

ASU

Arizona State University
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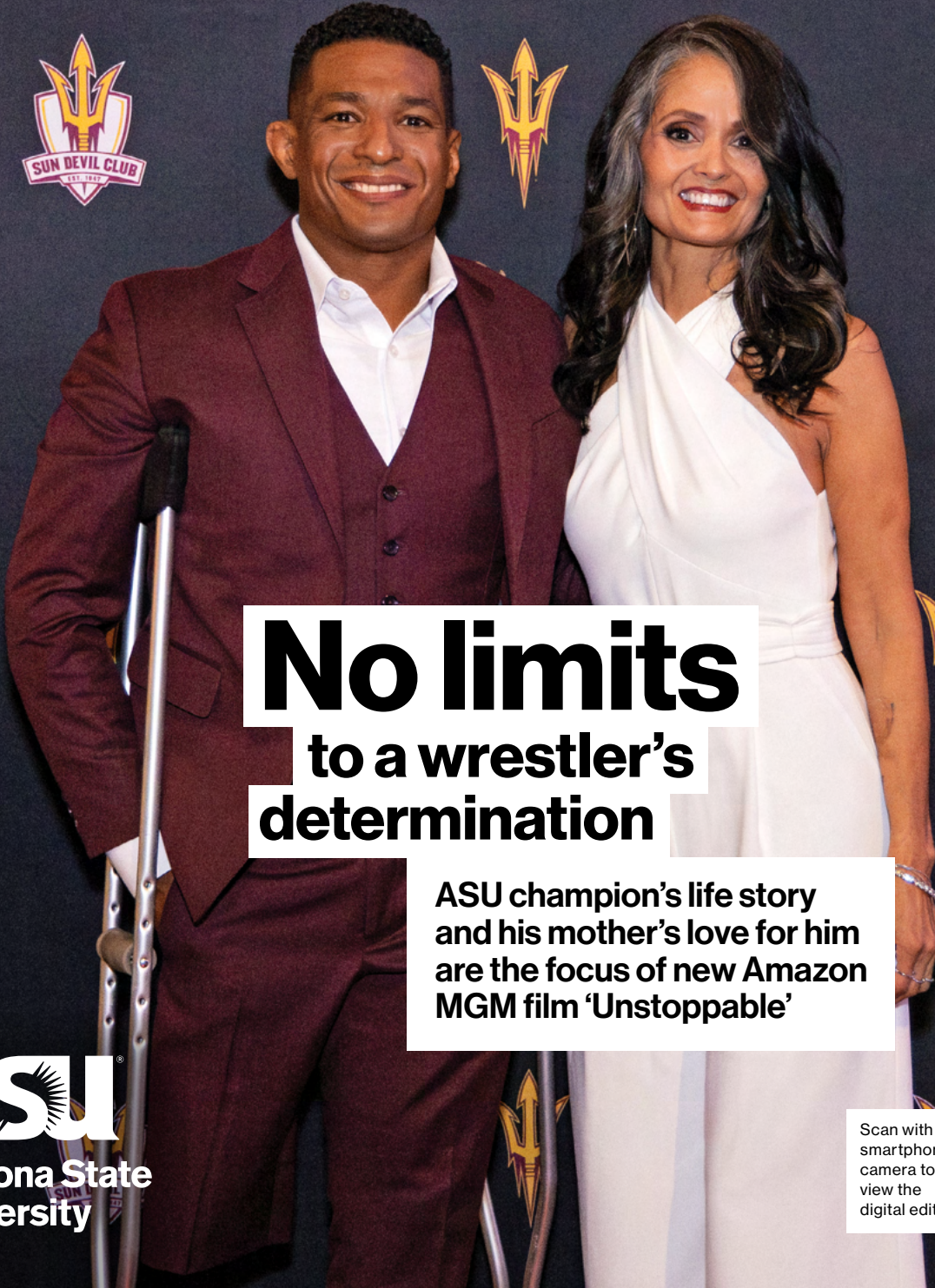
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Year in
review
2024

Highlights from
another year of
breakthroughs

Cybersecurity
students win
\$2M in national
competition

A water fix that
takes on the
yuck factor



No limits to a wrestler's determination

ASU champion's life story
and his mother's love for him
are the focus of new Amazon
MGM film 'Unstoppable'

Anthony
Robles and his
mom, Judy.

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The former COO of Morgan Stanley Europe is now an executive coach, speaker, advisor, author and executive-in-residence in ASU's Office of the President.

Bret Hovell

An Emmy Award-winning journalist who covered the White House, the Capitol and national politics for CBS News and ABC News, he has spent the last decade working in higher education.

Jill Richards

A commercial and editorial photographer, her work has been published in The New York Times, National Geographic Traveler, The Wall Street Journal, Midwest Living and Arizona Highways.

Federico Rios

Rios is a Colombian documentary photographer focusing on Latin America with over 10 years of experience as a photojournalist. His work is regularly featured in international media and publications.

Kristin Toussaint

The staff editor of the Impact section at Fast Company, she was previously a senior news reporter at Metro in New York City.

Taking responsibility for our communities

Recently ASU hit two 10-year milestones worth noting. Shortly after my arrival at the university in 2002, we began to work in a way that formed the philosophy of what would become the ASU Charter, which was formally adopted and presented to the Arizona Board of Regents in 2014. The work and purpose of the university over those years was transformed into a promise to the people of Arizona, delivered in just 46 words. The charter is an articulation of the university's reason for existence. It defines ASU's mandate as measuring success "not by whom it excludes, but by whom it includes and how they succeed."

The charter also states that ASU will assume "fundamental responsibility for the economic, social, cultural and overall health of the communities it serves," and that it will focus on "research and discovery of public value." This commitment to excellence is reflected in the master learners produced at ASU – graduates dedicated to the betterment of our society and democracy.

While the evolution occurred in daily work over many years, we forever and inextricably altered the culture and role of a top-tier public research university, transforming the way a university can act as a force for progress.

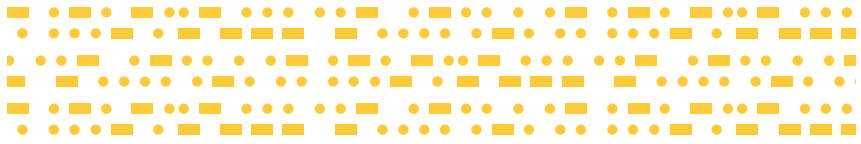
Something else happened 10 years ago, perhaps as the extension of the values and commitment expressed in the ASU Charter. In 2015, U.S. News & World Report launched a new ranking category to determine the "most innovative" university in the nation. ASU rose to the top, a spot we have held every year since for 10 consecutive years.

Receiving the top innovation ranking affirms a mindset deeply tied to our institutional identity, which has evolved to produce repeated No. 1 rankings on more than 20 lists—including sustainability, global impact, journalism and more. And this is only the beginning.

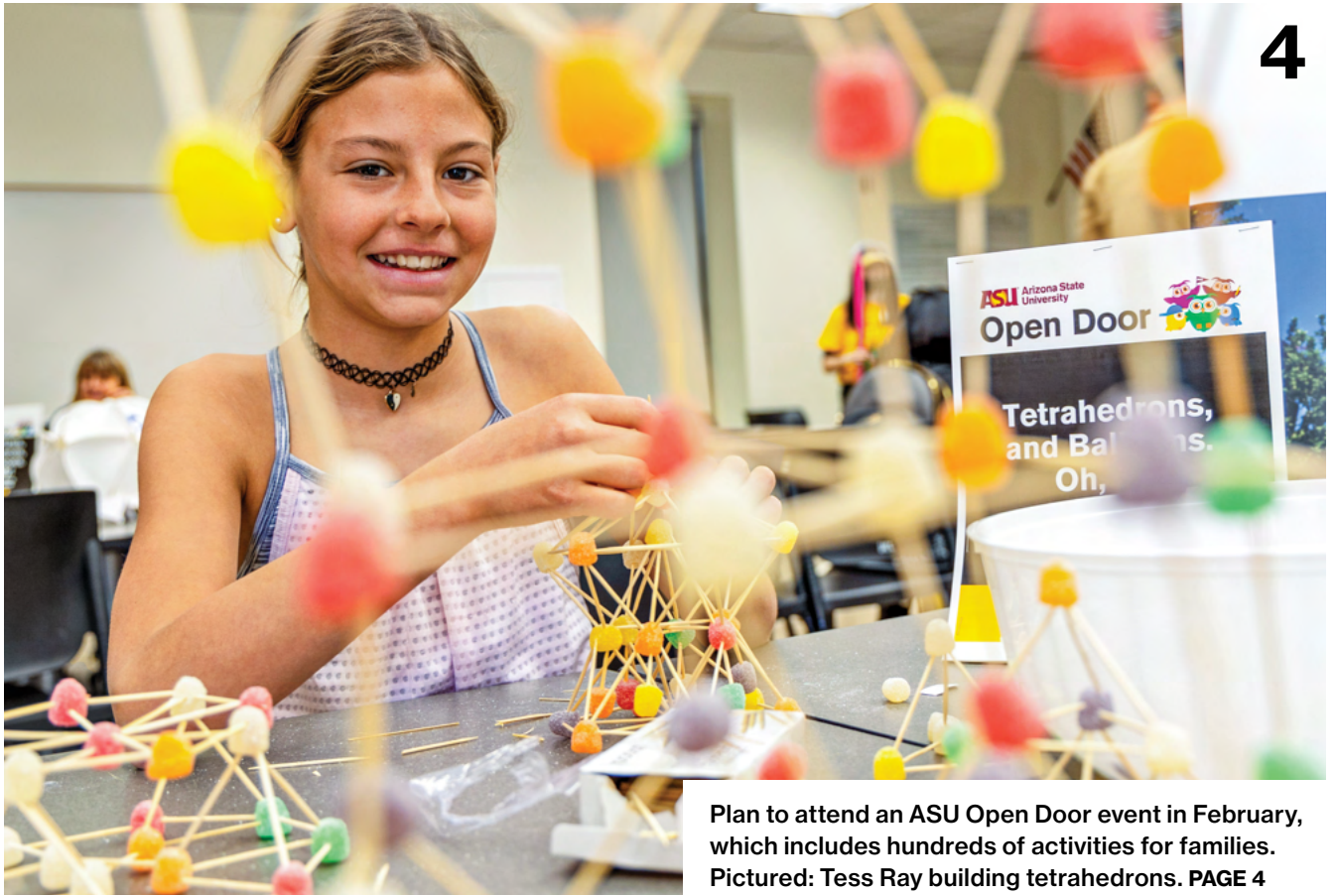
Michael M. Crow

President, Arizona State University

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Students win \$2 million prize in DARPA competition for US national security.

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A water fix that takes on the yuck factor

Reusing wastewater is a scientifically and technologically sound way of producing drinking water. But will the public accept it?

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Sun Devil Coach Adair leads team into exciting new era of women's basketball.

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ASU's Susan Craig works on water solutions.

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Connect with ASU

[Arizona State University](#) [ASU](#) [ASU Alumni](#) [magazine.asu.edu](#) [Sun Devil Athletics](#)

Live poetry spoken by wordsmiths

Hear acclaimed poets Katie Farris and Ilya Kaminsky read from their works. Farris is a 2023 winner of Publisher Weekly's Top 10 Poetry Books, and Kaminsky received the Whiting and LA Times Book awards.

Friday, Jan. 24, 6:30 p.m.,
Changing Hands Bookstore,
Phoenix

piper.asu.edu

Free Family



'Some Like It Hot'

Experience the hit Grammy- and Tony Award-winning Broadway musical "Some Like It Hot." Witness the hilarious tale of two male musicians fleeing Chicago mobsters as part of an all-female band. The New York Times calls it a fresh adaptation that is "a super-sized all out song-and-dance spectacular."

Tuesday, Feb. 11–Sunday, Feb. 16,
ASU Gammage

asugammage.com

Family Ticketed



Bring the kids

ASU Open Door is your portal to hundreds of interactive experiences for everyone, kids to adults, that demonstrate why ASU continues to be ranked No. 1 for innovation. Visit any or all of the four campuses to discover robotics, virtual reality, languages, biology, chemistry, sustainability and even cooking. Last year, 11,000 people visited. This year, make sure you're one of them!

Downtown Phoenix campus: Saturday, Feb. 1, 1–5 p.m.

West Valley campus: Saturday, Feb. 8, 1–5 p.m.

Polytechnic campus: Saturday, Feb. 15, 1–5 p.m.

Tempe campus: Saturday, Feb. 22, 1–5 p.m.

opendoor.asu.edu

Free Family Lifelong Learning

Jayden Quaintance,
forward, first-year
student



AI and the future of scholarship

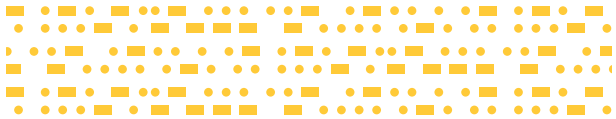
Should scientists use AI to write scientific journal articles? Learn more at the BioEthics Breakfast Club with experts from the School of Life Sciences and the School for the Future of Innovation in Society.

Wednesday, Feb. 12, 9–10 a.m., Life Science Center C-Wing,
LSC 202, 401 E. Tyler Mall, Tempe, in person and online

asuevents.asu.edu

Free Lifelong Learning Online

Visit asuevents.asu.edu for events. Visit sundevels.com for athletics game times, ticket information, news and stories.



Events



For the love of the games

Whether you're a basketball buff or baseball fan, Sun Devil Athletics has got you covered. This year's baseball season begins on Valentine's Day as your favorite team welcomes Ohio State for a three-game non-conference weekend series. Hoops fan? Then gear up for a double-header showdown as Sun Devil Men's and Women's Basketball teams play in their third epic back-to-back matchups this year.

Baseball: Friday, Feb. 14, time TBD, Phoenix Municipal Stadium. Basketball doubleheader: Saturday, Feb. 15, women's basketball 2 p.m., men's basketball 6 p.m., Desert Financial Arena

sundevels.com

Family **Ticketed**

Tyi Skinner,
guard, grad student

Ben Jacobs,
left-handed pitcher, junior



Tempe tee time

Tee up for "Sparky's Fairway," a driving range event for the whole family. Blast your flyers onto the iconic athletic field.

