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# FROM WONDER, TO BISGOVER, TO CHANGE

THE UNIVERSITY OF ARIZONA HELPS STUDENTS AND FACULTY FIND ANSWERS TO LIFE'S BIGGEST QUESTIONS.

"What difference can I make in the world?" Since 1885, the **University of Arizona** has helped its students and faculty find the answer through contributions to world-changing research, connections with peer and faculty mentors and development of new community ties.

While this incubator for wonder lies in the Sonoran Desert, the University of Arizona's reach extends far beyond. The school's faculty translate their imagination and curiosity into academic breakthroughs across the globe ... and even into space.

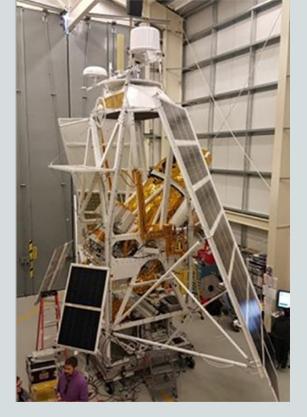


### WHERE DID WE Come From?

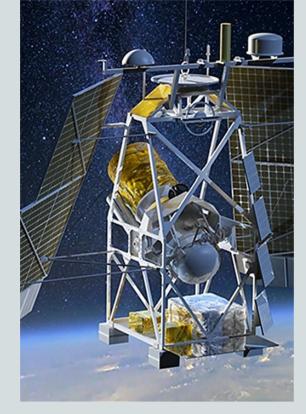
WONDER AND SPACE

That's a question Chris Walker, Ph.D., is currently searching the galaxy to answer, aided by University of Arizona facilities and expert personnel. In 2017, NASA selected the professor of astronomy in the university's <u>Steward</u> <u>Observatory</u> as the principal investigator to help map the galaxy.

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The \$40 million NASA project, the Galactic/Extragalactic ULDB Spectroscopic Terahertz Observatory, or GUSTO, will look at that cosmic gas and dust suspended among the stars of the Milky Way and the Large Magellanic Cloud.

"Where we came from was gas and dust, called interstellar medium," Walker says. "GUSTO looks at three very important atoms for [the] formation of planets and life – carbon, oxygen and nitrogen."

In 2021, Walker's team will deploy a high-altitude balloon carrying a telescope with carbon, oxygen and nitrogen emission line detectors. The balloon allows researchers to efficiently create a road map of the universe, and in trial runs, "we had more data on a carbon line in one hour than a previous billion-dollar space mission captured in its whole lifetime," he says. "We were able to demonstrate economy *and* scientific pavoff"

UArizona has a long history of space innovation. "Our scientists built instruments for Hubble; we have telescopes set up on local mountains and instruments in Antarctica," Walker says. GUSTO's mission will give researchers a clearer picture of stellar evolution, while helping unravel the galaxy's complexities and determine where we came from.

"WE HAD MORE DATA ON A CARBON LINE IN ONE HOUR THAN A PREVIOUS BILLION-DOLLAR SPACE MISSION CAPTURED IN ITS WHOLE LIFETIME. WE WERE ABLE TO DEMONSTRATE ECONOMY AND SCIENTIFIC PAYOFF."

Chris Walker, Ph.D., Professor of Astronomy, University of Arizona









"THE ARTS IS A CONNECTING POINT AMONG ALL THE COGNITIVE AND ACADEMIC BENEFITS - FROM LISTENING SKILLS TO GROWTH MINDSETS TO OPPORTUNITIES. ACCESS ... ALLOWS THESE

### HOW CAN ART WONDER AND ART CHANGE LIVES?

If you've ever been moved by music, a play or a painting, then you know art's transformative power. It's something that Brad Richter, director of outreach for the <u>University of Arizona</u> <u>College of Fine Arts</u> and co-founder of the music education organization Lead Guitar, explores through a program he helped develop, <u>Arizona Art in Schools</u> (AZAiS).

In the late 1990s, Richter visited the Navajo Nation in northeastern Arizona, and saw an opportunity to expand the music education curriculum. To help, he founded Lead Guitar, a nonprofit offering music resources in public schools with low access to the arts. In 2013, Richter teamed up with the university to create a similar program using music and dance to help empower middle and high school students. "With AZAiS, we wanted to provide the highest quality arts education possible to families who could typically least afford it," he says.

