

Spring 2023

UMBC

MAGAZINE

LEADING BOLDLY

The UMBC community near and far celebrates the inauguration of President Valerie Sheares Ashby—the first woman in this role—and a new era of Retriever excellence. — page 22



A person wearing a pink jumpsuit is lying down, surrounded by a thick, white, bubbly foam that resembles a large, overflowing bathtub. The person's head is tilted back, and they are looking upwards. In their hands, they hold a dark, irregularly shaped object that appears to be a piece of charcoal or a small sculpture, which is covered in numerous small, golden, shimmering particles. The background is dark, making the white foam and the pink jumpsuit stand out.

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Open to Interpretation

With a willingness to get lost on a tangent, creative thinkers at UMBC are joyfully finding new ways of translating the world around them.

By Jenny O'Grady

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Leading Boldly

With our supportive community of Retrievers behind her (and state leaders next to her), freshly inaugurated President **Valerie Sheares Ashby** ushers in a new era for UMBC.

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Building AI We Can Trust

The AI apocalypse is coming. Or it isn't. Either way, UMBC researchers are seeing inherent flaws in the machine learning technology that forms the foundation of tools such as ChatGPT and are working to make it better.

By Catherine Meyers



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Shared Stories, Shared Purpose

Immigrant research often focuses on statistics instead of the human experience. That's why **Tania Lizarazo's** "slow research" approach—which puts people first—is such a powerful tool in telling untold stories of local Latin American communities.

By Catalina Sofia Dansberger Duque

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How to Make a Pinhole Camera

If you've ever looked at an oatmeal container, a mailbox, or an entire room, and thought, "This object would make a great camera," chances are you are familiar with the concept of a pinhole camera. Let **Chris Peregoy '81, M.F.A. '99**, teach you how to make one.

By Randianne Leysbon '09



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ON THE COVER

Corey Jennings '10, UMBC's video producer, caught this still of President Valerie Sheares Ashby at one of the many moments of joy and gratitude during her April 2023 investiture ceremony.

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TO YOU



Dear Retrievers,

It's getting to be summer, so if you're anything like me, you're getting your TBR (to be read) list ready to roll. In my pile, you'll find a mix of sci-fi, literary fiction, horror, and a splash of adventure history (I'm on a Teddy Roosevelt kick recently).

I enjoy reading (and writing) all kinds of stories—especially if it's a page turner. And as I've discovered in my 18-plus years of reporting on our Retriever community, there's no story quite like our own. In fact, these stories have something for everyone.

The story of UMBC's founding, for instance, is something for the books. If you don't believe me, take a look at our online timeline (umbc.edu/about/timeline), or pick up a copy of *This Belongs to Us: Stories from UMBC's Founding Four Classes* (page 62), to hear some fun and enlightening stories from our very first grads.

If it's plot twists you're after, we've got plenty! In my "Open to Interpretation" story (page 42), you'll meet members of our community who turn creative research on its head, translating fish data into dance, hip-hop into sculpture, and poetry into wine. In "Building AI We Can Trust," writer Catherine Meyers delves into—and makes more familiar—a growing (and slightly scary, if you ask me) new frontier.

If it's inspiration you seek, look no further than Catalina Sofia Dansberger Duque's moving story (page 36) about professor Tania Lizarazo's work helping members of local Latin American communities tell their (previously) untold immigration stories. And, of course, who wouldn't find joy and hope in the shared vision of our new leader, President Valerie Sheares Ashby, as she looks ahead to UMBC's future from the vantage point of her inauguration (page 22).

The best part of any story, for me, is anticipating what comes next. Where UMBC is concerned, we all get to write that story together—and I can't wait to read our next chapters.

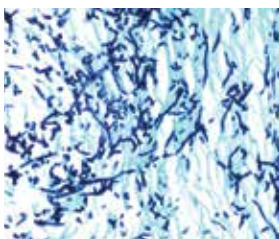
—Jenny O'Grady
Editor, UMBC Magazine

WEB FEATURES

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The Conversation: How do fungi develop drug resistance?



Meet a Retriever:
Nate Dissmeyer '07

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OFFICE HOURS



Each week, UMBC President Valerie Sheares Ashby invites students to her office to chat about their lives and their experiences at UMBC. Today, she's speaking with Viridiana Colosio-Martinez '22, modern languages, linguistics, and intercultural communication, and M.A. '24, intercultural communication, who emigrated from Mexico and is currently working on community-engaged research with immigrant communities in Baltimore's Highlandtown neighborhood. Read more about Colosio-Martinez's life and work on page 36.

UMBC Magazine: *Viridiana, you have such a compelling personal story. When you first met Dr. Sheares Ashby, what was the most important thing you wanted to convey to her about your story and why?*

Colosio-Martinez: President Sheares Ashby has been very inspiring to me. Because in my experience as a student and also as a Latino woman in the U.S., through the many institutions I've attended...I haven't seen the presence of women, especially in positions like this. For me, it's really inspiring and it gives me hope as a woman to know what is possible, because sadly in our society, we're still dealing

with a lot of discrimination and misconceptions.

Having this opportunity is really important. It makes me feel that any student—no matter if you're Latino, or if you're African American, or if you are Haitian American, or Asian, or international—can have the opportunity to meet people in power. You can connect and make bridges and share your needs and experiences.

UMBC Magazine: *President Sheares Ashby, you're meeting with many students in your first months here through your regular office hours and in other ways. How does it impact you as a leader to get to know people on an individual level?*

President Sheares Ashby: I am a teacher at heart...it is in my heart and my mind. I love teaching because it gives me the opportunity to look for greatness in my students and then help them see it for themselves. And so, I love it when a student comes to me and I can get to know who they are, where they come from, and how I can be supportive.

I am sitting here looking at you [Viridiana] thinking, "Okay, who is she going to become? And what is possible for her?" And the fact is, everything is possible. She is going to run and she is going to make a big difference in the world. And now I can ask myself, "How can I support her and help her do that?" That is what my brain is always doing. And so, I love it. I love when students come to me.

Colosio-Martinez: I feel like you're very approachable. In September, there was a meet-and-greet for the Latino/Hispanic Faculty Association. I was there supporting my professors, and I saw you there talking with every single person. I saw how you wanted to give us space and recognize our community.

UMBC Magazine: *You're finishing up your master's degree, Viridiana, and like the president, you're a teacher. What will you take from UMBC with you after you graduate?*

Colosio-Martinez: I would like to become a professor. When I have my office hours with students now, I'm always thinking the same thing: "Who are they? And do they need help with anything?" I want to help others...I would like to continue with my research in the Latinx community, to make space for the wonderful stories of people who are doing good things and all the challenges that our communities experience.

And what will I take with me? I will take all the passion, all the knowledge from my professors and mentors, like my mentor **Tania Lizarazo**, and all of the skills. I will take the friendships of my classmates...and the wonderful experience of teaching undergrads. I'm taking every single experience and I will remember every single student, and I'm taking all of those things with me to make sure that I use them in the future.

President Sheares Ashby: You are so inspiring, Viridiana. Thank you for sharing your story!

Pictured: Graduate student Viridiana Colosio-Martinez '22, M.A. '24, chats with President Sheares Ashby on the seventh floor of the Albin O. Kuhn Library.

DAWG'S EYE VIEW



WE'RE BLOOMIN' PROUD

Commonvision student designers **Joyce Koo '24** and **Jordan Fisher '25** brought to life these black-eyed Susan-themed shirts in honor of President Valerie Sheares Ashby's inauguration.

 @commonvision



"WHAT IS GOLD, ALEX?"

In 2022, for the first time, UMBC chemical engineering students brought home gold at the American Institute of Chemical Engineers (AIChE)-sponsored National ChemE Jeopardy Competition. Now they're poised to do it again, having recently taken first out of 18 teams at the AIChE mid-Atlantic regional finals. The team once again heads to the national stage in November 2023.

 @Mark_R_Marten



SO YOU "GUANO" BUILD A BAT BOX?

One of the upsides of studying bat droppings, is that **Chris Blume**, a master's student in geography and environmental systems, gets to guide bat-roost building workshops at Cylburn Arboretum in Baltimore. In addition to teaching about different species of bats in Maryland (but certainly *not* vampires), Blume showed how these nocturnal flying mammals contribute to the local ecology.

 @Cylburn



ALL YOU NEED IS LOVE

i3b (Initiatives for Identity, Inclusion, and Belonging) hosted their first annual Pride week this April, celebrating all facets of our community members' identities. **Lauren Allen**, the new director of The Women's Center, right, poses with **Amelia Meman '15**, a current Ph.D. student in human services psychology, sharing what Pride means to them!

 Women's Center at UMBC



COSMIC CANINES

Quadmania, hosted yearly by the student events board (seb), whirled Retrievers into a sci-fi fantasy space invasion frenzy this year. Despite the carnival getting cut short due to an epic thunderstorm, students still got the chance to cheer each other on at the student talent showcase.



FORTUNE SMILED ON HIM

Fred Fletcher-Jackson '15, theatre, won a March 2023 episode of *Wheel of Fortune*, taking home a prize pot of \$75,800, correctly guessing “pineapple upside-down cake,” “his mind is wandering,” and other phrases to become a rare contestant to win a perfect game.



WE'RE SEEING DOUBLE

Did you know **Angel Reese** played for the UMBC women's basketball team? No, not *that* Angel Reese, the LSU superstar who took her team to win March Madness, but her mom, UMBC class of 1994, an information systems major who dominated the Retriever court, who shares the same first name. Here, Reese senior, on the right, and her daughter on the left flank fellow UMBC grad, **Bethann Shapiro-Ord '89**, head coach for Binghamton University's women's basketball.



GIDDYUP, BIOBUGGY

What better way to explore—and hopefully grow to appreciate—our local waterways than have the water come straight to you? **Stephen Bradley**, associate professor of art at UMBC, along with Eric Schott of the University of Maryland Center for Environmental Science, collaborated to create this mobile art and science laboratory on wheels. The BioBuggy travels around, and the public gets to observe and listen to the small, sessile organisms in the harbor with the aid of a mobile microscope, video screen, and hydrophone (underwater) listening device.



WHAT'S YOUR VIEW?

Share your Retriever perspective on social media using the hashtag #UMBC, and your image could be included in a future issue of *UMBC Magazine*!

THE NEWS

Computing Support Made Accessible



On a Friday afternoon in late February, two students hoisted a pair of oversized scissors and cut the ribbon for the space housing one of UMBC's newest tutoring programs: the Computing Success Center. The center is designed to provide peer-to-peer support to students from any major, taking any course, who have computing questions.

"The Computing Success Center started as just a few tables in the library," says **Amanda Knapp**, who leads UMBC's broader Academic Success Center. Since the Computing Success Center tutoring program launched in 2020, it has seen skyrocketing demand.

"We are so happy for our students to now have a dedicated space for computing support, as a result of successful collaborations and valued partnerships from across the university," says Knapp, associate vice provost and assistant dean for Undergraduate Academic Affairs. "We are thrilled to introduce new tutoring options to the growing portfolio of academic support offerings available to all undergraduate students."

When **Annmaria Palmiero** came to UMBC as a first-year student in 2021, she had never programmed before but was curious about the subject. So, she enrolled in a class—

called Computational Design and Thinking, or COMP101—designed with students like her in mind.

The popular course assumes no prior experience with computing. It provides students with a broad overview of the field, builds their technical and professional skills, and gives them opportunities to work on group projects. In the past five years, it has also focused on ethical considerations in computing.

"Many students say the course helps them feel less intimidated by coding. It also helps them decide which computing program is best for them," says **Mark Berczynski**, a lecturer who has been teaching the course since 2019.

The course has been shown to increase the likelihood that students, especially women, will stay in a computing major. For Palmiero, the experience in the course convinced her to pursue a computer science degree in addition to her already planned statistics degree. She has also become a teaching fellow for the course.

Carefully designed computing courses start students on the road to success while services such as the Computing Success Center help students deepen their knowledge as they progress in their studies. The center offers

drop-in tutoring, including both course-specific resources and general guidance in programming languages.

The growing demand for computing tutoring services reflects in part increased demand for computing education. Over the past 10 years, the number of UMBC students pursuing a computing-related bachelor's degree in the College of Engineering and Information Technology (COEIT) has increased by more than 60 percent. During that same time, the number of computing degrees awarded to women and students from racial and ethnic groups traditionally underrepresented in computing fields increased at an even higher rate.

The Computing Success Center is one of many UMBC initiatives that is boosting the outcomes of diverse students entering high-demand computing fields.

"At both the undergraduate and graduate level, applications for our programs from a broad diversity of students are incredibly strong," says **Keith Bowman**, the dean of COEIT. "New students have shared that more senior students' positive views of our programs inspired them to pursue computing degrees, which we find very gratifying."

The Computing Success Center responds to expanding demand for this kind of support. In fall 2022, the center logged nearly 1,500 student visits, a more than tenfold increase from when it launched in fall 2020.

Ariana Pray, a sophomore computer science major, says the tutoring at the center goes beyond helping her complete assignments, offering conceptual guidance that has made her a more efficient coder. She appreciates the wide range of tutoring times available and the opportunity to learn from her peers in person.

"I definitely recommend going to the Computing Success Center," she says. "You'll come away with a better understanding of the material and will be better prepared when it comes time for exams."

— Catherine Meyers

Equity Imperative



Tanyka M. Barber has been appointed the university's inaugural vice president for institutional equity and chief diversity officer. She officially

joined the UMBC community on April 17.

"It is to UMBC's great advantage that in this inaugural vice presidential role, we will have a leader whose career has been as a practitioner in both the legal compliance space and the diversity, equity, and inclusion space," says President **Valerie Sheares Ashby**. "We also will have someone whose personal perspective, including as a first-generation college student and a non-traditional law school student, deeply informs her understanding of this work and the communities she serves."

Barber, who says she was drawn to UMBC for its "genuine commitment to advancing diversity, equity, and inclusion," holds a bachelor's degree from Morgan State University, a master of health sciences degree from the Johns Hopkins University Bloomberg School of Public Health, and a law degree from the University of Baltimore. She joins UMBC from TNG, one of the nation's largest education-focused law and consulting practices, where she served as partner.

Prior to her work with TNG, Barber served as director of diversity and Equal Employment Opportunity/Title IX coordinator at Morgan State University, where she drafted Morgan State's first comprehensive policy and procedures to address gender- and sex-based harassment and violence. She also developed and implemented a comprehensive Title IX grievance process and prevention policy.

Barber shares, "I want to be a partner and a resource to ensure that UMBC students, faculty, and staff have what they need to navigate the UMBC community and achieve success as they define it. I am eager to engage those already doing this work at UMBC and to bring new voices to the table."

— Dinah Winnick

News In Brief

Best in Class

UMBC continues to shine on national rankings lists for its commitment to undergraduate teaching and innovation in other areas.

In April, *U.S. News and World Report* announced its 2023 – 2024 Best Graduate School rankings, highlighting UMBC graduate programs in a broad range of fields, including public policy, several types of engineering, mathematics, and other sciences. Among UMBC's Best Graduate School rankings are 12 programs across all three of UMBC's colleges, including eight top-100 programs.

Earlier this year, the organization recognized UMBC's online master's degree in information systems as #41 on their national list of 2023 Best Online Master's in Information Technology Programs as well as #20 for veterans. This ranking follows UMBC's recognition as #9 in the nation for undergraduate teaching and #10 in the nation for innovation in the 2022 – 2023 *U.S. News and World Report Best Colleges* undergraduate rankings released last September.

ModernThink's Great Colleges to Work For program also recognized UMBC as a top institution nationwide in every measured category, from well-being and shared governance to mission and pride. UMBC is the only R1 university in the nation to achieve this honor, which is based on employee ratings.

Four of a Kind

UMBC softball ended its season on a high note, winning its fourth-straight America East Championship title on May 13 with a 9-3 victory over the University at Albany in rainy conditions at the Retrievers' home field, and earning a number of other honors in a year where UMBC student-athletes shined on multiple fields of play.

Graduate student **Courtney Coppersmith '22** earned Pitcher of the Year honors for the fourth consecutive season, becoming the first student-athlete in America East Softball history to do so and just the third America East student-athlete (in any sport) to win a regular season major award for four consecutive years.

The softball coaching staff, led by head coach **Chris Kuhlmeier**, was also named 2023 Coaching Staff of the Year for the third consecutive year. And UMBC is just the second program in conference history to win four consecutive America East softball championships, joining Hofstra, which won four straight from 1998 – 2001.

In other athletics news, in February, UMBC's men's swimming and diving team won its second consecutive league title—with 14 title wins coming out of their last 16 conference campaigns. And last November, UMBC volleyball won their third consecutive America East championship title.



Courtney Coppersmith pitches in a game against UMass Lowell. Photo courtesy of Joey Sussman.

THE NEWS

Black and Gold(water) Pride

Arjun Kanjarpane '24, M32, biochemistry and molecular biology, and Soujanya "Any" Viswanathan '24, M32, biological sciences, are the latest UMBC students to be named Goldwater Scholars. By pursuing their research interests—virology for Kanjarpane and neuroscience for Viswanathan—with rigor and dedication, both have the potential to make a major impact in their fields and in people's lives.

The Barry Goldwater Scholarship and Excellence in Education Program is designed to provide the United States with “a continuing source of highly qualified scientists, mathematicians, and engineers.” More than 1,200 students applied from over 425 institutions across the country this year, and the program ultimately selected 413 scholars to receive Goldwater Scholarships for 2023 – 2024.

As scholars, Kanjarpane and Viswanathan will receive substantial funding that advances their undergraduate work and supports their educational paths. They will also gain access to a network of current and former Goldwater Scholars, many of whom are conducting research at the leading edge of their fields.

Since 2005, UMBC has produced more than 20 Goldwater Scholars who have gone on to pursue a wide range of studies at top universities.

“We are delighted that UMBC has continued its impressive string of Goldwater awards for this year,” says **April Householder '95, visual arts,** director of undergraduate research and prestigious scholarships. “This indicates just how strong STEM education at UMBC is—indeed, it's among the best in the country.”

Kanjarpane and Viswanathan are both conducting their own research—Kanjarpane in the laboratory of **Michael Summers,** Howard Hughes Medical Institute Investigator and Distinguished University Professor of chemistry and biochemistry, and Viswanathan with **Rachel Brewster,** professor of biological sciences.

One of the projects in Brewster's lab seeks to tease out how the embryos of zebrafish (small, hardy, freshwater fish) can survive for up to 50 hours without any oxygen at all and then return to normal functioning once oxygen becomes available. “We are looking at the genes and

molecular mechanisms involved in allowing zebrafish to survive and recover from such extreme conditions,” Viswanathan says.

Viswanathan started in Brewster's lab in summer 2021. She immediately saw connections between Brewster's research on hypoxia (or lack of oxygen) in zebrafish and the same condition in some COVID-19 patients. “It was interesting to me,” she says, “to look at what genes and molecular mechanisms could potentially help humans withstand hypoxia just like zebrafish.”

Her Goldwater research proposal extends the work she's done over the last two years, but Viswanathan hopes to shift her focus to neurological disorders like Alzheimer's disease in an M.D./Ph.D. program after UMBC. She worked on a cutting-edge Alzheimer's project last summer at MIT with postdoctoral fellow Matheus Victor. A neurobiology Ph.D. combined with a medical education will enable her to investigate the underlying mechanisms of disease, treat patients, and then take any new research questions that arise back to the lab, Viswanathan explains.

Kanjarpane's research focuses on improving understanding of the molecular mechanisms behind HIV replication. A complex sequence of steps governs exporting the viral genome out of the host cell's nucleus and then packaging it into new infectious particles. Interactions between proteins and the virus's genetic material regulate this process, and those interactions aren't fully understood.

The end goal of Kanjarpane's work is to build “a more complete understanding of these viral processes” so that down the line, researchers can “develop drugs or therapeutics that might be able to target one or several of their components,” Kanjarpane says. His Goldwater proposal builds on this work.

This summer, Kanjarpane will conduct virology research under Paul Bieniasz at Rockefeller University. After graduation, he's planning to pursue a Ph.D. in virology or structural biology. “I would be interested in exploring viruses in a multidimensional approach,” he says.

Beyond their research and academic studies, both Viswanathan and Kanjarpane are committed to supporting their peers and neighbors as tutors and other community projects. “What impresses me most about Arjun and Anya is that they use their talents to help lift up others,” Householder says. “This dedication to others beyond the classroom is what makes them special.”

— Sarah L. Hansen, M.S. '15

Across: This year's Goldwater Scholars Arjun Kanjarpane '24 and Soujanya "Any" Viswanathan '24 pose on Academic Row.

UMBC's Newest Gates Cambridge Scholar



Christopher Slaughter '23, M31, computer engineering, has won a Gates Cambridge Scholarship to pursue a Ph.D. in electrical engineering at the

University of Cambridge in the United Kingdom in the fall. Slaughter, one of the class of 2023's valedictorians, is the fifth student from UMBC to be recognized with the prestigious award, established by the University of Cambridge in 2000 with a donation from the Bill and Melinda Gates Foundation. Slaughter's career goals are to develop novel biomedical technologies that meet the healthcare needs of under-resourced communities.