Saturday, Feb. 22–Sunday, March 16, Mountain America Stadium, Tempe campus
asu365.events

Family **Ticketed**

Sun Devils volunteer in communities from coast to coast

Join Sun Devils from California to Arizona to the East Coast volunteering with ASU Cares – community service projects organized by ASU Alumni chapters. This is your chance to make an impact.

Saturday, March 1–Monday, March 31
alumni.asu.edu/asucares

Free **Family**

Untold narratives shed new light on local history

Explore the history and contributions of the Hispanic and Latino community in Chandler. The oral history project "Querencia: Place and Belonging in Chandler" presents stories of community members from historical Hispanic and Latino neighborhoods spanning generations.

Now through Friday, March 7, Polytechnic campus Library
asuevents.asu.edu

Free **Family**

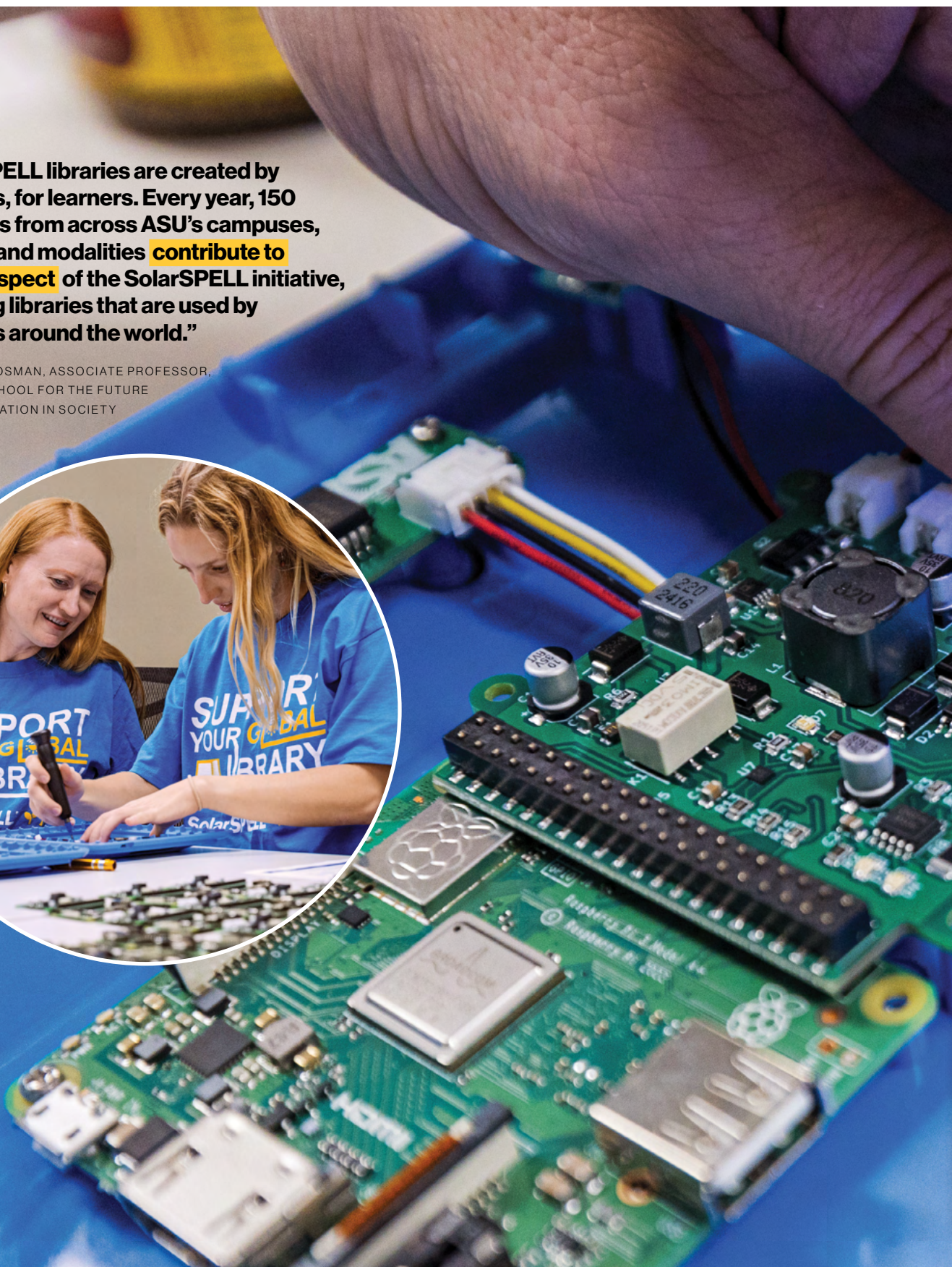


Reward yourself

Look for Sun Devil Rewards in the ASU Mobile App for event check-ins, VIP experiences, exclusive Sun Devil merchandise and more!
sundevelrewards.asu.edu

“SolarSPELL libraries are created by learners, for learners. Every year, 150 students from across ASU’s campuses, majors and modalities contribute to every aspect of the SolarSPELL initiative, creating libraries that are used by learners around the world.”

— LAURA HOSMAN, ASSOCIATE PROFESSOR,
ASU’S SCHOOL FOR THE FUTURE
OF INNOVATION IN SOCIETY



News

SolarSPELL is one of the numerous innovative ways ASU is helping to solve real problems around the world. The ASU-created and designed digital libraries go to learners who don't have internet connections or consistent electricity.

LASTING IMPACT

Repeatedly ranked #1 for a decade running

For the 10th year in a row, ASU is No. 1 in innovation in the “Best Colleges” 2025 rankings by U.S. News & World Report.

The university has placed first every year since U.S. News & World Report created the “most innovative” category. ASU has ranked ahead of MIT and Stanford University each time.

“Receiving the top innovation ranking from our peers for a decade is significant, as it affirms that our enterprisewide innovation mindset is deeply tied to our institutional identity,” says ASU President Michael M. Crow.

“ASU works hard to find and act on every opportunity at every level of teaching, discovery and operations to collaborate and manifest better solutions. We are proud of the variety and scope of impact we are making.”

Learn more at asu.edu/rankings.

9-year-old chess player wins international tournament

Chess player Aayansh Guntaka from Chandler, Arizona, competes competitively in the U.S. and around the world. Last year, Guntaka went undefeated in the U9 category of the World School Chess Championship and participated in the Prague International Chess Festival.

Guntaka attends classes online at ASU Preparatory Academy Digital so he can pursue chess while completing his schooling. ASU Prep Digital, with over 3,900 students, offers K-12 coursework. It provides students with flexibility, lets them learn at their own pace and tailors their schoolwork to their needs.

Learn more at asuprepdigital.org.



West Valley students Emma Huang, Rogelio Lopez Juan and Jesus Quezada.



Award recognizes West Valley campus' contributions

Forty years ago, ASU started its expansion into the West Valley to meet the educational needs of the region's growing community. The university was honored for doing just that with the West Valley Regional Advancement Award for successfully working to strengthen and transform the area's position for economic growth.

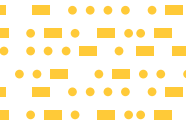
Since the campus opened, the area's population has increased to 1.8 million and the campus has grown in size, academic offerings and capacity. In 2023, it added three schools in business, forensics and engineering. Its enrollment of new first-year, transfer and master's students increased by 25% for fall 2024, setting a record for the first-year class. To accommodate the growth, the campus opened an additional residence hall and will open a new four-story academic facility.

Today, the West Valley campus is a tight-knit community of faculty and students that provides a small-college experience alongside top-tier research – with more than 125 undergraduate, graduate degree and PhD programs, including an honors curriculum.

Learn more at asu.edu/west.

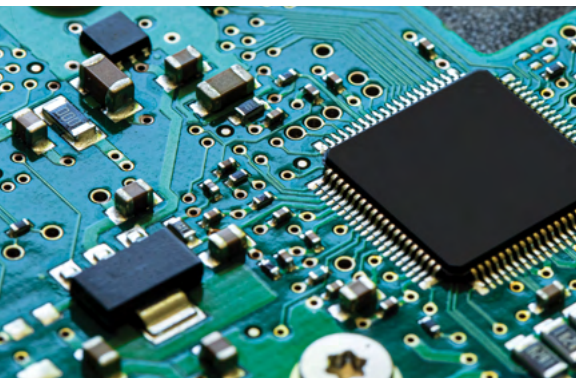
“We get to have a large, highly ranked university right in our backyard. It means a lot to the communities that we are here.”

— BOBBI MAGDALENO, EXECUTIVE DIRECTOR OF GOVERNMENT AND COMMUNITY ENGAGEMENT, WEST VALLEY CAMPUS



“A robust semiconductor sector in the Arizona and Mexico corridor means increased economic opportunities for the decades to come.”

— PAOLA HIDALGO, EXECUTIVE DIRECTOR, ASU MEXICO RELATIONS



ASU-Mexico partnership boosts semiconductor workforce

To increase skills necessary for semiconductor production in North America, ASU and Mexican universities developed an online course called English for the Semiconductor Industry to teach important terms. ASU is working on a second course that focuses on microelectronics and nanoelectronics.

The program has expanded to all 31 Mexican states and Mexico City, with 2,200 completing the full course as of this fall. ASU and its partners aim to double the number of participants over the next year to train the workforce for high-paying jobs.

Learn more at globallaunch.asu.edu.



#2 in the US in employability of graduates

According to a group of international businesses and organizations, in the newest Global Employability University Ranking and Survey, ASU again ranked second among public U.S. universities for employable graduates, ahead of UCLA, the University of Michigan and Purdue.

“This ranking demonstrates that an ASU degree is in demand by employers and a significant return on investment for our graduates,” says Nancy Gonzales, executive vice president and university provost.

Learn more at asu.edu/about/rankings.

Keep up with the headlines at ASU by subscribing to the ASU News e-newsletter at news.asu.edu/subscribe.

Vet starts business with entrepreneurship support

An Air Force veteran's business is taking flight thanks to an entrepreneurship support center created by the city of Chandler and ASU. Justin Moore, founder and CEO of protein powder company, Agoge, moved into the ASU Chandler Innovation Center in April. Open to anyone in the community, the center works to help local entrepreneurs and startups find success.

Moore has received mentorship, no-cost office space and a \$5,000 prize in an innovation pitch competition to grow his company. Support from the Chandler Endeavor Venture Innovation Incubator program also helped him land a \$4 million grant from the U.S. Department of Agriculture to further his research and expand his business.

“I looked at other states and, hands down, Arizona was the place to start a company based in health and wellness and sustainability. And I was blown away by ASU,” he says.

Learn more at entrepreneurship.asu.edu/spaces/asu-chandler-innovation-center.



“It is a unique and unbelievable place that ASU will continue to use all we have to understand; and now as a World Heritage Site, its importance cannot be overstated.”

– MICHAEL M. CROW, ASU PRESIDENT

DISCOVERIES

Research site given UNESCO World Heritage designation

At the edge of the south coast of South Africa, ASU Professor Curtis Marean and his paleoanthropology and transdisciplinary research teams have been teasing out the secrets of our earliest modern human ancestors in caves at Pinnacle Point for over 25 years.

In 2024, the site was declared a UNESCO World Heritage Site – the Olympic gold medal of heritage – given only to sites of “outstanding universal value” to all of humanity.

It all started in 1999, when Marean, associate director of ASU’s Institute of Human Origins, and his team did the first test excavations and began research that continues to reveal new and surprising clues about people living at the edge of the ocean 160,000 to 50,000 years ago. Over the years, some 60 scientists from eight countries, with hundreds of students, including South Africans, gained excavation and research experience and contributed to the discoveries.

Learn more at sols.asu.edu.



Faye McGechie in 2015, an anthropology undergrad student at that time, inside cave site PP5-6.

DIY air filters prove highly effective

ASU professor and researcher Megan Jehn and her colleagues recently published research demonstrating that DIY filters prove more effective at purifying air than commercial HEPA air cleaners – for a fraction of the price. The study monitored DIY air units in primary and secondary public schools in Arizona and Connecticut during the 2022–23 school year.

We spend the majority of our time indoors, breathing air that may contain particulate matter like dust, wildfire smoke and volatile organic compounds, so air purifiers can make a difference for health.

You can construct a DIY filter with a 20x20x2-inch MERV 13 pleated HVAC filter, a 20-inch Lasko box fan, a homemade shroud, duct tape and a box cutter.

Learn how to build a DIY filter at shesc.asu.edu/centers/cleanindoorair.

“Simple, low-cost DIY air filtration units provide a cost-effective solution to efficiently reduce aerosol exposures in indoor classroom environments.”

— MEGAN JEHN, ASU PROFESSOR



Barrett alum's undergraduate research published in major national journal as first author

When Angela Oreshkova, '23 BS in biomedical science, now in her first year of medical school at Northwestern University, was still a biology student in Barrett, The Honors College, she spent time in a lab feeding honeybees. Recently, Oreshkova published the results of her ASU undergrad research in PLOS One as a first author, a rare accomplishment for undergraduate research.

In the Amdam Lab at ASU, Oreshkova investigated the effects of queen mandibular pheromone, a chemical that the queen bee releases that may play a role in honeybees' metabolism that helps them maintain instead of gain weight as they age.

Learn more at sols.asu.edu.



Researchers discovered a spike in microplastic fiber concentrations in the Salt River following human activity such as swimming and tubing.

Swimwear can be a source of microplastics

A new study from ASU's School of Molecular Sciences suggests that swimwear worn during recreational water activities is contributing to the rise of microplastic pollution.

The study, published in the journal *Water Emerging Contaminants & Nanoplastics*, discovered a significant spike in microplastic fiber concentrations in the Salt River following human activity such as swimming and tubing. On a single day in July 2023, microplastic levels in the Salt River increased eightfold, with most fibers traced back to plastics in swimwear.

Kanchana Chandrakanthan, '24 PhD, a then-ASU chemistry graduate student, led the field work.

“We wanted to see what would be the variation of microplastics during the day before tubing and after tubing in July, and also ... afterwards in October when there's no tubing,” Chandrakanthan says.

While the researchers are not encouraging people to give up swimming or tubing, they recommend that manufacturers make swimwear with natural or biodegradable materials or make it more durable.

Learn more at sms.asu.edu.



