic that she melts his hardened heart. Along with making love, Norman and Esther make jokes, and surprisingly good ones for a couple careening toward tragedy. March had the perfect touch for such repartee in the golden age of screwball comedy.

The actor was renowned for his versatility, and he flaunts it in *A Star Is Born*. Norman is comic, tragic, and everything in between: from cynical to vulnerable, bumbling to debonair. When he wades into the Pacific Ocean for the ultimate self-sacrifice, you hate to see him go.

### **MEINHARDT RAABE '37** **in *The Wizard of Oz* (1939)**

No one would describe *The Wizard of Oz* as “a Meinhardt Raabe picture.” But as the coroner of Munchkinland, Raabe makes an unforgettable impression in just a few seconds on-screen.

Raabe’s scene represents a turning point in Dorothy Gale’s Technicolor journey of self-discovery. Her flying Kansas farmhouse has flattened the Wicked Witch of the East, and she’ll earn heroic status if the Munchkins can confirm the villain’s death. Did you ever notice that *The Wizard of Oz*, though illogical in the extreme, is obsessed with standards of proof? Dorothy requires a broom to prove the other witch’s defeat. Her fellow outcasts need trinkets to prove they have brains, heart, and courage.

In Munchkinland, proof falls to Raabe’s character. Fitted out in a pointy beard and purple scrolled

hat, he could have been simply ridiculous. But Raabe lends the character a stately presence as he displays the all-important death certificate, mouthing a line as famous as any by Humphrey Bogart: “She’s not only merely dead, she’s really most sincere-ly dead!”

With that one moment of glory, the game UW actor secured himself a place in movie history.

### **AGNES MOOREHEAD** **in *Citizen Kane* (1941)**

Snow falls outside a modest boarding house. Young Charles Foster Kane stands by his Rosebud sled, throwing a snowball. The camera pulls back until an imposing figure enters the frame: Charles’s mother, Mary (Agnes Moorehead), who tenderly calls to him out the window.

Moorehead anchors a heartbreaking scene in perhaps the greatest movie of all time. Mary has come into money, and she believes that sending Charles away from home is in his best interest. We see from her son’s tears — in a wrenching closeup — that she is mistaken. It’s a wound that will never heal, even as Charles grows up to be a renowned newspaper tycoon. Is it any wonder his dying word is “Rosebud”?

Writer-director-star Orson Welles suffered a similar trauma in his own childhood, so you can bet he thought long and hard about whom to cast as the wonderful, terrible mother. In her brief time on-screen, Moorehead conveys Mary’s mixed emotions with a gulp, a sigh, and an almost imperceptible quiver in her voice. The portrayal is all the more moving for the actor’s restraint.

Moorehead lived for a time in Wisconsin and





*Top: In The Wizard of Oz, Meinhardt Raabe (third from left) makes an unforgettable impression in a mere 10 seconds on-screen.*  
*Bottom: Agnes Moorehead anchors a heart-breaking scene in Citizen Kane.*



*Don Ameche (left, with Joe Mantegna) may not say much in Things Change, but his silence is golden.*

loved the UW, donating her papers to the university. She led people to think she had a UW degree but actually attended only one session of summer school. For the purposes of this article, though, let's go ahead and call her a Badger.

That allows for a magnificent boast: UW-Madison has a claim on *Citizen Kane*.

#### **GENA ROWLANDS x'51** **in *A Woman under the Influence* (1974)**

We meet Mabel (Gena Rowlands) in motion. Preparing for a date with her husband (Peter Falk), she packs off the kids, paces from room to room, smokes, sings, whistles, mutters. Director John Cassavetes's tracking camera can barely keep up with her — until date night falls apart and an ominous stillness sets in.

In *A Woman under the Influence*, Mabel veers between manic and depressive, struggling to live up to the conventional roles of wife and mother. The movie is a monument of independent cinema, and Rowlands delivers one of the great Oscar-nominated mad acts of the 1970s — right up there with Peter Finch in *Network* and Robert De Niro in *Taxi Driver*. Even Mabel's loyal spouse is forced to admit, "I don't understand what she's doing."

Viewers don't understand what she's doing, either. It's like trying to make sense of Ophelia's Act IV raving in *Hamlet*. Nevertheless, you can't take your eyes off Mabel as she baffles family and neighbors. The intensity in her expression — teeth bared, nostrils flaring — speaks volumes about her troubled marriage.

Cassavetes treasured improvisation, and Rowlands (his real-life wife) is nothing if not spontaneous. You never know what her character will do next. Even in a movie with virtually no plot, she keeps you on the edge of your seat.

#### **DON AMECHE x'31** **in *Things Change* (1988)**

Don Ameche was a glamorous movie star in the 1930s and '40s, followed by a long dry spell. He made a comeback in the '80s with *Cocoon*, winning an Oscar for Best Supporting Actor. But his outstanding late-career achievement came in *Things Change*, an existential buddy movie by playwright David Mamet and children's author Shel Silverstein. Ameche stars as shoeshine man Gino, who reluctantly agrees to take the fall for a gangland murder. Before the trial, the mobster (Joe Mantegna) assigned to keep an eye on Gino bends the rules by letting him enjoy a last weekend of freedom in Lake Tahoe. Then, as the title has it, things change.

At 80, Ameche retains his dapper mustache and leading-man stature. He gives Gino a regal bearing in spite of his humble station in life. You have no trouble believing that this simple laborer could be mistaken for a Mafia kingpin in Tahoe — a plot point that might have strained credulity but for Ameche's subtle performance.

The actor works his magic with minimal dialogue. As fortune has its way with Gino, he responds with little more than a widening of the eyes or a furrowing of the brow. Ameche may not say much in *Things Change*, but his silence is golden.



## JOAN CUSACK '84

### in *Addams Family Values* (1993)

Joan Cusack received Oscar nominations for second-banana parts in *Working Girl* and *In & Out*, but her shining moment came in a movie she dominates. Though *Addams Family Values* is packed with comic scene-stealers (Anjelica Huston as Morticia, Raul Julia as Gomez, Christopher Lloyd as Uncle Fester), Cusack outdoes them all as a gold digger from hell. Imagine Marilyn Monroe from *Gentlemen Prefer Blondes* crossed with Cruella de Vil.

Hired as a nanny, Cusack's Debbie drops like a (blonde) bombshell into the topsy-turvy Addams household. In this gothic netherworld, inspired by Charles Addams's *New Yorker* cartoons, gloomy is good and beautiful is bad. Even among the extravagantly wicked family members, however, Debbie stands out for her perversity. She sets her sights on Uncle Fester, who, while repulsive ("Fester means *rot*," he helpfully explains), is also rich. Cusack puts everything she has into the devilish one-liners, playing against type as Fester's femme fatale.

The best word for her performance might be "dreadful." In the Addams universe, that's the highest compliment.

## CARRIE COON MFA'06

### in *Gone Girl* (2014)

Margo (Carrie Coon) and Nick (Ben Affleck) are sarcastic twins with a taste for board games. Game-playing of a deadlier sort sets *Gone Girl* in motion, beginning when Nick's wife (Rosamund Pike) goes missing under mysterious circumstances.

This potboiler is a psychological mess. Affleck and Pike can't make sense of their characters' relationship, which wobbles between love and hate to satisfy the demands of an improbable cat-and-mouse story. The one actor who emerges with dignity intact is Coon, who draws on her UW theatrical training to create a consistent character.

Margo is written as a mere contrivance, arriving on cue to deliver or react to new information. But Coon brings so much more to the role. In a movie where neither of the main characters warrants our sympathy, she's the stalwart sister anybody would want during a murder investigation/media circus/con game. She takes the character beyond sarcasm to authentic desperation and despair. Remarkably, she even makes an emotional connection with Affleck — no mean feat given his determination to smirk through every plot twist.

Coon has distinguished herself on stage and television while earning relatively small parts in movies. *Gone Girl* suggests that this talented Badger is ready for her star turn. ●

*Dean Robbins is an Orson Welles fanatic (as if you couldn't tell) and coeditor of On Wisconsin. See [go.wisc.edu/sx6vb1](http://go.wisc.edu/sx6vb1)*



*Rodney Dangerfield is the one Hollywood actor who plays a Badger with flair.*

## STARRING AS UW STUDENTS

Several major movies are set at UW–Madison, featuring Hollywood actors as students. How good are they at playing the part of Badgers? Not very — with one notable exception.

### Elroy Hirsch x'45 in *Crazylegs* (1953)

It might seem unfair to judge Badger football legend Hirsch as an actor, but he had several Hollywood roles. *Crazylegs*, his own biopic, even won an Academy Award nomination. So I think we can honestly assess his performance as "Elroy Hirsch," a halfback with a unique running style. While it's fun to see our UW hero playing himself, he has little in his actor's toolkit besides a good-natured grin.

### Rodney Dangerfield in *Back to School* (1986)

A millionaire (Dangerfield) sends his son to Grand Lakes University (a.k.a. UW–Madison, where the movie was filmed), then decides to enroll himself as the world's oldest freshman. Dangerfield is the one Hollywood actor who plays a Badger with flair. He puts over the low-comedy material with expert timing and probably the funniest faces ever made on campus.

### Julia Stiles and Luke Mably in *The Prince & Me* (2004)

A sensible UW premed student (Stiles) falls for her roguish lab partner, a Danish prince (Mably) who enrolled undercover to meet hot chicks. Good acting might have redeemed this nonsense, but Stiles and Mably never seem believably in love. Forget about passing Organic Chemistry — these two can't even pass Romantic Comedy 101.

### Rachel Bilson in *The Last Kiss* (2006)

Older-guy Michael (Zach Braff) begins an anguished love affair with Badger undergrad Kim (Bilson). Kim is less a character than a clumsy symbol of youth and freedom, and you can only groan when she hands Michael a mixtape of "some really cool Madison bands." Bilson may well be the uncoolest UW student of all time.

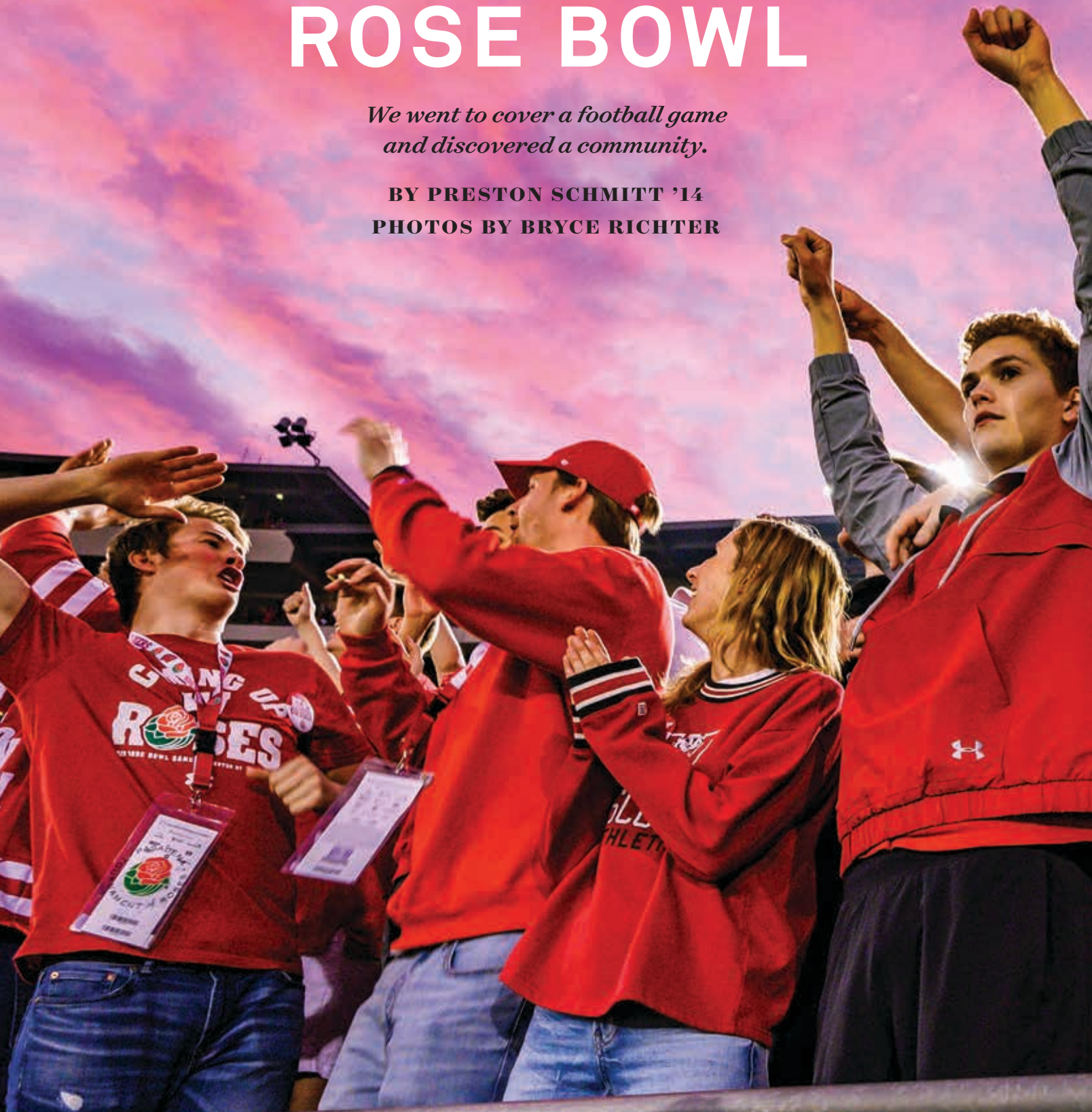
*for an update on Fredric March's campus controversy.*



# SIX LESSONS FROM THE ROSE BOWL

*We went to cover a football game  
and discovered a community.*

**BY PRESTON SCHMITT '14  
PHOTOS BY BRYCE RICHTER**





**I** confess: I'm jealous of my college friends who return to Madison with pure feelings of nostalgia. Now working as a writer for the UW, I've barely left campus since I enrolled as a student in 2010.

