Welcome to our magazine, DISCOVERY, focused on the research activities of the faculty, students, staff, and partners at The University of Texas at San Antonio (UTSA). UTSA has seen tremendous growth over the past three years, growing our research enterprise to new levels of success. While the pandemic had the research community pivoting to meet the ever-changing needs of our stakeholders and the communities we serve, UTSA’s Knowledge Enterprise persevered and was able to meet unprecedented success at the national level.

We achieved the R1 Classification (“very high research activity”), aka Tier One, from the Carnegie Classification of Institutions of Higher Education. This designation aligns UTSA with the nation’s top public and private research institutions and validates the breadth and strength of our research. We joined the ranks of the 21 Hispanic-serving Institutions also designated as R1s, putting UTSA in elite company on the national stage.

Growing research expenditures year after year, we recently closed the books for FY22: total research expenditures increased to $91.5 million, and restricted research expenditures rose to $70.4 million while seeing an 86% increase in funded research over the past three years.

Working within the colleges, our stellar faculty launched new, transdisciplinary research centers & institutes, including the Brain Health Consortium, Cyber Security Manufacturing Innovation Institute, Institute of Regenerative Medicine, Institute for Water Research, Sustainability and Policy, National Security Collaboration Center, MATRIX AI Consortium for Human Wellbeing, Center for Sustainable Pervasive Urban Resilience, Urban Education Institute, Women’s Studies Institute, and the Center for Applied Community & Policy Research.

Working with Academic Affairs, we added National Academy members to the faculty ranks, and in working with the Graduate School, we created a new Office of Faculty Research and expanded postdoctoral and graduate student support programs. In partnership with University Marketing and Communications, we promoted our researchers and their accomplishments to wider audiences.

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The growth and success of UTSA’s Knowledge Enterprise are evidenced by the quality of our dedicated faculty and students, the consistent rise in scholarly research awards and subsequent expenditures, and other vital data culled from various sources, including NSF HERD. This report is a culmination of three years of dedicated work by our incredible faculty, staff, and students, which led to the institution’s recognition as a Carnegie R1 research-intensive university. UTSA is now in the 4% of the 146 universities and one of only 21 Hispanic-serving Institutions on this elite list of R1 organizations.

**UTSA IS CARNEGIE R1**

**RESEARCH BY THE NUMBERS FY22**

**UTSA IS NOW**

**A BOLD MILESTONE FOR RESEARCH EXCELLENCE**

**WITH A PRESTIGIOUS CARNEGIE R1 CLASSIFICATION**

**TO 4% ONLY 146 UNIVERSITIES IN THE NATION**

**AND ONE OF 21 TIER ONE HISPANIC SERVING INSTITUTIONS**

**UTSA CREATING BOLD FUTURES.**

**EXPENDITURE SUMMARY FY22**

**TOTAL RESEARCH EXPENDITURES**

$141,703,321

- **RESTRICTED**
  - FEDERAL
    - $54,384,500
  - NON-FEDERAL
    - $16,169,325

**ECONOMIC IMPACT**

- **$2,070,376,325** New Sales, Contracts & Exports
- **$252,352,985** New Financing & Investments
- **$27,020,900** New Tax Revenue Generated
- **$991,000,000** IED’s Contribution to UTSA

**SERVICE RESULTS**

- **39,031** Businesses Served
- **1,410** Training Events & Courses
- **25,731** Consulting Cases

- **2,864** Jobs Created
- **7,373** Jobs Retained
- **483** New Business Starts
- **541** Business Expansions

**ECONOMIC DEVELOPMENT FY22**

$991,000,000

**UTSA RESEARCH, ECONOMIC DEVELOPMENT, AND KNOWLEDGE ENTERPRISE**
The University of Texas at San Antonio announced that it has achieved the R1 Classification (“very high research activity”), sometimes referred to as Tier One or Top Tier, from the Carnegie Classification of Institutions of Higher Education. This elite designation validates the breadth and strength of UTSA’s knowledge enterprise and aligns the university with the nation’s top public and private research institutions.

“Carnegie R1 is a historic waypoint on our trajectory to transform UTSA into one of the nation’s great public research universities.”