Thanks to the combined efforts of Lead Guitar and AZAiS, more than 5000 students in 83 schools in Arizona and beyond have access to music and arts education this year alone. AZAiS pairs

#### STUDENTS TO REWRITE THEIR PERSONAL NARRATIVES."

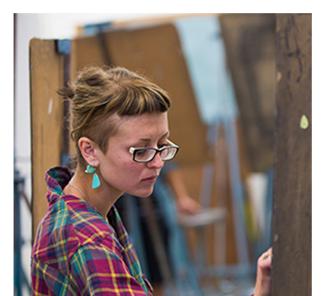
Brad Richter, Director of Outreach, University of Arizona College of Fine Arts



a university instructor with a certified co-teacher at the school to ensure sustainability. It also brings global artist performances into the schools and AZAiS students onto campus to perform.

In addition to tangibly better student outcomes in terms of dropout rates, behavioral issues and academic achievement, "these programs are a connecting point to broader cognitive and well-being benefits — from listening skills to growth mindsets to self-esteem," Richter says. "Access to the arts allows these students to rewrite their personal narratives."

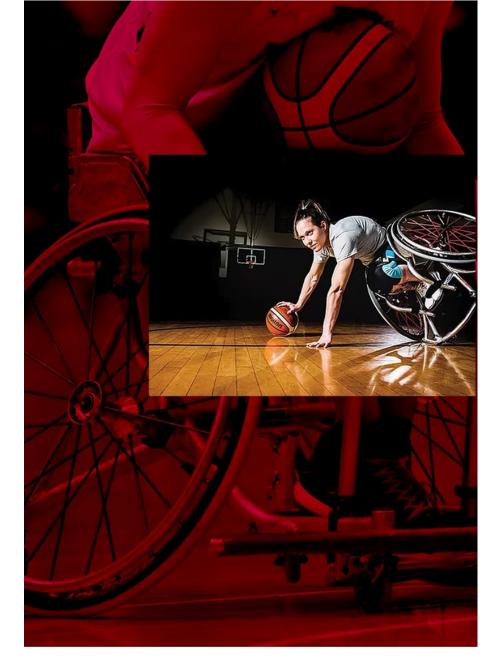
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## WHAT CAN OUR BODIES Accomplish?

#### WONDER AND THE HUMAN BODY

A lot, if you ask Jenn Poist. Each day, the University of Arizona women's wheelchair basketball head coach heads to campus at 6:30 a.m. for two-hour basketball practice.

Adaptive Athletics at Arizona is the largest collegiate-based program in the United States, providing disability resources to athletes across a variety of sports, including basketball, track, rugby, tennis and golf. Students have access to a specially outfitted fitness center, wheelchair maintenance, training and academic workshops. And in the program's 44-year history, 34 athletes, including Poist, have competed in Paralympics sports. "THE UA ADAPTIVE ATHLETICS PROGRAM GAVE ME THE OPPORTUNITY TO GO TO SCHOOL WHILE PLAYING SPORTS AND DOING WHAT I LOVE. IT ALSO MADE ME REALIZE THAT LIFE GOES ON AND THERE ARE OTHER PEOPLE JUST LIKE ME LIVING AND PURSUING THEIR DREAMS."

Jenn Poist, Women's Wheelchair Basketball Head Coach, University of Arizona

After losing her mobility at age 7, Poist discovered wheelchair basketball in high school. It was there she was recruited to the university. "I played for nine years as part of the team," Poist says. "In 2012, I made my first Paralympic team."

She went on to compete in the 2012 London games and won the gold medal in 2016 in Rio de Janeiro. "Before I played basketball, I was struggling with being disabled," Poist says. "The Adaptive Athletics program gave me the opportunity to go to school while playing sports and doing what I love. It also made me realize that life goes on and there are other people just like me living and pursuing their dreams.







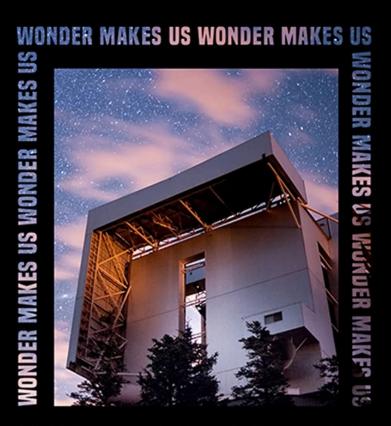
"Being an athlete pushes you to always do better and be better. That spills over off the court, too," she says.

Whether it's breaking the confines of a wheelchair or breaking



into the secrets of the universe, the University of Arizona continues to push the boundaries of possibility with an array of programs and initiatives in the arts, sciences and athletics. Using wonder as a driving force for exploration, discovery and change, University of Arizona students and faculty continue to transform and expand our understanding of the human experience.

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