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Career

MY TOP CAREER TIP

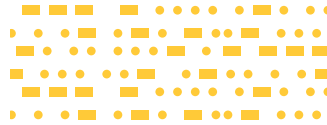
'Know every role'

Nick Cartell, '01 BFA in theater, made his Broadway debut in 2012's "Jesus Christ Superstar" and is best known for his role as Jean Valjean on the Broadway tour of "Les Misérables."

Tip: Understand as many jobs in your organization as you can.

"I've worked backstage, as a stage manager, on a crew. It was all those roles that give me an appreciation for and understanding of what everybody is doing [for the organization's success]."

Nick Cartell as Jean Valjean in the Broadway tour of "Les Misérables."



3 ways to start sounding like an executive

Better opportunities come your way when you know how to speak like a leader

Story by MAY BUSCH



May Busch is a former COO of Morgan Stanley Europe, who is now an executive coach, speaker, advisor, author and executive-in-residence in ASU's Office of the President. maybusch.com/asuthrive



WHETHER YOU LOVE MEETINGS OR HATE THEM, they are golden opportunities to demonstrate your executive presence and build your brand as a high-potential performer.

Meetings are typically where your colleagues and senior managers spend the most time with you, which makes it an ideal setting for showing you can communicate like an executive. When they see you can operate at the next level, better opportunities will come your way as a result.

Whether you have recently been promoted to senior management or aspire to join the executive ranks someday, here are three strategies you can use to showcase your executive presence in your next meeting.

1

Have a view

One of my senior managers once told me, "May, you have to have a view."

We had just left a meeting where I was briefing clients on interest rates. Since I didn't know exactly where rates were headed, I didn't say much. My manager explained, "Nobody knows for certain where

interest rates are headed. You just need a view that you can explain. And you don't have to be right all the time – no one is." I learned a valuable lesson.

Having a perspective, even if it is not guaranteed to be correct, demonstrates confidence and leadership.

I am not advising that you make wild assumptions, but it is important



“Positive words make you sound more diplomatic and solution-oriented.”

you have an educated opinion that you can communicate with gravitas.

If you are not sure how to share your view, try an opening phrase like, “In my experience ...” Or you could say something like, “Given the trend toward X it would make sense for us to try Y strategy.” Both options convey authority without being definitive.

2 **Manage the airtime**
Think of managing the airtime of a meeting as directing traffic. It is all about paying attention to who’s speaking and how much, then making subtle adjustments to foster a more productive conversation.
Keeping meetings efficient and focused shows that you

are thinking about the bigger picture and respecting the people around you.

It starts with managing your own airtime. If you are speaking too much, your words will start to lose their weight. So, choose your moments where you are going to have the most impact. And then when you do speak up, be clear and succinct, and get to the point.

Then zoom out and observe the meeting overall. Are the naturally outgoing people in the room dominating the conversation?

When this happens, make it easier for others to engage by inviting people to share their thoughts and observations. If you don’t want to put anyone on the spot, you can ask, “What points of

view have we not yet considered?”

3 **Use only positive language**
Back when I was a teenager, my father taught me a valuable lesson by challenging me to “use positive words only.” This advice has stuck with me ever

since, and I encourage you to take on the challenge too.

Positive words make you sound more diplomatic and solution-oriented, key qualities of a respected executive.

Remember, leaders are problem-solvers, not complainers. And by using only positive words, you will find it impossible to complain. Better yet, your ideas will find more receptive ears and your influence will grow.

For example, instead of saying, “That idea is never going to work,” the positive-words-only version could be, “I wonder how that would support our team’s mission.”

Improve your presence at any career stage

Executive presence is not about having the right answers – it is about how you communicate your ideas, project confidence and demonstrate your leadership potential.

Working on these subtle but powerful communication strategies will help you show up as the leader you aspire to be in your next meeting. ■



Improve your leadership skills
ASU’s CareerCatalyst offers several leadership courses, including “Leading Through Effective Communication.”
Learn more at careercatalyst.asu.edu.

Learning through life



Training to help you earn promotions or shift your career



Go green with data

Gather the tools you need to make an impact on your organization with the "Sustainability Analyst Fundamentals Specialization." You will learn sustainability skills related to goal-setting, reporting and data analysis. Forty hours; \$149; certificate and digital badge upon completion.

careercatalyst.asu.edu

Online Self-paced



Navigate your next chapter with confidence

For Sun Devil parents, navigating the transitions in the second half of life offers opportunities for learning, building connections and receiving support. ASU has partnered with the Modern Elder Academy to create "Thriving in Your Empty Nest Chapter," delivering learning and resources for navigating this stage with confidence. Eight to 10 hours; \$95.

careercatalyst.asu.edu

Online Self-paced



Learn Salesforce

Dive into the ASU Salesforce Developer Academy to master the leading customer relationship management tool companies use to track interactions with customers. Prepare for the Salesforce Platform Developer 1 credential exam. The program is for learners in computing and non-computing fields. Fifteen weeks; free.

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Leverage AI to drive results

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Access ASU Library virtually

Did you know that you can use digital resources from the ASU Library? From e-books to journals and multimedia content, these online materials are high quality and accessible to the public at no cost to users.

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Online Self-paced





Campus Directory

#1
Innovation
sustainability
global impact



Review

Highlights from
another year
of innovative
breakthroughs

2024 YEAR IN REVIEW

Celebrating 10 years of the ASU Charter

ASU's Charter is a bold promise to the communities we serve and a model for higher education itself. It sets out ASU's commitment to the inclusion and success of all who consider the university part of their story. Officially announced in 2014, the charter answers the question of what a "New American University" should be.

The people of ASU – the researchers, students, alumni and visionaries – and the things they accomplish in Arizona, the U.S. and around the world demonstrate the ASU Charter in action daily.

Ten years later, the combination of excellence and access – still a novel idea in higher education – continues to transform lives and advance society.

ASU Charter

ASU is a comprehensive **public research university**, measured not by whom it excludes, but by **whom it includes** and how they **succeed**; advancing **research and discovery** of public value; and assuming **fundamental responsibility** for the economic, social, cultural and overall health of the **communities** it serves.



Year in review

In the news



ASU a top producer of Fulbright Scholars

ASU is one of only seven doctoral-level institutions recognized as a top producer of Fulbright awards among both students and faculty, according to the Chronicle of Higher Education.



Reducing fire risk in Northern Arizona

In collaboration with Arizona's Salt River Project utility, ASU is investigating whether forest thinning will increase water supplies, in



addition to reducing wildfire risk and protecting important infrastructure.

ASU BIOS provides data to NASA measuring marine life in its smallest form

ASU Bermuda Institute of Ocean Sciences partnered with NASA on its Plankton, Aerosol, Cloud ocean Ecosystem satellite mission to improve understanding of how the ocean and atmosphere interact. As part of the PACE Validation Science Team, ASU BIOS is providing measurements enabling prediction of fisheries cycles, appearance of harmful algae and other factors that affect commercial and recreational industries.

\$70 million in funding to secure competitiveness in U.S. manufacturing in the global economic environment with clean energy. The Electrified Processes for Industry without Carbon institute, or EPIXC, helps eliminate carbon emissions with new technology and workforce development.



250 million biology learners

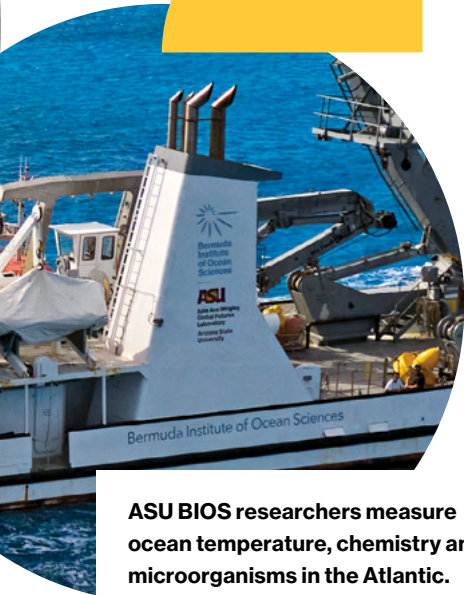
Ask A Biologist, a free online learning resource for K-12 students offered by the School of Life Sciences, tallied more than 7 million visitors under age 25 in 2024. The site offers nearly 700 activities and resources.

New biology class model expanded on campus and online

Making science more accessible for societal and workforce demands, ASU scaled up its NeoBio program reach to serve 14,336 learners in 2024. NeoBio includes adaptive learning and immersion in a virtual reality lab with narrative-style storytelling on campus and online. Learners outperformed their peers in traditional classes by almost a full letter grade.



2024



ASU BIOS researchers measure ocean temperature, chemistry and microorganisms in the Atlantic.

Wrestler Richard Figueroa won the NCAA national championship in the 125-pound weight class.



Engineering school, first of its kind, launched in the West Valley

The new School of Integrated Engineering on the West Valley campus introduced two new flexible engineering science degrees – one that combines math, science and engineering with a student’s chosen concentration and another focused on microelectronics.

West Valley Forward



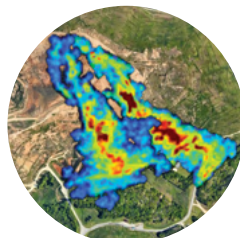
First-ever university partnership with OpenAI



ASU is partnering with OpenAI to enhance student success through new projects with faculty, staff and students. One example is “Sam,” an AI-generated patient that allows medical and behavioral care students to practice interviewing.



W. P. Carey School of Business launched a Master of Science in Artificial Intelligence in Business.



A first-ever study by ASU researchers in collaboration with Carbon Mapper found methane super-plumes in U.S. landfills.

Winning big at NCAA nationals and the Paris Olympics

Sun Devil Men’s Swim and Dive dominated the 2024 NCAA championships, winning seven events and setting nine school records and three NCAA records. In Paris, Léon Marchand and Ilya Kharun won four individual gold medals and three individual bronze Olympic medals, collectively.



100,000 students have graduated from ASU Online

In May, the university reached a milestone since starting to offer online learning.

ASU repeatedly secured multimillion dollar funding awards to lead microelectronics partnerships, including \$100 million to strengthen U.S. semiconductor packaging and \$30 million for the Southwest Advanced Prototyping Hub, driving innovation, workforce development and national security.

Golden State growth

More than 19,000 students from California enrolled at ASU in 2024. The university partners with all 116 California community colleges to deliver more than 400 pathways for transfer students.



The ASU FIDM Museum gave fashion students and the public a rare opportunity to view pieces from all of this year's Oscar-nominated costume designers, including Holly Waddington's work for "Poor Things."



275,000+

students served by the ASU-Cintana Alliance across a global network of 29 universities in 25 countries.

– GLOBAL ACADEMIC INITIATIVE, 2024



ASU Law expanded its LA presence in May, providing premier experiential opportunities that can lead students to jobs in intellectual property and entertainment law.



Sun Devil Football won Big 12 championship in its first season in the conference

The team routed Iowa State 45-19 in the championship game to claim the Big 12 title. The Sun Devils earned a trip to the College Football Playoff quarterfinals Jan. 1 at the Peach Bowl. These historic events came in ASU's first season in the Big 12.*



K-12 education model reinvented by ASU Teachers College

Carole Basile, dean of ASU's Mary Lou Fulton Teachers College, addressed the U.S. Congress' education subcommittee to present the school's team-based staffing model – multiple educators sharing a roster of students in flexible learning spaces – provides "distributed expertise" to meet the needs of each student.

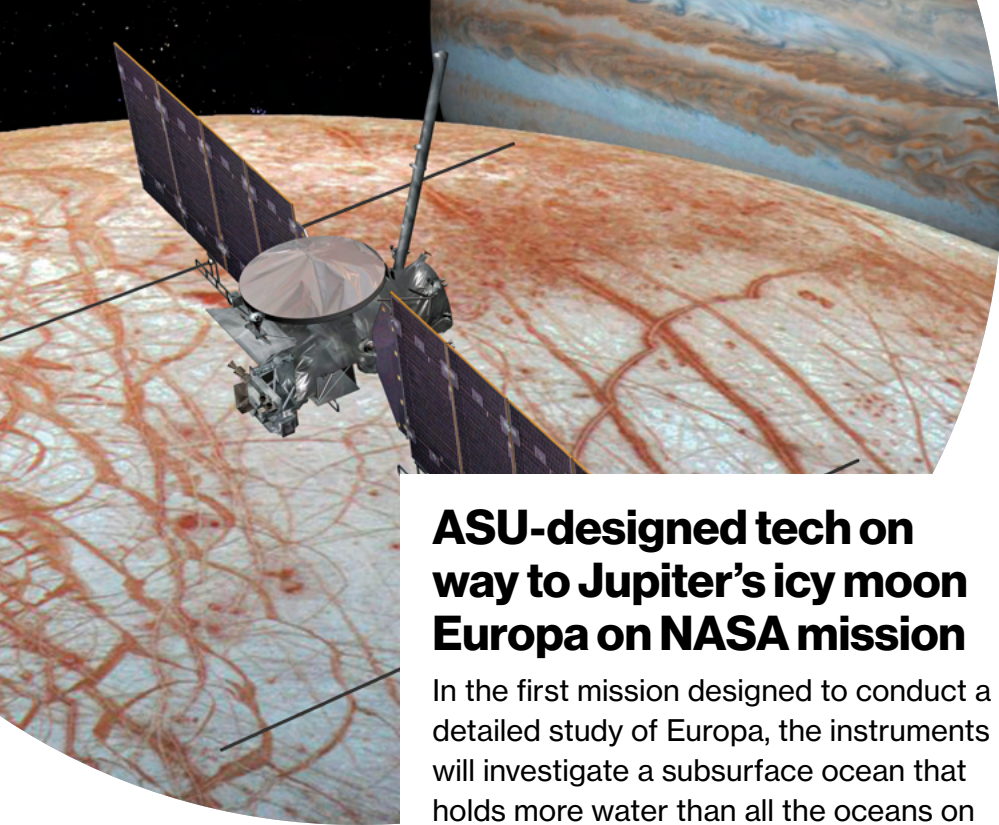
HonorHealth named primary clinical affiliate for ASU School of Medicine and Advanced Medical Engineering

The collaboration with the locally owned nonprofit health system will create clinical education programs for developing a unique, nationally recognized medical education program.



Natalie Diaz, English professor, Pulitzer Prize winner and a MacArthur Foundation "Genius" Fellow, named a Freedom Scholar by the Marguerite Casey Foundation. She is Mojave and an enrolled member of the Gila River Indian Tribe (Akimel O'odham).