UTSA joins an exclusive group of Carnegie R1 institutions across the United States, including in Texas: UT-Austin, UT-Dallas, UT-Arlington, UT-El Paso, Texas A&M University, Texas Tech University, University of Houston, University of North Texas and Rice University. Baylor University also joins this group this year.

“From the moment it was founded just more than 50 years ago, UTSA has been on the fast track to excellence,” UT System Chancellor James B. Milliken said. “For a university this young to have achieved so much so quickly speaks to great leadership, quality faculty and a broad community of supporters who all share a vision for a forward-thinking university that values innovative research and all the good that comes from it.”

“Carnegie R1 is a historic waypoint on our trajectory to transform UTSA into one of the nation’s great public research universities,” said UTSA President Taylor Eighmy.

“It is one of the most prestigious research designations that a U.S. research university can attain. I am so proud of our faculty and staff; their extensive contributions made this possible. What is really unique is that UTSA is now one of about 20 universities nationally that are both Hispanic serving and Carnegie R1. I believe we represent the future of public research universities for our state and nation.”

The Carnegie Classification was developed in 1970 by the Carnegie Commission on Higher Education to recognize the diversity of U.S. colleges and universities through a systematic evaluation. It is based on several data sources, including an institution’s annual research expenditures, the density of its research staff and the number of doctoral degrees it confers each year.

Today, the Carnegie R1 designation is synonymous with academic excellence and research innovation and impact. The recognition of Carnegie R1 status is just one of the important waypoints on the trajectory of UTSA becoming a great public research university as noted in its strategic plan. Other waypoints include National Research University Fund eligibility and growing the doctoral discovery enterprise.

“UTSA faculty have been central in our journey to reach this distinction,” said UTSA Provost and Senior Vice President for Academic Affairs Kimberly Andrews Espy. “Our faculty exemplify scholarly excellence in all of its varieties—fundamental, interdisciplinary, applied, community engaged and translational—which are particularly relevant to UTSA’s mission as a Hispanic Serving Institution and urban serving university. Most importantly, we recognize the impact our outstanding faculty and the R1 designation has in outstanding education for our community that promotes the success of UTSA students.”

Achieving Carnegie R1 designation is a significant milestone in UTSA’s strategic vision to become a model for student success and a great public research university. To advance its Research Excellence destination and earn the designation, UTSA increased its annual research expenditures, expanded its pipeline of doctoral students, garnered national recognition for its researchers and added National Academy members by nomination and recruitment to its faculty.

Over the past five years, the institution’s research expenditures have steadily increased by 106%, from $68 million in FY 2017 to $140 million in FY 2021. Additionally, UTSA faculty received more than 300 funding grants each year in that five-year span, a significant factor in Carnegie attainment.

The growing number of doctoral degrees awarded by UTSA was also key to the university’s receipt of Carnegie R1. Between fall 2017 and fall 2021, the university’s doctoral enrollment increased by nearly 20% (19.4% overall) and in 2020 UTSA conferred 153 doctoral degrees.
UTSA’s academic colleges are currently home to 26 competitive doctoral programs, including a newly approved Ph.D. program in school psychology, and the university has a doctoral program in molecular microbiology and immunology in the review pipeline for approval.

“UTSA faculty, staff and graduate students have demonstrated an unwavering commitment to excel and advance UTSA as a world-class institution. Carnegie R1 designation is a testament to their innovative research and transformational community leadership,” said Vice Provost of Graduate Studies and Dean of the Graduate School Ambika Mathur. “There is tremendous excitement across UTSA, knowing that R1 will bring new research and career development opportunities to graduate students, faculty and alumni.”

UTSA’s new R1 Carnegie designation will impact San Antonio as a knowledge economy. UTSA has extensive research collaborations with local research organizations such as UT Health San Antonio, Southwest Research Institute, Texas Biomedical Research Institute, Brooke Army Medical Center and Joint Base San Antonio. These relationships have accelerated the establishment of research centers and institutes within the university—including the National Security Collaboration Center, the School of Data Science and the Cybersecurity Manufacturing Innovation Institute—and the founding of the San Antonio Partnership for Precision Therapeutics.