Such proximity doesn't leave much room for reflection. The Humanities Building loses its sentimental value when you walk by it every day for a decade. When big Badger games double as work, you're numbed to the joy of victory and the devastation of defeat.

So I confess again: when photographer Bryce Richter and I got the assignment of a lifetime — covering the 2020 Rose Bowl Game in Pasadena,

California — we didn't expect to care much about the outcome between the Badgers and the Oregon Ducks. And we certainly didn't expect to be moved to tears by the UW students, alumni, and fans we met along the way.

But we did, and we were.

In the final minutes of the game on New Year's Day, Bryce and I waited anxiously on the sidelines for a last-ditch miracle, preparing to capture Wisconsin's first Rose Bowl victory in exactly 20 years. That moment never came. But when the clock expired, even in the team's defeat, we had never felt prouder to be Badgers.

Here's why.







## 1 UW students give back — even on vacation.

“We’re going to be rooting for different teams tomorrow, but today we’re going to fight hunger together.” UW dean of students Christina Olstad delivered that charge to more than 100 volunteers at a Los Angeles Regional Food Bank warehouse on Rose Bowl eve. Students, staff, and fans representing the UW and the University of Oregon answered the call, lining up at conveyor belts and packaging enough food for 2,240 seniors in need. Their brisk pace nearly broke the facility’s record for such a project.

The warehouse was a 30-minute drive from central L.A., so Bryce and I didn’t expect many — if any — students to show up and sacrifice a morning of their California vacation. But they proved us wrong. One sleep-deprived yet lively group had just arrived after a 30-hour road trip from Madison. “It’s cool to put sports aside and come together for a common cause,” said Molly Leyden x’23.

I unpacked boxes of vegetable soup next to 26-year-old Ingrid Filakousky. The Orange, California, resident had no connection to either university but was inspired to join the effort after learning about it online. She left the food bank a fan of both schools, and we left in awe of our service-minded students and alumni.

UW seniors Hannah Walker x’21, Hannah Baker x’20, and Logan Klein x’20 showed that giving back can be a whole lot of fun. “Some Oregon guys on the other end of the factory are dancing with their boxes of spaghetti, and we’re doing a little dance-off with our soup,” Walker said.

“We just try to embody the Wisconsin Idea — that you learn through action, not just classes,” Baker added.

*Top left: On Rose Bowl eve, fans from the UW and the University of Oregon come together to package food for seniors in need. Bottom: Megan Rollo (left) and her wife, Jordan Wilde, set aside their differences at the UW’s pre-game tailgate.*

## 2 We’re all in this together.

At the UW’s pregame tailgate, amid the mosh pit of Badger fans (and brats and beer), Bryce spotted the contrasting colors of Megan Rollo in cardinal red and her wife, Jordan Wilde, in grass green. Despite the Seattle couple’s differing allegiances, they had no real disagreements. They root for both teams outside of the head-to-head matchup.

They determined to make the 106th Rose Bowl their first because of its larger meaning. Wisconsin is where they met: Rollo attended UW-La Crosse, Wilde coached women’s basketball at UW-Parkside. As self-described football fanatics, they cared a lot about the game — but even more about their time together. “It’s 70 degrees on New Year’s Day,” Rollo said. “I don’t think losing would affect my experience.” She added, laughing: “If we were playing Ohio State, it would.”

For other fans, the pilgrimage to Pasadena was a familiar one. Barbara Carrig ’64, MS’87 was a student when the Badgers made their third Rose Bowl appearance. She thought better than to hitchhike to California with her friends in 1963, but she’s attended several Rose Bowls since.

I learned that Carrig, like my sister, became a speech-language pathologist at a primary school after earning her UW degree. She recounted the story of how a former student once approached her at a Rose Bowl tailgate. She remembered that he had a lateral lisp. He told her, “You changed my life.”

“It’s little things like that,” Carrig said. “I did it for 31 years. Your sister will be thankful that she did it, too.”







### 3 The UW Marching Band is a star attraction.

Jennie Johns wasn't the first person to be starstruck on the streets of L.A. But she might have been the first to seek out selfies with members of a college marching band.

A trip to the Rose Bowl was long on the bucket list for her and sister Leigh Price '81. For them, the band was by far the main attraction. "From the first time I went to a game and saw the band's Fifth Quarter, I was hooked," Johns said. "To me, it really embodied enthusiasm, youthfulness, love of life, and just camaraderie."

The band's halftime performance at the Rose Bowl, a melodic tribute to the military branches, stole the show. The crowd went wild when band members formed the shape of a plane and simulated the exhaust of afterburners with jet-pack props.

On the plane to California, I sat next to Bob '70 and Jeri Rooney, who proudly told me about their multigenerational connections to the band. Bob and their children were members, and now their grandson carries on the tradition as a trumpeter. The couple have attended all seven Rose Bowls since 1994 to show their support for the band family.

At a pre-Rose Bowl event, I ran into a friend I hadn't seen since my undergrad days: Malcolm Robey '15, who attended three Rose Bowls as a member of the marching band, the final one as its drum major. In college, as a Posse scholar, he helped me understand the challenges of being a student of color on a predominantly white campus, and how finding a community on campus is critical for success.

It was clear, as Malcolm danced joyfully with current band members, that he'd found lifelong community.



*Top middle: The UW Marching Band steals the show at the Rose Parade. Top right, waving: Leigh Price (left) and Jennie Johns are the band's number-one fans.*



## 4 UW fans own Pasadena.

As the oldest postseason game in college football, the Rose Bowl is called “The Granddaddy of Them All.” But the College Football Playoff system, developed in 2014 to feature the nation’s four best teams, has threatened that status. Semifinal games rotate among six bowls, with the Rose Bowl hosting a championship-level game just once every three years.

This was one of the off years. But that did little to discourage tens of thousands of UW fans from descending on Southern California. Since 1994, they’ve earned a reputation for traveling in big numbers. That was true again — little green could be seen in Wisconsin’s sections, while stripes of red bled through Oregon’s half of the stadium. And from Santa Monica Pier to the Hollywood Walk of Fame, we heard reports of Badgers far outnumbering Ducks.

“It’s been amazing,” star running back Jonathan Taylor x’21 said after the game. “People ask me about Camp Randall, but it’s just a stadium like any other. It’s the fans that fill the stadium and take time out of their jobs and daily lives ... to watch us play a game we love. They made it feel just like Camp Randall today.”







*Top: UW fans prove that being a Badger is about much more than a football game. Bottom right: Aron Cruickshank is a one-man stampede, returning a kick for a touchdown.*

## 6 It's not just about football.

Our final lesson was the most important: that a trip to Pasadena transcends football. Fan after fan told us that the Rose Bowl experience isn't defined by a win or a loss. It's defined by the people: generations of family, old friends and new, scores of strangers in matching red. "It's so fun to be with a bunch of people that you're connected to — that you don't know, *but you know*," said band fan Leigh Price.

The *aha* moment for me arrived in the third quarter of the game. During a commercial break, the UW Marching Band broke into the *Friends* theme song. It was a subtle nod to the song's prolific writer, Allee Willis '69. The one-of-a-kind alumna and Hollywood native had died unexpectedly on Christmas Eve at 72. For band members, it was a personal loss. They had just met Willis in September, when she returned to Madison to serve as a guest conductor in Camp Randall Stadium, leading them in the same tune.

*I'll be there for you*

*'Cause you're there for me too*

There's a cardinal rule in the press box: don't cheer. So I didn't, but my eyes did well with tears. That small gesture — current students honoring a former one — confirmed that being a Badger is about much more than a football game. It's about community. It's about what connects us.

And it turns out all I had to do to rediscover my passion as a UW alumnus was to leave town for a few days. ●

*Preston Schmitt '14 is a staff writer for On Wisconsin. For more Rose Bowl coverage by him and Bryce Richter, see [rosebowl.wisc.edu](http://rosebowl.wisc.edu).*

## 5 Win or lose, the game is a thrill.

ESPN summarized the game as a "frenetic edition of this venerated bowl," and so it was. Five turnovers, seven lead changes, and a one-point differential made for a wild ride. And for the Badgers, a crushing result: a 28-27 loss to Oregon, the fourth Rose Bowl defeat by a touchdown or less this decade.

But the competitive game provided plenty of moments to cherish. After Oregon sprinted down the field on its first drive, Wisconsin answered with an electrifying kick return for a touchdown. Returner Aron Cruickshank x'22, a one-man stampede, was the Badgers' surprise standout. His 95-yard dash down the right sideline was the second-longest scoring play in Rose Bowl history, and just the third kick return for a touchdown.

Wisconsin's familiar faces, including Taylor and receiver Quintez Cephus x'20, also starred in the back-and-forth affair. But the UW's four turnovers proved to be too costly. Oregon scored 21 points out of them, including the decisive touchdown midway through the fourth quarter.

Badger fans endured a bitter blast of green and yellow confetti as the clock hit zero. But the sights (hello, purple sunset over the mountains) and scores leading up to it? They were all worth the trip.



# A New Era for Children's Literature

*The UW Cooperative Children's Book Center  
transforms publishing by championing diversity.*

BY PRESTON SCHMITT '14

*Ever since I was born and could see,  
Everywhere I looked, I saw dance.  
In the clouds as the wind blew them  
across the sky,  
In the ripples on a pond,  
Even in the sea of ants marching up and  
down their hills.  
Dance was all around me. Dance was me.*

As a young girl, Melanie Kirkwood Marshall '15 wanted to dance. If Sassy could, why couldn't she?

Over and over again, she read that opening passage of Debbie Allen's children's book *Dancing in the Wings*. She pored over Kadir Nelson's sparkling illustrations of Sassy, a young black girl who, her classmates tease, is too tall to dance. Encouraged by her family, Sassy dances anyway. And after winning a big audition, she concludes: "Mama was right — being tall wasn't so bad after all."

Kirkwood Marshall, now a doctoral student of language and literacy education at the University of Illinois, recently looked through her old copy of *Dancing in the Wings* and discovered a note from her mother scribbled on the endpapers: *Always love yourself.*

"I didn't know it at the time — no kid would be

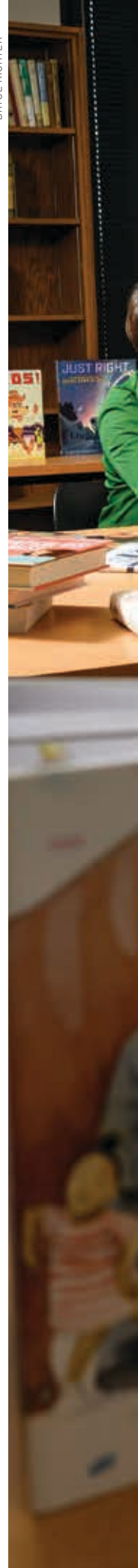
thinking, 'Oh, my mom got this because it validates my appearance' — but I leaned on that book heavily for understanding who I was and what I wanted to do," says Kirkwood Marshall, who is African American.

Such is the importance of multicultural children's literature. Scholar Rudine Sims Bishop famously coined the phrase "mirrors and windows" — meaning that a good book can serve as a window to an unfamiliar world, a mirror for self-affirmation, or, ideally, both.

But for all the potential, mirrors for children of color have been scarce. *Dancing in the Wings* was one of some 5,000 children's books published in the U.S. in 2000. Only 147 of them — less than 3 percent — featured black characters. Only 151 books combined featured Asian, Latino/Latina, or indigenous characters.

Today, more than half of K-12 public school students are children of color, yet less than 15 percent of children's books over the past two decades have contained multicultural characters or story lines. In 2018, roughly 10 percent of all children's books featured black characters, 7 percent featured Asian characters, 5 percent featured Latino/Latina characters, and 1 percent featured indigenous characters.

These troubling numbers come from the UW







*Left to right:  
Librarians  
Megan Schlies-  
man, Kathleen T.  
Horning, Merri  
V. Lindgren, and  
Madeline Tyner  
each evaluates  
upwards of 1,000  
volumes a year.*

Cooperative Children's Book Center, or CCBC, which has become the authoritative source nationally for tracking diversity in children's and young adult literature. Since 1985, the center's librarians have indexed every new book, providing data for a long-overdue reevaluation of the publishing industry and promoting a more accurate reflection of a diverse world.