*As of Dec. 8 press date.



ASU-designed tech on way to Jupiter's icy moon Europa on NASA mission

In the first mission designed to conduct a detailed study of Europa, the instruments will investigate a subsurface ocean that holds more water than all the oceans on Earth and that may have conditions to support life. The spacecraft will travel 1.8 billion miles to arrive in April 2030.

TIME 100 CLIMATE

Powered by TIMECO₂

ASU President Michael Crow named to the 2024 TIME100 Climate list, the first university president to be included. It includes leaders from policy to business to education driving real climate action.

XPRIZE™

ASU researchers and collaborators won the \$10 million XPRIZE Rainforest competition for creating a drone-based biodiversity measurement solution to protect endangered wildlife.

Champions in robotics

Desert WAVE, the Women in Autonomous Vehicle Engineering, won the top place in the International RoboSub Competition.



Volleyball won its first conference championship in program history

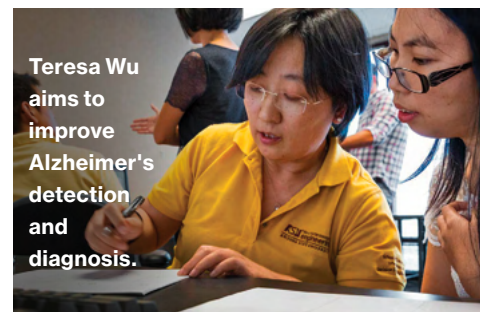
Under second-year head coach JJ Van Niel, ASU dominated in its first season in the Big 12, going 17-1 in conference play.



W. P. Carey's MBA for entrepreneurship was named the #1 in the U.S. and #2 in the world ahead of Duke University and UCLA by Poets&Quants. The ranking comes as the new Idealab Arizona will also grow ASU startups to increase jobs in Arizona.

Better diagnostics for Alzheimer's

A research team in the Ira A. Fulton Schools of Engineering is creating better tools for early detection of Alzheimer's disease using artificial intelligence to harmonize separate PET scans.



Teresa Wu aims to improve Alzheimer's detection and diagnosis.

The Mayo Clinic and ASU Alliance for Health Care seed program funded 15 new startup recipients for its 2024 venture funding round. Funded projects include nonmetallic, implantable biomaterials; a point-of-care biosensor; and AI analysis of clinical evaluations.



ASU microelectronics startup Crystal Sonic won first place at the National Semiconductor Technology Center Symposium in Washington, D.C. It showcased acoustic technology that reduces material waste during the semiconductor manufacturing process.

Year in review

By the numbers

Repeatedly ranked

#1

innovation

ASU ahead of MIT and Stanford

– U.S. NEWS & WORLD REPORT, 10 YEARS, 2016–25

sustainability

ASU ahead of Stanford and Cornell

– ASSOCIATION FOR THE ADVANCEMENT OF SUSTAINABILITY IN HIGHER EDUCATION, 2 YEARS, 2023–24

global impact

ASU ahead of MIT and Penn State

– TIMES HIGHER EDUCATION, 5 YEARS, 2020–24

air and climate

ASU ahead of Stanford and Cornell

– ASSOCIATION FOR THE ADVANCEMENT OF SUSTAINABILITY IN HIGHER EDUCATION, 2 YEARS, 2023–24

RESEARCH IMPACT

ASU is one of the **fastest-growing research enterprises**



in the U.S. with \$904M total research expenditures in FY23

– ASU KNOWLEDGE ENTERPRISE

Top 10 in the world for U.S. patents

ASU along with MIT, Stanford, Harvard

– U.S. NATIONAL ACADEMY OF INVENTORS, 2023

1,500+ new U.S. patents*

with 184 new patents in FY24

– U.S. PATENT AND TRADEMARK OFFICE

*From July 1, 2002 to June 30, 2024

ECONOMIC IMPACT

\$2.5+ billion economic output*

has been generated within Arizona from the ASU-linked companies to date

– SKYSONG INNOVATIONS

*From July 1, 2002 to June 30, 2024

\$1.4+ billion

in external funding has been raised by 250+ ASU startup companies facilitated to date

– SKYSONG INNOVATIONS

FUTURE INNOVATORS

Top producer of elite scholars

For 10 years, ASU has been a top-producing university for elite scholars, including Rhodes, Marshall, Gates Cambridge, Truman Scholars and more. ASU ranks in the top 15 overall for Fulbright awards, ahead of UC Berkeley, Duke and Cornell, and is the No. 2 public university ahead of UNC-Chapel Hill and UCLA.

– LORRAINE W. FRANK OFFICE OF NATIONAL SCHOLARSHIPS ADVISEMENT, 2024

Top 5 'Best Colleges for Future Leaders'



among public universities, ranked by Time, based on career milestones of a group of top U.S. leaders, including where they received their degrees.

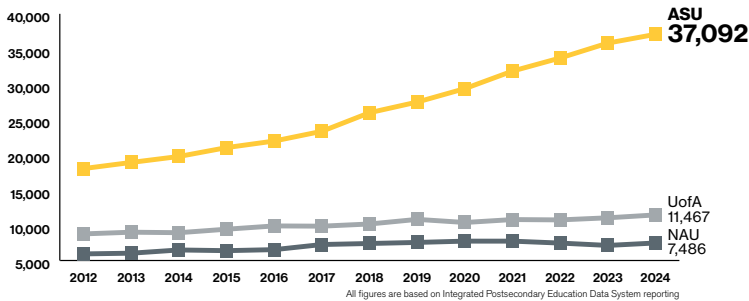
ACADEMICS

Top producer of grads in the state

ASU annually awards thousands of college degrees to innovators who excel in engineering, business, education, the arts and other fields. In 2023–24, ASU granted 23,682 associate and bachelor’s degrees and 13,410 master’s, law and doctoral degrees.

– ASU OFFICE OF INSTITUTIONAL ANALYSIS, UOFA UNIVERSITY ANALYTICS AND INSTITUTIONAL RESEARCH, NAU INSTITUTIONAL RESEARCH AND ANALYSIS

Degrees awarded



Top 5 in the U.S. for best online bachelor’s programs

ASU ahead of Texas A&M University, University of Arizona and George Washington University

– U.S. NEWS & WORLD REPORT, 2024

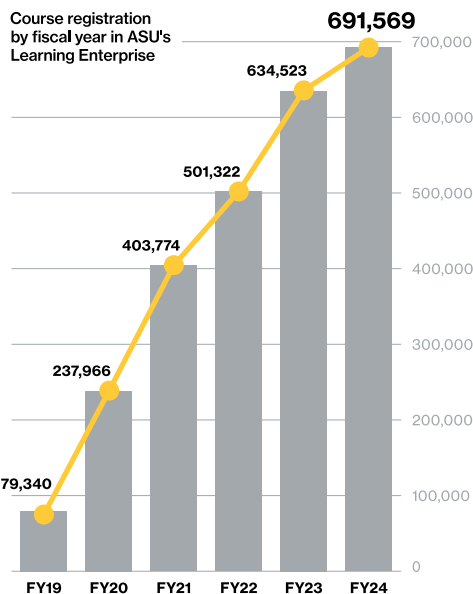
44 programs in the top 10 in the U.S. along with 83 ASU degree programs in the top 25

– U.S. NEWS & WORLD REPORT, 2024

Learning at every stage in life

ASU serves learners from K–12, career development and beyond. We’re evolving the American research university model, providing learning to everyone with accessible digital learning tools and resources for all ages. ASU works in 2,000+ partnerships, collaborating in education, industry and community sectors across 140 countries.

– ASU LEARNING ENTERPRISE, 2024



A top U.S. university

based on key indicators including academic reputation, employment outcomes, international research network and sustainability

ASU ahead of Dartmouth, Georgetown and Notre Dame

– QS WORLD UNIVERSITY RANKINGS, 2025

#2 in the U.S. for employability among public universities

ASU ahead of UCLA, University of Michigan and Purdue

– GLOBAL EMPLOYABILITY UNIVERSITY RANKING AND SURVEY, 2025



PHILANTHROPY

\$320.4 million

in new gifts and commitments for students, faculty, research and community programs in FY24

108,481 individual, corporate and foundation donors in FY24

ATHLETICS

- **Highest Academic Progress Rate** Sun Devil Athletics achieved the highest APR in its conference (the Pac-12 at the time).
- **165 student-athletes earned degrees** in 2023–24, including 58 with honors.
- **National champions** Men’s Swimming team championship, Wrestling’s Richard Figueroa wins individual championship, Triathlon’s Naomi Ruff wins individual championship.



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PROUD PARTNER OF
SUN DEVIL® ATHLETICS



First-year students Hans Inocentes and Matthew Arroyo design a baton that tracks time signature and tempo.

WEST ENGINEERING

Program brings engineering leaders to West Valley

Microelectronics has become integral to many industries, boosting demand for skills in engineering, science and related technological disciplines.

It's why the School of Integrated Engineering, the newest school in the Ira A. Fulton Schools of Engineering, recently brought together Microchip and Supplyframe DesignLab executives and students for a workshop on ASU's West Valley campus.

"The new school engages first-year students in real-world problem-solving through hands-on, team-based projects and events in the industry," says Shawn Jordan, interim director of the School of Integrated Engineering.

ASU's School of Integrated Engineering is unique in its approach of fusing engineering with other disciplines that prepare students to excel.

Learn more at west.engineering.asu.edu.

SUCCESS

No limits to
a wrestler's

determi

Alum Anthony Robles won the 2011 NCAA Wrestling Championship. His story is featured in a major new film.



Judy Robles was washing dishes in the kitchen of her California home and keeping an eye on her young son, who was playing in the park that backed up to the house.

She looked down for a second, maybe two, and when she looked up, there was her son, Anthony, sitting on a piece of playground equipment that looked like a bowl perched atop a long pole.

Robles ran outside, wondering how her little boy without a right leg – but who would eventually become an NCAA wrestling champion at ASU – managed to climb up the pole and worried that he would hurt himself trying to get down.

“I got to him and I’m like, ‘What are you doing?’” Judy Robles says. “And he’s just laughing. He thinks it’s funny.

“That was the moment. That’s when I knew I couldn’t put limitations on Anthony. He was going to figure things out.”

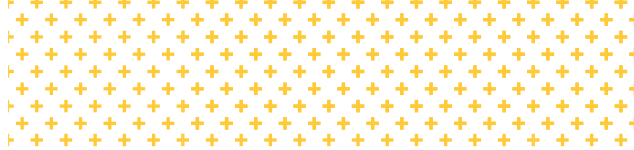
Movie with Hollywood stars
“Unstoppable,” the new Amazon Prime movie about Anthony Robles’ life – which had a screening at ASU’s MIX Center in downtown Mesa on Nov. 21 and a limited theatrical release starting Dec. 6 – is being released on Amazon Prime Video on Jan. 16.

The MIX Center screening was a homecoming for Robles, who wrestled four years at ASU, was a three-time Pac-12 champion and, in 2011, won the NCAA championship in the 125-pound weight class

nation

ASU champion’s life story and his mother’s love for him are the focus of new Amazon MGM film ‘Unstoppable’

Story by SCOTT BORDOW, '98 BA



despite competing with just one leg.

“Just to be able to go back home and have my family, friends and coaches see it, that was special,” says Anthony, who was actor Jharrel Jerome’s stunt double in the wrestling scenes.

“Going to ASU, that was a sense of pride for me. So, to have this film where it all started, I looked forward to that.”

The movie, which was produced by Ben Affleck and Matt Damon’s production company, Artists Equity, and stars Jennifer Lopez as Judy Robles, not only chronicles Anthony Robles’ improbable journey – it’s a tribute to the relationship between Judy and Anthony, to the woman Anthony calls “his hero.”

Judy, an associate athletic director for student-athlete experience and family programs in Sun Devil Athletics, was 16 when she found out she was pregnant with Anthony.

Anthony was born on July 20, 1988. Judy didn’t know he had been born without one leg – prenatal tests had not revealed the condition – until he was placed into her arms and her father told her.

“I’m kind of like, ‘OK, I have a baby. I’m 16. What does this mean?’” Judy says. “But then I waited until everyone was gone. I had a moment with my son. And he was just this little golden brown ... sweetest little boy. It was a challenge. But I was going to love Anthony. If that’s all I could give him, that’s what I was going to do.”

Those first few months were hard. Anthony had colic. Judy started sneaking out of her parents’ house to hang out with friends.

“I made a mess of things,” Judy says.

When Anthony was 8 months old, Judy’s parents told her she needed to grow up. Judy decided to become a mother rather than a statistic.

Truly unstoppable

Judy wasn’t sure what Anthony could do with just one leg. But she knew one thing: There wasn’t anything she wouldn’t let him try. Whether it was riding a bike, playing football or driving a car, Judy told Anthony to see his challenges as a puzzle.

“It was never like, ‘I don’t think you should do that because I don’t know if you can,’” Anthony says. “It was, ‘OK, how can we do this? Let’s figure it out.’”

“That’s how I approached my life. It always just came back to the mentality of never letting your challenge become the excuse.”

Judy says, “I took that step back and gave him an opportunity to fail.”

Judy wasn’t just Anthony’s advocate. She was his protector and defender.

“I was like, ‘Don’t treat him like he’s disabled. How dare you. Back off. This is my son,’” she says.



Anthony Robles and his mom, Judy, in the middle with their family at the film premiere for “Unstoppable” at ASU.



Jennifer Lopez, Anthony Robles and Judy Robles at The Road to the Golden Globes Party during the Toronto International Film Festival.

“Going to ASU, that was a sense of pride for me.”

— ANTHONY ROBLES, '11 BA, NCAA 2011 NATIONAL CHAMPION, ASU WRESTLING, NOW A MOTIVATIONAL SPEAKER AND COACH AT CHANDLER HAMILTON HIGH SCHOOL

Even when Anthony was older and could advocate for himself, Judy was there to defend him if needed. During one of Anthony's first wrestling meets at Mesa Junior High, a man in the audience started laughing at him. Judy got up, walked over to where the man was sitting and told him to knock it off.

“I never thought not having a leg was a big issue, but whenever I stepped out the door, whether I was going to school or the grocery store, people would treat me differently,” Anthony says. “They would put these limitations on me without even letting me try. And I didn't understand it for the longest time.