At the Top of Our Game

UMBC is proud of its student scholars, including:

- 2 Rhodes Scholars
- 2 Marshall Scholars
- 5 Truman Scholars
- 5 Gates Cambridge Scholars

Learn more about these students' accomplishments at ur.umbc.edu/prestigious-scholarships.



AT PLAY

All Rise for Mock Trial Alumni Volunteers



When **Natalie Murray '22, biology**; **Thomas Azari '22, political science**; and **Lauren Wotring '22, political science**, graduated last spring, they didn't expect to be returning to UMBC so soon. These recent alums—all members of the 2021 National Mock Trial Championship team—were making inroads in the next stages of their careers but didn't hesitate to pick up the phone when the UMBC Mock Trial team called.

Together they took on the leadership of UMBC's B team, guiding the group—composed mostly of first-year students—to the Opening Round Championship Series (ORCS) in March 2023 and saw B team co-captain **Fadil Adeite '26, media and communication studies**, and **Anna Kim '26, biochemistry and psychology**, win all-National attorney awards.

Natalie Murray was the first to rejoin the UMBC Mock Trial team as a coach. She was hesitant initially. A full-time veterinary assistant position at the ElkrIDGE Animal Hospital meant long days, so long she sometimes showed up to practice in her scrubs after a 12-hour shift.

When Murray agreed to coach, she envisioned having a minor position, yet she ended the season as the B team's head coach. "Once I started working with them, and I saw how driven and incredible they were, I could not help but throw myself way more into it than I had planned," said Murray.

The students were aware of the coaches' investment. "To see the three coaches come back after leaving and dedicate so much time and effort—and gas money—to the team was inspiring, and it really motivated us as competitors to give even more," said co-captain Adeite.

The team became a source of joy for Murray, brightening her stressful days and making the logistics of coordinating coaching worth it. It helped that she could rely on former teammates to share the load.

Thomas Azari navigated his job in the U.S. Department of State's Department of Human Rights and Labor, studying for the LSAT, and applying to law school while coaching. Lauren Wotring also made time to coach the B team while working at a D.C. law firm as an intellectual property legal assistant and prepping for law school.

Wotring said the students made the whole experience so special. "I realized how much the students meant to me and how amazing they are and how willing they were to learn," said Wotring, who realized she wants to keep coaching next year.

The B team trio cites current head coach **Ben Garmoe '13, political science**, and assistant coach **Whitney Wilder** as some coaches who made their mock trial experience.

Azari knew he had to return as a coach after the impact his coaches had on him and his Nationals-winning team. "If not for Ben, we wouldn't have had any of the success we have now," he said. "I kind of learned from that and was like, 'Ben is doing all this work. I have to too.'"

Murray, Azari, and Wotring's investment in the students took many forms. Wotring spoke to many about the dangers of perfectionism. Murray ensured they were having fun while being competitive. Azari lent out ties and showed them how to stay positive even after a loss. All three drove students to competitions, helped pay for food, and were always a text away.

The students couldn't have been more thankful. "They taught us how to be better competitors, how to work better as a team, how to get places on time, but mostly how to be confident and proud of ourselves," said Kim.

"Whenever anyone felt down about themselves, their performance, or not understanding, they were right there to lift us up, guide us, and make us all feel heard," said B team co-captain **Alysha Carter '26, political science**.

The trio's willingness to turn around so quickly after graduation and invest their time in the next generation of UMBC Mock Trial competitors means a lot to Garmoe. "Thomas, Natalie, and Lauren are all national champions and highly decorated competitors," said Garmoe. "But even more importantly, they are wonderful people and stellar role models for our young students."

Murray sees a direct correlation between her coaching experience now and the support she received as a Mock Trial participant. Her fond memories of the organization, said Murray, are rooted in the genuine care she felt from her coaches and teammates. "To be part of that equation, and thinking that maybe one day down the line some of these students will do the same thing, they'll graduate and they'll want to coach, has been a really fun thought to have."

—Morgan Casey '22

Wotring and Azari (standing) chat with members of the UMBC Mock Trial team.

Unleashing Their Inner Coach

In spring 2022, UMBC softball swept all three tournament games to win their third America East championship. The Retrievers held their opponents scoreless, becoming the first team in conference history to achieve this milestone. And no one cheered louder for their success than **Jamie Gurganus**, faculty and professor in engineering and computing education and mechanical engineering. Decked out in softball gear (and now with a championship ring necklace gifted from the team engraved with “Prof. G”), Gurganus ended her inaugural semester as honorary faculty coach to the record-breaking team on a high note.

But beyond cheering on their successful teams, how do honorary faculty coaches “coach” their teams? Enter **Adriana Mason**, associate athletic director for academics, who originally envisioned the role of “faculty liaison honorary coaches” lending their expertise to UMBC’s 17 Division I teams—maybe not moving magnets around a tactics board and giving game instructions but providing another listening ear and being a loud member of the cheering section.

“The goal is to foster and strengthen the relationships between athletics and academics. Sometimes there can be a disconnect, so we really wanted to try to build that bridge,” explains Mason, who initiated this program alongside Athletic Director **Brian Barrio**.

Since spring 2022, each UMBC athletic program has had its very own faculty coach. While “coach” may be in the title, squad selection, tactics, and practice plans are still in the hands of professionals.

When she met the softball team, Gurganus (known as “Prof. G” to many) made it a point to ask each team member. “Who are you? Tell me about your major. I blocked out time to figure out who every single person was.”

“She’s coming in so often and actually talking to us, and complimenting us, we can tell she actually wants to be here.”

—**Mikayla Bryant**, first-year softball player



“You have to be the initiator because sometimes they don’t know how to approach you,” says Gurganus. “I came down wearing a softball shirt, and I’m like ‘I’m one of you.’”

“When we were assigned her, I thought it’d be like the university saying, ‘Hey, professor, you have to be the honorary coach.’ But when she’s coming in so often and actually talking to us, and complimenting us, we can tell she actually wants to be here,” says first-year softball player **Mikayla Bryant**, chemical engineering.

It’s not only about the winning moments—Gurganus is no fair weather fan. During a recent tough moment for the team, “she showed up,” shares Bryant. “It wasn’t like she was forced to be there, but she had some words of advice for us and that was really nice. At that moment everyone was like, ‘Wow, she’s really here for us.’”

Coaches have also witnessed the benefits of the initiative. “We have several students who have a close relationship with her and, more as a

mentor or a sounding board for different things going on in their own lives,” says UMBC softball Head Coach **Chris Kuhlmeier**, who has led the team to four consecutive championships.

Honorary faculty coaches have their own reasons for wanting to participate in the initiative.

“Honestly, there are research centers that if I wanted to do pure research, I could go do that,” explains **Jeff Leips**, honorary coach of the UMBC swim and dive team and biological sciences professor. “But when I’m sitting here alone in my office thinking about science, and then I go talk to the team, that’s a great break.”

For Leips, the chance to get out of his office and “doing what I can to promote learning in whatever environment that I can,” is what taking on this role has been all about.

“It definitely changed my thinking about how to facilitate the learning environment for athletic students,” says Gurganus.

Even though the faculty coach initiative is still in its infancy, Leips and Gurganus see the potential for UMBC to continue leading the way in student support. “We can come together to help support these students in a bigger way, and a very non-traditional way, unlike any other university, I think,” says Gurganus.

—**Eric Widemann** ’21

Jamie Gurganus, second from left, poses with softball players displaying their 2022 America East Championship jewelry. Photo courtesy of Gurganus.

AT PLAY

Grin and Bear It

When asked to describe the cinematic masterpiece that is *Cocaine Bear*, **Scott Seiss '16, media and communication studies**, didn't mince any words to deliver his thoughts on the hit film based on true events.

"I think 'cocaine' and 'bear,' just those two words pretty much sum it up. A wild roller-coaster ride of gore and jokes."

What started as a Facebook message to then-agentless Seiss' spam folder with the suspicious but apt subject line "COCAINE" has led to a debut on the silver screen and launched this Retriever from Dundalk onto the national comedy stage.

Seiss, who plays the ill-fated paramedic Tom in Elizabeth Banks' recent romp, *Cocaine Bear*, credits much of his comedic career to the opportunities and support he got while attending UMBC.

"There were a lot of things that came from UMBC that I think really just helped me along the comedy journey and gave me a lot of confidence and experience and skills that I might not have necessarily had going somewhere else," says Seiss.

At this point in his career, there are a few places you may have seen Seiss—on stage performing with Dog-Collar Comedy Troupe (he was a part of the founding group at UMBC 10 years ago), on TikTok with his viral "Angry Ikea Guy" series, or opening for the likes of Patton Oswalt (on tour in 2022) or for Bo Burnham at UMBC in 2014. (At the time he thought, "Well, I've peaked. This is the coolest thing I'll ever get to do in comedy.")

Seiss got his start on UMBC's Flat Tuesdays stage and then started bouncing around Baltimore to begin his stand-up journey. He eventually moved to New Jersey, pursued stand up in New York every night, and then the pandemic happened. That's when he turned to TikTok. Drawing on his own experiences in customer service, Seiss soon amassed a massive following and, once a compilation video of his hits started making the rounds, Hollywood took notice.

Seiss explains, "Elizabeth Banks and her husband and producing partner Max Handelman saw the videos and loved them, thought they were funny, and they were like, 'We got to see this guy screaming for his life.'"

They got their money's worth from Seiss' shouts. On set, he says, "I had to do one day of all screaming, where I was just screaming and getting attacked." He credits **Lynn Watson**, theatre, for his vocal technique. "I did all the stuff that she had taught me, the Fitzmaurice diaphragmatic breathing, tremors, all this kind of stuff, to be able to project and scream. I never lost my voice."

In fact, Seiss often thought of advice he got from UMBC while filming. "**Eve Munson**, who is the best acting professor of all time, is also the best acting coach of all time. It was always her voice in my head when I was acting. I could just hear her saying, 'Don't pretend to be afraid of the bear, be afraid of the bear.' That was one of her go-tos: don't pretend, actually do it," says Seiss. "So, every time I did a take on *Cocaine Bear*, I would just go back and I'd go, 'Oh my God, would Eve have liked that?' That was my barometer for if it was good."

It's a mutual admiration for Munson. "I loved working with Scott when he was a student here at UMBC. He was my assistant director for our epic production of *Rhinoceros*. Scott was our chief script doctor—every night I would send him home with notes to update this classic work of political theatre," said Munson, who has been at UMBC since 2009. "Every day he'd come in with really funny gags and jokes for the actors to try out. I'm delighted (but hardly surprised) that Scott's considerable comedic talents are being recognized by his TikTok following and now the film industry."

The mentorship he received from the UMBC faculty played a huge part in his success. "**Jason Loviglio** from media and communications is just incredible. He really encouraged me when it came to comedy, specifically," remembers Seiss.

Seiss also attributes some of his comedy prowess to his peers, including the other performers in UMBC's Dog-Collar Comedy Troupe. "It was just nice being around such a creative and funny and supportive group of people who just wanted to push each other and try to be as funny as possible," says Seiss.

Cocaine Bear may have wrapped, but fans looking for more can catch him in Randall Park's directorial debut, *Shortcomings*, which premiered at Sundance earlier this year. He's also working on new content for his stand-up tour.

"My writing style is pretty chaotic. Sometimes I'll sit down and try to go through some sort of free-write exercise to pull an idea out, and then sometimes it's just like you're walking around, you get an idea," says Seiss.

For any budding creatives looking to break into the business, Seiss says, "The most important thing is that you have to make your own stuff and you have to show people that you can do it before they will start letting you."

Well, that and always check your spam messages on Facebook (proceed with caution).

—Kait McCaffrey

Right: Describing this behind-the-scenes shot, Seiss says, "Please know that the bear was not a real bear. It was a very polite man named Alan from New Zealand. It's weird to be in a movie called Cocaine Bear, but it's weirder to be the Cocaine Bear." Below: Seiss, a Dundalk native, plays an ill-fated paramedic named Tom. Photos courtesy Pat Redmond / Universal Pictures.





DISCOVERY

Getting Your Research Off the Ground



On a brisk but clear day toward the end of the semester, half a dozen brightly colored weather balloons barely squeeze through the double doors of Sondheim Hall's lower level one by one.

A group of four or five students handles each balloon, proceeding to the quad in front of the Interdisciplinary Life Sciences Building in a makeshift parade. A red balloon rises aloft as a demonstration, and then the remaining groups fan out across campus to follow suit. By 9:30 a.m., anyone walking across campus can see colorful dots hundreds of feet high, tethered by ropes that each end at a student on the ground.

This is the peak experience of GES 286, "Exploring the Environment: A Geospatial Perspective." The course is structured around various data-gathering projects, explains **Charles Kaylor**, the instructor and director of GIS (geographic information systems) and cartography labs in the Department of Geography and Environmental Systems (GES). "We use the campus as a laboratory," he says.

Kaylor opens the first class with a deceptively simple question: "Where are we, and how do we know that?" After beginning with a basic orienteering activity (no smartphones allowed!), the course advances through the surprisingly complex answer to Kaylor's question, which leads students to develop skills in statistics, data analysis, and various software programs.

The balloons have been a mystery to much of the campus community for years, with the colorful orbs dotting the campus sky in the tenth week of the semester. But for the students in Kaylor's class, the balloons represent a culmination of the knowledge and skills they've gained.

Each balloon flies with a digital camera attached, pointed at the ground. Previous students in the course coded a hack into the cameras that commands them to take a picture every 15 seconds as they float above campus. Far below, students lay what look like paper archery targets flat on the ground and record their precise coordinates using GPS. These targets will show up in the photos taken by the camera on the balloon. Using the targets as reference points, the students will then be able to "geolocate" (tie to a point on the Earth's surface) other objects—like buildings, trees, even people—in the camera's photos.

Kaylor creates a blank digital map at the start of the morning to record the coordinates. "It's fun to watch in the lab while students are out in the field doing it," Kaylor says, "because it starts blooming. You see students adding points in real time."

Each student has their own reasons for taking the course. For some, it's an opportunity to learn GIS skills—a must in the environmental field today—without spending too much time in

front of a computer. As **Kamsy Nwaiwau '23**, **geography and environmental systems**, puts it, "What other class do you get to hold a balloon 450 feet in the air? It's something different."

Whereas **Alex Flitter '23**, **mathematics and computer science**, has a different perspective. He's conducting research with **Bedřich Sousedik**, associate professor of mathematics, on how to model disease spread using ArcGIS—the same tool the students are using to locate points on the ground. GES 286 is "adding to my ability to visualize my research," he says.

Teaching the class has been a rewarding experience for Kaylor as an instructor, too. The course "reconnected me with something that makes [GIS] live and breathe in a different way—a more exciting way," he says. "Taking a more applied approach to it is a fun challenge."

Finally, it's time for the balloons to come down. As the students are wrangling them down and heading back to Sondheim Hall for a debrief, **Joey Laiosa '23**, **environmental science**, shares that he previously worked in public safety as a dispatcher, then came back to school. He's interested in conservation ecology, and using remote sensing to measure environmental health has particularly caught his attention.

"GIS is a really sought-after skill to have in a range of industries," he says. That includes public safety, Laiosa says, where it could involve better pinpointing the location of an emergency in a complex environment like a construction site or an amusement park. "Geography applies to everything."

— Sarah Hansen, M.S. '15



Setting the Stage for Black Art in the Jazz Age



Michelle R. Scott, associate professor of history, illuminates the lives of Black vaudeville performers and their broader social impact in her new book *T.O.B.A. Time: Black Vaudeville and the Theater Owners Booking Association in Jazz Age America*. In a conversation with *UMBC Magazine*, Scott shares the artistic, social, and historic context of an association that brought Black artists to audiences across the United States during the 1920s.

UMBC Magazine: *What are some of the central themes the book explores?*

Michelle Scott: The book explores the lives of the performers, theater owners, producers, managers, and audiences that were part of Black vaudeville and the Theater Owners Booking Association (T.O.B.A.). It's a story about how these Black- and white-owned theaters fostered Black artistic exploration and development and the growth of Black-owned businesses. T.O.B.A. is the foundation of Black live entertainment in the 20th century. This is the first in-depth study of this circuit during a time of transition in the entertainment industry between WWI and the Great Depression in segregated America.

UMBC Magazine: *Who were some of the artists who began with T.O.B.A. and grew famous, leading to profitable and stable careers?*

Scott: T.O.B.A. is a cornerstone in the history of the African American entertainment industry where artists like Cab Calloway—the famed singer, songwriter, bandleader, conductor, and dancer—honed their talents. Other artists include “The Empress of the Blues,” Bessie Smith, and Ethel Waters, who became the first Black woman to receive equal billing with white stars on Broadway.

But there was also a place for novelty acts, like the person doing the hula hoop or playing the harmonica with their nostrils. There were also tabloid plays. These abbreviated musical comedies bootlegged from off-off-Broadway plays into a few songs. T.O.B.A. gave an opportunity to a wide variety of talents to create shows that appealed to a wide audience.

UMBC Magazine: *T.O.B.A. enabled artists to channel their talents and broaden their networks. What was the association's impact beyond performances?*

Scott: In 1929, T.O.B.A. was among the 12 most profitable Black-owned industries in the United States, alongside Black-owned insurance agencies, beauty businesses, dressmakers, etc. For Black and white theater owners, T.O.B.A. provided a steady stream of entertainers, helping to contribute to the local and national economy.

In segregated towns, the Black hospitality industry played an essential role in meeting the needs of entertainers.

Black women found opportunities to operate boarding room homes and cook meals, and workers created a key union to fight for fair wages.

UMBC Magazine: *Jazz Age America was a time of expansive Black artistic exploration and innovation within a heightened period of racial violence and segregation. How did this affect T.O.B.A.?*

Scott: Most of the T.O.B.A. theaters were in the South. Artists traveling the country and performing in theaters often risked their safety to make a living from their art. The Black working-class audiences were taking a risk going to see live shows and spending their hard-earned money while surrounded by racial violence and segregation.

T.O.B.A. is monumental because it helped Black artists and Black communities continue to thrive while fighting white supremacy. Many times, if churches were not able to provide a space to organize marches, communities organized in theaters. Sometimes, theater entrance fees were donated to help activists or communities hit by natural disasters or to help with legal fees.

History definitely talks about the violence inflicted on Black communities, the death toll, and poverty, but it doesn't always tell about Black innovation, economic prosperity, creativity, and thriving Black communities that existed before, during, and after the Jazz Age. It doesn't always talk about art as an alternative resistance. T.O.B.A. is that story.

— Catalina Sofia Dansberger Duque

Below: Effie Mae Moore Troupe, 1920s, Scurlock Studio Records, Archives Center, National Museum of American History, Smithsonian Institution.



DISCOVERY

Creative Retriever Research in the Spotlight

In 2020, **Renata Taylor-Smith '24, theatre**, eagerly prepared for her first trip to Munich, Germany, to study theatrical lighting design, but a week before she was meant to fly to Germany, her trip was canceled due to the COVID-19 pandemic. She learned that the show she helped to prepare the lighting design for, a production of Jessica Dickey's *The Amish Project*, would be postponed indefinitely.

"That roadblock forced me to think creatively about how I could redesign my project," says Taylor-Smith. With the help of her faculty mentor **Adam Mendelson**, senior lecturer in theatre, Taylor-Smith sought new ways to gain hands-on experience in lighting design research.

Taylor-Smith showcased that work at UMBC's 2023 Undergraduate Research and Creative Achievement Day (URCAD), held in person on April 12 for the first time since COVID-19 appeared. There, she and nearly 200 other UMBC students convened to present their research and creative projects. In addition to her presentation, Taylor-Smith's story came full-circle this year when she was able to work as the assistant lighting designer for a 2023 production of *The Amish Project* at UMBC's Black Box Theatre. Later this year, Taylor-Smith expects to finally make her way to Germany to continue her research.

This year's URCAD featured a keynote by **Alicia Wilson '04, political science**, managing director and global head of philanthropy for the North America region for JPMorgan Chase. Wilson captivated an audience of URCAD presenters and attendees, sharing her personal journey, the value of her research experience, and the power of mentorship.

"UMBC, for me, represents so much of who I am and what I want to be in the world," says Wilson. "My pathway to where I am now is rooted in relationships, being able to care for my community and people regardless of their background. I learned at UMBC to treat everyone well and to research and understand things."

Theo Reinhert '23, media and communications studies, engaged a crowd of URCAD observers with a display of children's toys, gathered to demonstrate his analysis of

how gender ideologies can be coded in toys.

"While growing up and struggling with my own gender, toys were one of those media that impacted and had power over how I viewed my gender," Reinhert explained after his presentation. It made him curious to understand how material objects can have the power to carry ideas.