Along the way, their efforts have collided with century-old barriers in children's literature. And although there's reason for optimism, their work is far from over.

### "I Feel Guilty When I'm Not Reading"

Despite its name, the Cooperative Children's Book Center is for adults.

"We always say, 'We're a collection of books for children and teens *for adults who work with children and teens*,'" says Kathleen T. Horning '80, MA'82, director of the CCBC, which is part of the UW School of Education and supported by the Wisconsin Department of Public Instruction.

The center opened in 1963 with joint funding from the state and the university — hence *cooperative* — as a resource for Wisconsin's librarians and teachers to assess new books and donate their old ones. Thanks to major investments in education by the Kennedy and Johnson administrations, public school libraries suddenly had money and sought guidance on how best to spend it.

The UW campus didn't have space for an unproven library, so the CCBC opened on the fourth floor of the state capitol building under the massive dome. It expanded and moved to the new Helen C. White Hall in 1971, and later to its current home in the Teacher Education Building.

Now with an established reputation, the CCBC receives nearly every children's book from American (and some Canadian) publishers — as many as 3,500 per year. Its four librarians — Horning, Megan Schliesman MA'92, Merri V. Lindgren '88, MA'89, and Madeline Tyner MA'17 — each read and evaluate upwards of 1,000 volumes per year. "You do that at home," says Schliesman, laughing. "If you didn't have a passion for it, you would hate this job. I feel guilty when I'm not reading."

The CCBC highlights the best 250 books of the bunch in its annual publication, *Choices*, which emphasizes diverse works. Outreach remains central to its mission, with the librarians frequently traveling the state to speak to teachers and librarians. The center also provides information to Wisconsin schools and libraries responding to book challenges from community members.

The CCBC's library contains a current collection of all new publications, a permanent collection of recommended books, and a historical collection of previously acclaimed works. The vast inventory serves as a treasure trove for UW students and

faculty conducting research on children's literature.

According to Horning, no other children's book center offers such a range of services — from reviewing books and gathering data to shelving every publication and traveling the state. In the 1990s, government representatives from Malaysia and Venezuela visited the CCBC to learn how to create a state-sponsored center back home.

"It doesn't seem possible for anyone to replicate it," says Horning, who has been on the staff since 1982. "They can replicate a part of it but not all of it. And that's probably because when this library was started — in terms of the economy, in terms of partnerships — it was exactly the right time."

And it perfectly positioned the CCBC to expose a serious problem in the world of children's literature.

### The All-White World

Ginny Moore Kruse MA'76 was honored, and then alarmed.

In 1985, the American Library Association asked the longtime director of the Cooperative Children's Book Center to join the national Coretta Scott King Book Award committee. The annual award recognizes outstanding books by black authors and illustrators.

The committee didn't convene for long. There were only 18 books for consideration — 0.7 percent of the 2,500 published that year.

"I was flabbergasted," says Kruse, who headed the CCBC from 1976 to 2002.

The same year, Horning received a call from a librarian at a Milwaukee public school looking for multicultural books. "I looked up 'blacks, fiction' in the *Subject Guide to Children's Books in Print* and found a really small column of books," Horning says. "Before it, there were a couple of pages labeled 'bears, fiction.' It struck me as quite ironic that there were all these books about bears and so few books about black people."

Horning and Kruse decided to publish the 18-book statistic in the 1985 *Choices* and vowed to continue tracking diversity among new titles. Their efforts captured the attention of the children's book world, but underrepresented readers had been aware of the problem for decades.

"We weren't the first people to realize the paucity of books by African American writers and artists," Kruse says. "Black librarians, black teachers, black literature experts, black families — they had experienced the lack of books reflecting themselves and their lives. What made the CCBC stats memorable was the numbers confirming the experiences."

Throughout the 19th and early 20th century, portrayals of people of color in children's books relied on racial stereotypes and caricatures, as in *Little Black Sambo*. "No matter that my mother said that I was as good as anyone," children's author Walter Dean Myers wrote in 1986. "She had also told me, in

On Twitter, discussion of children's literature has become contentious, with charges of prejudice and countercharges of censorship.





LAWRENCE AGYEI

words and in her obvious pride in my reading, that books were important, and yet it was in books that I found ... blacks who were lazy, dirty, and above all, comical.”

Between the 1930s and 1950s, several authors of color found success writing children’s books, including Ann Petry, Countee Cullen, Langston Hughes, and Yoshiko Uchida. But they were rare and their books exceptions.

In 1965, the *Saturday Review* rocked the publishing industry with its article “The All-White World of Children’s Books.” Author Nancy Larrick reviewed 5,000 recent books and found that less than 1 percent portrayed contemporary African American life. A librarian told Larrick: “Publishers have participated in a cultural lobotomy,” treating the African American as “a rootless person.”

Around the same time, advocates formed the Council on Interracial Books for Children to encourage authors of color to create books and to push publishers to accept them. In step with the civil rights movement in the late ’60s and early

*Doctoral researcher Melanie Kirkwood Marshall sees an increase in books “allowing black girls an opportunity to imagine themselves in ways they wouldn’t have before.”*

’70s, multicultural literature proliferated, and literary giants of color emerged — Myers, Virginia Hamilton, Sharon Bell Mathis, Mildred D. Taylor, Lucille Clifton.

And then, for some four decades, progress halted. An economic downturn in the mid-’70s slashed book budgets for public schools and libraries, and “books by minority authors, bought in addition to usual purchases, were the first to go,” *USA Today* reported in 1989, becoming the first national outlet to cite the CCBC’s data.

With publishers increasingly relying on large bookstores for sales, the long-held notion that *black books don’t sell* became a self-fulfilling prophecy. Systemic barriers and the editorial instincts of overwhelmingly white publishing houses deterred would-be authors of color.

According to the CCBC’s data, between 1985 and 2014, children’s books by African American authors or illustrators never surpassed 3.5 percent of annual publications. Books containing African American content never reached 6 percent. Even more sparse were books about Asian Americans, Latinos/Latinas, or indigenous people.

Every few years, according to Horning, a new media outlet would pick up the CCBC’s statistics, but the resulting conversation would soon trail off. Then something changed.

### #WeNeedDiverseBooks

In 2013, 94 of the 3,200 new children’s books received by the CCBC — 2.9 percent — featured black characters.

Frustrated by the familiar tale, Walter Dean Myers and his son Christopher, also a children’s book author, penned a pair of powerful columns in the *New York Times*. The younger Myers referred to “the apartheid of literature — in which characters of color are limited to the townships of occasional historical books that concern themselves with the legacies of civil rights and slavery but are never given a pass card to traverse the lands of adventure, curiosity, imagination, or personal growth.”

Later that year, the announcement of an all-white, all-male panel for a major book festival sparked outrage on Twitter. The resulting hashtag, #WeNeedDiverseBooks, evolved into a nonprofit organization that continues to promote diversity in children’s literature and fund programs for aspiring book creators and publishers of color.

The numbers are trending up. Between 2014 and 2018, the CCBC saw books about African Americans and indigenous people roughly double, and books about Asian Americans and Latinos/Latinas triple. The librarians credit scholars and advocates on social media who are keeping the conversation going, as well as independent publishers, such as Lee & Low Books, that are dedicated to diversifying literature.

The progress is still relative. While books about



# DIVERSITY IN CHILDREN'S BOOKS 2018

Percentage of books depicting characters from diverse backgrounds based on the 2018 publishing statistics compiled by the Cooperative Children's Book Center, School of Education, University of Wisconsin-Madison: [ccbc.education.wisc.edu/books/pcstats.asp](http://ccbc.education.wisc.edu/books/pcstats.asp)

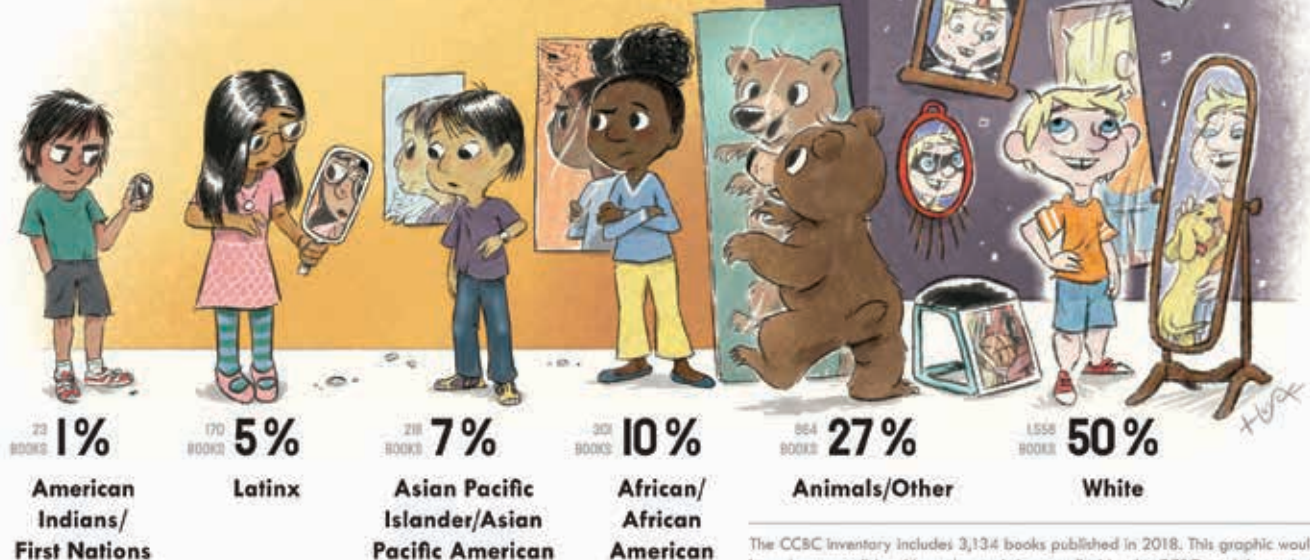


Illustration by David Huyck, in consultation with Sarah Park Dahlen  
Released under a Creative Commons BY-SA license: <https://creativecommons.org/licenses/by-sa/4.0/>

The CCBC inventory includes 3,134 books published in 2018. This graphic would not have been possible without the statistics compiled by the CCBC, and the review and feedback we received from Edith Campbell, Molly Beth Griffin, K. T. Horning, Debbie Reese, Ebony Elizabeth Thomas, and Madeline Tyner. Many thanks.

Latinos/Latinas may have tripled, the CCBC has found that they still represent only 6.8 percent of all books. In 2017, a character in a picture book was four times more likely to be a dinosaur than an indigenous child, and two times more likely to be a rabbit than an Asian American child. Only two picture books had a child with a disability as a primary character.

The CCBC now tracks disability and other forms of identity like gender and sexual orientation. Later this year, the center plans to launch a public database logging all of the children's books it receives. Researchers will be able to easily identify books with specific themes or aspects of representation.

The data have found a permanent home on social media. "We used to see the conversation [on diversity] blow over after a month, but it hasn't blown over this time," Horning says. "We get two or three emails and calls a week asking for our stats."

But with social media comes controversy. And on Twitter, discussion of children's literature has become contentious, with charges of prejudice and countercharges of censorship.

## "Toxic Online Culture"

As a UW senior in 2014, Melanie Kirkwood Marshall camped out in the Cooperative Children's Book

Center to study the representation of black girlhood in young adult literature. The few books she found were disappointingly homogeneous. But now, as a doctoral researcher, she's noticing promising trends.

"Not only are we seeing an increase in realistic fiction," she says, "but there's an uptick in speculative and science fiction stories. They're allowing black girls an opportunity to imagine themselves in ways they wouldn't have before."

The CCBC librarians note that the #OwnVoices social media movement has paved the way for such stories. It promotes the importance of "cultural insiders" portraying their own identities and experiences.

Proponents of #OwnVoices believe that when "cultural outsiders" attempt to write about people from different backgrounds, they're prone to stumble into problematic representations, ranging from harmful stereotypes to inauthentic narratives. And now, social media critics often condemn books and authors — as renowned as Dr. Seuss and J. K. Rowling — for cultural insensitivities. To some, that's the price of progress. To others, it's a slide toward censorship.

The publisher Scholastic famously recalled the 2016 picture book *A Birthday Cake for George Washington* after a social media outcry. Initially



praised by reviewers for its tale of the president's enslaved head chef, the book was denounced for glossing over the horrors of slavery.

Last year, two authors of color pulled their debut young adult novels just prior to publication. *A Place for Wolves* by Kosoko Jackson, a gay black author, received online criticism for using the Kosovo War as a backdrop for the love story of a non-Muslim American. The fantasy novel *Blood Heir* by Amélie Wen Zhao, a Chinese immigrant, angered #OwnVoices supporters by allegedly paralleling the history of African American slavery.

"It just snowballed into a lot of people who hadn't read the book [criticizing it]," Zhao told National Public Radio in November after releasing *Blood Heir* with revisions.

Some see these anti-book campaigns as an expression of "cancel culture." Ruth Graham cautioned in *Slate*: "We've gotten an increasingly toxic online culture around [young adult] literature, with ever more baroque standards for who can write about whom under what circumstances. From the outside, this is starting to look like a conversation focused less on literature than obedience."