“But my mom — and my family — was the one who would recharge me. I would not be here without her just believing in me, pushing me and teaching me to believe in myself. And with this film now, the world is going to see that.”

Something else happened that day at junior high: Judy began to understand how much wrestling mattered to her son.

“And when I saw him, I was really proud of him, hopping to the center, hopping off. I was like, ‘OK, this little boy has that strength in him.’”

It wasn't easy for Judy to see her life played out in the film. It details what she calls her “mistakes,”

including a fraught relationship with her ex-husband. She still beats herself up over some of the choices she made, even though she is the first person in her family to get a college degree — she earned a bachelor's degree in communication with a minor in English literature from ASU, a master's degree in higher and postsecondary education as well as a doctorate in educational leadership from Northern Arizona University — and all five of her children are college graduates.

“I'm struggling to give myself that bit of grace,” she says.

But the film turned out to be therapeutic for Judy and Anthony.



Behind the scenes of the Amazon MGM film with Robles as the stunt double and the film's stars in the right photo.





Anthony Robles continued his winning streak at his last Sun Devil Wrestling home meet and went on to win the 2011 NCAA Championship.



Anthony Robles, '11 BIS, and Judy Robles, '15 BS. She is a first-generation graduate who also holds master's and doctoral degrees.

She broke down on the set when she watched the filming of Anthony's national championship match, thinking about the struggles that got them to that point.

Judy and her five kids also sat down and discussed their family dynamic.

"We talked through the hard times within our home," Judy says.

The son knows better

"She absolutely does not give herself enough credit, and I think that was something I really wanted to be captured in this film," Anthony says. "I think the film does a great job of showing my mom was dealing with her own challenges."

Judy was humbled when she was told Jennifer Lopez wanted to play her in the movie. And a bit worried, as well. Would Lopez, a big star, be concerned about an authentic portrayal of Judy?

As it turned out, the worries were unfounded. After an initial conversation, the two women spoke on Zoom for three hours. Lopez even wore one of Judy's coats in the movie as well a pink beanie Judy owns that has the word "wrestling" stitched on the front. During one

of their conversations, Judy said, "Oh, that's just Anthony," and Lopez added the line to the movie.

When the movie was screened at the Toronto Film Festival in September, Lopez and Judy sat next to each other and cried.

"She genuinely cared about getting my mom and playing her authentically," Anthony says. "It was really neat to see."

Anthony says the film is "more than he could have hoped for." For Judy, it has been a catharsis.

"I'm learning not to look at the mistakes that I've made," she says.

"Because, to me, if I want to help other women who have been through what I've been through, other single parents who are raising kids, I need to learn to get past the thinking that it was my fault, and I don't deserve this.

"But it's so wonderful when Anthony says he loves me and says he wouldn't be where he is without me.

"I cannot not cry when he talks about me like that." ■

Learn more at asu.edu/athletics. Watch the "Unstoppable" movie on Amazon starting Jan. 16.

Sun Devil wrestling highlights

One of the most decorated programs in the West, the team has captured 24 conference titles in their over 50-year history. The only West Coast school to have won the NCAA Championships, ASU has over 120 individual Pac-10/12 titles and 28 WAC crowns.

10 NCAA national wrestling individual champions

including Anthony Robles in 2011, Zahid Valencia in 2019 and Richard Figueroa in 2024.

Coach Zeke Jones leads the team today as a national powerhouse

Jones followed his college wins as a Sun Devil with the 1991 World Champion title and a silver medal finish at the 1992 Olympics in Barcelona. He finished his professional career with four World Cup titles before shifting over to coaching, guiding U.S. Olympians at the 1996, 2000, 2004 and 2012 Games.

— SUNDEVILS.COM

SPACE

Before NASA's Europa Clipper launched, ASU manufacturing engineer Rob Woodward, '92 BS aerospace engineering, cleaned the E-THEMIS imager.





“If there’s life on Europa, or if asteroids can eventually be mined for precious metals, those are things that are going to **change how humanity thinks and works.”**

– JIM BELL, PROFESSOR, ASU SCHOOL OF EARTH AND SPACE EXPLORATION



SPACE LAUNCH

NASA, university collaborate on mission to Jupiter’s icy moon

On Oct. 14, NASA launched the Europa Clipper into space headed to Jupiter’s orbit. Why? To study Europa, one of Jupiter’s 95 moons, to see if the moon holds the potential for life.

The mission relies on the Europa Thermal Emission Imaging System, which scientists, engineers and students across the university built. The system features an infrared camera to observe temperature variations at Europa’s surface. The aim? To investigate whether the moon could harbor conditions suitable for life in the global ocean that underlies the icy shell at the surface.

The Europa Clipper will make its way to Jupiter by 2030, complete its first flyby of Europa by 2031 and continue to orbit Jupiter until 2034.

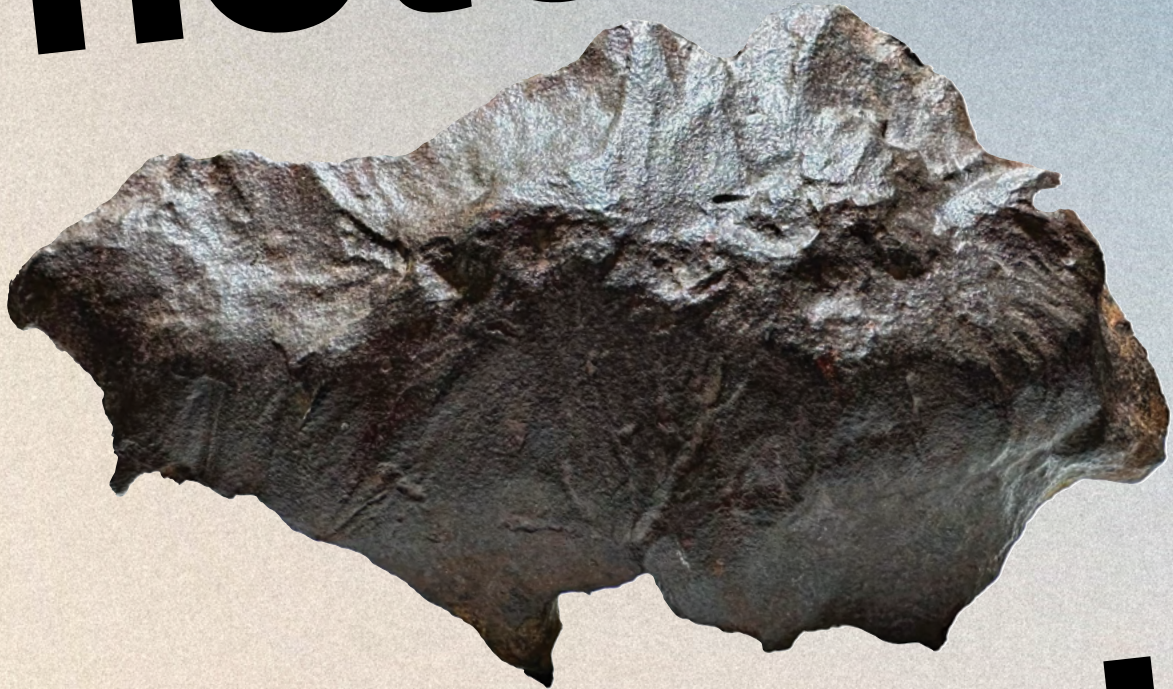
Check out video of the launch at sese.asu.edu.

SPACE

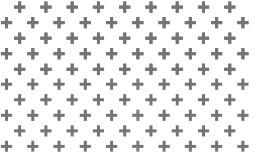
How ASU's bold investment
in a collection of meteorites
65 years ago powers
research to this day

Story by BRET HOVELL

THE meteorite



effect



On Nov. 9, 1923, Harvey Nininger saw his future explode across the Kansas sky.

He would become perhaps the single most accomplished collector of meteorites ever, and that collection would seed generations of cutting-edge space research at Arizona State University.

But at that moment, Nininger had only just become aware that meteorites even existed.

He was teaching biology and geology at the small McPherson College in Kansas, about an hour's drive north of Wichita. And he considered himself a knowledgeable man, especially about the sciences. So when he read, that previous summer, an article in *Scientific Monthly* about meteorites, he was fascinated.

"All during my childhood meteors were regarded in about the same light as ghosts and dragons: mentioned rarely and never discussed seriously," he wrote in his 1972 memoir, "Find a Falling Star."

Now, Nininger longed to see a meteor, and a meteorite, for himself. As fate would have it, he did not have to wait long.

That chilly November evening, Nininger was walking home from campus, chatting with another McPherson professor. They paused in front of the colleague's house



when suddenly, Nininger wrote, "A blazing stream of fire pierced the sky, lightening the landscape as though Nature had pressed a giant electric switch."

His companion was speechless. Nininger, however, bent over and



"He was just obsessed, if you will, with finding meteorites. And he was convinced that nobody was paying good attention to the field. And he was right."

— KENNETH ZOLL, THE AUTHOR OF A RECENT BIOGRAPHY OF NININGER CALLED "H.H. NININGER: MASTER OF METEORITES"

Harvey Nininger spent decades bringing falling "stars" into the world of scientific research.

made a mark on the sidewalk, beginning to calculate where the space rock, as he immediately suspected it to be, might have landed. He vowed to hunt for it.

"And his friend said, 'You're nuts!' But he wanted to find it," recalls Nininger's grandson, Gary Huss, the director of W.M. Keck Cosmochemistry Laboratory at the University of Hawai'i, who was previously a research scientist at ASU. "He thought that was the most fascinating thing he'd ever seen."

That first hunt would lead him to meteorites — though not, as it would turn out, the ones he saw streaking over his head that autumn night. And it would inspire him to commit, first to a hobby, then to a life, of searching for and cataloging them.

"He was just obsessed, if you will, with finding meteorites," says Kenneth Zoll, the author of a recent biography of Nininger called "H.H. Nininger: Master of Meteorites." "And he was convinced that nobody



Harvey Nininger, his wife, Addie, and Carleton Moore in 1967 with one of the over 700 meteorites from the Nininger collection.



The Nininger collection helped draw Carleton Moore to ASU. Above: Moore analyzes a meteorite from the Nininger collection.

was paying good attention to the field. And he was right.”

Nininger worked without institutional support: He wasn’t part of a university, he didn’t cash checks from the government. Very few meteorites had been found up to that point, and for the most part scientists thought everything that could be learned from them had been.

But Nininger proved that belief wrong. Working with his wife, and later with his children and their families, Nininger expanded knowledge of both the number and kinds of meteorites that had fallen to Earth, while developing the “collecting methods, cataloging and displaying of meteorites [that] are in many ways still the standard,” Zoll writes. Eventually he moved to Arizona to be closer to Meteor Crater in Coconino County. And he continued traveling the country, collecting samples.

A Harvard professor named Fletcher Watson wrote in his 1956

book “Between the Planets” that “for several years, Nininger was accounting for half of all discoveries in the world.”

But hunting for meteorites did not pay the bills. As Nininger aged, he realized he would need to part with the fruits of his life’s work. After selling part of his collection to a museum in London, American suitors for the remaining space rocks began to make serious proposals. ASU was among them.

The university was at a turning point. Just a few months earlier, ASU had been Arizona State College. But with its new mandate as a research-focused institution, ASU’s leadership saw an opportunity to capitalize on the urgency of the post-Sputnik moment and move into a research area that, they suspected, would only grow. With the help of a grant from the National Science Foundation, ASU paid \$275,000 for the meteorites, roughly \$3 million today. This year marks the 65th anniversary of that ambitious purchase.

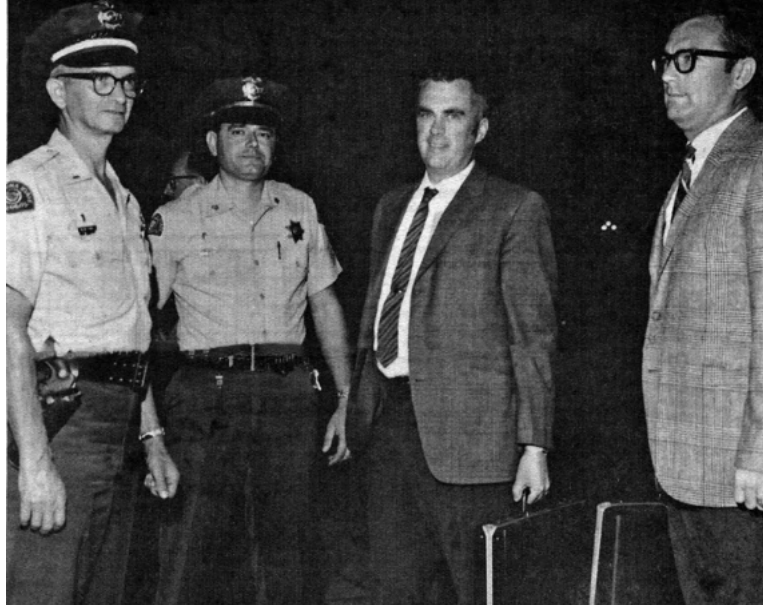
Nininger’s work anticipated the space age, and it proposed to grapple with a question humanity has always asked: What else is out there? Now, ASU would turn its attention to that question, and earn for the university a place among the modern leaders of space exploration.

Launching into a new era

ASU had secured the meteorite collection. Now it needed someone to manage it, grow it and turn ASU into a leading center for meteorite research.

“Everybody, go back to your seats and sit down until the law enforcement officials come on board the aircraft.”

— EVERETT GIBSON QUOTING THE AIRLINE PILOTS ON HIS FLIGHT WITH THE APOLLO SAMPLES



In 1969 when Moore and alumnus Everett Gibson brought back Apollo 11 samples for analysis, the police escorted them. Bottom: Ann Yates, a research professional at ASU, working in the meteorite center.

