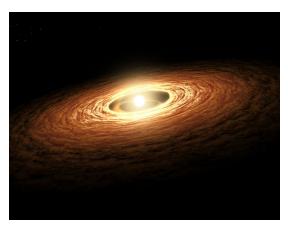


UA HILL UPDATE

Q2 2024

Space



To drive the next wave of space exploration and expand our understanding of solar system formation, <u>NASA's</u> <u>OSIRIS-REx mission</u>, led by <u>Dante Lauretta, Ph.D.</u> (principal investigator, regents professor of planetary sciences), revealed primordial ingredients in the dust samples from asteroid Bennu, providing new insights into solar system formation and Earth's origins.

<u>Erika Hamden</u> (director of the Space Institute, associate professor of astrophysics) spoke with <u>Techopedia</u> about NASA's Landolt mission, which aims to create a perfect artificial star using laser technology, crucial for detecting habitable worlds similar to Earth in space.

Techopedia: NASA's 'Star' Will Drive Search for Life: Expert Analysis

In collaboration with an international team, <u>llaria Pascucci, Ph.D.</u> (professor of lunar and planetary sciences, co-author of the study) used the <u>James Webb Space Telescope</u> to study the disk of gas and dust around a low-mass star, revealing the largest array of carbon-containing molecules observed in such a young system.

National Security

Domestic critical minerals are crucial for the renewable energy transition and for the U.S. to keep pace with global powers, yet the shortage of skilled mining workers poses a threat. Kray Luxbacher, Ph.D. (department head of Mining & Geological Engineering) spoke with Foreign Policy about the University of Arizona's efforts to recruit and retain the next generation of mining talent to ramp up mineral production.

 Foreign Policy: <u>Uncle Sam Wants You to Join</u> the Mining Industry

The University of Arizona and Davis-Monthan Air
Force Base are building strategic partnerships through <u>"handshake"</u> events to integrate military and academic expertise. Led by <u>Nathan Hogan</u> of Research Development Services' National Security Program, these initiatives aim to advance joint research and training programs to strengthen military capabilities.



Emerging Science and Technology

The federal government continues to grapple with how to effectively regulate the rapid development of AI while fostering innovation. Arthur "Barney" Maccabe (executive director of the Institution for Computation and Data-Enabled Insight) shared insights on AI regulation with InformationWeek, including endorsing industry-led initiatives or partnering with professional societies to develop an AI regulatory framework.

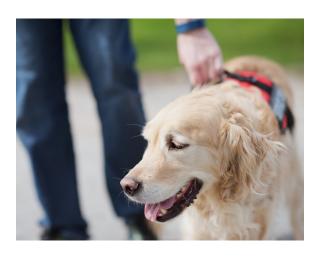
• InformationWeek: Should Government Be Allowed to Regulate AI?



The University of Arizona's CyVerse platform, led by

Nirav Merchant (CyVerse lead investigator & director of the Data Science Institute) and associate research professor Tyson Swetnam (CyVerse co-lead), received \$1.9 million as the lead institution for a \$20 million NSF award, supplying computing infrastructure for the National Synthesis Center for Emergence in the Molecular and Cellular Sciences (NCEMS).

Health



As Congress seeks to improve access to healthcare for veterans, recent studies from the University of Arizona's College of Veterinary Medicine led by Maggie O'Haire, Ph.D. (associate dean for research and professor at the University of Arizona College of Veterinary Medicine), aim to validate service dogs as an effective treatment for PTSD, potentially revolutionizing veteran healthcare.

Retired Command Sgt. Maj. Gretchen Evans exemplified the **positive impact and therapeutic benefits of service dogs** in <u>USA Today</u>, having found renewed independence and reduced isolation through her dogs, Aura and Rusty.

• **USA Today:** 4-legged lifesavers: Service dogs are working wonders for veterans with PTSD, Study shows



Environment

As climate change forces the adaptation of sustainable agricultural practices, **Duke Pauli** (associate professor in the School of Plant Sciences) and **Stephanie Slinski** (associate director of the Yuma Center of Excellence for Desert Agriculture) spoke with <u>E&E News</u> about the long-term viability of desert agriculture and University of Arizona's Yuma Center of Excellence. The Center is developing new plant varieties and growing methods to address climate extremes and higher water demands amidst drought.

Dr. Michael Kotutwa Johnson (assistant specialist at the Indigenous Resiliency Center) spoke with <u>E&E News</u> about the insights gained from traditional Indigenous farming practices, emphasizing the importance of federal support for tribal farming and the integration of Indigenous perspectives.



- Politico/ E&E News: America's water-starved salad bowl fights for its future
- Politico/ E&E News: Water scarcity spurs renewed interest in tribal farming

Nationally recognized extreme heat expert <u>Ladd Keith, Ph.D.</u> (associate professor of Planning and Sustainable Built Environments) spoke with <u>Smart Cities Dive</u> about the Biden administration's \$4.55 million award to establish research centers on heat monitoring and resilience to drive actionable policies in communities.

Smart Cities Dive: Heat resilience research center unveiled by Biden administration



Other News/ Reports

SPACE

- Taking law to the final frontier, University of Arizona News
- UArizona Space4 Center part of international Al space sustainability project, University of Arizona News
- Studying Artic glacier with airborne radar: Arizona project attracts \$30M from NASA, University of Arizona
 News
- Near-Earth asteroid was blasted from a crater on the moon, study finds, *University of Arizona News*
- <u>UArizona graduate student and team discover most distant supernovas ever found, University of Arizona</u>
 News
- Webb Telescope spots the two most distant galaxies ever seen at cosmic dawn, *University of Arizona News*

NATIONAL SECURITY

- DOD Skillbridge helps active-duty service members prepare for civilian life, University of Arizona News
- Cybersecurity Clinic will protect businesses from online threats, develop students' career skills, University
 of Arizona News

EMERGING SCIENCE AND TECHNOLOGY

- Science Friday: Indigenous Nations are fighting to take back their data, NPR
- UArizona's first satellite built by students is ready for launch, University of Arizona News
- Mapping Racist Covenants: How a UArizona geographer's research informed a new Arizona law,
 University of Arizona News
- How Generative AI is Changing the Classroom, The Chronicle of Higher Education/ AWS

HEALTH

- Phoenix City Council approves \$20M for CAMI, University of Arizona News
- Researchers in Phoenix Helping to Chart the Path for the Future of Commercial Space Travel, University of Arizona News
- Study shows first evidence of sex differences in how pain can be produced, University of Arizona News
- New Al coaching bot may enhance medical education, training, University of Arizona News

ENVIRONMENT

- Cooler states now forced to grapple with extreme heat fueled by climate change, Stateline
- How gas stations are winning the electric car era, Politico Power Switch
- When in drought: Researchers map which parts of the Amazon are most vulnerable to climate change,
 University of Arizona News
- The Center for Heat Resilience Communities gets a NOAA grant with Kelly Turner and Ladd Keith, America
 Adapts Podcast
- The pace of climate-driven extinction is accelerating, a UArizona-led study shows, University of Arizona News
- Architecture students' award-winning designs will help Hopi Tribe expand solar-powered housing, education,
 University of Arizona News