By contrast, adherents of #WeNeedDiverseBooks claim they're protecting children from hurtful material and challenging authors to be more sensitive. They're happy to wrest some of the power from a publishing industry that's still 80 percent white and has historically controlled what stories are told. "Social media is giving a voice to a lot of people who never had a platform before," Horning says.

## Equipped for Tomorrow

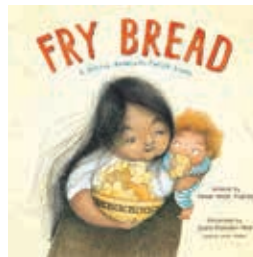
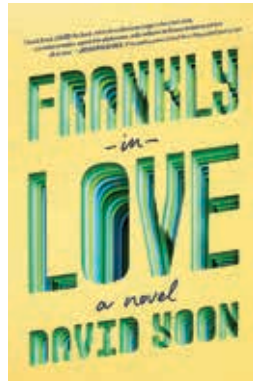
As the children's book world grapples with these complex discussions, sociological studies affirm the importance of representation. Research has shown that children notice race as early as six months, begin to internalize bias between the ages of two and five, and can become set in their beliefs by age 12.

"If children grow up never seeing, never reading, never hearing the variety of the wide range of voices, they lose so much," Kruse told the journal *Language Arts* in 1993. "They will not be equipped for today, not to mention tomorrow. The world will go right past them. They are going to be stunned when everyone is not like them."

Last year, Kirkwood Marshall became a mother herself. One of the first books she bought her daughter was *Sulwe* by Lupita Nyong'o. It follows a young black girl's journey from being insecure about her skin tone to embracing her unique beauty.

"It's come full circle," Kirkwood Marshall says. "I did the same thing [as my mother] — I wrote a note to my daughter in the book. It just says: *May you always love your beautiful brown skin.*" ●

Preston Schmitt '14 is a staff writer for On Wisconsin.



## CCBC Choices

"What I never want to get lost in the discussion about the quantity is that there are phenomenal multicultural books published each and every year," says Megan Schliesman, a librarian at the Cooperative Children's Book Center. Here are the staff's five favorite titles of 2019.

### **Frankly in Love, by David Yoon (Putnam, age 13 and up)**

High school senior Frank Li hides the fact that he's dating a white girl from his conservative Korean parents. Frank's first-person voice is funny and tender, and this emotionally charged debut novel offers a nuanced examination of race, love, and family.

### **Fry Bread: A Native American Family Story, by Kevin Noble Maillard, illustrated by Juana Martinez-Neal (Roaring Brook, ages 3–7)**

Parallel narratives detail the characteristics and cultural importance of this staple of Native American diets. The illustrations exude a sense of homey security, showing the realistic variety in hair, eye, and skin colors of indigenous peoples.

### **My Papi Has a Motorcycle, by Isabel Quintero, illustrated by Zeke Peña (Kokila, ages 3–6)**

As Daisy rides with Papi on his motorcycle, she describes her neighborhood and city in a delightful, loving ode to present and past, family and community. The mixed-media art features a warmly colored palette and cartoon-like energy.

### **New Kid, written and illustrated by Jerry Craft (HarperCollins, ages 9–13)**

A funny and thought-provoking graphic novel details Jordan Banks's seventh-grade experience as one of the few African American kids in an elite suburban school. This fearless social satire will offer affirmation for some readers and revelation for others.

### **Tristan Strong Punches a Hole in the Sky, by Kwame Mbalia (Disney Hyperion, ages 8–13)**

While visiting his grandparents in Alabama, Tristan falls into a parallel universe populated by characters from African and African American traditional stories. Also featuring two strong girls, this tale explores how stories have the power to help people connect and survive.



# In a Garden Far, Far

*UW researchers are unlocking the secrets to growing food without gravity — an essential*

In the 2015 blockbuster *The Martian*, Matt Damon's character, stranded on the red planet, manages to survive for months by growing potatoes in the Martian soil. In his own waste.

Damon's character is a botanist, a rare profession for Hollywood heroes. But if humanity is to achieve its most ambitious spacefaring goals — planetary bases, even interstellar travel — botanists might just see more starring roles, on-screen and off. Because plants, it turns out, are key to our ambitions.

Just as they do on Earth, plants in space can produce oxygen, recycle waste, and serve as food — a huge boon when extended trips make packing enough sustenance or relying on Earth for breathable air impossible.

For more than half a century, UW-Madison researchers have been at the forefront of developing a new agriculture for the final frontier. They've answered the earliest questions about how plants fare in space, built the equipment that grew the first crop in orbit, and brought us to the precipice of feasible space farms. Today, they are partnering with astronauts on the International Space Station (ISS) to decipher plants' genetic responses to weightlessness, hoping to engineer plants that can thrive as human spaceflight advances.

"I think people are just totally engaged by the unknown above them," says Simon Gilroy, a UW professor of botany. "We're just built to explore."

## Veggies in Orbit

With his chest-length gray hair, penchant for Hawaiian shirts, and British accent, Gilroy is unmistakable. Animated and gleeful, his conversation quickly leaps from the tiny, unassuming mustard plants that dot his office to the future of space travel they foretell.

Plants in space can produce oxygen, recycle waste, and serve as food.

Nutrition is essential for astronauts, he explains. The space environment suppresses appetite, and preserved food is unpalatable. Appetizing, fresh food may be one way to keep astronauts at a healthy weight, and the antioxidants supplied by fresh fruit and vegetables might help them combat cancer risks spiked by cosmic radiation. And there's the psychological component: living plants serve as a reminder of home.

Yet reaping these benefits requires overcoming challenges imposed by taking plants out of the gravity in which they've evolved. "One way to deal with these challenges is to ... build an environment that basically takes the Earth's environment into space," Gilroy says. "The other way is to use our knowledge of the biology of the plants to engineer the plants to deal with the *loss* of gravity. And as a biologist, of course, I think that's the much more elegant way."

For 20 years, Gilroy has worked to understand both how plants sense gravity and how they handle the consequences of its absence. Without gravity, water can stick to roots, blocking oxygen much like a flooded field would. The stressed plants still grow, but weakly.

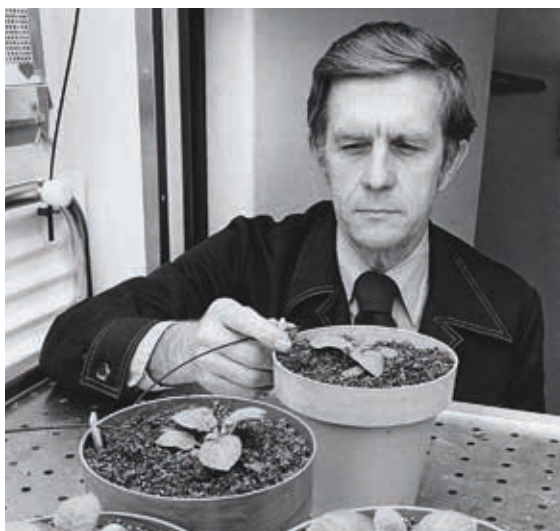
To understand that stress, and how to overcome it, Gilroy has launched his mustard plants, known as *Arabidopsis*, to the ISS during four experiments. His latest experiment arrived in December 2017. Astronaut Scott Tingle unwrapped 26 petri dishes containing 10 tiny seeds each and installed them into a plant growth chamber named Veggie. The seeds germinated, and the plants grew for a month. Midway through the experiment, Tingle took images under a microscope, capturing where the plants suffered from low-oxygen stress. The following month, Gilroy received the images, along with the frozen



# Away

BY ERIC HAMILTON

*component for long-term space travel.*



UW ARCHIVES S12564 (LEFT); BRUCE RICHTER

plants. He is now using advanced gene sequencing technology to compare the activity of genes in space-grown plants to those grown on Earth. Genetic engineering may help him and fellow researchers to prepare plants that can cope with the rigors of space travel.

Patrick Masson, a UW genetics professor, launched his own plants — the grass *Brachypodium* — to the ISS in April 2018. Much more closely related to major crops like wheat, rice, and corn than Gilroy's *Arabidopsis*, the grass can give scientists clues about how the world's most important crops might fare in space. "It's a very steep learning curve," Masson says of his first spacefaring experiment. "And that's where being at an institution like [the UW] is really helpful, because there is that long tradition of people who have experiments in the space environment."

*For more than half a century, UW researchers like Ted Tibbitts (left) and Simon Gilroy have been at the forefront of developing a new agriculture for the final frontier.*

## Zero-Gravity Spuds

Bob Morrow PhD'87 is part of the UW's long tradition of plant spaceflight researchers. He arrived on campus as a botany and horticulture graduate student in 1982 and joined the lab of Ted Tibbitts '50, MS'52, PhD'53, a professor of horticulture researching how to use plants for life support and designing controlled growth environments for use on the space shuttle.

While Gilroy focuses on altering the biology of plants to thrive in space, Morrow tackles the engineering. "Once we identify a stress that plants face, then we can attack it with hardware systems and plant protocols," says Morrow, who is now a principal scientist at the Madison campus of the Sierra Nevada Corporation, an aerospace contractor for NASA. He designed the Veggie system that Gilroy and Masson used for their experiments.

In August 2015, Veggie made history when U.S. astronauts Scott Kelly and Kjell Lindgren and Japanese astronaut Kimiya Yui toasted one another with Veggie-grown red romaine lettuce before delightfully munching on the leaves. It was the first time U.S. astronauts were given the go-ahead to eat space-grown produce. (Russian cosmonauts got the okay to eat green onions some four decades earlier.)

“That’s awesome,” Lindgren said at the time — between bites — offering a thumbs-up to his fellow astronauts.

“We understand enough now that we need to start demonstrating large-scale production of food crops in the space environment,” says Morrow. He has since worked with a team at Sierra Nevada and NASA to develop the Advanced Plant Habitat, the successor to Veggie and the space station’s current and most sophisticated growth chamber. And Sierra Nevada is now developing a much larger system with 80 square feet of growing space named Astro Garden for an eventual mission to Mars or a permanent lunar orbiter.

Veggie and its successors grew out of developments in plant spaceflight hardware that were pioneered in the Tibbitts lab in the 1980s and 1990s. Tibbitts was part of a NASA-sponsored interdisciplinary research center located in the College of Engineering, where he oversaw a team that painstakingly developed Astroculture, a compact plant-growth system for use on board the space shuttle.

“Ted was there at the beginning,” says Gilroy. “He’s one of the three or four people that you would say are the pioneers.”

Over several iterations, the team perfected systems for pumping nutrient solutions, providing sufficient light, controlling temperature and humidity, and managing carbon dioxide and other gases. By 1995, the researchers were ready to pursue one of their top goals — producing a crop in space.

“NASA had identified six primary life-support crops based on their nutrition and ability to be productive and that people were familiar with,” says Morrow. Those six — white and sweet potatoes, wheat, rice, soybeans, and beans — are still primary candidates for feeding crews today.

Tibbitts’s team, based in Wisconsin, the nation’s third-highest potato-producing state, chose potatoes. On Earth, miniature potatoes can form out of the buds of excised leaves in just a few days, so the researchers decided to test if these tiny tubers could grow in orbit. The UW team secured five leaves into Astroculture, and the space shuttle was launched in



*A UW team developed the Astroculture plant growth system, which proved that crops could grow in zero gravity.*

October 1995.

The results were obvious as soon as the growth chamber was opened nearly 16 days later: tiny tubers, just a couple of centimeters across, had formed on every leaf. Closer inspection showed only minor differences between the space-grown potatoes and their earthbound counterparts that served as controls. Those spuds were proof that a crop could be grown in zero gravity.

The Astroculture team continues this work today. While Morrow began working on Veggie at Sierra Nevada, postdoctoral researcher Ray Wheeler became the lead of advanced life-support systems at NASA’s Kennedy Space Center, where he partners with Gilroy and Masson on their experiments. And Morrow’s fellow graduate student Dan Barta MS’84, PhD’89 now manages life-support research at the Johnson Space Center.

When Tibbitts watched *The Martian*, he found the potato subplot suspiciously familiar.

“They never gave us any credit!” he says, laughing.

## A New Age of Discovery

Tibbitts didn’t originally set out to grow potatoes in space. He was a lettuce man — on terra firma.