Reinhert found presenting at URCAD to be an important learning experience and the support of his faculty mentor, **Jason Loviglio**, associate professor of media and communication studies, to be essential. "Whenever I would feel lost, Dr. Loviglio would assure me that I was experiencing a normal stage in humanities research" and he'd provide valuable insight, Reinhert said.

Lillian Kidd '24, biochemistry and molecular biology, explored the design and synthesis of palmitoyltransferase inhibitors as potential therapeutics for influenza, or the flu, with her research partner **Brooke Nelson '23, biological sciences**. Kidd and Nelson received an Undergraduate Research Award to support their work with faculty mentor **Paul Smith**, associate professor of chemistry and biochemistry.

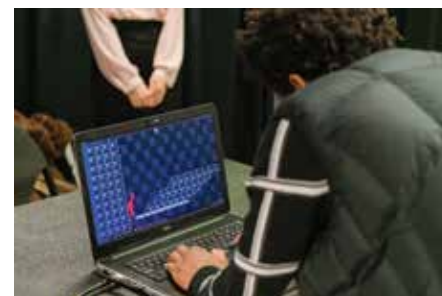
"I think doing research is a lot like standing in front of a mirror. It exposes you to what you're scared of and, inversely, what you're excited about. I learned a lot about my approaches to problem solving and discovered a deep interest in biochemistry," says Kidd.

Thu Dinh '23, biological sciences; Maryamah Ndao '23, psychology; and Jorge Saucedo '23, psychology, worked as research assistants in the Social Determinants of Health Inequities Lab, led by their faculty mentor **Danielle Beatty Moody**, associate professor of psychology. The group examined the systemic impact of implicit bias from healthcare providers on patient health outcomes. For Ndao, this was a research topic she's been interested in since her first year at UMBC.

Ndao describes her main focus as "making sure that the healthcare needs...of Black people, especially Black women, are heard."

"The data is very clear and the disparities are clear, but there's a lack of action," Ndao shared during the group's poster presentation. Later, she said, "having this opportunity at URCAD to be able to speak to people directly is beneficial because a lot of people may not know about this." Ndao hopes to one day open her own mental health medical practice to better help individuals from marginalized groups and also impact the conversation on bias in healthcare. "I want to do more advocating. I love speaking about this topic," says Ndao.

— *Adriana Fraser*



While poster presentations are the mainstay of URCAD, students also present computer games, lighting design, and other demonstrations of creative achievement. "The most important thing to consider for students who want to do research is to be proactive," says Jacob Lombardo '25, mechanical engineering. "Don't be afraid of reaching out to a professor whose research area interests you!"



IMPACT

Broadcasting Retriever Success



Eli Eisenberg came into the world of Retriever sports not as a recruited athlete or a walk-on but from a completely different angle—broadcasting. Capturing the energy of the fans, the maneuvers on the court or field, and the cheers and camaraderie of UMBC Athletics hooked Eisenberg early on.

When Eisenberg enrolled at UMBC in the 1980s, he used his interdisciplinary studies (INDS) major to develop a curriculum that primarily focused on broadcasting, American culture, and business and economics. To this day, he credits UMBC for his success and it's something he's been adamant about returning tenfold to the Retriever community.

"I knew at a young age that I wanted to be a television producer and director," says Eisenberg '86, INDS, who is now the CEO of VPC, an award-winning, full-service boutique production and broadcasting agency. VPC provided production services for UMBC Commencements as early as 1996 and was instrumental in the university's momentous 50th anniversary celebration in 2016.

Through VPC, Eisenberg has created a successful working model where real-world training and education intersect. In 2016, America East signed a deal with ESPN to have conference basketball games on ESPN+.

And in the past seven broadcast seasons, VPC has partnered with UMBC—training more than 100 Retriever interns along the way—to put UMBC Athletics on television. Alumni from the program have gone on to work for the Baltimore Ravens, Baltimore Orioles, Philadelphia Eagles, CBS Sports, and many other freelance video and sports productions.

In 2022, Eisenberg sought to address another perennial need among student-athletes—he and his wife **Patricia M. Vitale** made a gift to support students' mental health amid the pressures of navigating academic and athletic performances. The Retriever Athletic Wellness Endowment is dedicated to supporting UMBC's Division I athletes. The anticipated initiatives include nutrition, mental health programming, and sports medicine, among others.

"It's difficult enough for students to balance their athletic career with their academic one both pre- and post-pandemic. It's very rigorous," says Eisenberg. "It's that much easier to become unmotivated when adding the challenge of playing in an empty arena or stadium after long bus trips."

The endowment builds on the other ways Eisenberg supports UMBC students—through personal mentorship and hands-on broadcasting experience.

"Although the university doesn't have a broadcasting major," says Eisenberg, "through our ESPN initiative, students are trained to televise sporting events and are placed on the path to broadcasting careers."

Austin Hood, a media and communication studies senior, who has interned with VPC since last semester, says the experience has provided him with mentors "who want to see me learn and step into different roles like hand-on camera work, replay, audio, director, technical director, utility, and much more."

The internship has been invaluable, says Hood. "Eli has been transparent about what it took for him to get where he is. Working alongside him and others has shown me just how much work goes into what you see when you turn on a live sporting event. These experiences, to say the least, have me feeling eager and confident to take on a position anywhere in the production/broadcasting industry."

"Since the onset of both broadcasting relationships—the conference and UMBC, as well as UMBC with VPC—Retriever broadcasts have set the bar in production value, execution, and storytelling," says Eisenberg.

As a result of their gift, the Chesapeake Employers Insurance Arena backstage production corridor and loading dock will be named in recognition and honor of Eisenberg and his wife. The significance of the space is not lost on him.

"It's where VPC trains students to be in sports broadcast," he says with a smile.

— *Nikoletta Gjoni '09*

Top: Eisenberg chats with volleyball player Emily Genau '26 in the CEI Arena about her entrepreneurial goals. (Marlayna Demond '11/UMBC). Bottom: VPC interns hard at work in the production corridor broadcasting a sporting event. Photo courtesy of Eisenberg



Retrievers Behind the Scenes



Meet **Rachel Brubaker, M.A. '00, historical studies**, assistant director for grants and program development at the Dresher Center for the Humanities. Brubaker, a self-proclaimed humanities nerd, has worked in different positions at UMBC for 22 years.

Q: What's one essential thing you'd want another Retriever to know about you?

A: In my current role, I help faculty in the arts and humanities get prestigious grants and fellowships. It's a joy to learn about their research projects and help bring them to fruition.

Q: Tell us about what you love about your academic program or an organization you're involved in.

A: The Dresher Center is an interdisciplinary intellectual community in the truest sense. Our programs and grants support and promote faculty and graduate student research in the humanities at UMBC. We run a number of fellowship programs for faculty at all stages of their careers and provide a temporary home for visiting and internal fellows to research, write, and think about the humanities in conversation with each other.

Q: What part of your job do you enjoy the most and why?

A: Collaborating with faculty on their research proposals. This often begins in learning about them and their works in progress. Finding the right support for them to write books, create digital projects, and collaborate with community scholars and partners is supremely gratifying!

Q: What's the one thing you'd want someone who hasn't joined the UMBC community to know about the support you find here?

A: Think about UMBC not as an office but as a community of like-minded people who value and produce knowledge and look to make a difference.

Growing Fruitful Campus Connections



The occasional clang of a shovel rings through the chilly spring air amid the chatter of a small group of cheerful students at the UMBC Community Garden. The students and **Ariel Barbosa**, program coordinator for Retriever Essentials at UMBC and a master's student in community leadership, are working hard to ready seven garden plots for crop production this growing season. Already, cold-hardy greens are on their way in one bed, and cucumbers and eggplant are growing indoors awaiting transplant.

The gardening effort is a new initiative of Retriever Essentials, a faculty, staff, and student partnership to tackle food insecurity within the UMBC community. "We were hearing from a lot of students that canned food is not enough for people, and we need fresh fruits and vegetables," Barbosa says.

Retriever Essentials works to meet the needs of community members—and respond to new requests, like fresh produce—through robust and fruitful connections with UMBC staff members who want to help. **Emily Paul '21, global studies**, service learning and community engagement program specialist at the Shriver Center, co-instructs PRAC 096, a service-learning course that allows volunteers to earn course credit for their work in the garden.

The Garden is a student organization that maintains the beds near the UMBC Police Station and works to address problems such as food waste and food insecurity through service opportunities. **Eli Gooding '24, biological sciences**, and vice president of The Garden, offered seven plots to Retriever Essentials.

Barbosa says other staff members have been excited to pitch in. In fact, UMBC track and field coach **David Bobb '97, information systems**, "is going above and beyond to support this project," Barbosa says, by providing gardening expertise, seeds, and encouraging his athletes to volunteer. "He brought in the first bag of spinach from his own garden, and that was last spring," Barbosa says. "That was the first time that I thought, I guess we can accept produce."

As a student, Paul was struck by the growing impact Retriever Essentials was making on the campus community, and as a staff member, she's glad she can give back to the organization. "I am hoping that students learn about the strength of community and their own ability to take action through joining the garden project," says Paul. "It's empowering to grow food and nourish your community."

— Sarah Hansen, M.S. '15

IMPACT

Preserving Democracy, Through Math

In the 1960s, a common routine for elementary school students was to practice hiding under their desks in case of a nuclear blast. International tensions were high as the United States and the Soviet Union advanced their nuclear weapons. But global armament was only a minor inconvenience to **Stanley Czajkowski** in those days. As a third grader in Miss Hamill's class, he was busy falling in love with the riddle of math.

Unbeknownst to this future Retriever was how he would eventually use those foundational mathematical skills to develop algorithms designed to protect presidential communications in case of a nuclear threat.

Czajkowski, who is nearing retirement after more than four decades of service to this project and other issues of national security, is leaving the mission in good hands. Among the experts on his team are several other UMBC alumni—working side by side to ensure the success of nuclear deterrence.

Knowing what he would do with math came after Czajkowski '76, M.S. '77, mathematics, discovered the Johns Hopkins Applied Physics Laboratory (APL) headquartered in Laurel, Maryland, at a career fair on campus. He interviewed for a position and has been working for the research division of Johns Hopkins for the past 45 years.

Among the many projects he's been tasked with in the intervening decades, Czajkowski's main efforts have focused on developing the

mathematical models used to evaluate the communication systems that the president uses to command all the nuclear forces.

He gives an example of a submerged submarine, listening in on their antenna at a distant location. If you send information over the radio frequencies, how sure are you that it will be received? "You have to account for all the probabilities of different random events, and we have data that goes into the model that you have to calculate statistics on in order to support that calculation."

Early in Czajkowski's career at APL (where more than 350 Retrievers work currently), he helped design the simulation model used to do just that—and it's still being used by both the U.S. Navy and the Air Force. "It's become the national standard for modeling that kind of communications to submarines, bombers, and intercontinental ballistic missiles," he says.

Czajkowski, who writes the algorithms and performs analysis for this project, does not work alone. Meet **Jim Miller '87, computer science**, the group supervisor of Czajkowski and other technical staff members of the Nuclear Command Communications Systems Group of the Asymmetric Operations Sector.

Miller has worked for APL for 28 years. (His son **James Miller '13** and daughter **Christine Miller '17** are also Retrievers with computer science degrees.) "UMBC allowed me to have that opportunity to make relationships and understand how important they were, rather than being a lemming or a drone, just rotely going

to class and not getting a full experience out of college," says Miller.

One of Miller's newest team members is also a UMBC alumnus. **Nick Sica '22, computer science and history**, started at APL just under a year ago. As a recent graduate, many of the tasks require new skill sets for Sica, including work in computer and electrical engineering. But he knows just who to go to if he needs help: one of the longest-serving leads on the team, Czajkowski.

Sica says, Czajkowski gives "his input on the progress that I've made on the task as well as making sure that I understand the context of the situation and what we're doing. This helps me create better code for the mission that we're doing here."

Miller adds, "we have preserved our democracy for all these years through nuclear deterrence. And Stan's work is a testament to that."

"One of the things that I'd say that UMBC taught me was how to think logically in the mathematical world and dig deep into problems," says Czajkowski. "And the focus that I've applied throughout my career is be excellent in everything you do, and make sure you do everything the right way. It gives me great satisfaction to know that I'm applying myself the best I can, and not taking shortcuts. You don't want to be wrong in this world."

—Randianne Leysbon '09





Czajkowski on a 2023 visit to campus. Across, clockwise: Czajkowski at his desk at APL in the 1970s; his student ID from UMBC; and with his APL coworkers on campus, Nick Sica '22 (center) and Jim Miller '87 (right).

Leading **BOLDLY**

Prior to her formal investiture of the role of president, when **Valerie Sheares Ashby** reflected on her first year at UMBC, she said, “Every day, I am surprised in a good way by how much people love this place, how committed they are, and what lengths they are willing to go to for each other. For students, for colleagues, for our vision, for our mission, for our community—people will go to great lengths.”

And at the presidential installation ceremony on April 27, 2023, Sheares Ashby, other speakers, and the UMBC community as a whole celebrated that shared commitment to a common vision—one that promises to redefine excellence in higher education through an inclusive culture.

By Randianne Leyshon '09





President **Valerie Sheares Ashby** takes in the view from the 7th floor of the Albin O. Kuhn Library. The floor-to-ceiling windows frame campus, a wall-to-wall mural of manicured paths and greenery surrounding the academic buildings and residential halls. Most important to the scene are the students, walking in pairs, whizzing along on scooters, resting in the shade in a collective of hammocks.

“I love it when I walk across this campus and I see our students engaging with each other,” says Sheares Ashby. “I have been at institutions where we had a certain percentage of this population, of that population...but I have never seen this much true engagement where people didn’t get here and stay in their siloed group. That is a beautiful thing.”

It’s clear that Sheares Ashby finds her energy by tapping into the university’s vision statement—which aligns so closely with her own values, she says—and seeing and speaking with “her children, her students,” as she calls them. She becomes animated and eager to share their accomplishments. “I don’t need a big ta-dah for it to feel great to me. It is every single real, honest engagement with my people—my students, faculty, and staff—that’s special to me,” says Sheares Ashby.

While she took up the mantle of the presidency on August 1 of last year, on April 27, 2023, Sheares Ashby was officially conferred with the charge of the Office of the President (and given a medallion symbolic of the office and heavy in its weight, as a reminder of the responsibility of the role).

Surrounded by lush displays of Maryland’s black and gold

flower, black-eyed Susans, and state and campus leaders at her investiture ceremony, Sheares Ashby made a promise to the campus community and beyond.

“We look at our students as if we are looking at our own children. And so, I say to you, students: By our words and through our actions, we want you to feel that you belong and know that you are welcomed.”

A theme of *thankfulness*

The installation ceremony was the culmination of a week-long celebration of Sheares Ashby’s ongoing leadership of UMBC. If you want to know what mantra she’s been channeling through the build up and completion of this historic moment in the university’s timeline—not to mention her own life—it’s “gratitude.”

“How is it that I get to be here with these people whose values are right in the middle of my own?” she asks incredulously. “And they call it work.”

On the platform at Sheares Ashby’s investiture—along with Maryland Governor Wes Moore, other elected officials, and leadership of the University System of Maryland and UMBC—were mentors from her own academic journey who have been guiding her for 40 and 30 years apiece.

“They thought I could do this when I was 18, when I did not have a clue. But I have so much gratitude for how people have invested in me and for what my predecessor did. If [President Emeritus





Freeman Hrabowski] had not been here, this would not be the place that I wanted to be. He actually did something here that gave the place the soul that it has.”

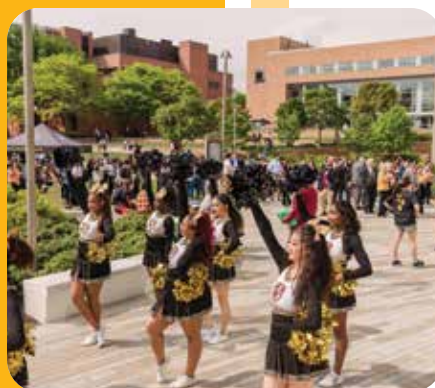
At an inauguration event celebrating faculty and staff, Sheares Ashby also stood up to acknowledge the efforts of the many different teams that make all of the fanfare possible. “I love thanking people,” she laughed. “I could do this all day.”

Gratitude goes both ways

“It feels good,” said **Janerra Allen**, a fourth-year electrical engineering Ph.D. student selected by President Sheares Ashby to be a student marshal. “I feel encouraged and empowered to see a female in the role and especially a woman of color.” Allen, who is the current president of the Black Graduate Student Organization, says she’s been cheered by Sheares Ashby’s commitment to graduate students and is looking forward to this next chapter of campus leadership. “I think that’s one unique characteristic of President Sheares Ashby—she can level with you and have a conversation with you, which just feels good.”

Thankfulness was a theme repeated by those close to President Sheares Ashby, including her older sister, Beverly Sheares, associate professor of pediatrics at Yale University School of Medicine. “I’m immensely proud and grateful and happy for her and UMBC and for our family,” says Sheares. “She has worked very hard. She’s been committed to her work over a long period of time. And her commitment has been really focused. She has made sacrifices to get here. I’m so grateful that the work and the sacrifices have led to something so fantastic. This is the space she belongs in.”

From VIP guests to a resolution passed by the Maryland House of Delegates to a student talent showcase, the UMBC community found myriad ways to celebrate at the inauguration events for President Sheares Ashby.



Family legacy of *generosity*

Amid the solemnity of the investiture ceremony, a notable energy bubbled to the surface. With her hand to her heart, Sheares Ashby took in the words of welcome and responsibility and received them with a smile visible from the back risers of the Chesapeake Employers Insurance Arena. Acknowledging her family in the front row, Sheares Ashby honored the home created by her late parents, James and Shirley Sheares, who nurtured curious children, gave them a sense of humor and joy, and continually modeled a life of service to others.

She then paused her remarks to surprise her family by announcing her establishing an endowed scholarship in her parents' names—a need-based scholarship for undergraduate and graduate students across the disciplines. As the audience stood to applaud, Sheares Ashby followed the moment with a quip—one of many moments of laughter throughout the event.

“And I can hear my mother’s voice saying, ‘Now don’t be skimpy...make sure you put enough in there so that the children have what they need.’ Yes ma’am.”

Continuity of leadership

Throughout the week of events celebrating Sheares Ashby’s presidency, organizers often remarked that UMBC had no playbook for this. In April 2023, the *Chronicle of Higher Education* reported that the average tenure of a college president has shrunk yet again, now to below six years. Yet prior to this semester, UMBC had not installed a president in 30 years.

Mary Ann Richmond ’93, history, UMBC’s government and community relations manager, who served as an event staff lead on the week’s events, remembers serving as an usher at Hrabowski’s installation just a few months after she

graduated. She didn’t know, she said, that they were ushering in the next three decades of campus leadership.

“When I think back about things that were starting when I was a student—I came in the same year as the first cohort of Meyerhoff Scholars, and the Shriver Center was just getting started. And now, seeing the university 30 years later and what it’s become, is just amazing.”

Now she can’t help but wonder, “Could this be the next 30 years? President Sheares Ashby is going to do such a fantastic job, and no matter how long it lasts, I know we’re in really good hands.”

Also present throughout the inauguration events representing continuity through UMBC’s different chapters of leadership were members of the first four graduating classes at UMBC, known as the Founding Four. Sheares Ashby, who was just 13 days old when UMBC first opened its doors on September 19, 1966, praised the commitment of the founding graduates who took a chance on a burgeoning institution and have never looked back. (She even took a moment to hold up their recently completed book *This Belongs to Us*. Read more about these Founding Four stories on page 62.)

In the intervening decades, UMBC has grown from a new institution on which students had to take a chance to a Carnegie Classified Research I university, consistently ranked as one of the nation’s most innovative campuses, and the number one producer of Black undergraduates who go on to earn doctorates in the life sciences, math, and computer sciences combined, as well as of Black undergraduates who go on to earn the combined M.D./Ph.D.

“And we are not done,” said Sheares Ashby from the platform. “UMBC possesses a willingness to continue to question the status quo, to consider the world’s ever-changing challenges and circumstances—and to innovate to serve our students.”

“My bold aspiration for UMBC? I want us to be nationally and internationally known as a model of inclusive excellence in higher education.”

— *President Sheares Ashby*

Champion for the university

In that spirit, this spring, the Retriever community came together in a series of conversations called UMBC Bold—sessions that laid the groundwork for the university's next phase of strategic planning. These were deeply engaging discussions—with more than 1,000 attendees—about the community's bold aspirations for the undergraduate and graduate student experience, the research enterprise, economic development, community engagement, and more.

Sheares Ashby attended each of the 22 listening sessions. “I heard so many things that were exciting to me, and I heard a lot of room for opportunity. There are a lot of opportunities,” she said. She came away brimming with ideas to carry forward with her in following years of her leadership.

“My bold aspiration for UMBC? I want us to be nationally and internationally

known as a model of inclusive excellence in higher education.” She stops for a beat and leans back in her seat on the 7th floor of the AOK Library (named after the university's first leader, **Albin Owings Kuhn**), framed by the moving mural of campus behind her.