Moreover, Carnegie R1 status further aligns with the focus on research and development under the Greater San Antonio Regional Economic Development Plan brought forward by Greater SATX.
The construction of San Pedro I is now completed, and preparations are underway for the January 2023 opening.

The $91.8 million, 167,000-square-foot, six-story structure on 506 Dolorosa St. sits along San Pedro Creek east of UTSA’s Downtown Campus, anchoring UTSA to San Antonio's downtown core. The building is the first of several planned for UTSA’s downtown expansion, serving as a catalyst for economic and community investment in the San Pedro Creek area.

The building houses the new School of Data Science with programs in artificial intelligence, computer science, data analytics and statistics, as well as at least 16 UTSA research centers, institutes and college-level labs, including the MATRIX AI Consortium for Human Well-being and the Open Cloud Institute. Other labs will enable research and teaching in bioinformatics, cyber-informed engineering, data engineering, IoT, robotics, smart transportation and more.

The School of Data Science is led by David Mongeau, who is well recognized for his success leading data science and analytics research institutes and training programs and developing impactful partnerships across government, industry, academia and the philanthropic community to advance collaboration in data science. He joined from the University of California, Berkeley, where he served as executive director of the Berkeley Institute for Data Science.

The entire data science community will benefit by working closely with the National Security Collaboration Center, which will anchor the top two floors with its embedded ecosystem of government contractors and federal partners.

Led by Brigadier General (Ret.) Guy M. Walsh who serves as the founding executive director, the NSCC has created a powerful ecosystem to engage government, industry and academia to tackle the nation’s greatest cyber threats. UTSA is the nation’s only Hispanic Serving Institution with three National Center of Excellence designations from the National Security Agency and the U.S. Department of Homeland Security.

San Pedro I has 84,500 square feet of classroom, laboratory and research space for the more than 400 data science students who are projected to take classes there starting in spring 2023. UTSA’s 30 core faculty members in science, engineering, technology, business, math, health, social sciences, and humanities will be located there, enabling more frequent collaborations with government, industry and community partners in the heart of San Antonio. State of the art features include a data center and a high security research center on the sixth floor.

San Pedro I, which will be accessible to the community, will also feature a large, multipurpose, public event space for workshops and conferences. An amphitheater staircase will serve as a gathering point to encourage community and collaboration. Additionally, a dedicated, ground-floor space will offer opportunities to showcase research and provide curated community partnerships and engagement.

The first of its kind in Texas, the SDS and the NSCC are key components for the University of Texas at San Antonio ecosystem which the Air Force can leverage under this CRADA through the NSCC’s partnership ecosystem, consisting of more than 50 organizations from government, industry and academia, “said Walsh.

The CRADA is a result of growing partnerships between the NSCC and multiple divisions of the Air Force, most notably the 16th Air Force, the Air Force Life Cycle Management Center, the Cyber Proving Ground, and Joint Base San Antonio and their effort to establish 5G capabilities.

“The NSCC and co-locating partners are slated to move to a new $90 million facility in 2022 in the heart of San Antonio’s burgeoning high-tech corridor. The new facility will include 72,000 square feet of innovation space, laboratories and research facilities and will serve as a hub for government, university and industry in support of national security.
The Cybersecurity Manufacturing Innovation Institute (CyManII), led by The University of Texas at San Antonio, announced plans to establish the Cybersecurity for Manufacturing (C4M), a new facility to accelerate training and strategic collaborations that safeguard installations and transportation assets operated by U.S. public and private sector partners. It is the next step in the shared goal of The University of Texas System, UTSA and CyManII to strengthen America’s cybersecurity workforce by upskilling and reskilling workers.

The $5 million facility, funded the Texas legislature and UT System and Port San Antonio will transform U.S. advanced manufacturing and make it more energy efficient, resilient and globally competitive against our nation’s adversaries and cyber threats. Under the leadership of TrustWorks-aaS, CyManII’s premier workforce development service, manufacturing leaders, employees, students, and innovators will receive skilled training curriculum to enhance their understanding of the newest tactics and information in cyber-attacks.