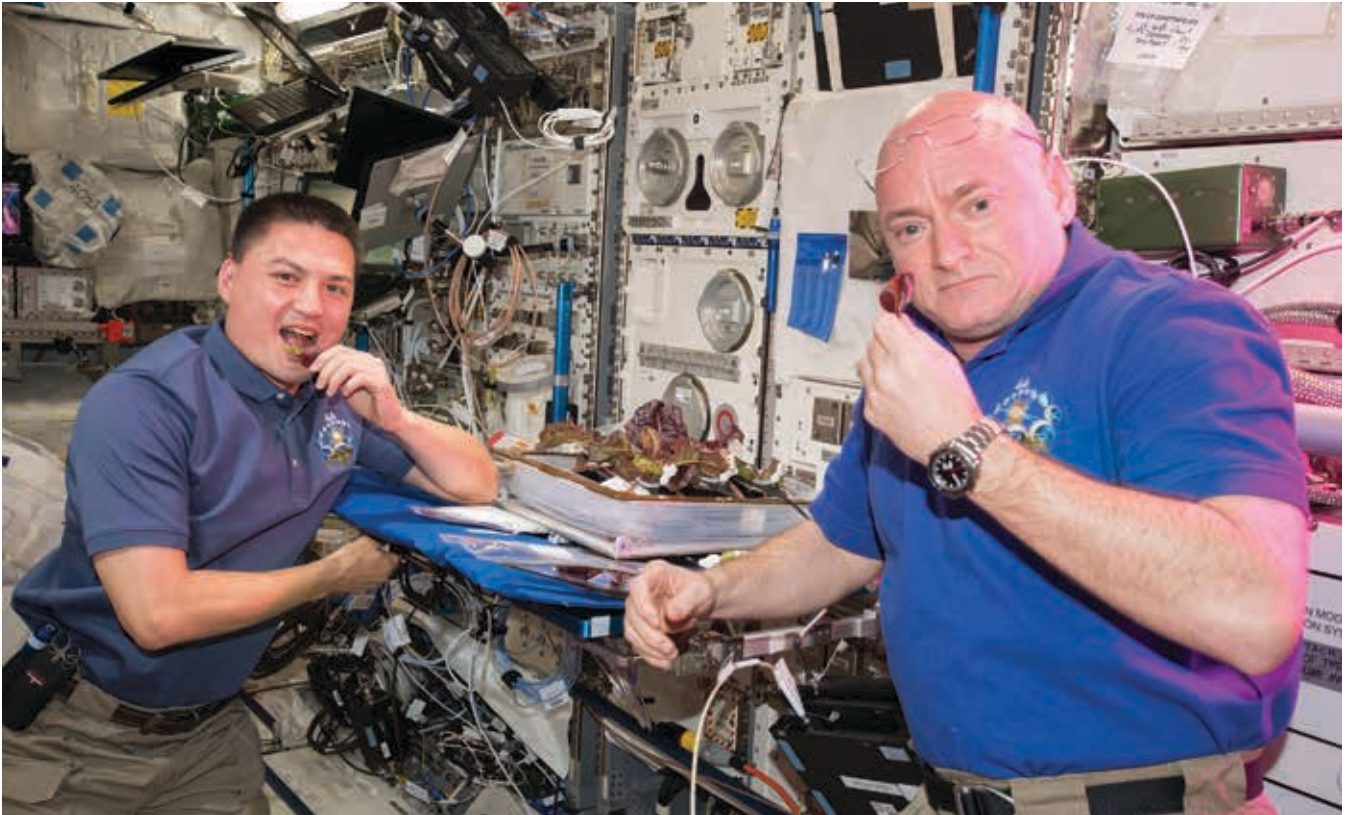
“I grew up on a [dairy] farm in Wisconsin,” says Tibbitts, now an emeritus professor. “The farm was rented out — I only milked the cows once or twice in my life. But I did work around the farm in the summertime for money — driving tractors, baling hay.”

Those experiences helped push the young Tibbitts toward the College of Agriculture when he arrived on the UW campus in 1946. He earned his undergraduate degree in agronomy, continuing on for advanced degrees in horticulture. After a stint in the army, he was hired by the university to research tobacco before being transferred to study the cause of tipburn, a condition that makes head lettuce unmarketable.

But funding from the lettuce industry was scarce. It was the Apollo era, and NASA was considering growing lettuce on the moon, so Tibbitts turned to the space agency in hopes of securing money for his research. While searching for NASA connections, Tibbitts met Sam Johnson, a space biologist at the North American Aviation Company, an aerospace contractor based in Los Angeles. The two began planning an experiment to test how zero gravity alters plant growth.

By 1967, a number of organisms had been sent





*In 2015, astronauts Kjell Lindgren (left) and Scott Kelly sampled red romaine lettuce from the Veggie plant growth chamber on the International Space Station.*

on brief spaceflights, primarily to test the effects of cosmic radiation on life. Few experiments were exploring how organisms behave when gravity is ripped away. To get at these behavioral changes, Tibbitts and Johnson turned to pepper plants. As these are compact plants with broad leaves, several could fit into a tight space. The plants' leaves normally stretch out perpendicular to gravity, and the team planned to use a camera to track the leaves' position in zero gravity.

That September, the UW researchers strapped nine Yolo Wonder bell pepper plants into a 957-pound biological laboratory named Biosatellite II, which carried 13 experiments in all. The lab was launched on a Delta rocket from Cape Kennedy, Florida. For 45 hours, the plants orbited Earth. When a tropical storm approaching Hawaii threatened the planned recovery, the laboratory was instructed to reenter Earth's atmosphere early. An Air Force plane captured the capsule as it parachuted over the Pacific Ocean and flew it to Hawaii.

There, Tibbitts waited. As with the tiny potatoes three decades later, the results were obvious as soon as the capsule was opened. The plants' leaves, outstretched at launch, had drooped during orbit, offering one of the first insights into how plants respond to weightlessness.

The same year, the university opened the Biotron, a state-of-the-art, controlled-growth facility. Designed to provide climates ranging from below zero to 100-plus degrees Fahrenheit, the Biotron allowed scientists to strip away variability and tinker with different growing conditions.

Tibbitts quickly moved in, becoming the first

plant scientist in the new facility. Working in the Biotron, he established himself as an expert in the precise control of plant-growth conditions, vital experience for his space-shuttle work. He was named director of the Biotron in 1987 while working on Astroculture.

That work also helped Tibbitts figure out how much space is needed for self-sufficient missions. He helped establish for NASA that 20 square meters of garden space are needed to keep a person alive. "This would provide them all the oxygen they need. It'll provide all the water they need. And it'll provide all of the energy needs, but not a balanced diet."

That size is several times larger than even Sierra Nevada's ambitious Astro Garden system in development, but Tibbitts and Gilroy are confident that in the near future — for space programs, this might mean decades — longer-term bases will be established, first in geostationary orbit, then on the moon or Mars. In many ways, Gilroy says, despite the enormous distance and other challenges, Mars provides an opportunity for the most Earth-like plant-growing systems. That's in large part because Martian gardeners could rely on having about one-third of Earth's gravity — possibly enough to keep plants growing normally.

Gilroy likens space travel today to the age of discovery on Earth, with explorers staring at horizons, unsure of what lies beyond, but eager to sail forward.

"We're at the point of people jumping into boats," he says, "and just going." ●

*Eric Hamilton is a science writer for University Communications.*

# On Alumni

Alumni News at Home and Abroad

## Visits via Podcast: Alums You Should Know

JEFF MILLER



*Bud Selig, left, shares a laugh with Chancellor Rebecca Blank at an event welcoming him to the UW's history department.*

If you'd like the inside scoop on prominent alumni such as football phenom **J. J. Watt x'12** or leading Native American activist **Ada Deer '57**, check out the Wisconsin Alumni Association's *Thank You, '72* podcast. (Many of the featured Badgers grew up in one of Wisconsin's 72 counties before graduating and going on to change the world.) New podcast episodes this spring include interviews with:

- *Wall Street Journal* sports columnist **Jason Gay '92**, whose flair for the funny has made him a reader favorite. Gay often wears his red-and-white colors on his sleeve in columns such as "Yes, to Save the World, Wisconsin Really Needs to Beat Michigan." During his podcast, Gay discusses his most- and least-favorite sports interviews, his unlikely journey from political science major to writing for one of the world's most prestigious newspapers, and the wild world of sports parents behaving badly.
- **Allan "Bud" Selig '56**, whom you can thank for returning Major League Baseball to Wisconsin 50 years ago — and for changing the very game itself. Selig, who grew up in Milwaukee, learned about business from his dad, but it was his mom who fostered his love of baseball. Selig bought the Seattle Pilots out of bankruptcy in 1970 and renamed the franchise for an old Milwaukee minor league team that he watched as a child, the Milwaukee Brewers. Later, Selig became the commissioner of Major League Baseball and guided the sport through labor strife, drug problems, and a business model that was about to put baseball as we know it out of business.
- **Hans Obma '02**, who uses his exceptional ability with languages and accents to play a variety of characters in an acting career that has recently taken off. The La Crosse native describes his facility with accents as "kind of my superpower." In 2018, he landed an exciting role, playing a German named Adrian on the hit AMC drama *Better Call Saul*. Obma has played everything from a crooked Hungarian businessman to a Czechoslovakian warlock to a French war hero. He's recently finished filming his first role as a leading man in an independent film.

Visit [thankyou72.org](http://thankyou72.org) to listen to more from these alumni and others like them.

TOD PRITCHARD



### Congrats, Young Alumni!

The Forward under 40 Award honors young alumni for their contributions to the Wisconsin Idea. The 2020 honorees are:

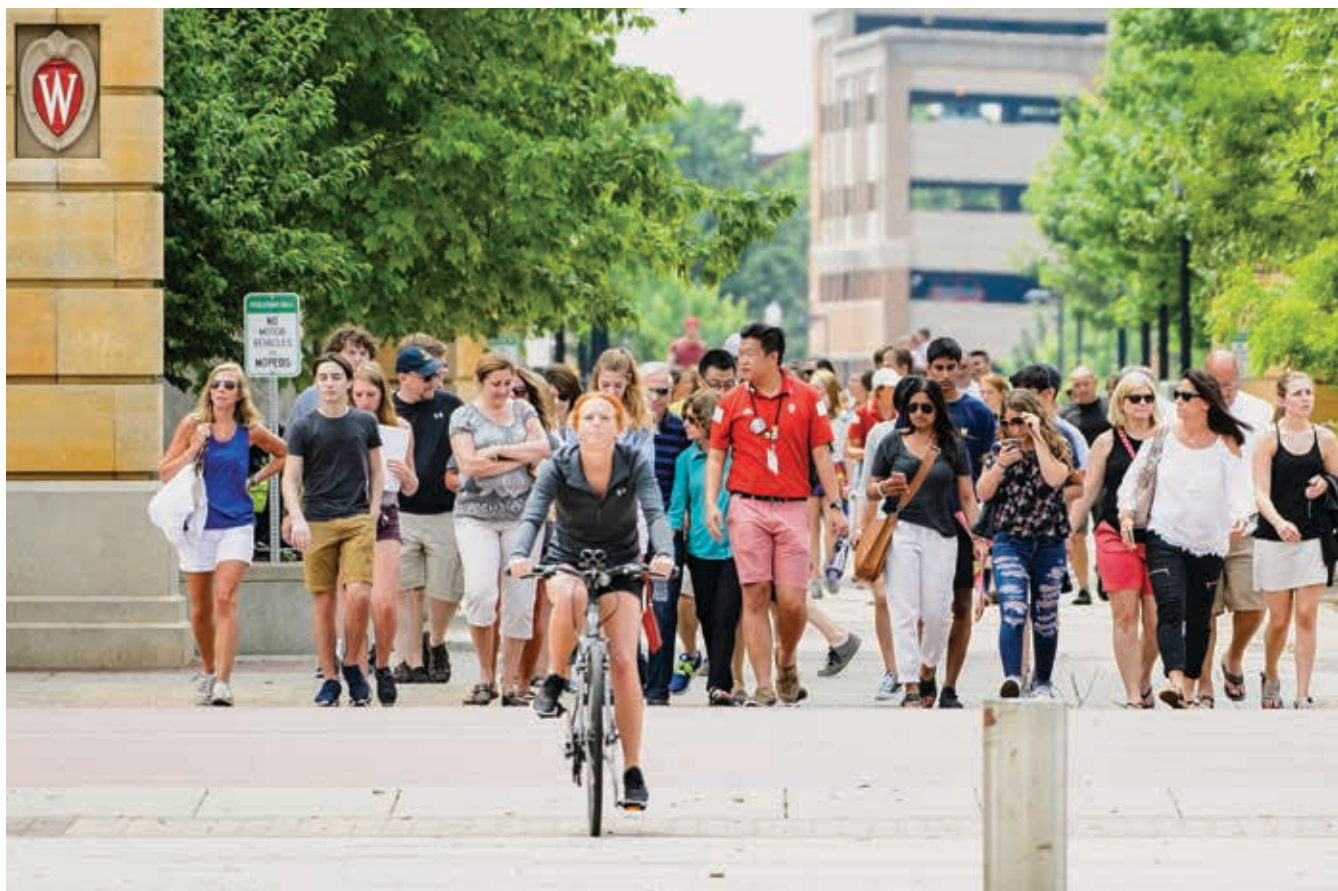
- **Mehrdad Arjmand MS'13**, PhD'17 and **Aaron Olson '12**, MS'14, PhD'18, founders of NovoMoto
- **Jayeesh Bakshi MS'14**, director of sales and marketing, Radium Incorporated
- **Erin Banco '11**, journalist, the Daily Beast
- **Kiana Beaudin '10**, MPA'15, executive director of health/medical provider, Ho-Chunk Nation Health Department
- **Scott Colom JD'09**, district attorney, 16th Circuit Court of Mississippi
- **Kristian Johnsen '07**, improved avionics intermediate shop section chief, United States Air Force

**More Podcast Headliners**  
Mildred Fish Har-nack '25, MA '26  
Warren Knowles LLB'33  
Gillian Laub '97  
Meinhardt Raabe '37  
Bill Schultz '48, MS'50  
Randall M. Scoops  
Daniel Speckhard '80, MA'82, MS'83  
Joseph Sullivan '38, LLB'41  
Tommy Thompson '63, JD'66  
Greta Van Susteren '76

### The UW Comes to You

It's springtime, and that means it's time for UW Super Founders' Days and UW Now events. Visit [allwaysforward.org/uwnow](http://allwaysforward.org/uwnow) to see when events are scheduled in your area.