“Anyone could say this, but nobody else is doing it—and I say this without hesitation as a scientist who knows that the word ‘nobody’ is like ‘a hundred percent.’ There's no other institution that has figured out how to do inclusive excellence in research.”

Sheares Ashby is working to continue the UMBC legacy and story, and she has the support of the campus community and beyond. Those library windows that look out across campus include Arbutus and Catonsville, too. Perfectly outlined on a clear day is the Baltimore City skyline and the Francis Scott Key Bridge, connecting other parts of Maryland together. Maryland Governor Wes Moore highlighted Sheares Ashby's “unbridled excellence,” making her “absolutely right for this moment.”

Her mentor since her undergraduate years, Henry Frierson told the audience at the installation, “You have truly gained a new champion for the university.” Joseph DeSimone, Sheares Ashby's Ph.D. advisor and long-term mentor, called the president “a servant leader.”

And she is ready to get to work. She wants to help realize the university's potential as seen through the Bold conversation series and driven by the university vision.

“I think we can simultaneously be that institution [a model of inclusive excellence] and not lose our core values—the way we care for people, the way we love our people, the way we are committed to this institution, the way we do teaching,” she says. “We can do that. And we can do it better than anybody else because I don't think anybody else is as serious about it as we are. That's my bold aspiration.”

See more photos and video from inauguration week at president.umbc.edu/inauguration.



President Sheares Ashby found ways to connect with students at the Universities at Shady Grove, the Catonsville campus, and in Baltimore City as she attended many events connected to her inauguration.





written by
Catherine Meyers

The AI apocalypse is coming. Or it isn't. Depending on what you read, you might get confused.

One thing is certain: Humans are fired up about smart machines. Much of the attention has focused on ChatGPT, an "artificial intelligence language model designed to generate human-like responses to natural language prompts" (in its own words).

ChatGPT gets coy if you ask whether its existence should be cause for human concern. "It's important to recognize that I am a tool and not inherently good or bad. It's how people choose to use me that can have positive or negative consequences," it says.

Many researchers, however, are not so noncommittal. They see inherent flaws in the machine learning technology that forms the foundation of tools such as ChatGPT, and they would like to make it better.

While ChatGPT advises that "it's always a good idea to double-check any important information I provide," some UMBC researchers are working to build better safeguards into the AI systems themselves—AI the public can trust.

On March 22 of this year, a group including prominent artificial intelligence researchers and tech entrepreneurs released an open letter calling for a six-month pause on the training of powerful AI systems.

“AI systems with human-competitive intelligence can pose profound risks to society and humanity,” the letter argued. “Powerful AI systems should be developed only once we are confident that their effects will be positive and their risks will be manageable.”

The letter signers, including two UMBC faculty, expressed alarm at an AI arms race unleashed with the November 2022 public debut of ChatGPT, a celebrity chatbot that answers almost any question or prompt with humanlike ease. In a mere two months, the bot attracted 100 million users, and big tech companies began sprinting to deploy similar technology in their products.

Yet a general unease is accompanying this latest rush for AI gold.

ChatGPT can dazzle users with its eloquent prose (and poetry!), but it sometimes delivers complete falsehoods. People fret that such technology will eliminate jobs and empower scammers and dictators. And beneath it all, many researchers worry that we do not fully understand—nor can we reliably control—how creations such as ChatGPT work.

“At the core of many powerful AI systems today are what are called ‘blackbox’ models,” says **Manas Gaur**, an assistant professor in the Department of Computer Science and Electrical Engineering (CSEE) at UMBC. The models percolate data through layers of calculations so dense and complex that researchers struggle to track what’s happening inside. The models may excel at certain tasks—like writing sentences in ChatGPT’s case—but they cannot explain why they make the

decisions they do. Sometimes they do perplexing, and erratic, things.

“Some people see ChatGPT and similar technology as a progressive tool while others fear it is dangerous,” says **Nancy Tyagi**, a master’s student in computer science at UMBC who is also working as a researcher in Gaur’s lab. “In my opinion, such tools are inherently risky and need further analysis. If these models are to be used in sensitive areas such as mental health or defense systems, then more work is required to make them safe, controllable, and trustworthy.”

Tyagi is working on a project to build an AI mental health assistant capable of initiating safe and appropriate conversations based on clinical guidelines in mental health. Her project is one of many that Gaur and other AI researchers at UMBC are launching with the aim of



ensuring AI tools are accurate, transparent, and safe.

To better understand these researchers' quest for trustworthy AI, it helps to take a step back and consider how the latest AI trend fit into the big picture.

A BRIEF HISTORY OF THINKING MACHINES

When the field of artificial intelligence launched in the 1950s, computers were feeble compared to the muscular monsters that power systems such as ChatGPT today. Yet researchers were intrigued by the possibility of teaching them to think like humans. What followed was a roller coaster of booms and busts.

"The history of AI has been marked by periods of hype, followed by some level of disillusionment," says **Tim Finin**, CSEE

"In my opinion, such [AI] tools are inherently risky and need further analysis. If these models are to be used in sensitive areas such as mental health or defense systems, then more work is required to make them safe, controllable, and trustworthy."

Nancy Tyagi

computer science master's student

professor and a researcher at UMBC who has been studying AI problems for more than 50 years.

Driving the ups and downs were three interrelated factors: the power (and limits) of the hardware that formed computers' brains, the data available to train those brains, and the "thinking strategies" AI researchers devised.

In the beginning, researchers taught machines to play games, learn language, and solve mathematical puzzles using a variety of "thinking" approaches. Yet the field

CREATING "AI SCIENTISTS" AT UMBC

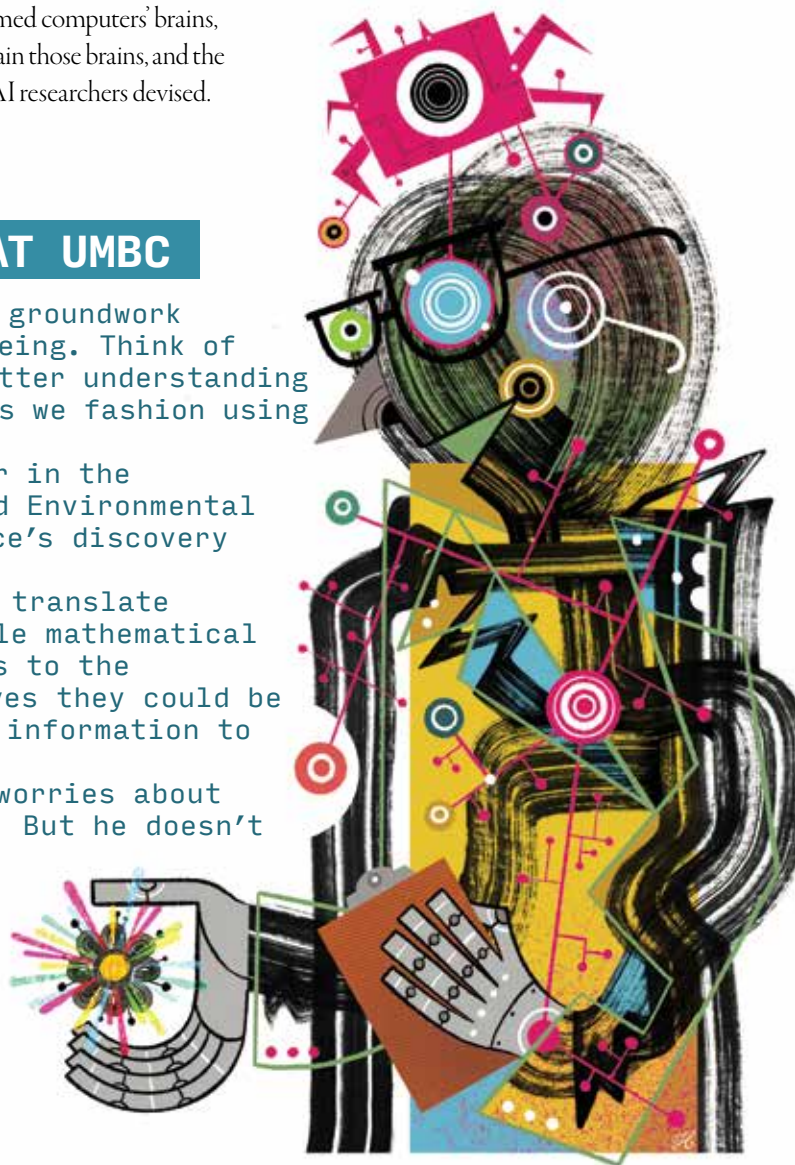
New scientific discoveries often lay the groundwork for significant advances in human well-being. Think of medical treatments that spring from a better understanding of the human body or labor-saving devices we fashion using our knowledge of material properties.

Tyler Josephson, an assistant professor in the Department of Chemical, Biochemical, and Environmental Engineering, hopes to turbocharge science's discovery engine, with a little help from AI.

Josephson has started a new project to translate chemical theories into a machine-readable mathematical language. Once the computers have access to the foundations of science, Josephson believes they could be tasked with logically manipulating that information to reveal new discoveries.

You might wonder if Josephson has any worries about creating his own AI-powered replacement. But he doesn't think AI scientists will displace the human kind.

"I think scientists have so many different problems to solve. And if we solve them faster with AI, they just open up brand-new questions for us to go after next," Josephson said in an interview about his work with the Canadian radio program *Quirks & Quarks*.



hit a wall in the 1970s: Computers couldn't store enough information or process it fast enough to tackle real-world problems. This was the first "AI winter," when funding dried up and the topic faded from public view.

The birth of the microprocessor at the end of the decade revitalized AI research. Riding the shoots of this new life, a certain approach to machine thinking rose to prominence—that of the expert

system. These AI programs were based on pre-programmed knowledge and logic meant to mirror the reasoning of human experts. Perhaps the most famous expert system was IBM's Deep Blue, which beat the Russian chess champion Garry Kasparov in a chess match in 1997.

Expert systems could shine when solving narrowly defined problems (such as winning a game of chess), but they were

brittle, says Finin. The systems struggled to adapt to fuzzy and fluid real-world situations, and it was cumbersome to program all the rules that an expert might use to evaluate a problem.

As the limits of expert systems became clear in the 1990s, AI felt the chill of a second winter.

It was another advance in computing hardware that thawed the field again after

TRAINING YOUR ROBOT ASSISTANTS

If you hope the AI revolution will bestow humanity with a machine "Jeeves" capable of meeting your every need, **Cynthia Matuszek** has some bad news.

"I'm always being asked: 'When will we have robot butlers?' I have to say—not any time soon," says Matuszek, an associate professor in the Department of Computer Science and Electrical Engineering.

Matuszek researches how to build robots that understand human commands in complex and chaotic natural environments. She has successfully trained a robot hand that can respond to written prompts such as "Grab the apple." She is also exploring how to teach robots to understand spoken language and to learn new concepts, like how to dice a vegetable, if a human shows them how.

Part of what motivates Matuszek's work is the huge unmet demand for caregivers to assist people as they age. Robots might fill the gap. Matuszek says we likely won't have "Jack of all trades" helpers, but robots could specialize in certain tasks, such as preparing food or folding laundry.

Another part of what motivates Matuszek is the thrill of being the first person to discover how to do something new. "It's really just so much fun," she says.



the turn of the 21st century. The graphic processing units developed to enhance video games supercharged computers' speed and power at low cost. This, coupled with a flood of free data from the internet, propelled a new type of AI to the forefront: machine learning.

With loads of computing power and heaps of examples to learn from, researchers found surprising success getting computers to teach themselves how to think. The computers start with a question, perform some calculations, and guess the answer. They then compare it to the actual answer. If they are wrong, (which they usually are at first), they fiddle with the calculations and try again. After running billions of calculations, such systems can become quite proficient at tasks such as identifying images of cats and predicting the next word in a sentence.

This approach to machine learning is called a neural network, so named because it was originally inspired by the way neurons in the brain work. Neural networks lie at the heart of most famous AI applications today, including image classification tools, voice recognition, and text and image generators.

THE POWER (AND LIMITS) OF MACHINE LEARNING

When many of the new machine learning systems debuted, their powers seemed almost miraculous. But soon enough, drawbacks emerged. The machines require enormous data sets (and enormous amounts of energy) to learn. They will adopt biases from their training data and sometimes from their interactions with humans. A chatbot named Tay was quickly scuppered after its 2016 release, when users pushed it into spewing racist and sexist ideas.

Machine learning systems can also fail spectacularly in individual instances (even if they get answers correct most of the time). For example, a driver was killed in 2016 when the autopilot in a Tesla car failed to recognize the side of a white trailer truck against a bright sky.

The blackbox nature of state-of-the-art machine learning means the systems are unable to explain or justify their conclusions, giving users—and even their

HYBRID SYSTEMS TO MERGE LOGIC AND LEARNING

If the AI systems of the 1980s married the AI systems of the 2010s, their baby might be the type of system Gaur, Song, and others are working to develop.

These systems look to deliver the learning capabilities of neural networks alongside the safeguards of knowledge and rule-based systems.

I recognize the need for trustworthy AI. I believe that this field of research is where I can make unique contributions and take on responsibilities for my professional communities and my home institution.

Houbing Song
information sciences professor

own creators—little insight into their thinking. For the most part, the systems struggle to build consistent worldviews or reason logically.

The weaknesses of learning models also leave them susceptible to malicious manipulation. Adversaries might “poison” the data used to train the models or exploit the model’s opaqueness to hide an attack.

“It is time we fall back from trusting these models,” says Gaur, whose personal push to make AI systems more explainable, robust, and safe is part of a growing international movement.

Another UMBC researcher joining the push is **Houbing Song**, a professor in the Department of Information Sciences at UMBC. Song says that transportation, defense, medicine, and the law are some areas where explainable and safe AI systems are needed the most.

As researchers tackle the challenge of making current AI systems better, they are often returning to ideas from an earlier era of AI.

In the field of mental health, Gaur points out that current chatbot systems are not well suited to answering patients’ questions since they can give unsafe or off-the-wall responses.

“Guaranteeing these systems’ safety calls for more than just improving their overall performance” he says. “We must also make sure the systems are prevented from giving risky answers.”

Working with **Karen Chen**, an assistant professor from the Department of Information Systems, Gaur has written a paper highlighting the properties that AI-powered virtual mental health assistants should exhibit to be considered safe and effective.

Together with his students, he is also working to create such systems. Using an approach called knowledge-infused learning, the researchers are looking to anchor their AI systems in clinically approved guidelines. They are also pushing their systems to reveal their thinking so that the approaches can be checked by



mental health experts. Sometimes the results reveal that even when a system arrives at a correct conclusion, the information it used to reach that conclusion may be irrelevant to a human doctor's thinking.

Song has also been coaxing AI learning models to open up. In a recent paper, he and his co-authors developed a tool to identify attacks on an image-recognition program by figuring out which parts of its neural network are most susceptible to manipulation.

In the fall of 2023, he will be teaching a new graduate-level course on a broad category of hybrid AI called neurosymbolic AI. UMBC will be only the second university in the world to offer such a course, he says.

Song arrived at UMBC in January on the heels of winning major honors for his research in computing and engineering and is looking forward to turning more of his attention to this emerging frontier in AI research. He says he eventually hopes to build a world-class AI research institute at his new academic home, focused on delivering learning machines that can be confidently used when safety is a top priority.

"I recognize the need for trustworthy AI," Song says. "I believe that this field of research is where I can make unique contributions and take on responsibilities for my professional communities and my home institution."

TECHNOLOGY TO BENEFIT SOCIETY

The initial goal of AI, as defined by a group of researchers credited with launching the field at a 1956 workshop, was to "make machines use language, form abstractions and concepts, solve [the] kinds of problems now reserved for humans, and improve themselves." But if

the aim is human-like thinking, it naturally raises the question: How do humans think?

In a bestselling book titled *Thinking, Fast and Slow*, world-renowned psychologist Daniel Kahneman posits that humans have two thinking systems: a fast one and a slow one. The fast one is the thinking that comes to mind almost without effort, and we use this thinking most of the time. Yet it is prone to errors. The deliberative slow thinking system catches mistakes and enables breakthroughs in understanding.

Finin compares machine learning models to the fast-thinking system while knowledge and logic-based systems are more like the slow-thinking system. To make today's faddish, fast-thinking models more competent, researchers such as Gaur, Song, and their students are extending them with slow-thinking capabilities.

We may still be decades away from AI systems approaching the full range of human intelligence. There are many ethical questions to grapple with before we reach a Hollywood-csque future of self-flying cars

and android coworkers. Yet the decades of AI research up to this point have already transformed the world. AI concepts underpin the ways we search the web, shop online, and otherwise interact with the digital world.

AI has enormous potential to improve human lives, but we must proceed wisely. UMBC researchers are at the frontiers of AI research, pushing the limits of knowledge and theory, and striving to make the technology better for the benefit of society.

THE SEASONS OF AI

The growth of the modern field of AI has been marked by a series of rapid spurts, followed by more dormant periods. People often liken these ups and downs to the seasons. During AI summers, public attention shines hot on the field. Yet the bountiful fruit of the season has often grown from seeds of ideas planted during quiet AI winters.

◉ SUMMER 1: EXPERT SYSTEMS

AI programs based on knowledge and logic flourished in the 1980s. Examples include systems that can identify unknown chemicals, diagnose diseases, and play chess. The systems are safe and explainable but fail to adapt to fluid and complex situations.

◉ SUMMER 2: MACHINE LEARNING

Starting in the early 2010s, the potent combination of supercharged computing and heaps of free internet data powered AI's second summer: the golden era of machine learning—an era that we are arguably still in.

AI systems started to recognize images, transcribe and translate language, and create text and art almost like humans do. These systems have surprised even their own creators with their range of abilities, but they are hard to understand, reason with, and control.

◉ INTO THE FUTURE: HYBRID AI

It's not yet clear when or if the second AI summer will turn to fall. But researchers are already planting the seeds for future advances. Combining the fruits of past summers, researchers hope to make future AI systems that are adaptable and safe, self-taught, and able to explain their decisions.

◉ **FUN FACT:** UMBC's first Ph.D. graduate in computer science, **Sanjeev Bhushan Ahuja**, earned his degree when expert systems dominated AI. His dissertation, published in 1985 and titled "An Artificial Intelligence Environment for the Analysis and Classification of Errors in Discrete Sequential Processes," advances techniques popular during this time.



Shared Stories, Shared Purpose

By Catalina Sofia Dansberger Duque

Immigrant research often focuses on statistics instead of the human experience. That's why Tania Lizarazo's "slow research" approach—which puts people first—is such a powerful tool in telling untold stories of local Latin American communities.



On a warm and bright sunny day in April when the trees in Baltimore City's Patterson Park are changing from bright green buds to full leaf and the birds are competing with the car horns, **Viridiana Colosio-Martinez '22, modern languages, linguistics, and intercultural communication, and M.A. '24, intercultural communication,** waits in front of the Creative Alliance, a community and performance space a few blocks away from the park. After three years of undergraduate and graduate classes with her professor **Tania Lizarazo**, Colosio-Martinez is finally meeting her in person.

"I'm nervous and excited," she says, waving to Lizarazo, assistant professor of modern languages, linguistics and intercultural communication and global

studies, as Lizarazo crosses the street to meet her and collaborator **Yesenia Mejia**, director of Creative Immigrant Educators of Latin American Origin (CIELO) and the Artesanas Latin American cultural enrichment program coordinator at the Creative Alliance.