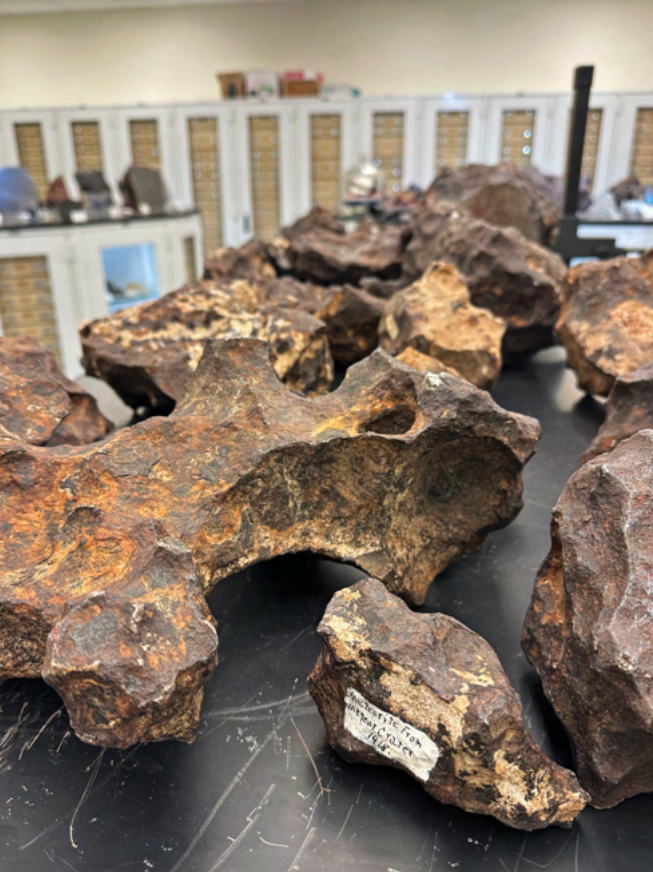


As one of the few serious meteorite researchers of that era, Carleton Moore had become aware of Ninnerger and his meteorites during the 1950s while studying at the California Institute of Technology. When the collection was moved to ASU, the university recruited Moore to create and lead the Center for Meteorite Studies.

“I think it represented a chance to start something new and explore this area of research at a university that recognized its value,” says Robert Moore, Carleton’s son. “It was an exciting, forward-looking opportunity for him.”

Moore set to work analyzing the meteorite samples, convening research symposia and arranging a system to loan meteorites to qualified scientists around the country. His success would put him, and ASU, in the middle of one of the most monumental scientific missions in human history.

On the evening of Oct. 1, 1969, Moore was on a commercial flight at Phoenix’s Sky Harbor Airport. It taxied toward the terminal and slowed to a stop, waiting for the airstairs to approach.



Meteorites from Arizona's Meteor Crater in the vault at the Buseck Center for Meteorite Studies.

“The collection attracts good people, and that attracts opportunities to do good science. It propels us forward.”

— LAURENCE GARVIE, CURATOR
OF THE METEORITE COLLECTION

needed to be protected.

They carried from Houston to ASU rocks and dust from the moon, samples that had come to Earth on Apollo 11 a little over two months before. Moore had been tasked with analyzing them in his Tempe lab.

Just a few days later, late in the evening to avoid being bothered, Moore and three colleagues gathered to begin their work.

“This was a definitely pivotal moment, and a story that he recalled for our family on numerous occasions,” says Robert Moore.

NASA had tried to perform the same test and gotten no result. So they asked Moore if his team could try.

He was relieved that he got readings, because, as he said in an audio recording made in 2009, “we didn’t know” if it would work.

“I remember it in great detail,” he said. The first sample Moore and his team tested was of loose lunar dirt. When he saw that he was collecting data, he remembered thinking, “We’re in business.”

After that success, Moore would be asked to re-create his lab at NASA’s Johnson Space

Center in Houston, and would analyze samples from future Apollo missions. He would conduct research, hire talented scientists and lead ASU’s Center for Meteorite Studies – now named the Buseck Center for Meteorite Studies – for more than 40 years, retiring in 2003. He passed away in 2023. The meteorite collection is named in his honor.

Missions with NASA

Today, there’s a direct link between the myriad space exploration missions on which ASU collaborates with NASA – such as the Psyche Mission, led by Lindy Elkins-Tanton – and that initial decision by ASU to invest in a collection of meteorites 65 years ago.

“The collection attracts good people, and that attracts opportunities to do good science,” says Laurence Garvie, the curator of the meteorite collection. “It propels us forward.”

There are only a handful of NASA missions into deep space every decade, but because of the extensive collection of meteorites at ASU, scientists around the country can explore the solar system right here on Earth.

“We have pieces of thousands of different asteroids in our collection that we can study and that we can loan to other researchers to study,” says Rhonda Stroud, the director of the Buseck Center. “We will never visit that many individual asteroids or solar system bodies. The collection gives us direct access to the variety of asteroids and other rocky bodies in our solar system.” ■

NEW IDEAS

Students prepare for a moon landing

NASA named ASU's Luminosity Lab student team one of six finalists in the Breakthrough, Innovative, and Game-Changing Idea Challenge, awarding the team \$150,000.

The student group designed an inflatable and reusable lunar landing pad system, Aegis, capable of autonomously deploying to reduce dust and debris generated by landers to guide the landing.

The team comprises students from the Ira A. Fulton Schools of Engineering, the School of Sustainability, the School of Mathematical and Statistical Sciences, and the Herberger Institute for Design and the Arts.

Learn more at theluminositylab.com.

From back row: Grad student Sarwan Shah, senior Grant Lesley, sophomore Connor Owens, grad student Vaibhav Khanna and ASU's Luminosity Lab Senior Director Tyler Smith.

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“When you go to a new place and see it, touch it, taste it, smell it – being immersed in that can change your perspective.”

– JAMIE VALDERRAMA, ASSOCIATE TEACHING PROFESSOR, ASU SCHOOL OF SOCIAL WORK

GLOBAL AWARENESS

Students study ecosystems in the Galapagos Islands

A group of ASU students, including many pursuing their degrees from locations around the U.S., journeyed to Ecuador’s Galapagos Islands to gain a better understanding of the biodiversity unique to this part of the world. They spent four days in the islands where they visited the Charles Darwin Research Center and saw endangered sea turtles.

“When you go to a new place and see it, touch it, taste it, smell it – being immersed in that can change your perspective,” says Jamie Valderrama, associate teaching professor with the School of Social Work.

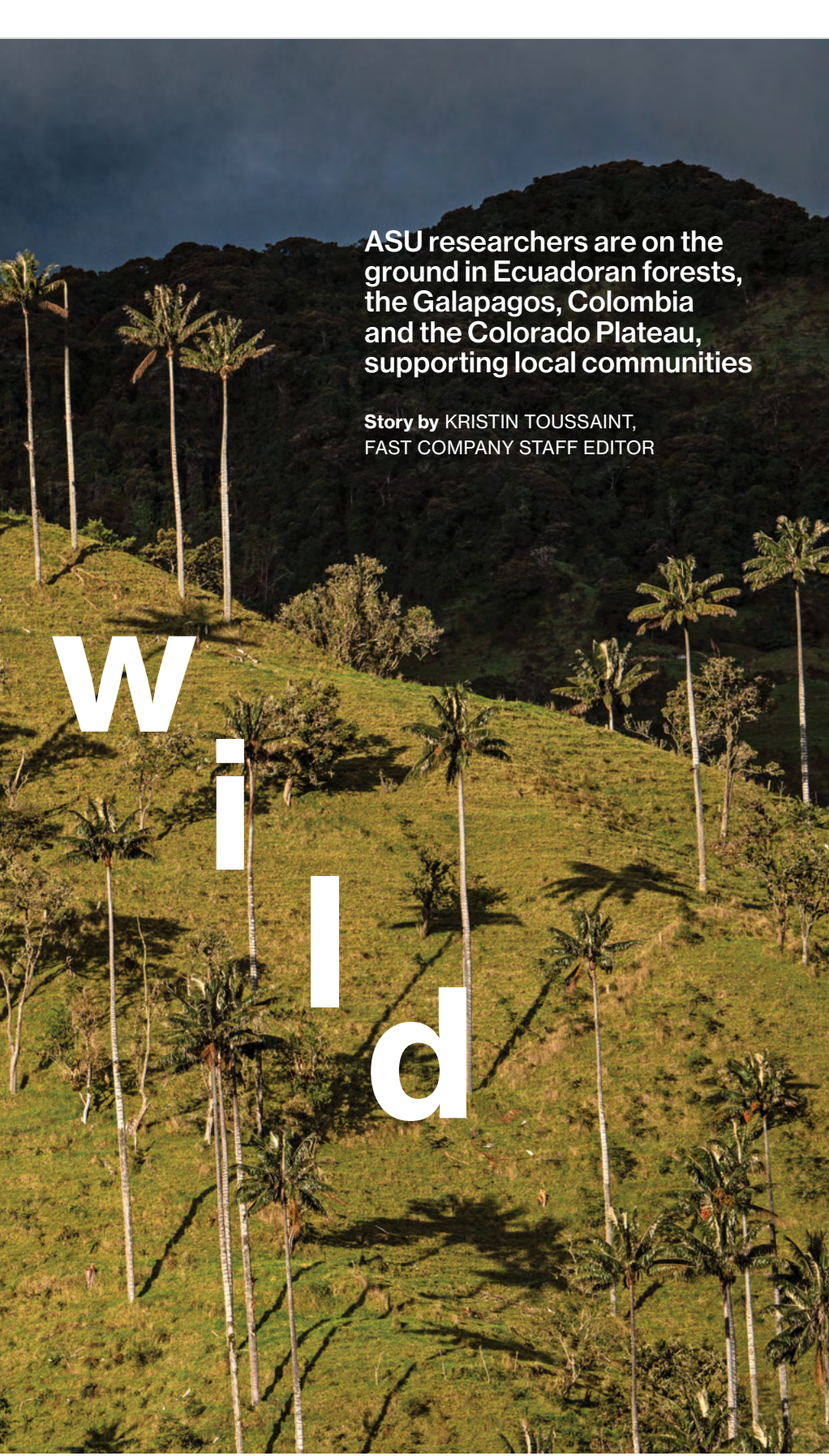
Students reported that they left Ecuador with a stronger awareness of how the Earth’s resources are intricately connected locally and globally.

Learn more at goglobal.asu.edu.

Lava cactus (*Brachycereus nesioticus*) on the lava field of Fernandina Island, Galapagos Islands, Ecuador.

RENEW

At home in the
hills



ASU researchers are on the ground in Ecuadoran forests, the Galapagos, Colombia and the Colorado Plateau, supporting local communities

Story by KRISTIN TOUSSAINT,
FAST COMPANY STAFF EDITOR

w i l d



Colombia's Andes mountains are home to an interconnected web of life.

Way up in the Andes

mountains in Colombia, wax palms stretch their towering, skinny trunks into the sky. Colombia has more than 200 types of palms, but wax palms are special. They're the tallest palm in the world — reaching up to 200 feet — and they are only found here, in the cloud forests of the Andes.

María José Sanín, an ASU assistant professor in the School of Mathematical and Natural Sciences and a senior global futures scientist, grew up in this region and has been studying the wax palm since 2007. The national tree of Colombia, the wax palm is now endangered, threatened by deforestation. Just 10% to 20% of the original Andean cloud forest cover in Colombia remains, and wax palms cannot survive outside of the forests.

In the summer of 2024, Sanín returned to those forests, amid the misty clouds and white, waxy trunks to take samples of the palms' leaves, roots and fruits. The research helps understand the effects of river drainage evolution and human use on certain palm species. Her work has explained what factors contribute to the wax

palm's population decline and what humans should do to ensure its survival.

That survival is important not just for the state of the wax palm itself, but for the health of the entire cloud forest ecosystem.

Plants “are the fundamental blocks of ecosystems, producing energy for all elements along food chains,” Sanín says. “I am convinced that the more we focus on their ecology and function, the more prepared we will be to develop and sustain healthy and biodiverse systems.”

And protecting plants like the wax palm also helps local communities develop tourism – adding another layer of protection for these forests.

“I am convinced that the more we focus on their ecology and function, the more prepared we will be to develop and sustain healthy and biodiverse systems.”

— MARÍA JOSÉ SANÍN, SENIOR
GLOBAL FUTURES SCIENTIST

Preserving the Galapagos

Conserving nature is crucial to the health of the planet. But one of the challenges with conservation is that we can “forget that we are part of nature,” says Paola Sangolqui,

’24 MS in biology, and a third-year PhD candidate at ASU who works with Professor Leah Gerber in the Center for Biodiversity Outcomes.

For Sangolqui, though, that’s never been an issue. Growing up on the Galapagos Islands, where 97% of the land is a protected national park, meant being surrounded by flora and fauna.

As a child, she would walk on the black volcanic rock formations barefoot, and camp at Playa Escondida, the “hidden beach.” She would casually walk by a sea lion, or would be sitting on a pier when a pelican would join her. She snorkeled as a young child, seeing hammerhead sharks.

Now Sangolqui is a researcher working on ecosystem services in the Galapagos Marine Reserve, which extends 40 nautical miles from the islands’ coasts. That work helps update zoning so these lands and waters – home to many species not found anywhere else on Earth – can stay protected. The Galapagos are especially vulnerable to invasive species.



**Assistant Professor
María José Sanín
studies the endangered
wax palm in Colombia.**



Protecting that biodiversity is important for the study of evolution and ecology and crucial to the livelihoods of the local population, 80% of which depends on nature-based tourism. People want to be able to visit the Galapagos to see the giant tortoises or Darwin's finches.

"By protecting them [the marine ecosystems], we're also protecting our well-being, our community," Sangolqui says.

For her, it's also a personal mission: She wants her 3-year-old daughter to have that connection to nature that she did growing up.

Being able to help protect her home is a dream job for Sangolqui. And even after a childhood spent amid the wonders of the Galapagos, that connection to nature never gets old. During the pandemic, she was doing fieldwork monitoring sea turtles and saw orcas coming up out of the water right next to her boat.

"It was unbelievable," she says. "Nature never stops surprising me."

Solar Canoes Against Deforestation on the Amazon

It was November 2023, and David Manuel-Navarrete, a professor in ASU's School of Sustainability, was back in the Ecuadoran Amazon.

There, at a lagoon off of one of the rainforest's milky-brown rivers, he tested a prototype of a solar canoe – a technology co-designed with local Indigenous communities, including the Kichwa, and the Waorani who live on tributaries of the Amazon. A working controller started the canoe's motor, sparking a new way of transportation for these communities.

In the Ecuadoran Amazon, the

wide, shallow rivers that wind their way through the rainforest are everything to locals like the Kichwa and Waorani: their highways, their children's paths to school, how they hunt and fish, how they earn money through tourism and how they guard the forest.