BRUCE RICHTER

How do you sell the spacious UW–Madison campus to a stranger in just 75 minutes?

That’s the tall order for the university as it receives record numbers of student applications and visitors. Last year, some 46,000 prospective students and family members went on the UW’s official campus tour.

“The tour is one of the most — if not the most — important parts of the college decision process,” says **Nancy Hoffman ’96, MS’03**, director of Campus and Visitor Relations, which organizes the visits in partnership with the Office of Admissions and Recruitment.

Campus tours have likely existed in some form since the beginning of the university, says **Greer Davis**, associate director of communications for the admissions office. For decades, the sprawl of campus has provided a distinct challenge. A tour booklet from the 1960s suggested

Last year, some 46,000 prospective students and family members went on the UW’s official campus tours, led by highly trained undergraduates.

that “a stroll across the Madison campus ... requires a stout pair of shoes and the sort of leg muscles Wisconsin students soon develop.”

Today, the main campus spans 936 acres, which puts limits on what visitors can see and do in just over an hour. The 1.5-mile walking tour circulates through campus staples — Memorial Union, the Terrace, Library Mall — as well as a residence hall, library, several classroom buildings, and a historical marker that recognizes the land as the ancestral home of the Ho-Chunk people and acknowledges their forced removal.

The university’s foundation was built atop Bascom Hill, where the steep slope offers a beautiful vantage point but makes travel troublesome. The university arranges an alternative route to accommodate visitors with accessibility needs. “Our goal is to be universally accessible,” Hoffman says, adding that other plans

include offering multilingual and virtual-reality options and sharing more stories about historically underrepresented students.

April, July, and October are the busiest months for tours, with as many as 3,000 visitors per week. Participants are split into small groups and matched with a tour guide. The guides — highly trained undergraduates — have required talking points but are encouraged to improvise and add personal touches. Their challenge? To bring a magical campus and its robust opportunities to life, even when it’s below freezing.

Tour guide **Emily Cerbins x’20** remembers two California parents who insisted that none of their children would want to attend a university that gets snow in April. “But by the end of the tour,” she says, “their daughter told me she had fallen in love with the campus.”

**PRESTON SCHMITT ’14**

## 40s-60s

Thank you, **Eileen Martinson Lavine '45**, for writing to us! She appeared in the Class Notes section of the Winter 2019 issue and has clarified that she was not the first woman editor of the *Daily Cardinal*, as we stated. Rather, she was the first woman to complete a full year as editor of the newspaper. Three women served before her, but each for only a few months. She also let us know that she was president of Information Services, an editorial company in Bethesda.

**Bob Espeseth '52, MS'56** of Savoy, Illinois, has enjoyed volunteering before and after retirement. He has been recognized as volunteer of the year at the local, state, and national levels — for the Retired Senior Volunteer Program, Illinois Association of Park Districts, and the National Association of County Park and Recreation Officials, respectively.

Hearty congrats to former “Rosie the Riveter” **Ione Shadduck '58** of West Des Moines, Iowa, who was inducted into the Iowa Women's Hall of Fame in August. According to the *Des Moines Register*, she quit her first job when her employer declined her request for equal pay, tested steel drums during World War II, and joined the Women's Army Corps during the Korean conflict. Under the GI bill, Shadduck earned a degree in physical education at the UW. She later earned a doctorate and led the women's physical education program at Drake University, where she advocated for the transition from six- to five-player girls' basketball in Iowa. She went on to become an attorney and a founding member of the Iowa Women Attorneys Association.

**Naima Wallenrod Prevots MS'60** of Washington, DC, was presented with the 2019 Lifetime Achievement Award from the National Dance Edu-

cation Organization in October. Prevots is a professor emerita at American University, where she served as director of dance for 34 years and chair of the Department of Performing Arts for three years. Among her many accomplishments, she studied at Juilliard, cofounded a dance company, and played a crucial role in creating American University's Department of Performing Arts.

**Daniel Freedman MS'62, PhD'64**, a professor emeritus in the Massachusetts Institute of Technology's Departments of Mathematics and Physics and a visiting professor at Stanford University, is a recipient of the Special Breakthrough Prize in Fundamental Physics along with colleagues Sergio Ferrara of CERN and Peter van Nieuwenhuizen of Stony Brook (New York) University. Previous recipients of the award include Dame Jocelyn Bell Burnell and the late Stephen Hawking. The three developed the theory of supergravity and share the \$3 million prize.

Last year, **Kurth Krause '62** of Rancho Mission Viejo, California, attended the 50th anniversary celebration of the Apollo 11 moon landing. The event was held at the Space Center Houston, and NASA escorted Krause — who had been in mission control during the landing — and his wife, **Susan Firle Krause '62**, to the mission control center at the adjacent Johnson Space Center. He will also be publishing a second edition of his book, *My 36 Years in Space: An Astronautical Engineer's Journey through the Triumphs and Tragedies of America's Space Programs*.

Former U.S. Army officer, U.S. Navy civilian, and U.S. Coast Guard civilian **Jonathan Berkson MS'69, PhD'72** has retired from his position as the Coast Guard's marine science program manager after a nearly 50-year career serving the

**BOOK NEWS?**  
See page 61.

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To submit an obituary, please see page 60.

nation. His retirement ceremony was held at the U.S. Coast Guard Headquarters in August, when he earned both the Distinguished Career Service Award and the Civilian Service Commendation Medal.

**Marc Staenberg '69** retired as CEO of the Beverly Hills Bar Association and Foundation (BHBA) at the end of 2019. The Los Angeles resident was appointed CEO in 2004 and was named CEO emeritus upon his retirement. A member of the BHBA since the mid-1980s, Staenberg previously volunteered as chair of the Entertainment Law Section, a board member, and an officer — including president. He was also a private practice entertainment attorney, an attorney adviser in the Department of Defense, and a senior attorney with the U.S. Nuclear Regulatory Commission.

## 70s

Following a career in the food industry, **Laura Schwable Jaffe '70** of Katonah, New York, has become the first treasurer on the board of directors for Campus Bound Scholars. Its mission is to provide a mentor, a scholarship, and dorm supplies to first-generation college students, and, so far, it has mentored more than 45 scholars.

**Arie Galles MFA'71** has retired as professor emeritus of painting and drawing at Soka University of America in Aliso Viejo, California. He was also named artist-in-residence at the university.

**Robert Josephberg '72** has been inducted as an original member of the American Society of Retina Specialists' Retina Hall of Fame. He is the chief of the Retinal Division at New York Medical College — a post he's held for the past 25 years. During a retinal fellowship at the Baylor College of Medicine, Josephberg was mentored by **Alice McPherson '48, MD'51**, who is



a founder of the UW's McPherson Eye Research Institute.

Kudos, **Bonnie Cooper '73**, for earning the 2019 Canadian Dairy Cattle Improvement Industry Distinction Award, presented by Lactanet Canada. A resident of North York, Ontario, Canada, she is the 11th recipient of the award and the first woman to be honored. Cooper served as an editor at the *Holstein Journal* for more than 45 years — one of only two editors in the magazine's 81-year history. She was also secretary of the Curtis Clark Achievement Award Committee for 25 years.

If you've attended a Milwaukee Brewers game in recent years, you can thank **Michael Dillon '73** for the well-loved Racing Sausages. A graphic designer, Dillon created the first three costumes based on the cartoon characters that used to appear on the stadium's jumbotron. In June 1993, he put on his bratwurst costume for the first time to compete against the Italian and Polish sausages. "They started that sausage race on the jumbotron, and then the cartoon stopped and went blank. And the gate swung open and the crowd went insane," Dillon told WUWM 89.7, the Milwaukee NPR affiliate, in July of last year.

**Stuart Brotman MA'75** has been serving as a fellow at the Woodrow Wilson International Center for Scholars in Washington, DC, during the 2019-20 academic year. Based in the center's Science and Technology Innovation Program — which states on its website that it aims to understand "bottom-up, public innovation [and] top-down, policy innovation" — Brotman focuses on digital privacy policy issues.

**Jean Dibble '79, MFA'88** has been named professor emerita upon her retirement from the University of Notre Dame's Department of Art, Art History, and Design. She has a



SCOTT SUCHMAN

### DEFENDING A 9/11 SUSPECT

Defense attorney **Edwin Perry '97** understands that most Americans don't sympathize with the five men who are facing trial, and potentially the death penalty, for allegedly plotting the terrorist attacks on September 11, 2001.

"But as Americans, not only should we be concerned about bringing terrorists to justice, we should be concerned about what our government does in order to effect that justice. We have to decide what kind of republic we want to have," says Perry, who represents one of the accused.

The trial is scheduled for January 2021. It has been delayed for many reasons: The suspects were held by the U.S. government in detention for years before being charged or given attorneys; the Obama administration tried to get the case moved from a military court to a standard civilian court; and, since being arraigned in 2012, the defendants have been the subject of dozens of complicated pretrial hearings.

Perry worked for 12 years as a federal public defender in Memphis, Tennessee, before being hired in 2015 as one of the civilian attorneys representing Walid bin Attash. Attash is one of the men charged as a coconspirator with Khalid Shaikh Mohammed, who is accused of orchestrating the attacks that killed nearly 3,000 people in New York, Washington, and Pennsylvania.

The five men were captured in Pakistan in 2002 and 2003. According to lawyers, they were held incommunicado in CIA prisons and subject to waterboarding, sleep deprivation, and other ill treatment before being delivered to the detention center at Cuba's Naval Station in Guantánamo Bay in 2006.

The trial will take place in front of a military judge and a jury chosen from military officers at Guantánamo Bay.

"If a federal judge determined that the government had tortured the defendant for about three years and then decided to charge him eventually with a crime, I think a federal judge would likely dismiss the charges — or, at a minimum, suppress any statements made by that defendant," says Perry. It still hasn't been determined how much information gathered through torture will be allowed at the trial. "But that's very much an open question in military commissions, which makes it a court of dubious constitutional foundation," he says.

The bottom line is that the trial, in Perry's view, will not be what most Americans would expect.

**TOM KERTSCHER '84**

MOE ALVASINI



## TRADING RACKETS FOR REALITY TV

Life in a house full of millennials in the Hamptons might seem like the ultimate challenge on Bravo's *Summer House*, but cast member **Hannah Berner '13** came to the role well prepared. A lifelong athlete, four-year veteran of UW–Madison women's tennis, and fiend for the camera — both in front of and behind it — Berner is all too familiar with life's highs and lows, and she has made a career of reflecting on them.

After nearly 15 years in tennis, Berner passed

on the pro tour after college and, like many athletes who choose not to go pro, she was left with an unfamiliar freedom that had her feeling lost.

"I just felt very empty after college. I didn't feel like I had a purpose," Berner says. She felt like a failure and wondered if there was more to life than tennis.

Spoiler: there was. Berner bounced around digital marketing jobs in her hometown of New York City, craving the rush she'd felt on the tennis court. But the jobs didn't fulfill her need to create.

That's when her brief undergraduate broadcasting experience with the UW Athletics Communications Department came into play. It helped her land a job heading the video production department for the millennial media company Betches, where she wrote and produced short comedy videos that quickly went viral. This exposure led to a casting on *Summer House*.

"I wanted to go on reality TV not to show off or act like I'm better than anyone else, but rather to show people my vulnerabilities so that other people can understand, can relate to me, and we can learn from each other," she says.

Berner is also the creator and host of the podcast *Berning in Hell*, which she uses as a platform to start conversations about successful people's fears and failings. The podcast, which she calls her "passion project," has allowed her to show that there's not much difference between those who succeed and those who don't.

"Sometimes it's just how you speak to yourself and how you control your own mind instead of letting it control you," she says.

Berner adds that being true to herself has been key to a happy life.

"Just because you're really good at something, like tennis or sales, doesn't mean it's what makes you happy," she says. "It was a process of learning what I really wanted, and then it's a choice of self-love to then act on it."

**MEGAN PROVOST X'20**

new studio in Colorado, where she continues to create art.

In September, attorney and community activist **Roy Evans JD'79** — who has more than 40 years of civic-minded service and experience — was presented with a 2019 Frank P. Zeidler Public Service Award in the Vel R. Phillips (LLB'51) Ante Chamber at Milwaukee's City Hall. In addition to his law practice, Evans is chair of the City of Milwaukee Board of Review and a member of the State Bar of Wisconsin's Alternate Dispute Resolutions Board. He has been recognized by the *Milwaukee Community Journal* as one of the top 100 most influential African Americans in the city, and the *Milwaukee Times* has honored him with its Black Achiever Award. Exercising his passion for teaching, Evans teaches at and visits local schools to speak about obstacles he encountered growing up.

