

## Space

To pioneer the next frontier of space exploration, [Janice Lee, PhD](#) (associate astronomer and Gemini Observatory Chief Scientist at the National Science Foundation's NOIRLab) and [Jimena Rodriguez, PhD](#) (postdoctoral research associate) helped unveil [never-before-seen images](#) from NASA's James Webb Space Telescope of 19 spiral galaxies located 50 to 65 million light-years away.

Seeking clues about the life cycle of stars, the NASA Small Explorer Mission GUSTO, led by [Chris Walker, PhD](#) (Steward Observatory astronomy professor and principal investigator for the GUSTO mission), broke NASA's record as the [longest-flying heavy-lift balloon mission](#).

A [recent study](#) led by [Naman Bajaj](#) (graduate student at the Lunar & Planetary Laboratory) utilized the James Webb Space Telescope to observe a young planetary system actively dispersing its gases, offering vital clues to how planets form.

- **Science News:** [Newborn stars sculpt their galaxies in new James Webb telescope images](#)

In collaboration with Tech Launch Arizona, [Jekan Thanga, PhD](#) (associate professor in the College of Engineering) is leading the [development of smart, robot-built sandbag shelters](#) for NASA astronauts on the moon.



## National Security



With increased focus on securing the U.S. critical mineral supply chain to power next-generation technology, [Kray Luxbacher, PhD](#) (Department head of Mining and Geological Engineering), authored an op-ed in [DefenseNews](#) on cultivating domestic mining talent and how Arizona can serve as a mining blueprint for other states.

- **DefenseNews:** [Curbing reliance on foreign critical minerals starts with mining in US](#)

The [School of Mining and Mineral Resources](#) hosted [members of the Congressional Western Caucus](#) for a tour of the university's [San Xavier Underground Mining Laboratory](#), the only student-run multilevel mine with a working vertical shaft in the United States.

In support of the National Defense Science and Technology Strategy, the University of Arizona received three [U.S. Department of Defense awards](#) to support the acquisition of major equipment and develop new research capabilities.

# Emerging Science and Technology



As Arizona continues to advance as a major hub for semiconductor innovation with CHIPS funding, [Dr. Liesl Folks](#) (director of the Center for Semiconductor Manufacturing and vice president of Semiconductor Strategy) is leading a [new agreement](#) between the University of Arizona and Northern Arizona University to encourage research collaboration and foster partnerships.

The Center for Semiconductor Manufacturing also convened [150 national leaders](#) at the University of Arizona to discuss shoring up the domestic semiconductor industry.

As the lead institute and host of the National Science Foundation's (NSF) Center for Quantum Networks (CQN), the University of Arizona's [investment in quantum innovation](#) will stimulate \$220M+ in economic activity nationally and statewide in the next decade.

## Health

As Congress focuses on effective diabetes treatment, a team of researchers at the College of Medicine – Tucson led by [Klearchos Papas, PhD](#) (professor of surgery and director of the Institute for Cellular Transplantation) received a [\\$2.7 million grant](#) to fund clinical testing of a new medical device for diabetes patients that could eliminate the need for glucose testing and insulin injections in the management of Type 1 diabetes.

[Deepta Bhattacharya, PhD](#) (professor of immunobiology at the College of Medicine – Tucson) led a [study](#) that found genetically modified pluripotent stem cells may evade immunological rejection after transplantation, bringing research one step closer to effective regenerative medicine.



# Environment



To advance food security in a warming climate, [Duke Pauli, PhD](#) (associate professor in School of Plant Sciences) [spoke with E&E News](#) about how farmers can adapt their growing strategies to increased water regulation and declining aquifers. The institution's Maricopa Agriculture Center was also [featured in an E&E article](#) about how the state's farmers are adapting irrigation strategies to be leveraged nationwide.

- **Politico/ E&E News:** [Arizona farmers face an unusual problem: Rain](#)
- **Politico/ E&E News:** [Farmers cling to cotton as water worries mount](#)

Nationally recognized extreme heat expert [Ladd Keith, PhD](#) (assistant professor of Planning and Sustainable Built Environments) recently spoke with Ten Across Podcast about how federal, state and local governments can execute heat governance, policy and resilience solutions in a warmer world.

- **Ten Across Podcast:** [Local Experts Answer: Why Are People Still Moving to Phoenix?](#)

[Karletta Chief, PhD](#) (associate professor and extension specialist in the School of Environmental Science and director of the Indigenous Resilience Center) and [Dr. Cherie DeVore, PhD](#) (assistant professor of Chemical & Environmental Engineering) are leading the institution's participation in a [\\$150,000 NSF grant](#) to develop relationships with Native American tribes to advance Indigenous geoscience education in the Grand Canyon.

# Other News/ Reports

## SPACE

- [UArizona-led asteroid sampling mission's new journey: OSIRIS-APEX](#), *University of Arizona News*
- [Life After Asteroid Bennu](#), *The New York Times*
- [Could a Giant Parasol in Outer Space Help Solve the Climate Crisis?](#), *The New York Times*
- [Teams behind OSIRIS-Rex win prestigious aviation award](#), *University of Arizona News*

## NATIONAL SECURITY

- [Gallery: U.S. Fleet Forces Command Tours University of Arizona](#), *University of Arizona News*

## EMERGING SCIENCE AND TECHNOLOGY

- [DOE Funds 3 Research Projects to Support ORNL's Quantum Efforts](#), *Executive Gov*
- [APLU extends UArizona's 'Innovation and Economic Prosperity University' designation](#), *University of Arizona News*

## HEALTH

- [UArizona scientists pinpoint anorexia's neurologic origins](#), *University of Arizona News*
- [New project helps UArizona boost access to hearing health care](#), *University of Arizona News*
- [Researcher Awarded \\$3 Million Grant to Develop New Therapy for Lung Diseases in Premature Babies](#), *University of Arizona News*
- [Poor sleep linked to migraine attacks in new UArizona Health Sciences study](#), *University of Arizona News*

## ENVIRONMENT

- [New plant science lab examines how root architecture can shape the future](#), *University of Arizona News*
- [UArizona climatologist explains how mining can be part of a sustainable future](#), *University of Arizona News*
- ['The future is fungal': Research finds fungi that live in healthy plants are sensitive to climate change](#), *University of Arizona News*
- [Critical Minerals Symposium Highlights Path to Domestic Supply Chain Security and Economic Growth](#), *University of Arizona News*
- [2024 Southern Arizona Heat Planning Summit Invites Hot Takes on Addressing Heat from Community Members](#), *University of Arizona News*