Many remote territories are accessible only by canoe. During some of his first trips to the Amazon, Manuel-Navarrete realized that solar energy could help.

By 2023, the team had a prototype, made up of an old gas-powered motor retrofitted into an electric version with local parts, by local engineers. That was not just resourceful, it was intentional: If they simply brought in an electric motor from elsewhere, then residents may not have the knowledge or spare parts to make repairs.

"All these things can only work if you have this team that brings different types of knowledges," Manuel-Navarrete says. "Communities know how to navigate the river, engineers know the mechanics, the sustainability people know how to put everything together."

Janna Goebel, assistant professor of sustainability education in the School of Sustainability, adds, "Having respectful and reciprocal interactions with Indigenous communities is very important. It is vital that we work on solutions with them, not for them."

Goebel and Manuel-Navarrete collaborate on Solar Canoes Against Deforestation with ASU's Melissa K. Nelson, a professor of Indigenous Sustainability in the School of Sustainability.



“By protecting them, [the marine ecosystems], we’re also protecting our well-being, our community.”

— PAOLA SANGOLQUI, THIRD-YEAR PHD CANDIDATE

Paola Sangolqui grew up in the Galapagos Islands, lives there and conducts her PhD research work there.



“Having respectful and reciprocal interactions with Indigenous communities is very important. It is vital that we work on solutions with them, not for them.”

— JANNA GOEBEL, ASSISTANT PROFESSOR,
ASU SCHOOL OF SUSTAINABILITY



The team also designed a solar recharging station that provides Wi-Fi to the community.

“That starts opening up opportunities,” Manuel-Navarrete says.

The communities could build schools, or take longer trips for hunting or tourism.

“If these communities disappear,” Manuel-Navarrete says, “we lose the best forest protectors there can be.”

Fostering Native solutions in the Colorado Plateau

The Colorado Plateau, which covers 130,000 square miles of the American Southwest, is 80% the size of California. Native American tribes oversee a third of it and have been its original stewards. The Native-led Colorado Plateau Foundation protects ancestral homelands through grantmaking,

communications and strategic partnerships.

“Our motto, ‘We live where we serve,’ is fundamental to our mission,” says Angela Gonzales, a Hopi tribal member, director of American Indian Studies at ASU, and president of the Colorado Plateau Foundation Board of Directors.

“What sets the Colorado Plateau Foundation apart from other nonprofits is our commitment to fostering genuine, equitable relationships,” Gonzales says.

The foundation recognizes diverse knowledge systems and perspectives, empowering grantees to bring their own visions to life.

Since its founding in 2012, the foundation has awarded \$6.2 million in grants to more than 250 Native-led initiatives that work to protect natural environments, preserve languages and promote food security.

One of the grantees is Black Mesa Trust. Led by Vernon Masayesva, '69 BS in political science, a Hopi leader of the Coyote Clan, the nonprofit communicates the threats to water in the region, like the coal mines that deplete springs and aquifers that the Hopi and Navajo rely on.

Some of the nonprofit's grantees are ASU graduates, and some staff members are alums of ASU's Indigenous Leadership Academy.

“It's education and preparation from Arizona State University that is helping to create modern Native movement and nation-building throughout the plateau area,” says Jim Enote, the foundation's CEO and a Zuni tribal member. ■



David Manuel-Navarrete is one of the ASU researchers working with local communities in the Amazon.



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Shellphish's faculty advisors from ASU's School of Computing and Augmented Intelligence, pictured in the middle, are Tiffany Bao, Ruoyu "Fish" Wang, Yan Shoshitaishvili and Adam Doupé.

Hackers



Story by KELLY DEVOS
Photos by SABIRA MADADY

This past August, a motley assortment of approximately 30,000 attendees, including some of the best cybersecurity professionals, expert programmers and officials from top government agencies packed the Las Vegas Convention Center for DEF CON, the world's largest hacker convention.

At the convention, a cybersecurity cohort of professors, researchers and graduate students from ASU waited anxiously in a crowded ballroom for the results of the semifinal round of the DARPA AI Cyber Challenge, also known as AIXCC.

The 25-person Shellphish team, comprised of "hackademics" from ASU, the University of California, Santa Barbara and Purdue University, had been preparing for this day since March. They now waited on the edges of their seats for the answer to a burning question: Would they receive the \$2 million in prize money that would enable them to continue their work?

Spoiler: They did.

for good

Students win \$2 million prize in DARPA competition for US national security



Adam Doupé (standing) shares tips with Shellphish, a competitive cybersecurity team.

“Addressing critical cybersecurity challenges will require us to invent new paradigms of collaboration between the human and digital world.”

— YAN SHOSHITAISHVILI, ASSOCIATE PROFESSOR, IRA A. FULTON SCHOOLS OF ENGINEERING

They competed in the competition created by DARPA to spur the development of a cybersecurity system powered by artificial intelligence, or AI. Because of its desire to protect hospitals, pharmacies and medical devices from cyberattacks, the U.S. Advanced Research Projects Agency for Health, or ARPA-H, is also collaborating on the competition and has expanded the prize pool.

In the semifinals, \$14 million was on the line. But the true stakes are even higher.

A massive cybersecurity workforce shortage, vulnerabilities in open-source software and a drastic rise in cybercrime have created a desperate need for solutions that can be deployed now to protect the nation's technical infrastructure.

Open-source software creates cybercrime openings

The Internet Crime Report compiled annually by the Federal Bureau of Investigation noted a record number of complaints received in 2023 and reported financial losses set to exceed \$12.5 billion annually. Meanwhile, an

estimated 3.5 million cybersecurity jobs go unfilled, including around 750,000 in the U.S.

The widespread use of open-source software has created heightened vulnerabilities. With such software, source code is publicly available. Anyone can inspect the code, and anyone can modify it. Anyone can also comb through the code to spot security weaknesses. Examples of open-source software include the Linux operating system, the web browser Mozilla Firefox and the web content management system WordPress.

In March, a lone engineer from Microsoft single-handedly prevented what NPR dubbed “the hack that almost broke the internet,” spotting what's now known as the XZ hack on an open-source data compression utility that would have made it possible for bad actors to remotely access millions of computers.

“We want to redefine how we secure widely used critical codebases because of how ubiquitous open-source is across the critical infrastructure sectors,” Andrew Carney, DARPA program manager for AIxCC and program

manager for resilient systems at ARPA-H, told The Washington Post.

The ASU AIxCC team is part of a small business venture called the Shellphish Support Syndicate that is organized by Adam Doupé, Ruoyu “Fish” Wang and Yan Shoshitaishvili, three associate professors of computer science and engineering in the School of Computing and Augmented Intelligence, part of the Ira A. Fulton Schools of Engineering at ASU. Its objective is to support the Shellphish team through education and research initiatives.

Working with doctoral students and researchers, Doupé, Wang and Shoshitaishvili, along with fellow Fulton Schools faculty member Tiffany Bao, collaborated on the development of an AI-based system called ARTIPHISHELL, pronounced like artificial. Their solution can automatically analyze the code that runs a piece of software, correct any security vulnerabilities found and then retest the system.

“ARTIPHISHELL is a giant leap toward achieving our vision of humans working alongside AI to keep our software safe,” says Shoshitaishvili. “Addressing critical

In their own words: Student spotlight



“Shellphish is cool because it’s this mix between applied stuff, applied research, hacking – these concepts we find very cool in the movies, and then doing things that are more scientific. We call these hackademics.”

— ZION LEONAHENAHE BASQUE, '20 BS, '24 MS IN COMPUTER SCIENCE, PHD STUDENT, SIX YEARS ON THE TEAM

Why he’s in Shellphish – to make a difference.



“You learn a lot of things, like technical knowledge. In addition to that, everyone is very helpful. If I need help, I would just go and say, ‘Hey, can you help me with this?’”

— ATI PRIYA BAJAJ, '21 MS IN COMPUTER SCIENCE, PHD STUDENT, FOUR YEARS ON THE TEAM

Why she’s in Shellphish – to be part of a team.



“They were all super welcoming, and that’s why I’ve stuck with them for so long. I’ve learned so much from them.”

— MITCHELL ZAKOCS, SENIOR MAJORING IN COMPUTER SCIENCE, FOUR YEARS ON THE TEAM BECAUSE HE JOINED IN HIGH SCHOOL

Why he’s in Shellphish – to be mentored.

cybersecurity challenges will require us to invent new paradigms of collaboration between the human and digital world.”

All bets are off

It’s this new vision they brought to the AlxCC Semifinals Competition.

The Shellphish team erupted in cheers at the announcement that they had won. The group is one of seven semifinal winners, out of more than 40 total entries, that will receive \$2 million in funds to continue their development work.

Doupe, who is also the director of ASU’s Center for Cybersecurity and Trusted Foundations, notes that these types of AI systems are urgently needed for enterprise software as well. Many of these systems rely in part on open-source code, and even those that don’t need help with ongoing maintenance.

“Today, a company might hire a team of really good cybersecurity consultants to audit their system. That team will find and patch vulnerabilities,” he says. “Then they move on to their next project. But who tests the company’s system the next week? Or the week after that?”

The latest win marks \$3 million in total prize money awarded to the Shellphish team from AlxCC competitions. The group received \$1 million in March in the first AlxCC round to fund their early work.

They will compete in the AlxCC Final Competition in August 2025, demonstrating their finished system and competing for an additional \$4 million prize. ■

RENEW

A water



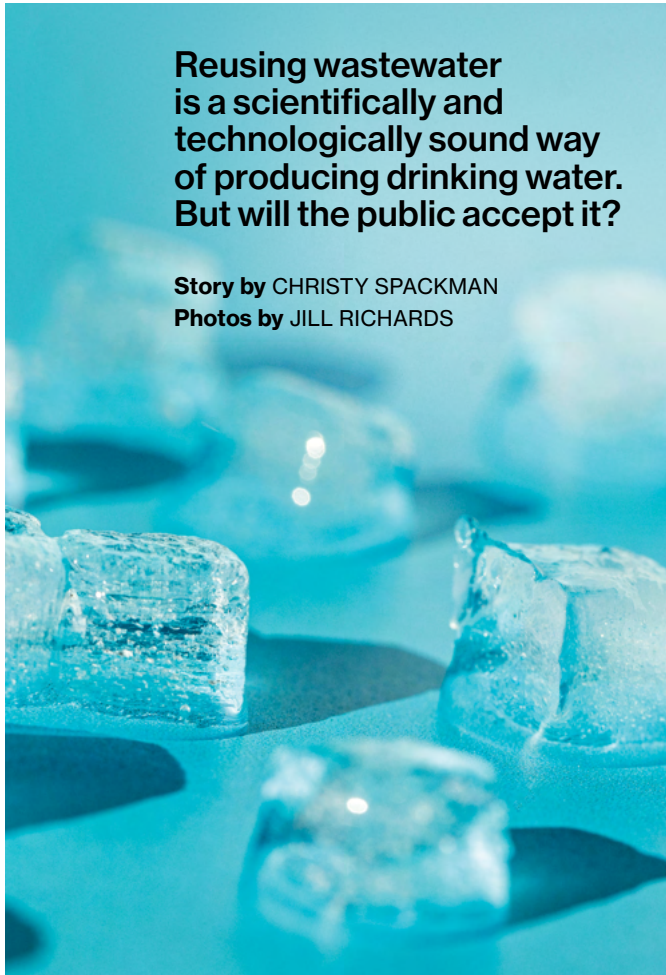
yuck

fix that takes on the



Reusing wastewater is a scientifically and technologically sound way of producing drinking water. But will the public accept it?

Story by CHRISTY SPACKMAN
Photos by JILL RICHARDS



Would you drink recycled water you knew was made from your own poop or pee? What if that water showed up in a glass of award-winning beer or even popsicles?

For attendees of Scottsdale, Arizona's annual Canal Convergence arts festival, the One Water Brewing Showcase offered an opportunity to try limited-edition craft beers made from highly purified wastewater. With each sip, drinkers found themselves tasting a speculative future not yet legally possible in Arizona — one where wastewater is immediately cleaned and returned to the municipal water supply system. Participating brewers donned their "water hero" capes, helping the municipal water utility's efforts to get the public to accept purified recycled water.

If you've been paying attention to the news about the dwindling Colorado River or seen the bathtub ring in Lake Powell demarking the reservoir's peak years, you're well

factor

ASU's Michelle Oldfield, a community engagement specialist, and Andrew D. Maynard, professor in the School for the Future of Innovation in Society, are both involved with water solutions.

aware that Arizona needs “water heroes.”

Since the 1980s, Arizona's water managers have proposed and deployed a range of techniques to mitigate dwindling water supplies. Some are fantastical, like a contested proposal to geoengineer the atmosphere. Other techniques seem more practical, including the desalinization of brackish groundwater, improving current water use and efforts to innovate in water augmentation with technology such as cloud seeding. Though all these water futures rely on technological intervention, reuse is the one that involves people's intimate, embodied experiences of smelling, tasting and consuming water.



“Water recycling, also known as reuse, sits at the heart of these possible water futures.”

— CHRISTY SPACKMAN, ASSOCIATE PROFESSOR AND AUTHOR OF “THE TASTE OF WATER”

This question of water quantity and quality hits close to home for me, as an inhabitant of Maricopa County, Arizona — one of the fastest-growing metropolitan regions in the U.S. My hometown has an average rainfall of only 8 inches per year. (Washington, D.C., by comparison, receives more than 40 inches per year.)

Meeting the water needs of the region's 4.95 million inhabitants is a struggle. Regulators, policymakers and others responsible for supplying water to water-stressed regions are constantly searching for “new” sources of water. Water recycling, also known as reuse, sits at the heart of these possible water futures.

Treat, treat and treat again

Water reuse offers providers a pathway for transforming water, no matter its source, into whatever type of water is needed. Many people who live in water-scarce regions practice informal forms of reuse, such as using water from rinsing vegetables to water house plants. Using water that contains discards is not new.

At the municipal scale, reuse falls into two categories: indirect

and direct. In indirect reuse, wastewater treatment facilities return treated water to aquifers or other natural buffers. Indirect reuse has proved a politically palatable approach for introducing reuse to communities.