“U.S. workers are the heart of our manufacturing economy, but the skills needed to work in this industry are changing,” said Paris Stringfellow, CyManII Vice President for TrustWorks. “Energy-efficient manufacturing must be protected and it’s up to all employees to do their part. CyManII’s workforce development efforts are designed to address the unique requirements of cybersecurity in a manufacturing environment and will bring accessible, relevant and specialized training to workers across the country.”

Led by The University of Texas at San Antonio (UTSA), CyManII is funded by the DOE for five years to lead a consortium of member institutions in order to introduce a cybersecure energy-ROI that drives American manufacturers and supply chains to further adapt secure, energy-efficient approaches, ultimately securing and sustaining the nation’s leadership in global manufacturing competitiveness. It is funded by the Office of Energy Efficiency and Renewable Energy’s Advanced Manufacturing Office (AMO) and co-managed with the Office of Cybersecurity, Energy Security, and Emergency Response (CESER).
MATRIX AI CONSORTIUM FOR HUMAN WELL-BEING LAUNCHED

Comprised of diverse local, national, and international AI and machine learning researchers, the UTSA MATRIX AI Consortium for Human Well-Being is dedicated to conducting transformative research in the design, use, and deployment of AI to enhance human life. Leading this multiorganizational consortium is Dhireesha Kudithipudi ’06, the Robert F. McDermott Chair in Engineering and a professor of electrical and computer engineering and computer science at UTSA.

“AI is transforming our world. Future innovations will enable humans and machines to interact seamlessly,” explained Kudithipudi. “The creation of this consortium will build an ecosystem of stakeholders employing transdisciplinary approaches to advance core AI capabilities, address community-driven research challenges for human well-being, reconceptualize AI training and build a globally inclusive team.”

Last fall’s inaugural AI Summit and retreat at UTSA underlined the need for a robust alliance in research in the area. Four research thrusts emerged, each to be led by two thought leaders in the field: They are:

- Augmenting human capabilities, led by Amina Qutub of UTSA biomedical engineering and Paula K Shireman of UT Health San Antonio surgery;
- Machine learning and deployment, led by Christopher Mentzer of Southwest Research Institute and Murtuza Jadliwala of UTSA computer science;
- Neuroinspired AI, led by Peter Fox of UT Health San Antonio research imaging and Fidel Santamaria of UTSA biology; and
- Trustworthy AI, led by Nicole Beebe of UTSA information systems and cyber security and Ram Krishnan of UTSA electrical and computer engineering.

Matrix has recently initiated numerous cross-institutional collaborations, including a partnership between UTSA and UT Health San Antonio researchers developing novel AI algorithms for accelerated dementia diagnosis using MRI and EEG data.

Matrix researchers are also actively engaged in supporting the city and local community to address the COVID-19 pandemic through volunteer work; COVID19 modeling work using AI in collaboration with UT Health San Antonio and SwRI, which was awarded DHS funding; digital tools; AI and advanced imaging to noninvasively screen for COVID-19 and detect neurovascular recovery postinfection; and mapping tools.

In addition to its transdisciplinary and cross-institutional nature, these research initiatives exemplify Matrix’s commitment to improving human well-being through AI. The research portfolio of Matrix thrust leads is supported by multiple prestigious federal and private agencies, including the National Science Foundation, the National Institutes of Health, the Air Force Research Laboratory, the U.S. Air Force Office of Scientific Research, the National Aeronautics and Space Administration, and the W.M. Keck Foundation.

The advisory board for the consortium will have representation from ARM, DARPA, Air Force Research Laboratory and GSK, among others. Already this momentum has resulted in new research awards for Kudithipudi’s work in neuromorphic computing. She and her team are designing lifelong learning algorithms and AI accelerators that are inspired by the neural processes in the brain. The research is supported by DARPA’s Lifelong Learning Machines project in collaboration with Argonne National Labs, where they are building lightweight AI algorithms that learn, adapt and act continually in new environments.