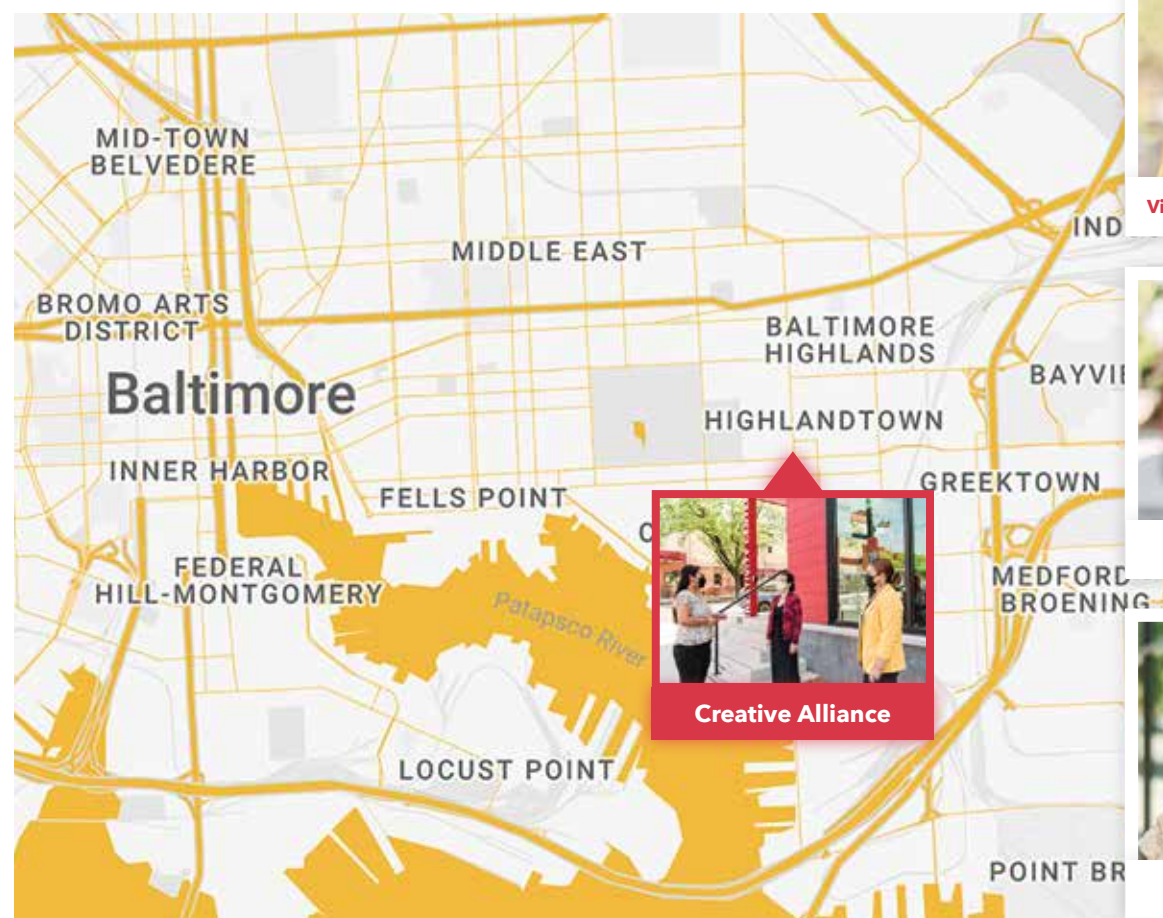
"I can't believe it's the first time I'm seeing them outside of Webex," says Colosio-Martinez.

There was a lot of hugging—the kind of hugging that is reserved for a friend you haven't seen in years. Together, the group is gathering to review digital storytelling projects they've been working on together virtually for the past year, which they will present at the International Digital Storytelling Conference in Baltimore this summer.

Led by Lizarazo, and in collaboration with local Latin American communities, they are working to center the human experience by collecting and sharing a range of immigrant journeys that have previously been unrecognized.

"Lived experience is knowledge and should be part of knowledge production. A lot of our students are immigrants or their parents are immigrants, and seeing experiences of migration beyond academic writing motivates them to explore their own personal and family stories," says Lizarazo.

Viridiana Colosio-Martinez '22, M.A. '24, Tania Lizarazo, and Yesenia Mejia have been working together to tell the immigration stories of Baltimore's Latin American communities.



Viridiana Colosio-Martinez



Tania Lizarazo



Yesenia Mejia

Mejia, Lizarazo, and Colosio-Martinez meet for the first time in person at Baltimore's Creative Alliance.



Making Teaching and Research Accessible

When Lizarazo moved from the University of California, Davis (UC Davis) to teach at UMBC in 2015, she felt an urgent need to create community. It had been easy to find a Latinx community in Davis but less so in Maryland.

“I arrived in Baltimore and suddenly I’m walking into places where I’m the only Latina. I don’t think that it’s healthy

for anyone,” says Lizarazo. She began volunteering at the Creative Alliance where she met Mejia and started *Latinas in Baltimore*.

During the pandemic, Lizarazo, who is chronically ill and immunocompromised, has found that virtual classes and tools allow her to continue teaching and engaging in research with the community.

In fact, the pandemic made accessibility that had previously been considered impossible the norm.

“We were so close to reimagining what community care could look like in 2020. We should not leave anyone behind or require people to choose between showing up or protecting themselves, their families, and their communities,” says Lizarazo. “I



Mejia shares pieces of her family history, including a cotton huipil (tunic) hand embroidered with red and orange nahuales, and a family picture with her mother wearing it.

am also committed to showing that we don't have to choose between presence and safety. We can imagine collaborations that do not require additional exposures during an ongoing pandemic, that acknowledge that we have different access to resources such as healthcare, and that value interdependence and community care. Not only do I want to collaborate in producing knowledge but I want to be mindful of the context of these collaborations and not pick and choose what justice is when marginalized people keep being the most affected by the pandemic."

Together with the Baltimore Field School, a part of UMBC's overarching public humanities programming, and her partner researchers, Lizarazo has spent numerous hours building the relationships needed to help community members tell their stories.

"In the same way, community members rarely feel included in academia in different ways than research subjects. Creating opportunities for dialogues opens up opportunities to imagine new interactions and collaborations where not only the researcher's knowledge is valued. Researchers would not be able to do anything without relationships and collaborations with students and community members."

Slow Research

The researchers sit around a table and listen to Mejia describe photos of her family back in Santa María Zacatepec, Oaxaca, Mexico, during the 1990s. A faded photo shows her and her sister riding horses at a ranch. She picks up a picture of her father and pauses. "I didn't get to see him." Mejia has not been able to return to Mexico for almost 20 years, during which her father died. Colosio-Martinez and Lizarazo nod, understanding the pain and joy in between Baltimore and Oaxaca.

Mejia, a Baltimore Field School fellow, is working on a digital story, a story map, and website for her project on Representations of Indigenous Traditions from Latin America in Baltimore. She unfolds a calf-length, white cotton huipil (tunic) hand embroidered with red and orange nahuales and proudly shows a family picture with her mom wearing the same huipil.

"My mom always wears her huipil," says Mejia. "Nahuales are spirit animals that are assigned to a baby according to the day they were born." This spurs a lot of questions about the nahuales while she shows another hand-embroidered item, a bag with nahuales made by a fellow Indigenous Tacuate artist from Zacatepec.

This community-centered approach to research where students and community members are the knowledge creators is a key approach to Lizarazo's community-engaged research on Latin American studies, transnational feminism using collaborative methods. It's a shift away from the colonial-minded ethnography methods created by academics in the global north to research communities in the global south.

"We need to recognize that trust-building is a slow process," says Lizarazo. "It's based on reciprocity and it's essential to meaningful communication and collaboration with communities."

“Academia has historically excluded marginalized groups while extracting their knowledge. This extraction translates into personal gain for researchers but rarely benefits the communities that have been researched. As universities are not always reflections of the local communities where they are located, I have always been interested in learning from community members,” says Lizarazo. “I enjoy creating, collaborating on, and supporting projects that would not have an exclusively academic audience and won’t exist (only) behind paywalls. This is particularly important in public universities.”

Lizarazo calls this “slow research.” She had been practicing it in her home country of Colombia and at UC Davis as a doctoral student.

“Tania was an early proponent of experimenting with digital storytelling as a research method. Uncomfortable with academic ‘interventions’ into communities, she liked the idea of putting digital communication tools in the hands of vulnerable groups, like migrants, who might not otherwise have access to share their experiences in the public sphere,” shares Lizarazo’s mentor, Robert Irwin, director of the UC Davis Global Migration Center.

“She was an advocate for listening to and learning from migrants. Hers was an important voice in the research group that designed our first strategies for deploying this methodology.”

Learning and Listening

“Mujeres Pacíficas” was Lizarazo’s first digital storytelling project in collaboration with Afro-Colombian women activists in the department of Chocó, in Western Colombia, who were also advocates for land rights and women’s rights. She met the group in 2008. “Women were doing the work alongside men for years but their work had gone unrecognized,” says Lizarazo.

One of the first stories, recorded after five years of community building, was created in collaboration with Luz Adonis Mena Becerra, a member of the Main Community Council of the Integral Peasant Association of the Atrato River, a Black farmers’ association in the Colombian Pacific, where Black communities were officially granted territorial rights in 1993.

“In the process of creating Luz Adonis’s story, I found out she had faced forced displacement and had lost everything she owned in a fire years later,” says Lizarazo. “Despite this, she reconstructed her memories through community photographs for her story.”

The project inspired Lizarazo’s forthcoming book from the University of Illinois Press, *Postconflict Utopias: Performing Everyday Survival in the Colombian Pacific*, a part of the “Dissident Feminisms” series. “The willingness to imagine these stories before they had audiences, and in spite of the absence of personal archives, is utopian,” says Lizarazo. “Not because these stories are ideal or unrealistic but because they invite the audience to imagine what seems impossible: the end of decades of violent conflict into a material reality.”

At left: Lizarazo (center) meets with community journalist Lucely Rivas (left) and Gender Commissioner Julia Susana Mena Becerra at the Atrato River. At right: Working with partners on the Mujeres Pacíficas project at the Gender Commission’s office in downtown Quibdó in 2013. Pictured (l-r): Rubiela Cuesta Córdoba, María del Socorro Mosquera Pérez, Yenny Palacios Romaña, Carmen Aides Navia Mena, Banessa Rivas López (in blue), Luz Adonis Mena Becerra and Ana Rosa Heredia Cuesta. Photos courtesy of Lizarazo.



Student-Teacher and the Teacher-Student

Parting with colonial-minded immigration research means developing new frameworks that humanize data and shift the process of gathering and disseminating information from one person to a community with a diverse and evolving set of skills and expertise.

“Equipping immigrants with the tools and methods to co-create personal stories can help us understand migration as a hemispheric experience in the context of globalization, colonialism, neoliberalism, genocide, and marginalization, especially of Black and Indigenous communities in Latin America,” says Lizarazo.

These voices highlight the multitude of paths immigrants take that are equally stories of joy, success, family, and community love as they are stories of survival, sacrifice, separation, and pain. There isn’t one Central American experience, Mexican American life, or Latin American journey. Before immigrants became people of color, Latinos, or minorities, they were Aymara, Taino, Mayan, Colombian, Mexican.

“It’s important to critically study the connections between local and global contexts of production and consumption of these stories,” says Lizarazo.

“It’s a more horizontal teaching-learning experience, where students, community members, and instructors are teaching and learning. The world is messy; when we listen to each other, we can do things that we didn’t know were possible before.”



Colosio-Martinez shares photos and stories of her family's journey with Mejia and Lizarazo.



One Penny

After Mejia places her photos and huipil on the table, Colosio-Martinez, research assistant for the Moving Stories: Latinas In Baltimore digital storytelling project led by Lizarazo, takes a deep breath and preempts the debut of her digital story draft by apologizing for the tears to come. A clip of a map shows a blue line tracing the miles of her life from Caborca, Sonora, Mexico, three hours from Phoenix, Arizona, to New Haven, Connecticut, to Baltimore.

A small picture of a penny appears on the screen.

“I’ll never forget when me and my mom tried to register for community college,” she begins, “but we were short one penny.” With each description, the penny gets

bigger. “The registrar said she didn’t have a penny and shut the window in our faces.” The penny fills the screen. “My mom and I went outside and searched the floor until we found a penny.”

The pursuit of education is the connecting thread throughout the narrative. A photo of Colosio-Martinez wearing her cap and gown and celebrating with her husband after earning her associate’s degree is followed later by a screenshot of an email welcoming her to UMBC.

Colosio-Martinez covered her eyes to hide her tears. Lizarazo hugged her. Mejia touched her shoulder. They suggest she not cut her story.

WHAT IF you could ask yourself a big question and then use your intuition to follow it wherever it led for as long as it took? It would take a certain kind of guts, right? But, with a willingness to get lost on a tangent, to joyfully put themselves in positions of not knowing, truly creative thinkers can find new ways of translating the world around them.

Enter the following: A dancer who makes beautiful movement from fish research. An information systems professor who turns poetry into wine. A data visualizer who draws connections while splattering paint. A mapper and sculptor of hip hop facts. A harnesser of color and language and culture.

This is the sort of magic that can happen when you're...

OPEN TO INTERPRETATION

by Jenny O'Grady



REVEL IN THE REVEAL

ANN SOFIE CLEMMENSEN

On a molecular level, the push and pull of an ecosystem may feel too infinitesimal for humans to experience visually. A researcher can track the data in a spreadsheet as a series of characters and marks or explain it with the structure of a scientific article. Microscopes may capture stills or video of tiny worlds, but what about the emotional landscape of life in motion?

"I really am fascinated with the small things we cannot see that are so important," says **Ann Sofie Clemmensen**, assistant professor of dance, who spent a year in residence at the Institute of Marine & Environmental Technology (IMET) next to Baltimore's Inner Harbor working with scientists who study a variety of topics adjacent to aquaculture, environment, and sustainability.

“It’s like looking at an abstract painting. If you don’t have a little key that can unveil or reveal some of those secrets, then it’s just chaos.”

- Ann Sofie Clemmensen



Clemmensen began her residency by diving deeply into the research of the IMET scientists around her—learning about everything from rainbow trout viruses to the ecological wear and tear of red tides. As she built relationships with researchers, she found herself drawn into the details of their studies—and wondering how she might translate what she learned into something that might encourage viewers to learn more about their world.

“There’s a sort of unpacking of the language of that field. Because movement, while it’s not a spoken language, it is language,” she explains, ever the eager translator. “We have to understand the concept we are trying to embody in order for the physical embodiment to carry the meaning.”

Working with student dancers, Clemmensen choreographed and filmed a series of movements and scenes meant to depict biological processes she learned about from her IMET counterparts. In one, students in masks represent the generic differences of virulent and avirulent strains of the VHSV rainbow trout virus. In another, dancer **Michaela Emmerich ’24** (covered in clay powder) rolls in the dirt to show the effect of argonite in reducing levels of phosphorus in farming run-off.

While Clemmensen’s scenes of red tides, green biomass, and white, milky foams are objectively beautiful, don’t be fooled. Nature isn’t pretty, Clemmensen says. But taking a good close look can help us all understand our environment a bit better.

“For many doing art, dance, and data-driven research, it’s like looking at an abstract painting. If you don’t have a little key that can unveil or reveal some of those secrets, then it’s just chaos.”

Assistant professor Ann Sofie Clemmensen worked with researchers at IMET to create a series of videos depicting microscopic processes like red tides and battling dinoflagellates. Photos courtesy of Clemmensen.

FOUND IN TRANSLATION

FOAD HAMIDI

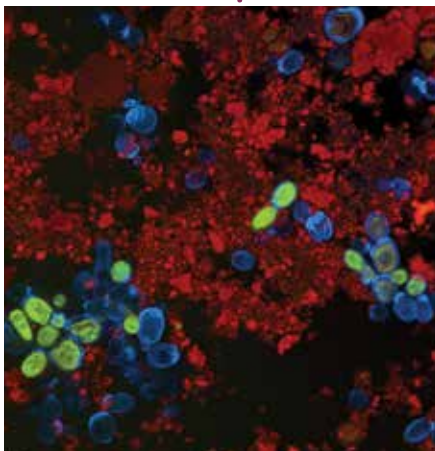
A poem crosses time and space, building in meaning as it travels from person to person, from generation to generation. With each new reader, it becomes something new and specific—but also potentially loses something of itself along the way.

As a trained computer scientist, **Foad Hamidi**, assistant professor of information systems, is fascinated by the practical challenge of being able to retrieve information lost when data is duplicated—an inevitable fact of digital life. As a lifelong lover of Sufi poetry from his home country of Iran, he also can't help but wonder how to preserve the heart of these precious words, even as circumstances—generations, distance, cultural leanings—might dilute or change them.

"There's always some information loss" in data duplication, he explains. "However, a very interesting theorem in information theory also says that if you have a lot of replicas of the same code...you can recover the original message in the presence of errors that was in all these codes."

Years ago, Hamidi learned about a song that was encoded by Japanese musician Etsuko Yakushimaru using living bacteria as a sort of language, "and it really made me think of the possibilities of information and culture and data and encoding." And so, at the start of the pandemic, he began exploring ways of translating the poetry of Hafiz, a 14th-century Persian poet, into new, living forms and of sharing the experience with others.

Hamidi's bio-art-inspired creative inquiry led him first to interpret the poetry as code—DNA, to be precise—culled from the words themselves. He then created a "poetry-infused transgenic wine" using yeast

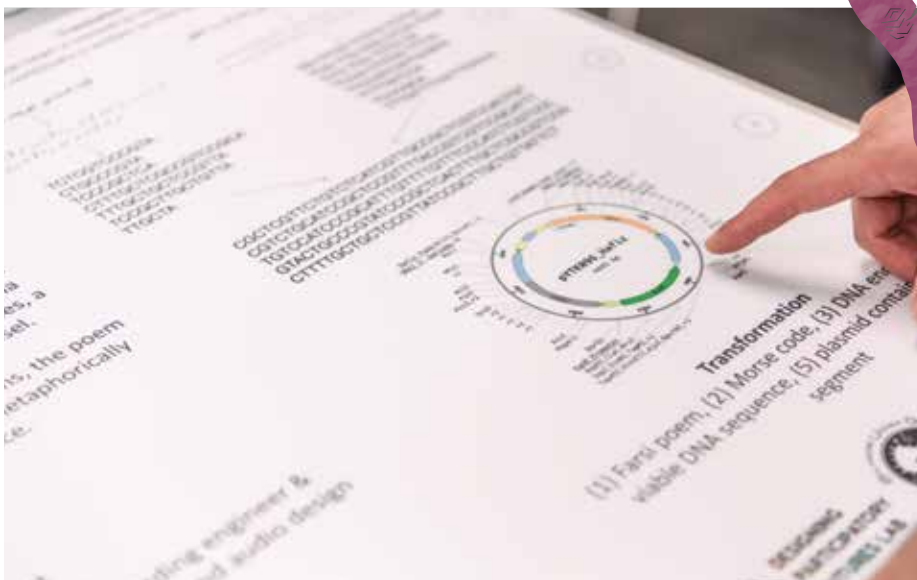


modified with the DNA encoding of the poem. Craving community, he took the idea to other researchers in music, biology, imaging, and beyond to joyfully build further iterations of the chain. These efforts led to an Imaging Research Center (IRC) Faculty Research Fellowship (with **Linda Dusman**, professor of music), and today, he continues to explore new translations of the coded poem through music, cellular imagery, and even a cluster of mushrooms growing in Hamidi's office.

With each new link in Hamidi's poetic chain, the information is replicated and the "data" is one step closer to being saved through this fascinating theorem. In doing so, Hamidi also is able to bring together curious new friends who might not have had reason to collaborate otherwise.

Although Hamidi's "translations" may seem outside the box, the practice of making a poem one's own "has a long history," he explains. "These poems are the DNA of my culture...so our architecture, our music, our visual arts, our cultural traditions, are very much impacted by poetry."

Information systems Professor Foad Hamidi has translated a favorite childhood poem into DNA code, wine, and more. Top image (magnified photo of yeast cells with the modified DNA Hamidi made) courtesy of Tagide deCarvalho.



ARTISTIC METHOD

LEE BOOT

In a far corner hangs an enormous painting of a brain, with bright blue lines, red arrows, and clips of phrases suggesting ideas in motion. In every direction above it, threads of red and blue criss-cross the room anchoring one artwork to the next—a system of knit synapses representing not only 25 years of research but the artistic process that fuels it.

“What I try to do, above and beyond anything else, is show as transparently as possible what that process looks like,” says **Lee Boot**, director of UMBC’s Imaging Research Center (IRC), whose retrospective exhibit “Abstracts & Artifacts” showed at Baltimore’s Peale Museum earlier this spring.

For Boot, that means a room filled with numbers, images—some animated, many bursting with color—and the connective tissue of the personal paintings he created to process information and experiences related to the various subjects of his research.

“The work is immersive. I paint my brain out as a meditative, reflective process. And then that gets honed, and reshaped, and...out of that automatically comes new perspectives and new ways of framing problems.”

Boot lives to solve problems, and believes deeply in the power of combining artists’ ways of thinking with other disciplines to ask questions and find solutions in new ways. Over the years, the IRC has brought together multidisciplinary teams of artists, scientists, and social scientists from state and local agencies, foundations, and other organizations to tackle everything from substance misuse to educational achievement gaps to the epidemiology of pandemics.



“I paint my brain out as a meditative, reflective process. And then that gets honed, and reshaped, and...out of that automatically comes new perspectives and new ways of framing problems.”

- Lee Boot

And while technology runs much of what the IRC builds, nothing is quite so essential to the heart of the work as one's own intuition, says Boot. As a classically-trained painter, that means returning to the canvas and allowing his brush to take him in new directions—not to create something beautiful, per se, but to open himself to ideas accessible only through such a personal process.

With each stroke of the brush, and each new color, he pulls from the deepest reaches of experience, community, and understanding, creating a road map for what's next.

“I'm not trying to make something pretty,” he says. “I am trying to understand how a set of issues sits in being, in my psyche, on the landscape of the world as I understand it. I'm trying to see what I cannot see.”

In his exhibit “Abstracts & Artifacts,” Lee Boot asks viewers to consider new ways of solving problems. “Almost like dreaming, making art with a question in mind reveals meaning through metaphor. How is it that metaphors seem to be both specific and ambiguous—both personal and universal—at once?”