**Tim Pagel '79** of Jupiter, Florida, is pursuing two of his passions — sports and the arts — after retiring from NextEra Energy, where he led corporate executive and sustainability communications. He's worked in field operations at FITTEAM Ballpark of the Palm Beaches, where the Houston Astros and the Washington Nationals have spring training. He also works in security for LiveNation at its Coral Sky Amphitheatre in West Palm Beach, is a volunteer usher and bartender at the Maltz Jupiter Theatre, and serves in a leadership role on the scholarship committee for the Palm Beach chapter of the Wisconsin Alumni Association.

## 80s

The History of Science Society has bestowed its 2019 Joseph H. Hazen Prize for excellence in education on **Michael Osborne MA'81, PhD'87**, professor emeritus of history of science at Oregon State University. Also receiving recognition from the society was



**Michael Robinson MA'96, PhD'02**, professor of history at the University of Hartford (Connecticut), who earned the 2019 Watson Davis and Helen Miles Davis Prize for best book for a general audience in the previous three years, *The Lost White Tribe*. And **Megan Raby PhD'13**, associate professor at the University of Texas–Austin, earned the 2019 Philip J. Pauly Prize for the best first book on the history of science in the Americas, *American Tropics: The Caribbean Roots of Biodiversity Science*. The UW group received the awards in July at the society's meeting in Utrecht, Netherlands.

After 27 years, **Makram Murad-al-shaikh MS'83** has retired from his position as a geographic information systems (GIS) and cartography instructor at Esri, an international supplier of GIS software. He continues to teach cartographic design courses using GIS software at the University of California–Riverside. “I am eternally indebted to the high-caliber education that I had under some of the [most] elite cartography professors in the world at UW–Madison,” he writes.

**Steven Baron '84** has recently helped launch the law firm Baron Harris Healey in Chicago, and its practice includes areas such as advertising and marketing, media and the First Amendment, intellectual property, and e-commerce. For more than 30 years, Baron has counseled businesses on intellectual property matters and helped resolve disputes.

The American Association for the Advancement of Science (AAAS) has awarded **Patrick Coaty '84** with an AAAS Science and Technology Policy Fellowship, which placed him in the U.S. Department of State. He is among nearly 280 scientists and engineers who are spending a year serving in federal agencies and congressio-

nal offices, furthering AAAS's mission to advance science and serve society while also supporting evidence-based policymaking. Coaty was previously a political science professor at Orange Coast College.

Two doctors with a passion for homebrewing, a former professional cyclist, and an entrepreneur walk into a bar and start a brewery. Okay, that's not *quite* how they started, but **Jimmy Gosset '86, MD'90; Scott Kelley '90; Nick Reistad '06;** and Kevin Brandenburg decided they needed to open a brewery after meeting over beer — a red Imperial India Pale Ale (IIPA) that the doctors produced. Since the group opened Raised Grain Brewing Co. four years ago, it has seen significant growth at its Waukesha, Wisconsin, location, and has now expanded to the Madison area. The kicker? Their original red IIPA won the gold medal at the 2016 Great American Beer Festival.

**“I felt proud that I finally used my disability to potentially help other young students with disabilities.”**

Ashley McGoey '18 writing for hearoclub.com in October

### 90s

In November, **Kim Anderson Sponem '90**, president and CEO of Summit Credit Union in Madison, was inducted into the Credit Union Executives Society's (CUES) 2019 Hall of Fame in honor of her achievements and dedication to the credit-union movement. She was selected by the board of directors at CUES, which has more than 22,600 members and a mission to develop credit-union leaders.

Wisconsin Cheese Mart owners **Melissa Morkri McNulty '91** and **Kenneth McNulty '92**, whose original store is located in Milwaukee, have opened a second store on State Street in

Madison. The couple met while attending the UW, married in 1993, and purchased the company — which started in 1938 — from its previous owner in 2003. Today the company ships cheese around the nation.

The Wisconsin Agricultural and Life Sciences Alumni Association (WALSAA) presented its fourth Daluge Red Jacket Award to **Marjorie Stieve '91** in September, recognizing her support for the association. Stieve, a former WALSAA president, helped establish the association's Impact Grants for members of College of Agricultural and Life Sciences student organizations and is credited with naming the very “Red Jacket” award she's earned. Stieve resides in Baraboo, Wisconsin, and is a marketing services manager and employee owner at Vita Plus.

**Geoffrey Bradshaw MA'94, PhD'97** has been named the dean of international education at Madison College (formerly Madison Area Technical College). He began his career there in 1997 after earning his doctoral degree in cultural anthropology and previously served as director of the college's Center for International Education.

**Matt Miszewski JD'95** has been appointed the CEO of AkitaBox, a facility management software provider that supplies services throughout the United States. Before joining AkitaBox, Miszewski worked for Microsoft, Salesforce, and the State of Wisconsin. Most recently, he was the chief revenue officer for Socrata.

**Diana Moran Thundercloud MS'95**, a doctoral student at Edgewood College in Madison who focuses on Native leadership and community-based programs, was selected as the 2019–20 Community Fellow for the college's Graduate Social Innovation and Sustainability Leadership Program. Among her accomplishments, she has consulted with faculty and

**WELCOME, ALL!**  
The Wisconsin Alumni Association (WAA) encourages diversity, inclusivity, nondiscrimination, and participation by all alumni, students, and friends of UW–Madison in its activities.

staff on Native Indigenous curriculum and pedagogy for a master's-level program, conducted research in Chile on Native Indigenous rights and migration issues, and was invited to teach a course at UW-La Crosse.

Congratulations to University of Georgia professor **John Knox PhD'96**, who received two honors at the 100th annual meeting of the American Meteorological Society (AMS) in January. He earned the Edward N. Lorenz Teaching Excellence Award, a top teaching award in the country for meteorology instructors, and he was inducted as a fellow of AMS.

Last August, **Douglas Kratt DVM'98** was named president-elect by the American Veterinary Medical Association (AVMA). He is a small-animal practitioner from La Crosse, Wisconsin, where he serves as president of the Central Animal Hospital. Prior to his election, he was Wisconsin's delegate in the AVMA House of Delegates and president of the Wisconsin Veterinary Medical Association.

**"I am eternally indebted to the high-caliber education that I had under some of the [most] elite cartography professors in the world at UW-Madison."**

**Makram Murad-al-shaikh MS'83**

**Tim Mattke '98, MAC'99** has been promoted from chief financial officer to CEO at MGIC Investment Corp., a mortgage insurer based in Milwaukee. He joined MGIC in 2006 and previously worked as an audit manager with PwC (formerly PricewaterhouseCoopers LLP).

Poet **Sarah Passino '98** of Brooklyn, New York, is one of six recipients of the 2019 Rona Jaffe Foundation Writers' Award, which recognizes extraordinary women writers early in their careers. Passino's

poems have appeared in publications such as *Brooklyn Rail* and *Boston Review*, and she recently published the book *Versioning Sappho Versioning*. She was a Poets House Fellow in 2018 and earned the 92nd Street Y Rachel Wetzsteon Poetry Prize in 2017.

**Celena Roldan '98, MS'00**, CEO of the American Red Cross of Chicago and Northern Illinois, has been included on the list of "Most Powerful Latinos in Chicago" by *Crain's Chicago Business*. In 2017, she traveled to Houston after Hurricane Harvey to help undocumented Latinos who avoided shelters and food banks for fear of being arrested — an experience that led her to create the Latino Engagement Initiative, a national program for disaster support. Her Red Cross region is one of the largest in the nation, serving about 9.5 million people each year.

Madisonian **Ellen Mer-ten Carlson '99** was one of 13 honorees at the 2019 Governor's Service Awards ceremony, which celebrates those who help address social needs in Wisconsin. She earned the AmeriCorps VISTA Alumni of the Year award for her ongoing service. She previously served in the Schools of Hope Literacy Project and has worked for Middleton Outreach Ministry — where she is now executive director — since 2002.

## 00s

**Patricia Hannon MM'00** is one of five recipients of the 2020 Horace Mann Award for Teaching Excellence and, as a result, is a finalist for the 2020 National Education Association (NEA) Member Benefits Award for Teaching Excellence (for which the winner was announced after press time). Hannon is a reading specialist at Hohenfels Elementary School in Germany and a member of the Federal Education Association, a state affiliate of NEA and Hannon's nominator. Some of Hannon's innovative

teaching techniques include incorporating music and movement into reading lessons.

Well, this is certainly a love story unlike any we've heard. During a recent visit to campus, husband and wife **Chris (Christian) '00** and **Eve Sauer '00 LeBarton** saw a clump of paper towels sitting on a window ledge on W. Gilman Street. These weren't just *any* paper towels. Chris had put them there during his senior year 20 years prior, tossing the soaked wad from his porch to his neighbor's (Eve's) window in an effort to get her attention at a time when cell phones weren't yet popular (and the broken buzzer at her apartment forced him to get creative). It worked; the couple met and started dating, and today they are happily married with two kids. As for the sturdiness of those paper towels? We'd really like to know what brand those were, Mr. LeBarton.

Last June, **Rajesh Rao '00**, a retinal surgeon and physician-scientist, was installed as the first Leonard G. Miller Professor of Ophthalmology and Visual Sciences at the University of Michigan. Among his accomplishments, Rao has earned awards and grants from Research to Prevent Blindness, the E. Matilda Ziegler Foundation, and the Knights Templar Eye Foundation, and he became the youngest member inducted into the Macula Society for research in retinal, vascular, and macular diseases.

**Ahna Skop PhD'00; Olivia Castellini MA'01, PhD'04; Jessica Fagerstrom MS'08, PhD'17; and Ana Maria Porras MS'13, PhD'16** are among 125 women named by the American Association for the Advancement of Science and Lyda Hill Philanthropies as IF/THEN Ambassadors. The national initiative aims to further women in STEM fields by empowering innovators and highlighting role models for middle school girls.



**Noelle O'Mara '01** is now the president of the prepared foods segment at Tyson Foods and is based in the company's Chicago office. She joined Tyson Foods in 2016 as vice president of new business models and was promoted to chief marketing officer in 2019. In her new role, she has oversight of some of Tyson Foods' manufacturing facilities and manages the company's \$9 billion prepared-food business, which includes brands such as Tyson, Jimmy Dean, and Hillshire Farm. O'Mara previously worked for Kraft Heinz.

**Lori Leonard '02** of Reno, Nevada, is a restoration technician at global environmental nonprofit the Nature Conservancy and a graduate student in Miami University's Global Field Program. She recently studied coral reefs, manatees, jaguars, and other wildlife while learning methods communities are using to sustain them in Belize. In other conservation news,

**Riley Hamrick '16** of Denver, a graduate student in Miami University's Advanced Inquiry Program and an ophthalmic technician at Children's Hospital Colorado, studied Borneo's primate denizens, including orangutans, last summer. Hamrick developed new ways to engage communities across the globe in primate conservation.

**J. Griffith Rollefson PhD'09**, a professor of music at University College Cork, National University of Ireland, has launched *Global Hip Hop Studies*, the world's first academic journal of international hip-hop music, culture, and politics, according to the university. The journal is one of the primary outputs of his five-year, €2 million EU grant for the International Council for Hip Hop Studies: Hip Hop Interpellation project. He also delivered a keynote with rapper and collaborator Juice Aleem at the conference where the journal was launched.



FRANK WOODBERRY

### SUPPORTING STEM STUDIES

The next time you take vacation photos on your phone or store homework on a flash drive, you can thank **Jeff Kessenich '83**.

His name is on 11 patents issued for the memory chips that improve storage reliability in smartphones, digital cameras, and other devices. Kessenich used his UW degree in Applied Mathematics, Engineering, and Physics to pursue a career in the semiconductor industry, eventually retiring from Micron Technology.

"I feel very fortunate to have had the opportunity to collaborate on projects with so many intelligent and incredibly talented individuals," he says. "Often I felt like we were writing a new page in the textbooks every week."

Kessenich is now on a mission to help today's students launch their own careers in technology. He has pledged an estate gift of \$1 million to need-based scholarships for students in mathematics, computer science, and data science. Thanks to the Patterson Match, a generous gift from James Patterson and **Susan Patterson '79, MFA'82** that underwrites student support, an endowed scholarship was created in Kessenich's honor.

After he retired, the Vancouver, Washington, resident taught briefly at a community college. He came away from the experience struck by how hard it was for many students to pay for an education. "If students really want to go to college, I don't want them dissuaded by the fear of taking on a large amount of student loan debt," he says. "I feel good doing something about that."

Kessenich says he could have directed his gift to a number of universities, "but I have a soft spot for Wisconsin, and I value the education I got there."

Kessenich's desire to give back extends to numerous initiatives in his local community. He tutors disadvantaged high school students in math. A master gardener, he's a neighborhood tree steward and also a "stream steward." Kessenich has received an award for his work in tree planting and natural area restoration, as well as for volunteering at a cat shelter.

When we spoke with Kessenich, he was wearing a UW T-shirt because the hockey team was playing that day. "I'm always supporting my Badgers," he says.