Matrix is also committed to offering research training opportunities to UTSA and UT Health San Antonio students. Students who are interested in AI are also encouraged to attend the launch. Opening remarks will be given by UTSA President Taylor Eighmy, followed by distinguished speakers and collaborators of the Matrix. Kudithipudi will introduce the Matrix AI consortium. U.S. Rep. Will Hurd, representing Texas’ 23rd district, will also provide remarks. A dedicated advocate for cybersecurity, Hurd understands the need to leverage AI to address the ever-evolving complex requirements for national security and for greater collaboration between academia, government and industry. “San Antonio is Cyber City, USA, and the Matrix AI Consortium at The University of Texas at San Antonio exemplifies the role our city plays in advancing leading technologies that will drastically change the way we live in the coming decades. It’s great to see the consortium officially launch. I know the distinguished professors involved will continue their world-renowned research, and it will benefit not only San Antonio but the entire United States. As we work to take advantage of technologies that will decide our future, UTSA is leading the way,” added Hurd.Speakers representing a number of Matrix member institutions will be featured at the event, including UT Health San Antonio, Southwest Research Center, GSK, National Security Collaboration Center, Air Force Research Laboratory and the Centre National de Recherche Scientifique. The Matrix is also launching a new website to engage the global community in developing AI solutions that can address the pressing grand challenges for human well-being.

“The launch is a confirmation of our commitment to transdisciplinary research in artificial intelligence and machine learning,” said Bernard Arulanandam, UTSA’s vice president for research, economic development, and knowledge enterprise. “UTSA is investing in both the talent and the resources required and actively contributing scholarly excellence, since it impacts every industry in some form or another and complements our existing research portfolio in cyber and data sciences for which we are known.”

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“Generation AI Nexus” or “Gen AI,” refers to anyone born in 1995 and later. The goal is to help all students, regardless of their major, understand AI and how to use it as an effective tool.

As part of the project, UTSA is curating a data set around veterans’ resilience, one of the National Challenge problems Gen AI is focusing on. The UTSA team is creating ten AI-based lesson modules in at least five different disciplines. These lessons each include a lecture presentation, notes and a homework assignment.

MITRE approached UTSA to participate as an early adopter of the Gen AI program because of its recent cross-disciplinary cluster hire of data analytics faculty.

“This partnership is a prime example of how cluster hires support our teaching mission in addition to our research mission,” said Kimberly Andrews Espy, provost and senior vice president for academic affairs. “One of the objectives of our Clustered and Connected Hiring Program is to strengthen existing and create new curricular offerings for our students. Through the Gen AI coursework, UTSA students in diverse majors will gain understanding and skills in artificial intelligence and related fields, making their UTSA degrees all the more competitive.”

The program is now in a two-year pioneer phase, and has expanded to include University of Virginia, Virginia Tech, Purdue, Marymount, University of Maryland at Shady Grove, and Worcester Polytechnic Institute. Following the pioneer phase, Gen AI will launch publicly on a wider scale.

MITRE is one of UTSA's National Security Collaboration Center partners, and the project is jointly supported by the Offices of Academic Affairs and Knowledge Enterprise.

ARTIFICIAL INTELLIGENCE ROLLS OUT ACROSS ACADEMIC DISCIPLINES

The University of Texas at San Antonio is participating in a pioneering program to introduce artificial intelligence principles to students in all academic disciplines. UTSA is working with MITRE, a not-for-profit corporation dedicated to research and development in the public interest, to help faculty develop lesson modules incorporating AI, big data analytics and data visualization in classrooms across campus this academic year. The project, codenamed “Generation AI Nexus” or “Gen AI,” refers to anyone born in 1995 and later. The goal is to help all students, regardless of their major, understand AI and how to use it as an effective tool.

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UTSA CENTER FOR GOVERNMENT CONTRACTING AND NATIONAL SECURITY COLLABORATION CENTER Featured at FORCECON 2022

“Events such as FORCECON 2022 showcase Military City USA’s commitment to helping strengthen relationships between the DoD, academia and industry,” said Nirenberg. “These relationships and joint efforts on emerging technology strengthen our national security.”

Participating UTSA faculty and staff included the following who spoke or participated in panel discussions and judging.

- Department of Computer Science
- Department of Electrical & Computer Engineering
- National Security Collaboration Center
- Office of Technology Commercialization
- SBDC Center for Government Contracting
- SBDC Technology Commercialization Center
- School of Data Science

The day concluded with the iChallenge competition, where seven finalists from AETC presented pitches to a panel of judges for a chance to win $250,000 in funding for their innovative ideas. UTSA Office of Technology Commercialization Director Dr. Christine Burke was a judge.