MAPPING A MOVEMENT

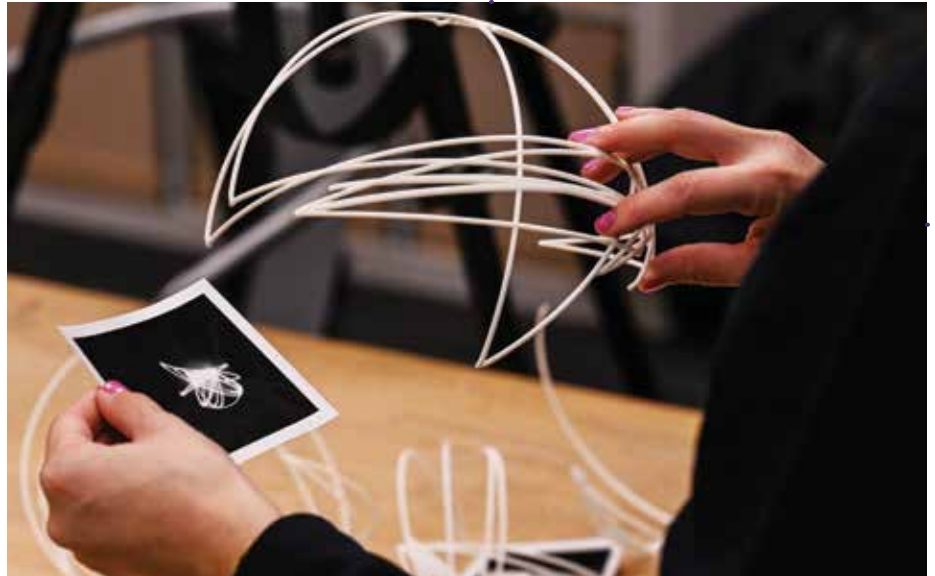
TAHIR HEMPHILL

On the table sit three football-sized forms of light plastic. Each has been sculpted in a 3D printer using zigzag motions specifically programmed to mimic the map lit up behind them showing an orange globe splashed with green arcs. Dots on the screen represent locations mentioned in thousands of hip-hop and rap lyrics, as big as the oft-mentioned city of Atlanta and as hyperlocal as the intersection in front of a neighborhood convenience store.

A student gingerly picks up a gold-colored sculpture, and asks, “Is this Kendrick Lamar?” **Tahir Hemphill**, a faculty fellow, music aficionado, and self-described “creative technologist who works with art,” nods as a collective “ooh” makes its way around the room.

“It’s data sculpture, literally. It’s making things as real as possible,” says Hemphill, whose ever-evolving body of work, The Rap Research Lab, made its home at UMBC’s Center for Art, Design, and Visual Culture this spring. “This is what it feels like to touch a rapper’s rhymes.”

Located at the intersection of hip-hop and data visualization, and built as an





interactive teaching space, the lab features the “Mapper’s Delight” tool that, using augmented and virtual reality, cross-references locations from thousands of rap song lyrics along with a variety of other art pieces that speak to Hemphill’s goal of finding “relationships and shapes in the data.”

Over the course of the semester, UMBC students helped Hemphill delve further into the data while middle schoolers from around the state visited the teaching lab with their classes to try their own hands at research using Hemphill’s lyrics database.

On this particular day, Hemphill demonstrates yet another incorporation of the geographic lyric data. In collaboration, Foad Hamidi helped Hemphill program a robotic arm, and by inserting a LED pen into the robot hand and filming movements at a long exposure, he’s able to make “light pen drawings” of the data, à la Pablo Picasso.

With the lights dimmed and the robot arm making ethereal data shapes before their eyes, Hemphill tinkers with his projected spreadsheet in real time. There are just so many threads to follow and infinite stories hidden within.

“My job is to draw them out—pun intended,” he laughs.



Tahir Hemphill, a faculty fellow, music aficionado, and self-described “creative technologist who works with art,” uses data visualization tools to reveal new levels within hip-hop.

Squaring the Circle: The Art of Hadieh Shafie

by Alex V. Cipolle

The most recent artworks by **Hadieh Shafie, M.F.A. '04, intermedia and digital arts**, appear like optical illusions, tricks. Tightly stacked lines of colored pencil suddenly twist and warp into circles. The two-dimensional surface swirls and vibrates, like eddy lines in a river or sound waves blasting from a speaker. Tucked into these dancing lines, Shafie has written the Persian word for passionate love: *eshgh*.

The drawings pull together many themes from Shafie's work and life experience, of leaving her home country of Iran in 1983 at the age of 12 and never going back. From her childhood there, she recalls how women were banned from reading certain texts.

"The importance of books and the power of language, the seed of that idea was implanted in my heart and mind then," says Shafie, a 2014 Alumni Award recipient. "I saw things as a child there that were really traumatic. So, I felt that while my culture is imbued with all this poetry and love for beauty—things that are beautiful, and homes are decorated, and there's this idea of paradise in the Persian carpet—there was a lack of really practicing any of it."

Love and the circle have shown up in her art since the beginning, since her days studying painting at the Pratt Institute in the nineties and intermedia and digital arts at UMBC in the early aughts. Her work now resides in collections of the British Museum, the Metropolitan Museum of Art, the Brooklyn Museum, and the Los Angeles County Museum of Art and in exhibits from Virginia to Dubai to Australia.

She considers herself a Brooklynite, but when she found the M.F.A. program at UMBC, she was ready for a break from the

city. She was drawn to the program because it was small, intimate, and she was excited about the writings on performance art by **Kathy O'Dell**, a faculty member in the Department of Visual Arts.

At UMBC, Shafie began a deeper exploration of the Whirling Dervishes, the religious art form of spinning meditative circle dance, and the poems of Rumi, the 13th-century Persian mystic who expounded on the idea of passionate love. Shafie started whirling at UMBC.

"I was getting better at it, only to come to realize that as an Iranian woman, the very first session when I was whirling and I got sick, and I fell on the ground and slammed into the wall—that was my work," says Shafie, explaining that was symbolic of the role of women in Iranian society. "As a woman I'm never allowed to forget I'm a woman, my place in society, and the things that are barriers to me, so that was very significant."

Shafie carried these themes into the "Paper Works" series, where she packs a frame with tightly rolled and stacked sheaves of colored paper that have been filled with texts. The effect is a dizzying mosaic of thousands of circles.

"I started with fragments of poems and then kept reducing it to one word, and the word and the common denominator for all of our problems was love and hate," Shafie says. "I didn't want to use the word *hate*. So I use the word for passionate love."

In her new body of work, the optical "Cut & Rotate Series," love continues to prevail, the word *eshgh* appearing like notches, like dragonflies that have landed on rivers of color and line.

"This word that's so ordinary holds so much power," Shafie says.



Work documentation: Robert J. Fagan

HOW TO MAKE A PINHOLE CAMERA

With Chris Peregoy '81, visual and performing arts, M.F.A. '99, intermedia and digital arts



*When **Chris Peregoy** received a tin full of Christmas cookies from his sister around the year 2000, he immediately dumped the contents out on the table to eat later. He had a moment of inspiration staring at the empty container—“This tin would make a great camera.”*

If you’ve ever looked at an oatmeal container, a hollowed-out book, a mailbox, or an entire room, and thought, “This object would make a great camera,” chances are you are familiar with the concept of a pinhole camera. It’s photography distilled to its most basic elements: a light-proof box, a lens—which is often just a literal hole made from a pin—and some film or photographic paper.

Peregoy, the lab manager for the Department of Visual Arts, has worked at UMBC since graduating from the photography program in 1981 and will retire this summer, but he leaves behind a substantial legacy in his 6-foot 8-inch wake. He’s also leaving behind a few dozen handcrafted pinhole cameras from his company Pinhole Blender for students to keep using in their photo classes.

In addition to the helpful labels on each camera describing exposure time in different types of light, Peregoy has some useful hints for the rest of us who might want to dabble in the non-digital world of making photos.

Tools of the Trade

1. A light-proof container—a great second life for the shipping tube your diploma arrives in
2. A pin to make the eponymous pinhole
3. Small square of black tape to act as a shutter
4. Film or photo paper
5. Access to a darkroom (but if not, you can still make it work)

Step 1

MAKE YOUR CAMERA (OR BUY ONE FROM PEREGOY’S COMPANY).

Cookie tins aside, Peregoy says he isn’t someone who makes cameras out of odd objects for the most part, although those people are out there. Shipping tubes and oatmeal containers (especially before Quaker changed their lids to transparent plastic) are his go-tos (although he’s making a camera for his retirement party out of an old whiskey barrel the brewery near his house is giving him).

You need an opening large enough to arrange the film in the containers and a way to reseal the box/tube/pumpkin/etc. When you make the pinhole, Peregoy recommends pushing a pin through a small square of soda-can material and smoothing out any burrs with fine sandpaper. Affix this metal piece to the camera body with black tape. Then you need to attach a shutter—something that ends the light exposure—like a piece of black electrical tape.



Step 2

LOAD YOUR CAMERA.

Load the camera with the film or photo paper in a darkroom (you can improvise with cardboard taped over your bathroom window, in a pinch). Now you need to choose your subject. “One of the aspects of the pinhole camera is that although it might not create a sharp picture like a real

Peregoy demonstrates how to make the correct-sized pinhole. Across, top to bottom: Erin Cusick develops film from her pinhole camera in the UMBC darkroom; one of Peregoy’s Pinhole Blender cameras he donated to UMBC; Jamal Jackson takes a picture with a pinhole camera outside of Fine Arts.

lens, it has an incredible range of focus,” says Peregoy. “So things a quarter inch away from the pinhole will be as focused as things that are 30 feet away.” In his own pinhole work, Peregoy often uses miniature dolls or statues as subjects in the photos, using the strength of the camera to play with perspectives.

Most often, when students are released from the classroom to go take photos, for time reasons, they don’t stray far. “I’ve seen a lot of pictures of the Fine Arts building,” laughs Peregoy. But even so, he’s still surprised sometimes. In one image of a rocky scene with a building in the background, Peregoy did a double take; despite his many decades on this campus and specifically in this building, he didn’t recognize the shot. The student revealed they had laid down in a drainage ditch, and yes, indeed, it was still Fine Arts in the background.

Step 3

DEVELOP YOUR FILM.

Next comes film development. For students, that means learning the rules of the darkroom. “I didn’t know what a pinhole camera was,” says **Erin Cusick**, a sophomore who is taking the class for elective credit. “It’s been so fun to see how exposing the paper to light and then using time to play with the way the image develops,” says Cusick as she leans over a tray of chemicals in the darkroom watching her image appear.

But Peregoy offers two alternatives for a darkroom-free pinhole experience—solargraphy and lumen photography. Solargraphy uses a pinhole camera and exposes the image outside for several months, burning the path of the sun and the stars into the paper. Lumen prints use photo paper overlaid with flowers or other objects, which after exposure to sunlight will create an ethereal image on the paper. It’s a fragile process, says Peregoy, and the paper should be scanned digitally because eventually the image will fade from the paper.



Step 4

KEEP PLAYING AROUND WITH ANALOG.

“Digital has taken most of the cameras away from us,” says Peregoy. “But there are lots of old options and ways to turn old things into film or pinhole.” Cusick, in the photo class, is struck by how simple-seeming the whole process is, “but the simplicity makes it all the more confusing how it works,” she marvels.

Outside Fine Arts, the sun shines brightly on the building and **Jamal Jackson**, a visual arts major who transferred from Montgomery College, aligns his pinhole camera just so. “The versatility of the camera makes it so fun to play with,” he says. “It’s letting me capture my own voice in photos.”



The More You Know

Discover more pinhole resources on Peregoy’s page: pinholeblender.com.

— Randianne Leyshon '09



ALUMNI ESSAY

Retriever For Life

*Very few Retrievers can say they've spent as many years on campus or enjoyed quite so many roles in doing so as **Joan Costello '73, social work**. From her first days as a student and student worker; to 41 years as a staff member in the library, audiovisual (AV) services, and multimedia center; to her current role as basketball season ticket holder, committee member of the Founding Four, and board member of the Wisdom Institute—UMBC's organization for retired staff and faculty—Costello shares why she's chosen to make UMBC her second home for more than 50 years.*

The First Days

I grew up two miles away, and when this new school opened, I thought I would give UMBC a shot. In my memory, it rained at the beginning of most semesters—a nice complement to the on-going construction. But I really enjoyed the experience of being part of a young university. It was fun seeing everything grow up with me.

College was hard at first. It was a big change for me academically; even the language used was very different from what I was used to. Terms like mean and median and bell curve I had never heard of! I took a statistics course and I thought I was doing okay compared with everybody else. We were all on that same curve, right? But when it came to the final, I ended up getting a D in that class. I didn't know yet about repeating classes, or dropping them at the last minute, so it took me a while to bring my GPA up, but I did.

In my second semester, I got a job at the library—not yet the Albin O. Kuhn Library that Retrievers have access to now—and it gave me an outlet to learn more about the campus, faculty, staff, student workers, and patrons. The library was a great place

to work. We learned each other's jobs so that we could help in a pinch, and we had the best parties—staff Olympics and talent contests like the Gong Show. We were all young, students and staff, and many of those bonds have lasted over 50 years.

Returning to Work at UMBC

After I graduated, I worked at the Good Shepherd School for Girls for five months, but UMBC called me and offered me a job in the library, so I happily returned. I eventually became a supervisor of Record and Tape. Back then there was an AV department on campus that did the movies and equipment around campus, which eventually went under the wing of the library. It became two jobs: supervising Record and Tape and AV services. AV was located in the Chem/Physics building, which had to be the worst office ever because it was in the basement and you got the lovely fumes from the labs.

We later moved to a new building, Academic IV (now Sherman Hall).

Victor Aulestia (director of instructional technology) made his case to put the



media areas together—AV services, the International Media Center (the Language Lab), and the TV studio.

I always loved getting to know the students, staff, and faculty. And I liked to help. If somebody needed help in a pinch, I would try to arrange it. I later worked in the International Media Center in Academic IV. It was a great study area for students to hang out.

At the beginning of the school year, kids often looked lost, and so I tried to help with directions and encourage them—I really enjoyed that. I had a crew of students who worked with me—students from all over the place—and it was fun getting to know all of them. I wanted to make them feel comfortable because some of them were away from home for the first time.

Long-Term Retriever

I've found ways to stay involved. I am a part of the Founding Four group (our members include the first four graduating classes of UMBC). It's been rewarding to be involved with that group and to hear other people's stories. In fact, we have just put together a book of early recollections, *This Belongs to Us*. I go to the UMBC theatre to see the plays as often as I can, and I'm also a basketball season ticket holder. I always see friends there.

I'm also on the board of the Wisdom Institute, a group of UMBC retirees always working to bring folks together with activities and volunteering and camaraderie. We've done luncheons, we've gone to plays and concerts at Lurman Woodland Theatre, in Catonsville. We also get people involved in service, like helping tutor or mentor students in the nearby schools, and that's a great way of giving back. Our biggest hit as an institute is our annual special talk and luncheon—we've had some great speakers, and you get to see so many people coming back to campus.

That's the best part. You get to keep your connections to people you knew at UMBC, and maybe you wouldn't think of getting together with them otherwise, but we have this venue that makes it easy and makes it so much fun.

I've stayed connected to UMBC for all this time because it's familiar, convenient, and like another family. UMBC is its own community within the loop. I enjoyed the people...and I still do!

Learn more about the Wisdom Institute, now celebrating its fifth anniversary, by visiting wisdom.umbc.edu.



Top: Costello at work in her earlier days with AV Services in the basement of the Chemistry/Physics Building. Bottom: Costello (center front) with student workers in 2012. Photos courtesy of Joan Costello.

CLASS NOTES

UMBC Class Notes is compiled by *UMBC Magazine* staff from items submitted online and by mail from alumni as well as from news articles and press releases received by the university. This edition of Class Notes contains information processed by April 24, 2023.

How to Submit Class Notes

The deadline for submitting Class Notes for the next print issue of *UMBC Magazine* is October 2, 2023. Submit your class note and photos online at umbc.edu/magazine or by email to magazine@umbc.edu.

1971

Steve Lazinsky, ancient studies, a Maryland businessman, was named chair of the board of advisors at University of Maryland Children's Hospital in April 2023.

David Zisow, mathematics, a retired OB-GYN, shares that he was the first UMBC student to matriculate to the University of Maryland School of Medicine after completing his junior year at UMBC in 1970. He then went on to receive his UMBC degree in 1971 after completing his first year of medical school. This set the stage for the rest of his professional career, he says. At age 73, he's thankful for his wife—**Marcie Zisow '72, French, M.A. '84, instructional development systems**—and four children and 10 grandchildren.

1973

Mary Slicher, sociology, co-founder and executive director of Project PLASE (People Lacking Ample Shelter and Employment) was recently featured in the *Baltimore Sun*. PLASE, a homeless shelter in Irvington founded in 1974, is on the cusp of completing \$37 million in fundraising for a major renovation to better serve people who are unhoused in Baltimore City.

1981

Howard Siskind, M.S. '85, psychology, published his first book *Honabeats Says: Crazy Words!* in April 2022. The following April he presented at the Annapolis Book Festival. His latest original song "Ice Queen" came out in October 2022.

1982

Ron Pettie, English, won first prize for his short story "Gertie and Madeline"—based on his cat Nina—at the 2022 Baltimore County Senior Expo Creative Arts Contest.

1985

Lucy Long, M.A., ethnomusicology, director of the Center for Food and Culture, recently retired from Bowling Green State University where she taught for over 30 years, first in music, then in popular culture and other programs. Long is credited with the first printed use of *culinary tourism* and has promoted a humanities-based approach in publications and workshops internationally.

1986

Claire Katz, philosophy, is one of three finalists for Baylor University's 2024 Robert Foster Cherry Award for Great Teaching, a national teaching award with a monetary reward of \$250,000. Katz is a professor and interim department head of Teaching, Learning, and Culture at Texas A&M University.

1987

Matt Tormollen, information systems, was appointed new CEO of energy sales and risk management software company POW'WR, in January 2023.

1988

Valarie Burks, computer science, joins the College of Southern Maryland as the associate vice president of information management and chief information officer, after serving in leadership roles at NASA and the U.S. Department of Agriculture.

1989

Devin Walker, political science, known for his music on The Uncle Devin Show, launched a partnership with UMBC and the Sherman Center in April 2023, interviewing and featuring various authors on WEE Nation Radio.

1990

Paul Maas, information systems management, has retired as a major general after more than 42 years of service in the Maryland Air National Guard. He served in a number of national-level positions with his last assignment at U.S. Cyber Command at Fort Meade.

1991

Kara D. Freeman, information systems management, was named president and CEO of the National Association of College and University Business Officers in March 2023. A strategic leader with extensive national higher education experience, she is the first African American woman to serve in this role.

1993

Sean Leuba, political science, was named as senior vice president, corporate development, and general counsel of the Mayville Engineering Company in January 2023.

1994

Lisa Respers France, English, a senior writer for CNN's entertainment team, was named to the 2023 Atlanta 500: Professionals list in *Atlanta Magazine*.

X MARKS THE SPOT

Terry Smith '00, computer science



Three weeks exploring the beautiful, pristine waters of Indonesia to study seagrasses—that was the plan. But before **Terry Smith '00, computer science**, could get to work, he had another problem to solve. What do you do when half of your research equipment gets stuck in customs? For Smith, that just means it's time to get creative. "I love finding the fun problems," he says. So, he created a camera float using any materials he could get his hands on—PVC pipe, a life ring, and a bit of rope.

Smith is a solutions engineer on the Tidal project in Alphabet's X division, a semi-secret research and development organization founded by Google in 2010. Recently, Smith worked with the governments of Indonesia and Australia to come up with technology to visualize, analyze, and track the growth of seagrasses, which are particularly effective at absorbing carbon dioxide from shallow waters.

"Traditionally, if you wanted to make a map of all of the seagrasses, it would probably take 10 years and 1,000 grad students," explains Smith. "We're trying to come up with technology that'll make that happen a lot faster. So, I go out into the water with some prototype technologies that my team built and run robots over seagrass and then do 3D visualization of the data we capture."

Tidal is just the latest in a long line of exciting projects Smith has gotten to be part of throughout his career, which has seen him travel all over the world. And throughout it all, Smith follows a simple philosophy: "Go see what's happening in your field and make early contact with the real world."

This core belief has guided Smith from UMBC all the way to X—the so-called moonshot factory in California. But this journey from coast to coast was not a linear adventure. Like many UMBC

alumni, Smith's story doesn't even begin at UMBC. His story starts a little further south.

For three years, Smith studied electrical engineering at the Florida Institute of Technology, but then he pressed pause. Eventually, he transferred to UMBC in 1997 to be closer to his parents. He decided to lean into the tech boom and major in computer science.

"I found a really amazing department," said Smith. "There are so many opportunities at UMBC to work with outside companies. Being able to interact with industry gives you such an advantage."