**NIKI DENISON**

## 10s

**Sarah Brunnquell Davidson '10** is owner of Monona, Wisconsin-based Harmonious Union Events, which celebrated five years in February. She and her business were honored last year with the Wedding of the Year award (\$50,000–\$100,000 budget) from the National Association for Catering and Events, recognizing the talent and work that Davidson put into producing and executing a 2018 wedding in Elkhorn, Wisconsin. The wedding was one of seven category nominees nationwide.

Last September, **JT (John) Roach '10** appeared on — and won — the season finale of NBC's *Songland*. During the episode, he performed a song he wrote, "Somebody to Love," for OneRepublic, competing against other songwriters in hopes that the band would choose his song as its next hit. After selecting Roach's song, the band performed it at Red Rocks in Colorado. "It is a magical song," said Ryan Tedder, OneRepublic's lead vocalist, during the episode. "I know we're sitting on a hit."

A Badger pat on the back goes to **Greg (Guoliang) Liu PhD'11**, an assistant professor in Virginia Tech's Department of Chemistry. Liu earned the three-year Blackwood Junior Faculty Fellowship of Life Sciences from the Virginia Tech board of visitors, and it will support him in advancing the life sciences with a complementary focus on developing business and entrepreneurial opportunities. He previously received a CAREER Award from the National Science Foundation, an American Chemical Society Petroleum Research Foundation Doctoral New Investigator Award, and an Air Force Young Investigator Program Award.

**Charles Pellicane '12** has become the director of operations at human-I-T, a nonprofit based in Long Beach, California.

**OBITUARIES**  
Brief death notices for Wisconsin Alumni Association (WAA) members and friends appear in *Badger Insider*, WAA's magazine for its members. You also may submit full-length obituaries (with one photo each) for online posting at [uwalumni.com/go/alumninotes](http://uwalumni.com/go/alumninotes).

The company, which is looking to expand nationally, aims to bridge the digital divide by providing low-income individuals and nonprofits with technology, internet, and digital training. It reuses electronics to reduce waste while also promoting digital inclusion and online access.

Pursuing his longtime interest in craft breweries, certified cicerone **Garth Beyer '14** of Madison opened the doors to Garth's Brew Bar in December. The craft-beer bar, which is located on Monroe Street and mainly focuses on Wisconsin craft breweries, is meant to "feel like a curated experience for folks," Beyer told *Madison Magazine* in August. He is also a public relations and social media account executive at Hiebing.

UW Hospital nurse **Bridget Ravis '16** incorporates her passion for musical theater into her work with patients when she feels it may be helpful in their care. She recently noticed a patient reading a book by *Hamilton* creator Lin-Manuel Miranda and asked if she could sing for her. She later received a message from the patient saying how her singing had helped. "Sometimes I'll find a patient who loves musical theater and is really excited to hear me sing, and then I'll sing to them," she told the *Wisconsin State Journal* last August. "My only job is to meet [the patient] in the space they're in."

Former UW pole-vaulting star **Taylor Amann '18** competed in the national finals of NBC's *American Ninja Warrior* last year. Although she was eliminated in stage one, this isn't expected to be the end of her journey. "I'm definitely going to be back next year," she told the *Milwaukee Journal Sentinel* in September. While a student on campus, she won *Team Ninja Warrior: College Madness* alongside fellow Badgers **Andrew Philibeck '17** and **Zachary**

## Kemmerer PhD'21.

On its website, hearing-aid batteries subscription service hearOclub published a blog post written by **Ashley McGoe '18** of Janesville, Wisconsin, who reflected on her campus experiences with hearing loss and her involvement with the McBurney Speakers Bureau. The bureau, an extension of the UW's McBurney Disability Resource Center, provided McGoe the chance to share her story with teachers in the community. "When I finished speaking," she wrote, "I felt proud that I finally used my disability to potentially help other young students with disabilities." And, she notes, her newfound confidence encouraged her to take on new challenges.

A chemistry teacher at Ripon (Wisconsin) High School, **Rachel Thorson MS'18** has been selected by the Knowles Teacher Initiative as one of its 2019 teaching fellows. The five-year fellowship supports promising high school mathematics and science teachers early in their careers, providing them with access to grants, mentoring, and a nationwide community.

Former UW–Madison First Wave scholar **Mackenzie Berry '19** is one of six people nationwide to earn the Marcus L. Urann Fellowship from the Honor Society of Phi Kappa Phi. Berry, whose work at the UW examined topics such as health-care access in Kentucky and Muhammad Ali's influence on hip-hop, is now at Goldsmiths, University of London to obtain a master's degree in race, media, and social justice. She hopes to pursue "the messy work of seeking equity for marginalized groups in humanizing and feasible ways," Berry told UW–Madison in July.

*Class Notes/Diversions* editor Stephanie Awe '15 is seeking bingeworthy TV recommendations.





## GROWING PAINS; GROWING FRIENDSHIP

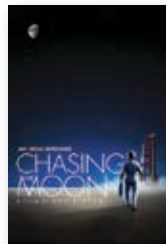
ADRIANNE MATHIOWETZ



Last year, **Elizabeth Ames Staudt '03** of Cambridge, Massachusetts, released her debut novel, *The Other's Gold*. Beginning on a college campus, the book follows the friendship of four women — Lainey, Ji Sun, Alice, and Margaret — as they experience major turning points in their lives.

The friends, who meet during their freshman year at Quincy-Hawthorn College and quickly become inseparable, soon face threats to their bond. In her transition from college to parenthood, each friend makes an awful mistake. The novel dedicates one part to each blunder — “The Accident,” “The Accusation,” “The Kiss,” and “The Bite” — and confronts how growing up forces friendships to evolve.

On a list titled “The 28 Best Books of 2019,” *Elle* ranked *The Other's Gold* as its 11th pick, writing, “The debut novel of the season, *The Other's Gold* reads like an origin story for the women of *Big Little Lies*.” The book has also been reviewed by *Vogue* and *Bustle*, among others. “This novel will resonate with anyone who guards an inner circle forged in dorm rooms and dining halls, but it is also, in the end, more than that,” wrote *Vogue*. And *Bustle* called it “an ode to the turmoil and joy of female friendship, and the perfect book to read with your friends.”



**Leonard Marcus '73, MS'74** is the lead author of *You're It: Crisis, Change, and How to Lead When It Matters Most*, which reviews lessons learned from leaders in difficult times — from the Boston Marathon bombings to Hurricanes Katrina and Sandy. Marcus is codirector of the National Preparedness Leadership Initiative, a program of the Harvard T.H. Chan School of Public Health and the Harvard Kennedy School.

The three-part documentary *Chasing the Moon*, directed by Oscar- and Emmy-nominated filmmaker **Robert Stone '80** of Rhinebeck, New York, captures the race to the moon and includes previously unseen footage. The film premiered on PBS last summer — aligning with the moon landing's 50th anniversary — and is available for purchase on Amazon Prime.

Bassist **Leon Dorsey MM'83**, an associate professor at the Berklee College of Music in Boston, has released the jazz album *MonkTime*. The album debuts Dorsey's DSC Band, which plays compositions by jazz musician Thelonious Monk. At the UW, Dorsey studied under bass legend **Richard Davis**. The album can be downloaded at [leonleedorsey.com](http://leonleedorsey.com).

Perfect for gardening season, *The New Gardener's Handbook* by **Daryl Beyers '89** — an instructor at the New York Botanical Garden — supplies an easy-to-follow, visually instructive planting guide. It describes what goes into thriving gardens and provides readers with everything they need to know about growing both food and flowers.

Children's book author and former federal Indian law attorney **Traci McClellan-Sorell JD'01**, who lives in Oklahoma, helped write *Indian No More* with the late Charlene Willing McManis. The middle-grade novel, inspired by McManis's own tribal history, features 10-year-old Regina Petit of the Umpqua tribe. Her family faces conflict when the federal government enacts a law saying the tribe no longer exists.

*Hello Girls*, coauthored by *New York Times* best-selling author **Brittany Cavallaro MFA'11** of Elmhurst, Illinois, is a young-adult novel reminiscent of *Thelma and Louise*. Two teenage girls, Winona and Lucille, have had enough of the controlling people in their lives — Winona's father and Lucille's mother and brother — and take charge. They plan an escape from Michigan to Chicago, but can they pull off the daring adventure?



UW ARCHIVES S16374

A pioneer in the study of freshwater ecology, **Arthur Hasler PhD'37** carried on the University of Wisconsin traditions of curiosity and conservation for four decades, discovering new ways to conduct research and pushing to protect our natural resources.

A key figure in advancing the study of limnology at the university, Hasler influenced how we study aquatic ecosystems, pollution control, and wildlife management around the world.

Hasler arrived in Madison in 1932 to study under **Chancey Juday**, pioneer of lake science research along with **E. A. Birge**. He took a few sabbaticals after earning his PhD in zoology, serving as an analyst with the Air Force Strategic Bombing Survey in Germany in 1945 and returning a decade later as a Fulbright Research Scholar.

**Arthur Hasler (shown here, front, with Robert Ragotzkie PhD'53 on the UW's meteorology plane on Lake Mendota) changed the way we study waterways by getting out of the lab and onto the lakes.**

He was promoted to full professor of zoology in 1948 and turned the university into a world-renowned hub for aquatic research.

Diverging from the beliefs of predecessors Birge and Juday, Hasler hypothesized freshwater ecosystems are heavily influenced by their surroundings, from plants to pollution, known as cultural eutrophication. His studies informed widespread efforts to curb soil erosion and sewage and fertilizer contamination.

In one famous experiment, Hasler introduced a better way to study aquatic ecosystems by building a barrier between Michigan's Peter and Paul Lakes, creating control and test environments in which to study aquatic life. This method is used today to study acid rain, pollution, and invasion by exotic species.

Hasler is best known for his findings on how salmon spawn. While hiking near his childhood home in Utah, he was struck by the way familiar smells trigger memories, and he wondered if salmon were similarly compelled to spawn where they were born — a phenomenon known as olfactory imprinting. His discovery influenced salmon management strategies around the world.

In 1958, the National Science Foundation granted Hasler funds to build a working research station on Lake Mendota. The Laboratory of Limnology opened in 1963 and was renamed the Hasler Laboratory of Limnology in 2005.

After retiring in 1978, Hasler served as professor emeritus of limnology and maintained close ties to the university until his death in 2001.

**WENDY HATHAWAY '04**



**Veronica Rueckert '96** is helping individuals — especially women — find power in their voices. Rueckert earned her degree in vocal performance and is a former radio-show host and a Peabody Award-winning producer. Today she utilizes her skills as a public speaker and vocal coach while also integrating them into her work as the UW's national media relations specialist. Her debut book, *Outspoken: Why Women's Voices Get Silenced and How to Set Them Free* (HarperCollins), was published last year.

***What are your main goals when coaching clients?***

I really love helping people tap into that full power of their voice, because so many of the people who come to me don't feel like their voice expresses their full power. I help them get to a place where they actually feel good about their speaking voice. They feel like themselves, they feel authentic, and they don't feel blocked anymore.

***Could you describe some of the issues that women face with their voices?***

One really common one is women [in business and academia] who are doing a lot of

public speaking will say, "I speak a lot publicly, and I get great feedback when I speak, but I feel lousy afterward." Typically, what that comes down to is they are forcing themselves to be a plastic-mask version of themselves. They think that a public speaker behaves a certain way, sounds a certain way — and, by the way, typically that way is a male template that they're trying to mimic. So, of course, it doesn't feel right. We work on, "Hey, how would it sound if you sounded like yourself?"

***Why is it important for women to learn to love and use their voices?***

Because we do need everyone's voice. If you just have 50 percent of the people in the room making the decisions and sharing their ideas, you're missing out on so much. We [can] only be stronger when we're more diverse.

***What advice do you have for women and for all people who are looking to use their authentic voices?***

Taking risks is one. If there are no women's voices in the room, I'm going to challenge myself to be the first one to speak. If there are women in the room, but they're not talking, I realize it right away, and I try to get the first [comment] in there, because I know that women need to see other women talking.

***How might your book apply to all readers?***

The exercises can benefit everyone. But not everyone will have exactly the same experience when they bring [these exercises] out into the world. We need to be aware of that and be aware of bias and be more accepting of all voices. They're not going to sound the same. But that doesn't mean that we have an excuse not to listen.

*Interview by Stephanie Awe '15*

*Photo by Jeff Miller*





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# Destination *The UW Makerspace*



JEFF MILLER (4)



The Makerspace supports for-credit courses and offers free workshops, such as one on thermoforming masks held before Halloween. Starting in summer, the space will host an interdisciplinary master's degree program.



Some of the most popular tools in the Makerspace are its 3D scanners and printers, with more than 3,000 parts printed in 2018-19. Waterjets, drones, and laser cutters — used to cut this marketing card — are also available.



To encourage peer-to-peer, hands-on learning, the Makerspace is staffed mostly by graduate and undergraduate students. A large staff — each student works about 10 hours a week — helps create a diverse and welcoming space.





## First Day of College



## First Day on The Job



## First Day of Retirement

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