For example, due to a 1989 Scottsdale mandate that golf courses use reclaimed water, courses partnered with the city to fund the building of an advanced wastewater treatment plant. Now all courses in Scottsdale are watered with reclaimed water. The city then uses any excess water left over by the golf courses to recharge its aquifers — a move that the city points to as helping it reach “safe yield” levels, the rate at which groundwater can be withdrawn without affecting long-term water levels.

In contrast, direct potable reuse sends the treated wastewater directly back into the water delivery system. It does this either by putting the treated wastewater into raw water headed for a drinking-water treatment plant, or by blending the treated wastewater with finished water ready for distribution.

For technologically minded folks who think of water in terms of its molecules, it's not a big leap to go from purifying wastewater enough for safely watering golf courses or recharging aquifers to purifying wastewater to the point that it is considered safe for human consumption. The transformation of wastewater back into drinking water relies on a combination of advanced treatment techniques grounded in the philosophy of, as Scottsdale Water representatives explain it,



Susan Craig, the director of Impact Water – Arizona in the Arizona Water Innovation Initiative, part of ASU’s efforts to secure Arizona’s water future.





Las Vegas deposits reused water into Lake Mead.

Proven technology to clean water

Direct potable reuse, or advanced water purification, isn't a vision from a sci-fi infused future: It's already happening today – just not yet in Arizona. Plants are operating in California and Nevada.

“The technology is very well-established,” says Sarah Porter, director of the Kyl Center for Water Policy at ASU's Morrison Institute for Public Policy.

Advanced water purification is simply a matter of upgrading reclaimed water to the higher drinking-water standard. Scottsdale already has a pilot plant doing just that; Pima County conducted a similar test run a few years ago.

Clark County, Nevada's Water Reclamation District deposits millions of gallons of AWP H2O into Lake Mead, some of which finds its way to Phoenix.

– Paul Tullis, who writes on environmental issues for Bloomberg, The New York Times and others

“treat, treat and treat again.”

A growing number of cities in states including Colorado, Texas, California and Arizona, are actively exploring a future with the technology. Advocates for direct potable reuse are still working out how to help the technology diffuse into legal and social realms using approaches such as development of master plans, early efforts to seek stakeholder input, public-facing education and outreach, and demonstration treatment systems.

One of the main hurdles to this is what researchers call the yuck factor. As demonstrated by the range of fermented-food lovers and active communities of dumpster divers, yuck is not only innate – it's also learned, and can potentially be unlearned.

Brewing support for wastewater reuse

By partnering with brewers to produce tasty beverages, proponents of water from direct potable reuse aim to create new, positive associations for consumers. Organizers of tastings seek to sever the affective connections between past experiences and expectations around wastewater so that reused water can finally transition out of its liminal state.

Scottsdale's One Water Brewing Showcase in 2019 was the first competition to be widely open to the public – previous beer brewing competitions had remained accessible only to people associated with municipal water production.

Scottsdale Water's public-facing approach is catching on: More recently, in collaboration with

filtration membrane manufacturer Xylem, beers brewed from recycled water have appeared in Berlin in 2019, and Calgary in 2020. Good beer, especially good beer made from what was recently wastewater, makes for good press.

A radical reorganization

Efforts to activate the yum factor, playful as they may be, are political acts embedded within larger processes of decision-making. By engaging inhabitants, policymakers and members of the press in using their bodies to “taste” the future, proponents of direct potable reuse are asking different publics to actively support legislative, regulatory and infrastructural changes to the status quo.

As participants taste beer or popsicles made with recycled water, they accept a physiological invitation to rewrite the connections between taste and memory, to erase past concerns not just about the quality of a single glass of water, but also about the capacity of technologies, regulators, experts and governments to provide all people with access to safe and good water. ■

Learn more at sfis.asu.edu.
Read the original at issues.org/industrial-terroir-yuck-factor.

Christy Spackman is an ASU assistant professor and senior global futures scientist. This essay is adapted with permission from an article in *Issues in Science and Technology* from her book, “The Taste of Water: Sensory Perception and the Making of an Industrialized Beverage.”

Sports

SUN DEVIL HOCKEY

Tony Achille overcame cancer and gives back

At age 15, Tony Achille was diagnosed with Hodgkin lymphoma, a type of cancer that affects the lymphatic system. When Achille was diagnosed, his life turned upside down.

He wasn't able to skate competitively for two years, but skated sparingly on an ice rink owned by the father of his best friend, Tim Lovell.

In 2020, Achille and his family founded Mission 16, a website designed to sell merchandise. It has raised thousands of dollars with all profits and toys donated to children's hospitals.

Today, the ASU sophomore is cancer-free and plays forward for Sun Devil Hockey, a sport that competes for the entire academic year in the NCAA Division 1 National Collegiate Hockey Conference.

Learn more about Sun Devil Hockey at sundevels.com/sports/mens/ice-hockey.

Tony Achille writes "DF" (for Dana-Farber Cancer Institute) on the side of his stick each time he plays, "to remember what I went through and what the kids go through. And I play for them every time I step on the ice."

Equal parts

grit and grace

Sun Devil Coach Adair leads team into exciting new era of women's basketball

Story by SCOTT BORDOW, '98 BA

When Natasha Adair drove to the basket for a layup one October night in 1990, her future was right in front of her.

Adair, a senior at Albert Einstein High School in Kensington, Maryland, was a preseason basketball All-American and being recruited by more than 200 college coaches.

But as she landed on the court and heard the pop in her knee, everything changed.

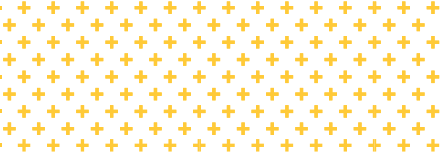
"I couldn't get up," Adair says. "I mean, I screamed."

Adair feared she had torn her anterior cruciate ligament, a fear that was realized when she woke up in a hospital bed following her surgery. In the ensuing days, her mother, Evelyn Barnes, tried to console her.

Natasha was 17. All she felt was pain, physically and emotionally.



Natasha Adair



Adair didn't know it then – couldn't have known it – but the injury headed her down a path that, 32 years later, would lead her to become the women's basketball coach at ASU.

"People often ask me if I would change what happened," says Adair, who was named the Sun Devils' coach in March 2022. "No. It made me who I am."

'The game has exploded'

It's not hyperbole to say this is a new era for ASU women's basketball. First, the geographical reach of the Big 12 – the conference stretches from Florida to Arizona – means more eyeballs and attention on the Sun Devils.

"We're playing in a Power Five conference where you get national exposure," Adair says. "Now, we're in every household versus limited households before."

"Now, we can go [to the East Coast] or the Midwest and say, 'Hey, we're going to bring your daughter home at least once and you'll get to see her.' That helps us from a recruiting standpoint."

Second, ASU will play a handful of games this season in Mullett Arena, and Adair believes the 5,000-seat capacity will provide a loud and boisterous home-court advantage.

"There's no bad seat in Mullett," Adair says. "The fans are going to feel like they're right on top of you. The energy is going to be rocking. It's going to be electric."

Finally, women's basketball has never been more popular. Thanks in part to Caitlin Clark, the University of Iowa sensation who was the first



Adair makes her team feel valued.

overall pick of the 2024 WNBA draft by the Indiana Fever and went on to be named Rookie of the Year, the WNBA this past season set records for TV ratings (a 170% increase from the 2023–2024 season), attendance and merchandise sales.

"The game has exploded," Adair says. "You go home, watch ESPN and a game is on. You turn on other networks, and you're watching women's basketball. ... And I think we're just scratching the surface. There's interest, and there's buy-in."

A hoops family

Adair played on the same pickup team on the courts near their home with her father, Bobby Barnes – "my dad could shoot," Adair says – but her natural proclivity for the game came from her mother, Evelyn, who played basketball in high school and for two years in college.

By the time she was 17 years old, Adair stood 6-foot-1. That was a bonus on the basketball court, but it led to ribbing from others. She was called "Too Tall T" and had to wear

men's tennis shoes because there weren't women's sneakers that fit.

Adair also had a genuineness that attracted others to her.

"She was a people person from the beginning," says Patti Ripley, Adair's coach at Einstein. "She had a smile that could light up the room, and she was just so personable for one that young."

"The game [of women's basketball] has exploded. ... And I think we're just scratching the surface."

– NATASHA ADAIR, SUN DEVIL WOMEN'S BASKETBALL COACH

Adair missed all of her senior season with the knee injury, but the disappointment only grew her resolve. On the advice of University of South Florida coach Trudi Lacey, Adair enrolled at Pensacola Junior College, rehabilitated her injury and led the team to two state championships. She then



Tyi Skinner followed Adair to ASU.

played at South Florida, where she still holds the school's single-season rebounding record.

Adair's people skills became evident at South Florida, where she was named team captain and earned the nickname "Grandmama."

There was no WNBA in 1994, so Adair took her communications degree and became an assistant athletic director at South Florida with a focus on marketing and fundraising.

Basketball seemed over for her — at least until, on a trip home in 1998, she went to an AAU, Amateur Athletic Union, game to watch her cousin play and ran into Georgetown women's coach Patrick Knapp.

Soon after, Knapp offered her an assistant coaching job and, Adair says, "Here I am, 27 years later."

Coaching as a calling

Through all of her coaching stops, including head coaching stints at College of Charleston, Georgetown, Delaware and ASU, Adair has remembered something a former coach once told her: The lives of the

"... I do promise that [my players] will graduate and they'll be proud of who they are as people."

— NATASHA ADAIR

young women she's leading are as important as the trophy awarded for the national championship. It's why Adair considers coaching to be not just a job but a calling.

"It's a holistic approach," Adair says. "When we sell ASU women's basketball, we sell every aspect. I don't make a lot of promises to the parents and the families, but I do promise that [my players] will graduate and they'll be proud of who they are as people."

Guard Tyi Skinner, '24 BA in interdisciplinary studies, who followed Adair from Delaware to ASU, says Adair often tells her players it's about withdrawals and deposits.

"She talks a lot about just

who we are as people and that this is bigger than basketball," Skinner says. "She wants us to be respectful, upstanding people. I think she just is trying to prepare us to be adults rather than just basketball players."

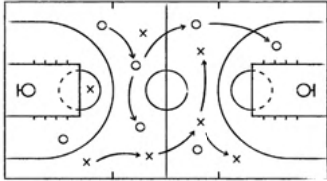
In so many ways, there's a through line between Adair's upbringing and her ASU family.

"I coach from a place of love," says Adair, who has two children, Aaron, 27, and Alyssa, 19. "When you come to our program, you're going to be a part of a family, and you're going to feel loved, you're going to feel valued, and you're going to feel support and appreciation.

"That love came from my mom. But there's a fight in me like no other. That's my dad."

And all these years later, that 17-year-old young woman who screamed when her knee gave way knows one simple truth about herself.

"There's nothing I can't do," Adair says. ■



How sports analytics is changing basketball

Data continues to change the NBA, says Daniel McIntosh, associate teaching professor at the W. P. Carey School of Business. An example is player-tracking datasets – which players should we draft? Can we limit injuries and maximize the players we currently have?

McIntosh says that sports analytics has changed basketball tactics too.

“Today, the shots that are taken are radically different, and most fans would identify that the mid-range game is completely gone,” he explains. “It’s been replaced by corner threes, it’s been replaced by free throws and it’s been replaced by layups. All of that is directly related to statistical analysis.”

Learn more at

[youtube.com/@ASUOnline](https://www.youtube.com/@ASUOnline).

2023–24 Sun Devil Men’s Basketball team shooting stats:

FG Made-Attempted	791-1901
FG Percentage	.416
FG Per Game	24.7
3PT Made-Attempted	215-716
3PT Percentage	.300
3PT Per Game	6.7
FT Made-Attempted	412-629
FT Percentage	.655
FT Per Game	12.9



Head Coach Matt Thurmond, Josele Ballester and Graham Rossini.

Elite athletics run in the family

Josele Ballester comes from a family of athletes. His father, José Luis Ballester, competed in Olympics three times as a swimmer. His mother, Sonia Barrio, won gold at the 1992 Summer Olympics in field hockey, and Josele, a student from Spain, won the U.S. Amateur golf tournament in 2024. He joins Sun Devil Jon Rahm, '16 BA in communication, as the only other player from Spain to win a USGA tournament, as Rahm won the U.S. Open in 2021.

Ballester is ASU’s fourth U.S. Amateur winner and a three-time All-American majoring in sports science and performance programming. Like many others on the Sun Devil Men’s Golf team, he sometimes trains and practices with Sun Devil alumni Rahm and Phil Mickelson, '92 BA in psychology. Head Coach Matt Thurmond says that with such a strong men’s golf team, he believes the No. 2-ranked team can win the NCAA championship this May.

Learn more at sundevils.com/sports/mens/golf.

Former track athlete inducted into Hall of Fame

During her track days, Valerye Boyer-Wells, '81 BS in criminal justice, '85 JD, earned six All-American honors, won two team NCAA national championships and set four school records.

In her law career, she served as a municipal judge. After retirement, Wells began mentoring Sun Devil Women’s Track student-athlete Adriana Tatum, who has set records in the 100m and 200m.

Learn more at sundevils.com/sports/track-field.



CHAMPIONS

HISTORIC

Sun Devil Football wins Big 12 championship

On Dec. 7 in Arlington, Texas, the Sun Devils routed Iowa State 45-19 in the Dr Pepper Big 12 Championship game to claim the Big 12 conference title. First-year quarterback Sam Leavitt threw for 219 yards and three touchdowns, two to Xavier Guillory. Running back Cam Skattebo scored three touchdowns. The championship during ASU's first season in the Big 12 advanced the team to the College Football Playoff and gave Sun Devil Football its first outright conference title since 1996.

ASU received a bye in the first bracket and earned a trip to the College Football Playoff quarterfinal at the Peach Bowl on Jan. 1.* Get your season tickets at sundevis.com.

"Most Outstanding Player" of the game, Cam Skattebo, ran 170 yards, with three carries of over 20 yards and a 33-yard scoring catch.

*As of Dec. 8 press date.

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A great career for Lilianna, a stronger economy for the nation

A degree from the nation's most innovative university prepares you not just for today's jobs but the jobs of the future – whatever those may look like. At Arizona State University, you'll learn how to adapt and quickly master new and emerging concepts, something that's served Lilianna well in her role as a Forensic Scientist at the Glendale Police Department.

Lilianna Valdivia

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'19 MS in forensic psychology,
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— Global Employability University Ranking and Survey, 2025