During the second day, discussions centered on what industry and academia can bring to bear for installation and mission support.

COSA R&D LEAGUE RAPID CALL FUNDING AWARDED TO UTSA

Sponsored by the CoSA Office of Innovation, in collaboration with UTSA Office of the Vice President for Research, Economic Development, and Knowledge Enterprise (REDKE), a new funding program from the Research & Development League (R&D League) has awarded its inaugural funding of more than $120,000 in Summer 2022. UTSA faculty members will work to enhance scientific collaboration between the organizations to address some of San Antonio’s pressing civic issues.

Known as CoSA R&D League Rapid Call, the program was created to respond quickly to specific city department and member challenges proposed by their employees late last year. Thirteen proposals were submitted by UTSA faculty members in response. Funding was given to four project teams led by a UTSA faculty member in the role of Principal Investigator (PI). This funding mechanism is one of first of its kind using the newly established Master Research Agreement between the City of San Antonio and UTSA signed earlier this year.

Formed in January 2020, the R&D League—aligning the efforts of the four key partners, CoSA, Southwest Research Institute, USA, and UTSA—works to create cross-sector, multi-disciplinary teams that utilize scientific methods and data to investigate new ideas, facilitate evidence-based policymaking and explore the frontier of innovation for our 1.5 million residents.

“As we progress our R&D League efforts and grow the program into one that benefits more and more of our resident services, we are delighted that our attempt at creating a Rapid Call intake has been successful and has produced not only interest from our partner agencies and city departments, but also has produced tangible work items that will improve how we operate in various ways,” said Brian Dillard, chief innovation officer for the City of San Antonio.

The projects and team members are:

- Wenbo Wu (PI) and Pamela Smith, Carlos Alvarez College of Business, and Ying Huang, College for Health, Community and Policy, working with the CoSA Municipal Court.
- Jeffrey A. Jordan (PI), College of Health, Community and Policy, working with the CoSA 311 Customer Service Office.
- Lloyd Potter (PI), Po-Chun Huang and Jeffrey A. Jordan, College for Health, Community and Policy, working with the CoSA Department of Human Services and the CoSA Communications and Engagement Department.
- Saul Capehart (PI), College of Health, Community and Policy, working with the CoSA 311 Customer Service Office.
- David Han (PI), Carlos Alvarez College of Business, and Jeff Reif, CoSA Municipal Court.
- Paula Stallcup, Chief Innovation Officer, City of San Antonio.
- Brian Dillard, Chief Innovation Officer, City of San Antonio.

Fueled by a team-up between members representing The University of Texas-San Antonio’s Center for Government Contracting, led by Jaime Martinez and Terri Williams, on the one hand, and the Texas-Mexico border area.

COMMUNITY AND ECONOMIC DEVELOPMENT

Since 1979, UTSA’s economic development programs have been building the economy, one business at a time. The UTSA Institute for Economic Development is dedicated to creating jobs, growing businesses and fostering economic development in San Antonio, Bexar County, and the Texas-Mexico border area.

The inaugural FORCECON 2022: Innovation – Technology – Gaming convention kicked off with a collider event May 24-25 at the new Tech Port Center + Arena, highlighting innovation, technology and gaming.

The UTSA Small Business Development Center (SBDC) Center for Government Contracting (CGC) collaborated with the United States Air Force and the Port Authority of San Antonio for the inaugural FORCECON 2022: Innovation-Technology-Gaming last month at the new Tech Port Center + Arena, highlighting innovation, technology and gaming.

Highlights from the first day, which focused on AETC innovation priorities, included remarks from San Antonio Mayor Ron Nirenberg and UTSA National Security Collaboration Center Executive Director Guy Walsh, as well as presentations on teaming with academia, digital proficiency and technology innovations in learning.

“Events such as FORCECON 2022 showcase Military City USA’s commitment to helping strengthen relationships between the DoD, academia and industry,” said Nirenberg. “These relationships and joint efforts on emerging technology strengthen our national security.”

The agenda for the industry collider included presentations, panels and an exposition hall with 70 vendors focused on innovation in force development, and installation and mission support.