Smith parlayed all of this experience and his natural charisma into a part-time job while still in school, but not in the way you may think. As a bartender on Main Street, Ellicott City. Smith says one of his regulars asked about his summer plans. "Serving you drinks," said Smith. The regular, a hiring manager at TRW Inc., a defense contractor since acquired by Northrop Grumman, ended up helping Smith find a summer job in the signals processing lab near Fort Meade.

That summer job eventually turned into a part-time job and then, "I left UMBC with a full-time job in hand and a lot of experience," says Smith.

After working at TRW for a few years, Smith moved up to Boston, working at Draper Laboratory and eventually M.I.T. Lincoln Laboratory. But, like any good engineer, Smith continued to wonder what was next. So, he headed out west, eventually landing a job at NASA's Ames Research Center, working on the next generation of air traffic control.

At that point, Smith says, "I had done a lot of work in simulation and I wanted to get back to the real world." He moved on to Liquid Robotics, a Boeing company that works on wave-powered ocean robots to track whale migration using hydrophones or look for oil leaks around oil rigs

using hydrocarbon sensors. After seven years there, X and the Tidal project came calling.

Smith has been at X just shy of two years, working on Tidal to find ways to use Google technology to benefit all things ocean. "We're looking for ways that AI, ocean robotics, and the other technologies we developed can be used to make human work on the ocean more efficient, sustainable, and better for both people and the ocean," says Smith.

No matter what he's doing, or what farflung location he finds himself, Smith has continued to find ways to stay connected with the UMBC community. He jumps at the opportunity to attend events whenever UMBC makes it out to the West Coast—most recently during the San Francisco stop on the 2022 RetriEVER Grateful Tour—and he remains close with his college roommate, **Tim Craig '02, computer science**, who also relocated to California. "We see each other quite a lot," says Smith. "His kids play with my kids."

Smith is also working with the UMBC Alumni Engagement team to host an event at X for UMBC alumni working in Google-affiliated companies. "We all try to find each other," says Smith of his fellow California-based Retrievers.

Up next for Smith, he will be investigating new areas to apply X's machine learning and artificial intelligence technology, prototyping novel solutions, and helping commercialize Tidal's aquaculture platform across the world.

"It's going to be a busy couple of years," jokes Smith.

By Bobby Lubaszewski '10

*Top: Smith, in his element, working on the water.
Bottom: Smith inspecting an autonomous wave glider for Liquid Robotics. Photos courtesy of Smith.*



CLASS NOTES

Angel Webb Reese, information systems, a former Retriever basketball player, instilled a love of basketball early in her daughter, Angel Reese, a key performer in Louisiana State University's 2023 NCAA victory.

Cynthia Linton Rush, visual and performing arts, an elementary special education teacher, earned her doctorate of education in August 2022 from Liberty University focusing on curriculum and instruction for special education.

1995

Jason Kasch, information systems, joined Enterprise Community Development in November 2022 as their IT director, a key leadership position within the company.

Timothy O'Ferrall, interdisciplinary studies, is the general manager of the Fort Meade Alliance, a community group that helped create the Education and Resiliency Center. The center will serve as a hub for wellness and mental health services available for those working at Fort Meade.

1996

Candace Dodson-Reed, English, UMBC's vice president of government relations and community affairs, is serving as co-chair for Maryland comptroller Brooke Lierman's transition team.

Pete Fitzpatrick, emergency health services management, a registered nurse with Children's National Hospital, was appointed as an inaugural member of the Baltimore County Police Accountability Board.

1997

Ava Fujimoto-Strait, geography, and her husband, John Strait, recently received the American Association of Geographers Distinguished Teaching Honors for their joint teaching, mentoring, and pedagogical accomplishments at Sam Houston State University.

1999

Omolola Eniola-Adefeso, M7, chemical engineering, has been elected by the American Institute for Medical and Biological Engineering (AIMBE) Fellows as president-elect of AIMBE. Eniola-Adefeso is the university diversity and social transformation professor of chemical engineering at the University of Michigan and has just completed a two-year term as director at-large on the AIMBE Board of Directors.

Darian Robbins, M6, mechanical engineering, was featured along with his daughters on "The Women of #BlackPanther" episode of the Disney+ *MPower* series. The Robbins family takes part in a segment that interweaves their animated avatars in Wakanda while they recount the positive effects of what experiencing these characters on screen has meant to them.

2000

Robyn Lanasa, emergency health services, joined UM Shore Medical Group-Cardiology in Easton, Maryland, in November 2022.

2001

Kate Tracy, M.A., Ph.D. '03, psychology, was named the senior associate dean for research at the University of Vermont's Lerner College of Medicine. She began the role in February 2023.

2002

Bakeyah Nelson, psychology, M.A. '03, sociology, and Ph.D. '07, public policy, was named a member of the 2023 cohort of the Public Voices Fellowship on the Climate Crisis.

2003

James Bailey, M.S. '07, history, was named in March 2023 the new superintendent of two national historic sites in Virginia, the Appomattox Court House National Historical Park and Booker T. Washington National Monument.

Letitia Dzirasa, M11, biological sciences, was tapped by Baltimore Mayor Brandon Scott to serve as the interim deputy mayor for equity, health, and human services effective May 1. Prior to this, Dzirasa served for more than four years as Baltimore's commissioner of health, guiding the city through the deadly global pandemic.

Philip Knowlton, visual arts, directed a 4-part Amazon Prime documentary series titled *Redefined*. Airing in 2023, it follows the former NBA player J.R. Smith, who decided to attend North Carolina A&T to pursue a degree and also try out for their golf team.

2004

Delali Dzirasa, computer engineering, discussed on CBS Baltimore how his team at Fearless Solutions developed the Searchable Museum to complement the Smithsonian's National Museum of African American History and Culture "Slavery and Freedom" exhibition.

Anna S. Sholl, economics, began serving as the new executive director of the Maryland State Bar Association (MSBA) on November 1, 2022. Sholl has been with the MSBA since 2018, most recently serving as the chief operating officer before being selected as the executive director by the MSBA Board of Governors.

Sylvain Tjock '16, financial economics, returned from the U.S. to his home country Cameroon in February 2019. A year later, he was elected mayor of the City Council of Esekka in Cameroon. Tjock has two more years left of his five-year term to serve.



Alicia Wilson, political science, the new managing director of North American regional philanthropy at JPMorgan Chase, was named one of the 25 Black Marylanders to watch by the *Baltimore Sun* in 2023.

2005

Shaun Curtis, visual arts, was profiled in *Montgomery Magazine*, explaining his hyperlocal work in preserving Gaithersburg history through his collection of archival images.

Kenneth Gibbs, M13, biochemistry and molecular biology, played a key role in developing MOSAIC, a training program run by the National Institute of General Medical Sciences and the American Society for Biochemistry and Molecular Biology to support researchers committed to diversity as they transition from postdoctoral fellowships to faculty positions.

Avery Posey, M13, bioinformatics and computational biology, has been named to the cell-engineering technology firm MaxCyte's scientific advisory board.

2006

Chaya Baliga, biological sciences, privacy counsel at Google, has launched her first children's book, *Maiyya Mori*, a kid-friendly translation of the song "Main Nahin Makhan Khayo" or "I didn't eat the butter." The book recounts a Krishna folktale Baliga grew up hearing that she wanted to share with her own sons and now beyond.

Michael Hunt, M13, mathematics, a doctoral student in the language, literacy, and culture program and director of the McNair Scholars Program at UMBC, shared two new approaches to challenging oppressive systems within the academy in a February 2023 essay in *Inside Higher Ed*.

Danielle Stephenson, M14, mechanical engineering, was awarded the 2023 Senior Technology Fellow by the Black Engineer of the Year Awards. She is a principal research and development engineer for Sandia National Laboratories.

2007

Sarah Christa Butts, social work, was named as a 2023 "Maryland's Top 100 Women" honoree by *The Daily Record*.

Eric Joy (Grollman) Denise, sociology and psychology, left their tenured sociology faculty position at University of Richmond to launch an academic justice consulting business, Speak Truth LLC. This is the next step in Denise's scholar-activist journey, which first took shape as an initiative for an on-campus LGBTQ+ center at UMBC.

David Rinehart, mechanical engineering, was promoted to project manager at Mueller Associates, a Baltimore-based mechanical, electrical, and plumbing engineering firm. He is currently the lead mechanical engineer on the renovation of Carrington Hall at the University of North Carolina at Chapel Hill's nursing school.

Ehsan Sanaie, political science, has been promoted to partner at Reed Smith LLP in the firm's Tysons office. Sanaie, a member of the Real Estate Group, focuses his practice on transactional work, including borrower and lender representation, development, acquisitions, dispositions, and commercial leasing.

2008

Kizzmekia Corbett, M16, biological sciences and sociology, and **Olubukola Abiona '17, M25, biochemistry and molecular biology**, were featured in a story from the *New York Times* 2023 series "Transforming Spaces" about women driving change in unexpected places. Corbett was also featured in *Documenting Women's* "Iconic Women" series.

Alex Chan, psychology, is the new senior director of development and engagement for the Side-Out Foundation, a group that advocates, fundraises, and conducts research on metastatic breast cancer.

Malcolm Taylor, M16, computer engineering, was named a Modern-Day Technology Leader for his work to help shape the future of STEM. Taylor is a senior cybersecurity engineer and serves as a project technical lead, section supervisor, and group chief scientist. Most recently, he developed a novel capability to help safeguard U.S. elections from adversaries looking to disrupt the democratic process through cyberattacks.

2009

Lindsey Cook, English, is one of the newest partners in Pennsylvania law firm Barley Snyder. Cook works for the firm's litigation practice group. Cook is devoted to local residents and businesses and committed to resolving complex disputes. In 2022, she received the Rising Stars designation for Pennsylvania Super Lawyers.

Melissa Roy, political science, is starting the second half of her 20-year career in the military as part of the U.S. Air Force Reserve. She's also looking forward to serving her community as a volunteer firefighter in Odenton, Maryland. In July 2022, she and her husband Jimmy welcomed their first son, Alexander.

2010

Erwin Cabrera, M18, biological sciences, leads a new scholars program at Stony Brook University modeled after the Meyerhoff Scholars Program.

Michael Dark, sociology, the clinical research manager at the University of Maryland, Baltimore, completed his doctorate of public health degree at Capella University in July 2022.

2011

Carol Boom, chemical engineering, was a panelist at Robeson Community College's "Women of Color in STEM" event in February 2023. Boom is currently working as the diffusion, implant, and thinning process development engineer at electronics company Wolfspeed.

Mitch Case, media and communication studies, began a new job as manager of communications at the Frick Collection in NYC in January 2023.

Christine Osazuwa, interdisciplinary studies, founded a virtual music, tech, and data conference and hackathon, the Measure of Music. In 2023, the free, weekend-long event held its third annual festival with more than 2,000 participants.

CLASS NOTES



James Palo '15, anthropology, and **Linda Nguyen '16, biological sciences**, are celebrating one year of marriage. Despite the feigned disgust, James's younger brother, **Jacob Palo**, has recently committed to coming to UMBC in fall 2023.

2013

Josiah Dykstra, Ph.D., computer science, is co-author of a second book, *Cybersecurity Myths and Misconceptions: Avoiding the Hazards and Pitfalls that Derail Us* published in November 2022. He also wrote *Essential Cybersecurity Science*.

Donta Henson, health administration and policy, M.S. '17, professional studies, co-founder of Baltimore's first Black- and veteran-owned tequila company, Los Hermanos Tequila, announced a new partnership with UMBC's Chesapeake Employers Insurance Arena in December 2022.

Chandra M. Kumar, M.S., management of aging studies, was named the new chief operating officer for Alexandria, Virginia-based Goodwin Living. She most recently led all operations for Charlestown Senior Living, the flagship retirement community for Erickson Senior Living in Catonsville.

Flavius R.W. Lilly, M.A. sociology, Ph.D. '15, gerontology, has been selected as McDaniel College's new provost, their chief academic officer. Prior to this role, Lilly was the vice provost of academic and student affairs and the vice dean of the Graduate School at the University of Maryland, Baltimore.

2015

Stephanie Beauté, M.S. '15, information systems, is running for Rhode Island's soon-to-be-open 1st Congressional District seat.

Leigh Dalton, Ph.D., public policy, was unanimously elected to partnership at the firm Stock and Leader, effective January 2023. Dalton is a member of the School Law Practice Group and applies her Ph.D. to guide clients on various school topics, including special education and pupil personnel matters, including equity, disproportionality, discipline, and the Family Educational Rights and Privacy Act.

Jermaine Ellerbe, Ph.D., language, literacy, and culture, current social studies department chair at Robert Frost Middle School in Montgomery County, was awarded a Fulbright Fellowship to Finland for three weeks in November to study their K-13 education system.

Fred Fletcher-Jackson, theater, was a winning contestant on a March 2023 episode of *Wheel of Fortune*, taking home a prize pot of \$75,800 after a perfect game.

Emily Kline, Ph.D., psychology, wrote a book called *The School of Hard Talks: How to Have Real Conversations with Your (Almost Grown) Kids*, released in April 2023 by Sasquatch Books/Penguin Random House. Kline, a psychologist and assistant professor of psychiatry at Boston University School of Medicine, based her book on research she conducted over the past five years funded by a National Institute of Mental Health career development award.

James Palo, anthropology, celebrated his first wedding anniversary with **Linda Nguyen '16, biological sciences**, in April 2023.

2016

Samantha Chadbourne, visual arts, moved to Los Angeles after graduation with the goal of pursuing a career in film and television, specifically behind the camera. In 2022, she joined the International Cinematographers Guild. Currently classed as a film loader (digital), she has worked on shows such as *Grey's Anatomy* and the new and upcoming *The Idol* with The Weeknd.

Hesham Hassanein, political science, moved to South Korea after graduation. After living in Gwangju and Seoul for a few years, he returned to the U.S., got married, and now works as an Arabic and English language arts teacher at a private school just a few minutes from UMBC.

Angeleke Kaldis, history, is a second-generation Greek American historical romance writer. She's currently working on her seventh book, *First Comes Eros*. She credits her UMBC professors, especially **Andrew Nolan** and **Melissa Blair**, for preparing her to be a writer.

Sylvain M. Tjock, financial economics, was elected mayor of the City Council of Esekia in Cameroon in February 2020 and has two more years left of his term.

2017

Jeremy Bennett, theatre, was nominated for two Helen Hayes Awards for Outstanding Media/Projections Design for *Yoga Play* and *Elegies: A Song Cycle*, both at The Keegan Theatre in Washington, D.C.

Kevin Hsieh, financial economics, opened Bao Bei, a traditional Taiwanese restaurant in Rockville, Maryland, that honors the foods he ate as a child.

Kate Swanson, computer science, is a software engineer at JPMorgan Chase, based in Seattle. It's her fifth year in the Pacific Northwest, and she's loving it—especially getting to work with several other Retrievers on her team. Swanson says she also shares a special connection with her mom, **Susan Swanson '85**, a fellow computer science major.

2018

Felix Facchine, political science, M.S. '21, public policy, in December 2022 was named the assistant chief of staff for Howard County executive Calvin Ball.

Aishwarya Iyer, M26, biochemistry and molecular biology, currently an MD-Ph.D. candidate at the University of Maryland School of Medicine, recently contributed a book chapter in *Lessons Learned: Stories from Women Leaders in STEM* published by the American Association for Physician Leadership. Iyer was also named UMB's Medical Scientist Training Program Student of the Year in 2022.

Anastasia Kaldis, psychology, got engaged last year and married her fiancé, Jack, in May of 2023.

MINISTERING TO THE MOST VULNERABLE

Susan Beck '74, French



Having the sally port gates slam behind her after walking into the prison for the first time was a bit of a shock to **Susan Beck '74, French**. Luckily, a friend was there to hold her hand as they adjusted to the tight space and waited for the next door to open. As Beck got her breathing under control, she joined her classmates in a clinical pastoral education class on the rest of the tour of the facility.

Beck, a former French teacher and a childbirth instructor, never envisioned her retirement as a career rebirth, but as she contemplated how she wanted to spend her time, she kept returning to her love of the church and wondered how she might serve. Prison ministry was the farthest idea from her mind, says Beck now. She imagined shepherding a congregation and ministering to families, but what that evolved into was a role as a community pastor, hosting weekly pub theology sessions and also stepping in as an interim pastor at different churches.

When her predecessor tapped her to think about taking over the spiritual leadership of The Community of St. Dysmas—a Lutheran ministry within the Maryland State Correctional System—Beck thought “no way” at first. But after Beck started volunteering with St. Dysmas, “It was pure gospel,” she says.

“Christianity is so focused on forgiveness of sins and God’s grace and God’s unconditional love, and that transforms people,” says Beck. “I do not seek to ever find out what their offenses are. That’s not important to me as their pastor, but sometimes they tell me. And as a mother and a grandmother, it’s really hard to hear—but when someone seeks God’s forgiveness and they get it, it changes their lives. It doesn’t change their circumstances. They’re still going to live out their sentence. They may never get out of prison, but everything’s different. That’s

Jesus’ message and it was right there in the prison, and I absolutely loved it.”

Beck explains that while there are many larger prison ministries, St. Dysmas is one of the only places that provides a welcoming and affirming service for the LGBTQAI+ community within the Maryland prison system. “We very much welcome the questioners and the people who aren’t quite sure where they belong.... We welcome first and walk with people along their way, which is a very Lutheran thing to do.”

In January 2023, after nearly five years of doing this work, Beck was formally installed as the pastor to a congregation entirely behind bars but spread out over the Maryland state prison system. On Monday nights she’s in Hagerstown; on Wednesdays, Sykesville; and Saturdays in Jessup. Beck is accompanied by a rotating cadre of volunteers, who step up to make sure each facility has coverage for worship services and Bible studies.

What an average service looks like for Beck is after the sally port gates shut behind her and the next set of doors opens, she needs to successfully go through a metal detector in fewer than three tries. (“Don’t wear bras with underwires.”)

In a clear, plastic purse, she only brings with her items on an approved list from the Maryland Correctional Facilities: bread and a sealed container of grape juice for communion, devotional materials, different colored cloths for different liturgical seasons. Sometimes she needs other materials. “I did a baptism a couple of weeks ago, and I had to send many reminders to the administration that, ‘I need to bring in a plastic bowl. It’s just a plastic bowl.’”

Beck serves communion, offers a time for reflection, and shares a short sermon. “Over time, as they hear us preach and teach and talk—and the services are very interactive—those relationships build. And even though we’re informal and it’s not a cathedral, it’s not a sanctuary like you would imagine, I want to create a sanctuary for them.”

Beck, who is 70 years old, says that this work she previously couldn’t have imagined for herself continues to energize her. “UMBC offered me an accessible path to education,” reflects Beck. “But you don’t ever stay on one path—you go off and expand it.”

When she goes to leave the prisons at night, her parishioners will tell her, “Watch out for the deer. They’re crazy this time. You’ll watch out for the deer?” And as the sally port gates shut behind Beck, with her now on the outside, she says, “I know on the other side of that door, there are gangs and there’s danger and there’s people yelling at them. But they said, ‘Watch out for the deer.’ That’s just so human.”

—Randianne Leyshon '09

Above: Beck stands in her office space in Catonsville’s Salem Lutheran Church. (Marlayna Demond '11/UMBC). Below: Beck is formally installed in her pastoral position in January 2023. Photo courtesy of William Beck.



CLASS NOTES

2019

Ifeoma Azinge, psychology, is a Ph.D. student in neuroscience at Brown University. Azinge alongside **Cheyenne Oliver '20, biological sciences**, co-founded a fashion rental startup company called Joluxe.

2020

Anthony Caesar, business technology administration, CEO of Upfront Capital, discussed disrupting music's finance models for equity with his Catonsville-based startup and how UMBC has supported the process in *Technical.ly*.

Christian Hartman, music performance, returned to campus in March 2023 at the invitation of the Department of Music. The cellist performed a program "for solo cello," exploring avant-garde works for unaccompanied cello from the 20th and 21st centuries.

Sherella Cupid, Ph.D., language, literacy, and culture, and **Antione D. Tomlin, Ph.D. '21, LLC**, co-edited a new volume in the series *Contemporary Issues in Higher Education* published by Information Age Publishing. Released in December 2022, it's titled *Black Experiences in Higher Education: Faculty, Staff, and Students*.

Michelle Innerarity, Afro-American studies, is the new ultimate games and IED teacher at Walt Whitman High School—her alma mater—in Montgomery County.

Alicia Sabatino, geography and environmental systems, a current graduate student in GES, helps explain how satellite location measurement data is gathered in *The Conversation*.

2021

Tirzah Khan, information systems, played a key role in designing new multimodal exhibits at the Walters Art Museum for "Across Asia: Arts of Asia and the Islamic World."

Johnny Walker, music performance, is a cello instructor who has played at the White House, overseas, and at two NPR Tiny Desk concerts.