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Fueled by a team-up between members representing The University of Texas-San Antonio’s Center for Government Contracting, led by Jaime Martinez and Terri Williams, on the one hand, and the Texas-Mexico border area.

COMMUNITY AND ECONOMIC DEVELOPMENT

Since 1979, UTSA’s economic development programs have been building the economy, one business at a time. The UTSA Institute for Economic Development is dedicated to creating jobs, growing businesses and fostering economic development in San Antonio, Bexar County, and the Texas-Mexico border area.

The inaugural FORCECON 2022: Innovation – Technology – Gaming convention kicked off with a collider event May 24-25 at the new Tech Port Center + Arena, highlighting innovation, technology and gaming.

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The report was prepared for the Distilled Spirits Council of the United States.

“This study makes clear that continued growth of the Texas distilling industry presents great opportunities for the state, and that the collective economic contributions of these small businesses could be even greater if antiquated laws restricting spirits sales were updated,” said Kristi Brown, senior director of state government relations at the Distilled Spirits Council of the United States. “Texas distillers still aren’t allowed to sell spirits bottles to consumers on Sundays, despite being allowed to open their doors, offer tours and provide tastings.”

Brown added, “This simply doesn’t make sense. The decline in on-premise sales greatly impacted distillers, and it’s time to modernize Texas alcohol laws to help support this growing industry and spirits consumers throughout the state.”

Key findings from the study show Texas distillers contributed:

- Nearly $2 billion in total economic output (or revenues)
- Support for close to 4,900 Texas jobs
- As much as $334.9 million in salaries and benefits paid to workers
- Approximately $481,450 from on-premise mixed beverage gross receipts taxes paid. The tax paid in 2020 declined by more than $240,000, or 34%, due to COVID-19-related closures.
- Close to $200,000, or 34%, due to COVID-19-related closures.

Supporting the distilling industry, therefore, has a much larger positive impact on the overall economy in Texas.”

“Over the past decade, the number of Texas distilleries has grown dramatically as has the sector’s economic impact to local economies and surrounding communities,” Javier Oyakawa, lead investigator of the study from the Center for Community and Business Research at the UTSA Institute for Economic Development. “The number of Texas distilleries has grown from just eight in 2008 to 190 today. These distillers are playing a critical role in the state’s economy by generating sales, creating jobs, and providing wages and benefits.”

“The data shows the proliferation of distilleries and their continued growth helps support other local businesses including farmers, glass manufacturers, truckers, equipment suppliers and more,” said Tunstall. “Supporting the distilling industry, therefore, has a much larger positive impact on the overall economy in Texas.”

Established in 1979, the IED is part of the UTSA Division of Research, Economic Development and Knowledge Enterprise. The institute is home to 10 centers and numerous programs that facilitate economic, community and business development at the local, regional and national levels.
The university honored David Akopian as its 2021 Innovator of the Year. Akopian is professor of electrical and computer engineering and serves as associate dean of research in the Margie and Bill Klesse College of Engineering and Integrated Design. His research interests include communication and navigation systems. His work focuses on wireless sensor, communication, location technologies and mobile applications such as human-machine automated dial systems and mobile health.

He is the founder and director of the UTSA Software Communications and Navigation Systems Laboratory. Since 2004, his lab team has trained more than 100 students who have gone on to successful careers at a variety of companies, including Apple, Google, Samsung, Cisco Systems, Amazon, Intel and Verizon.

Akopian was inducted as a fellow of the National Academy of Inventors in 2016 and has over 30 patents. He was named Innovator of the Year after receiving four patents and one software copyright, and filing one utility patent and two provisional patents.

Stanton McHardy was selected as the 2019 Innovator of the Year. McHardy is a professor of research, an associate professor of chemistry and director of UTSA’s Center for Innovative Drug Discovery, a joint venture between UTSA and UT Health San Antonio. The center provides a diverse array of core facilities and expertise to facilitate the translation of basic scientific discoveries into tangible preclinical candidate drugs that can be further developed into clinical therapies for human disease.