2022

Caleb Flesher, computer science, immediately following graduation, transitioned from part time to full time in his role in quality assurance at national security company ManTech. More importantly, he shares, he married his wife, Hope, in November 2022.

David Horsey, M30, biology, is pursuing a Ph.D. focused on genetics research as an inaugural fellow in the Johns Hopkins University Vivien Thomas Scholars Initiative scholarship program.

Joshua Forlotta Gray, dance and media and communication studies, a Linehan Artist Scholar, spent the summer of 2022 interning with the Congressional Black Caucus Foundation in the House of Representatives for Representative Kweisi Mfume. In November 2022, Gray shipped off to Army Basic Combat Training at Fort Sill, graduating the following February. Since then, he has been stationed at Fort Huachuca, learning his job as an all source intelligence analyst.

Friends We Will Miss

Jennifer Gibbs '13, psychology, passed away in May. After UMBC, she earned her master's of social work from the University of Maryland, Baltimore and worked as a social worker serving at-risk children.

Marilyn Hatza '99, Afro-American studies, the director of grants and community engagement for Maryland Humanities, passed away early in January 2023. Throughout her meaningful career, Hatza worked as an archivist at the AFRO American newspapers and as assistant curator at the Howard County Center for African American History and Culture. She was also a pioneering member of the Maryland Lynching Memorial Project.

Ryan Lee Mutter, M.A. '01, economic policy analysis, Ph.D. '06, public policy, passed away suddenly on February 14, 2023. A popular adjunct professor of economics at UMBC, Mutter worked as a health economist for the federal government throughout his career, exploring wide-ranging topics such as the competitive impact of hospital mergers, the influence on mental health from social media, and the cost effectiveness of health policy proposals. In the past four years, he particularly loved his work at the Congressional Budget Office and his professional colleagues.

Michael C. O'Neill, a professor of biological sciences from 1973 to 2012, passed away in April 2023. Over his long career, O'Neill contributed greatly to the field of computational biology. He was a guiding force behind the creation of the applied molecular biology master's program at UMBC. Later, he led the effort to create the major in computational biology and advocated for hiring more faculty with research interests in the area. O'Neill retired as an associate professor emeritus on July 1, 2012. His friends and colleagues remember him having strong opinions about matters both academic and otherwise and he was not someone to hide those opinions or to shirk his duty to express them.

Patricia Peters '74, psychology, passed away in May 2021. A retired educator, Peters spent her career working with young children and also instructing at-home day care providers.

E. Michael Richards, professor emeritus of music, passed away on February 18, 2023. One of the world's leading interpreters of contemporary music for the clarinet, Richards was an exemplary performer, researcher, and educator. He joined the UMBC faculty in 2001, was promoted to full professor in 2009, and twice served as chair of the music department before retiring with emeritus status in 2021. The Department of Music honored Richards with a named seat in the Earl and Darielle Linehan Concert Hall and will provide an annual award to a member of the UMBC Symphony in his name.

Wendy Takacs, professor emerita of economics, passed away in early 2023. Takacs joined the faculty at UMBC in 1976, after completing her Ph.D. at Johns Hopkins University. Her retirement in 2016 marked four decades of commitment to the department and the university. Particularly noteworthy were her dedication to clarity and approachability in classroom exposition, her impressive range of publications, and her expert professional involvement in her research specialization of international trade. Takacs's excellence in teaching was evidenced by her winning the economics department's Teacher of the Year Award nine times, including at least once in each of her four decades of teaching at UMBC.

Paul Warnken '74, sociology, died on September 7, 2022. Warnken studied at UMBC on the G.I. Bill following his military service in Vietnam, where he was awarded the Bronze Star. In addition to his long career in the U.S. Treasury Department, Warnken served as pastor to the residents of Lorien Mt. Airy Assisted Living Facility for more than 17 years.

CAREGIVING GOES BOTH WAYS

Rita Choula '95, information systems management, M.A. '16, aging services



For more than a decade, **Rita Choula** was the primary caregiver for her mother, Theresa Bryant, who lived with frontotemporal degeneration (FTD), a lesser-known form of early-onset dementia that typically affects people under the age of 60.

"My mother started saying things like 'I don't feel like myself. I feel like I'm losing my mind.' She used to be someone that was really engaged and outgoing and she started to pull back a bit. She used to be very empathetic, very people-loving, and showed a lot of concern, and it reached a point where that empathy went straight out the window," recalls Choula '95, information systems management, M.A. '16, aging services.

The process of learning what was affecting her mother, who passed away in October 2020, was a long and challenging one for Choula and her family. That's why in her current role as the senior director of caregiving at the AARP Public Policy Institute, Choula advances equitable, culturally-responsive policies and practices by elevating the unique nature of each caregiving experience.

After four years of misdiagnoses and cycling through several neurologists and medical practitioners, Choula's mother, at age 60, was finally diagnosed with behavioral variant FTD, a subtype of early-onset dementia that doesn't specifically impact memory but instead causes personality changes, apathy, and a progressive decline in socially appropriate behavior, judgment, self-control, and empathy.

"It was a true battle to determine her diagnosis. The lack of an early diagnosis left me bitter because it took away a lot of opportunities for us to just be with her," says Choula. "So much of our journey was me figuring it out and having to educate professionals on it."

But how did she go from a frustrated family caregiver to a leader in the aging field?

Nearly 20 years after receiving her undergraduate degree, Choula returned to UMBC to continue her academic journey at the Erickson School of Aging Studies while in the throes of caring for her mother. Her caregiving experience encouraged her to learn about how to more adequately and holistically care for aging adults and the caregivers that supported them, like herself.

"The program was shaped in a way that allowed a working family caregiver and mother to a newborn and toddler to be able to pursue her dreams of getting a degree while still helping me navigate a really difficult time in my life," says Choula.

In the 1990s, UMBC was one of Choula's top university choices, stemming from the keynote speech delivered at her high school graduation by none other than UMBC's then-president, **Freeman A. Hrabowski, III**.

"Listening to this erudite Black leader speaking to the importance of higher education while quoting Langston Hughes' 'A Dream Deferred' confirmed that UMBC was where I wanted to attend."

Choula, who hails from Suitland, Maryland, was interested in information systems management because of UMBC's strong computer science programs. She found value in coupling her major with a minor in Africana Studies. Her educational experience helped her to "broaden how I viewed myself as a Black woman in this world," Choula shares.

Choula cites professors emeriti of Africana studies **Acklyn Lynch** and the late **Miriam Decosta-Willis** as mentors who helped expose her to many Black scholars and thinkers across the African diaspora.

"I was challenged across my courses to critically think about what we were learning, to ask those difficult questions, and to work together as

a student body on many different issues to push forward change."

When Choula returned to earn her degree in the Erickson School, she says the professors imparted much more than academic knowledge—they also assisted her in her personal caregiving experience, especially when it came time to transitioning her mother into living at a nursing home facility.

"I went to several of my professors and asked how I should navigate this. They picked up the phone to make calls to care facilities on my behalf—it impacted me tremendously and taught me the importance of seeing a student as a whole person."

Choula's experience as a Retriever laid the foundation for the work that she does in support of family caregivers. She specifically remembers a class with **Joseph DeMattos**, president of the Health Facilities Association of Maryland—the state's largest and oldest long-term care association. Choula noted how DeMattos' guidance on leadership helped to inform her current career pursuits. "DeMattos taught me how to position myself as a leader, the different types of leadership styles, and what type of impact I want to have not just on my work but on the people who I'm leading," says Choula.

Choula applies all that she's learned at UMBC to bring together policy, research, and practice—the three critical areas of aging services. With her expertise, she works to bridge the three areas, centering on identifying and supporting the needs of diverse family caregivers across ethnicities, cultures, and generations.

"I learned so much about myself as a UMBC student. My experience taught me to take on issues from a place of critical thinking and ensure that we center the needs of people while working with them to affect change and impact."

— *Adriana Fraser*

*Above: A portrait of Rita Choula.
Below: Choula kisses her mother,
Theresa Bryant. Photos courtesy of Choula.*



THEN & NOW

UMBC Belongs to All of Us

UMBC is a young institution—and not only do we have active alumni from the first four graduating classes still working to make an impact on campus and beyond, we are still discovering new stories about the establishment of the university and the ways the campus community was invited to co-create UMBC at its inception.

In fact, **Diane Tichnell '70, political science**, describes the impetus for the Founding Four's book, *This Belongs to Us* (2023), as its own sort of inception. Several years ago, she had a dream—a literal dream while she was asleep. In it, she was attending a lecture given by then-President **Freeman Hrabowski**. He was talking about the books he had written, and afterward, Tichnell went up to speak to him. In her dream, she said, “We need to get the first four years of UMBC documented because soon we’re all going to be gone. Maybe in a hundred years, somebody will write it down, but why not do it now?” Dream Freeman replied, “Write that book.”

Mimi Dietrich '70, American studies, remembers an event at the Wisdom Institute—UMBC's association for retired faculty and staff—where a UMBC professor expressed surprise by Dietrich's story about the plywood sidewalks that connected campus during the construction in the early years. “What do you mean you’ve never heard that story?” Dietrich responded—she figured everyone remembered what it was like in the beginning. “So Diane and I, and later **Dale** [Gough '70, American studies] and **Bob** [Dietrich '70, biological sciences, Mimi's husband] came together on this; and we just started saying, ‘We have to do this. We have to do this right now.’”

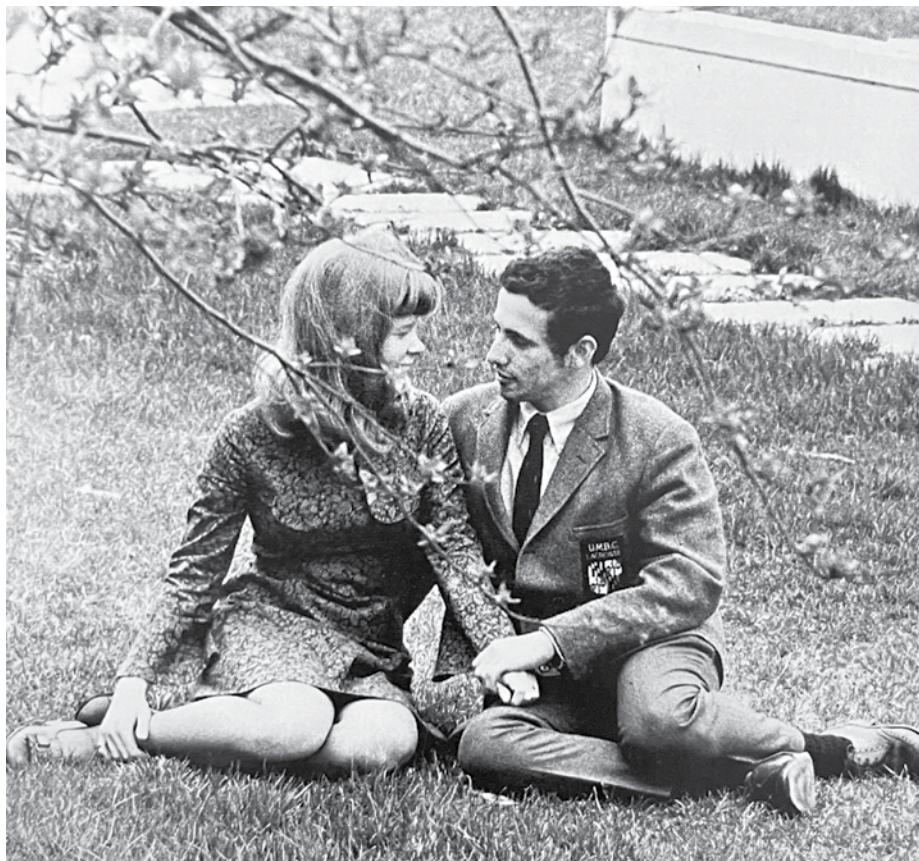
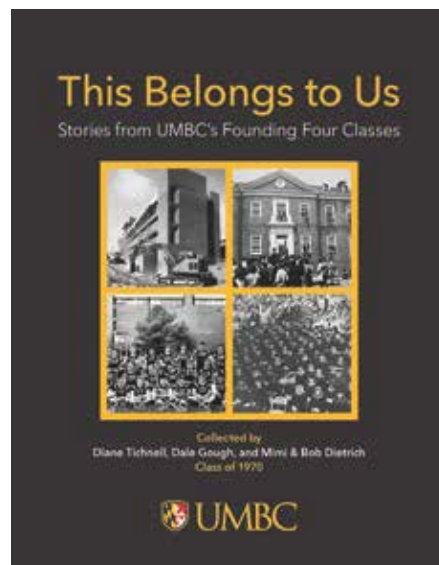
Those four brainstormed the idea and knew that this labor of love would need to be as inclusive as possible. “We needed to engage the collective memory of everybody that we could possibly ask to write a story from the first four classes who were on campus,” says Tichnell. They sent newsletters, emails, mail, and even knocked on doors to capture the voices of as many graduates as possible.

In the end, 84 authors contributed more than 100 stories to *This Belongs to Us*, a kaleidoscopic retelling of the colorful and authentic story of UMBC. Proceeds from the book (at the clever price of \$19.66) go to several scholarships supported by the founding four classes.

The Founding Four marvel at what their young institution has grown into. “All those flags in The Commons are so incredible to me,” says **Joan Costello '73, social work**, a contributing author. “Because they’re from different countries. But when we came here, we were just from different neighborhoods.”

—Randianne Leysbon '09
& Jenny O'Grady

Above: The cover of the Founding Four's book This Belongs to Us. Below: Co-authors Mimi and Bob Dietrich in UMBC's 1970 yearbook Skipjack. Across, clockwise: Diane Tichnell from 1970's Skipjack. Dale Gough (pictured with Betty Huesman '70) in the 1969 Skipjack. Founding Four authors gather at the Erickson School of Aging Studies to celebrate the release of their book in April 2023.





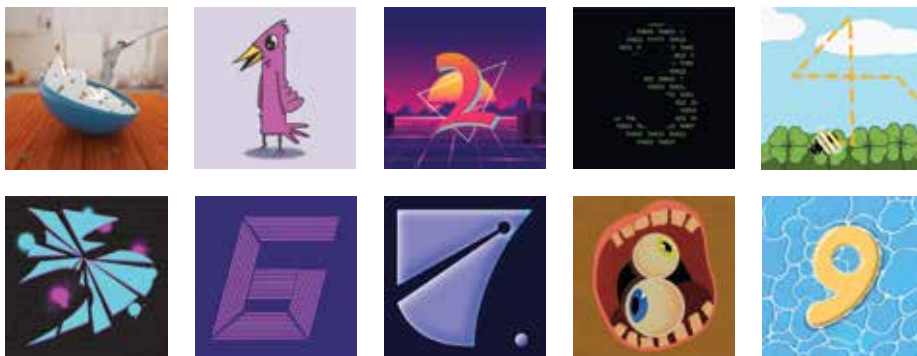
WILD CARD

A B C—It's Easy As 1 2 3

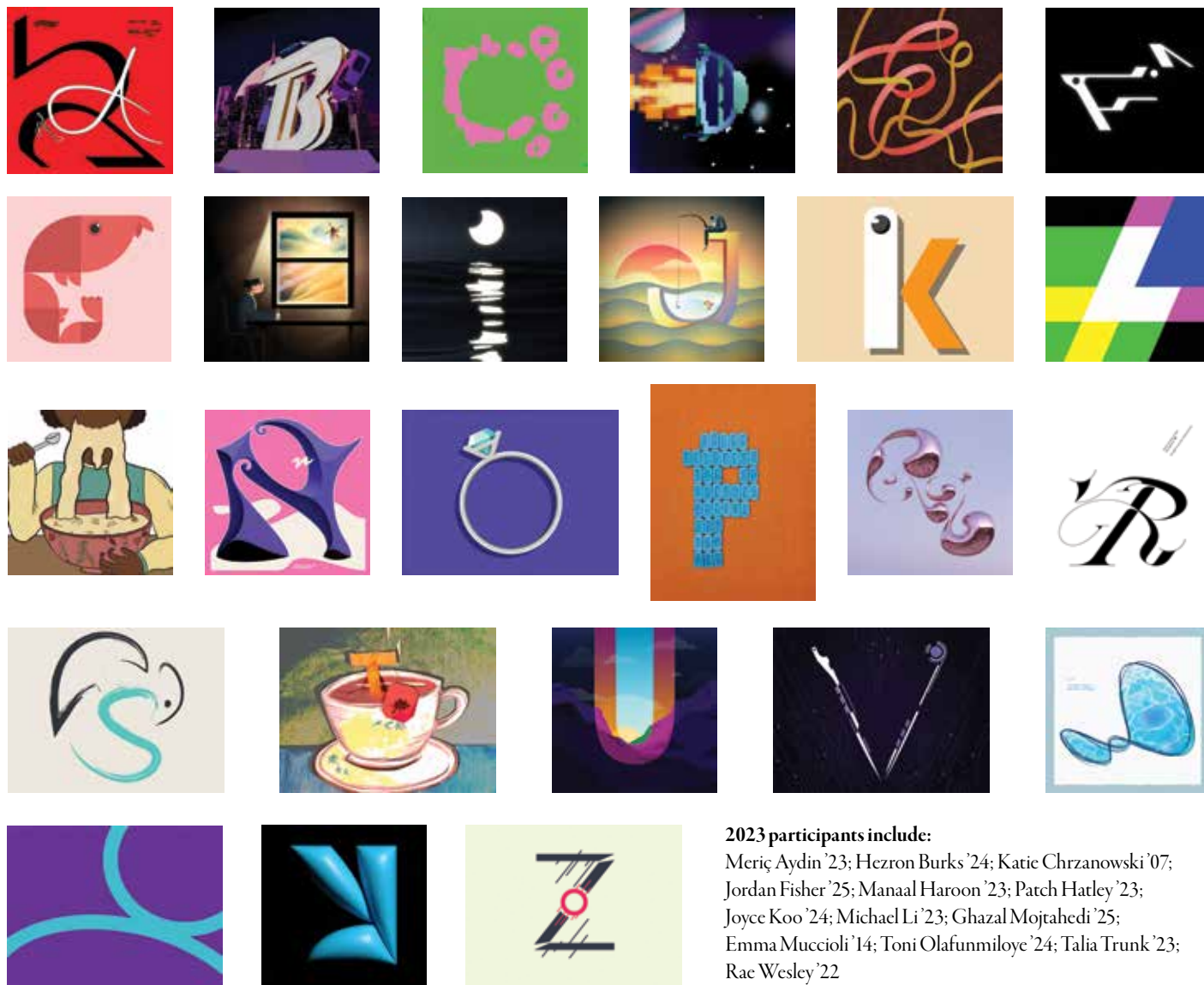
For the fourth year in a row, staff and student workers at commonvision, UMBC's design and print center, have dotted their "i"s and crossed their "t"s as part of the international challenge known as "the 36 Days of Type."

Assistant Director of Creative Services in Campus Life **Emma Muccioli '14**, **media and communication studies**, enjoys how everyone who participated (including herself!) ended up "approaching things a bit differently. Some people go for puns, some like to work with their hands and create something tactile, others use it as a way to try out a new digital design or animation process."

—*Randianne Leysbon '09*



See the collection fully animated on Instagram at @commonvision.



2023 participants include:

Meriç Aydın '23; Hezron Burks '24; Katie Chrzanowski '07; Jordan Fisher '25; Manaal Haroon '23; Patch Hatley '23; Joyce Koo '24; Michael Li '23; Ghazal Mojtahedi '25; Emma Muccioli '14; Toni Olafunmiloye '24; Talia Trunk '23; Rae Wesley '22

Your Generosity Makes an Impact

Through the Alumni Endowed Scholarship Fund, the UMBC Alumni Association offers scholarships to outstanding juniors and seniors. Since 1996, we've awarded nearly \$250k to students like **Darcie Adams '23, Gender, Women's, + Sexuality Studies and political science.**

"The scholarship that I have received has been very impactful in helping me do a debt-free senior year. As an adult learner who is also disabled and cannot work full time and do school full time, it's been really helpful to be able to prioritize my studies in the most difficult year of my schooling."

You can help students like Darcie achieve their UMBC dreams by giving to the Alumni Endowed Scholarship Fund.



Visit alumni.umbc.edu/AES to learn more.

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SAVE THE DATE

Homecoming: October 8 – 14

Save the date for the return of events such as the Bonfire, Men's and Women's Soccer Games, GRIT-X, Athletics Hall of Fame, Carnival, Puppy Parade, Retriever 5K, and new alumni reunions and gatherings, including a Greek Alumni and Friends party to conclude the celebration. Contact us at homecoming@umbc.edu if you have any questions.

Alumni Awards: October 27 (in-person and virtually)

The Alumni Association Board of Directors will honor UMBC graduates and members of the community at the 34th Alumni Awards. Awardees will be honored in the Outstanding Graduate categories of social sciences, visual and performing arts, humanities, engineering and information technology, natural and mathematical sciences, Distinguished Service, Young Alumni Rising Star, and Outstanding Faculty and Staff.



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