An active researcher, he has brought over $10 million of research funding in the past few years. His patent application for small molecule drugs for the treatment of obesity and neurological diseases was recently licensed by Ridgeline Therapeutics.
Anson (Joo L.) Ong, the USAA Foundation Distinguished Professor and senior associate dean of administration and graduate programs in the university’s Klesse College of Engineering and Integrated Design, was named a 2021 NAI Fellow. Ong has secured over $40 million in total funding to support his UTSA research programs. He is recognized for medical device innovations using biomaterials and holds nine U.S. patents (three utility and six provisional patents) as well as four international utility patents. Some of the latter is licensed to a U.S. medical device company.

One of his most significant inventions, “Bi-layered Bone-like Scaffolds” (US9162288B2), describes a methodology to save injured limbs of soldiers wounded on the battlefield by preparing and using novel bi-layered bone-like scaffolds. His co-founded GenOsteo Inc, a start-up company that developed and commercialized medical products to aid military service personnel who suffered traumatic injuries. The impact of Ong’s contributions is particularly significant for San Antonio, a city with an extensive military community.

Ravi Sandhu, Lutzer Brown Endowed Chair and professor of computer science, was named a 2020 NAI Fellow. Sandhu serves as executive director of the UTSA Institute for Cyber Security and the lead project investigator of the National Science Foundation Center for Security and Privacy Enhanced Cloud Computing.

Sandhu’s seminal papers on role-based access control established it as the dominant form of access control in computer permissions and as the best standard, according to the National Institute of Standards and Technology.

Sandhu is an inventor on 31 security technology patents and has accumulated over 42,000 Google Scholar citations for his papers. For more than a decade, Sandhu served as chief scientist and co-founder at TriCipher, which was acquired by VMWare. A prolific and highly cited author, he has produced research that has been funded by the NSF, NSA, NIST, Defense Advanced Research Projects Agency, Office of Naval Research, Air Force Research Laboratory, Army Research Office and private industry.

Rena Bizios, Lutzer Brown Endowed Chair in Biomedical Engineering and a professor of biomedical engineering, was named a 2019 NAI Fellow. Bizios is a globally recognized educator and researcher who has made pioneering contributions to biomedical engineering curricula as well as groundbreaking contributions to the understanding of cell-material interactions at the tissue/implant interface with applications in implant biomaterials, tissue engineering and tissue regeneration. She has published more than 108 peer-reviewed papers and co-authored the landmark textbook An Introduction to Tissue-Biomaterial Interactions, which is a standard in the biomaterials field and has been adopted for upper-level academic courses by several biomedical engineering programs in the United States and abroad.

Bizios is member of numerous professional academic organizations. This most recent honor makes Bizios the only full-time faculty member in UTSA history to be elected to three U.S. national academies.

Amanda Fernandez is an assistant professor in the College of Sciences (COOS)’ Department of Computer Science. She is a member of the MATRIX AI Consortium and the primary investigator in the UTSA Vision and Artificial Intelligence Lab (VAIL), where researchers construct deep theoretical models by considering adversarial examples and cybersecurity approaches and apply these models to real-world technologies.

Douglas Frantz, the Max and Minnie Tomerlin Voelcker Distinguished Chair in Chemistry, is a co-inventor on potential drugs that can control how stem cells differentiate into different cell types (U.S. Patent 8,686,012). This particular invention has significant ramifications in areas such as regenerative medicine, diabetes and neurodegeneration where stem cells could help treat devastating human diseases.

Thomas Forsthuber is the Jesse H. and Mary Gibbs Jones Chair in Biotechnology and a professor in the COS’ Department of Molecular Microbiology and Immunology. As a member of the university’s South Texas Center for Emerging Infectious Diseases and its Brain Health Consortium, he leads a research team seeking to understand how the immune system, in particular T cells, contribute to autoimmune diseases and how to modulate T cell immunity for therapeutic purposes in humans.

Paul Rad is a Peter T. Flawn Endowed Professor and associate professor of computer analytics and artificial intelligence. He has four U.S. patents for his inventions related to AI algorithms for workflow scheduling and security on multi-clouds. One was for systems and methods for scheduling of workflow-aware jobs on multi-clouds and for systems and methods for secure file transmission and cloud storage. He received an additional patent for “Intellectual Property Transitioning to Industry.”

John Quàrelle, associate professor of computer science, received U.S. Patent 10,692,401 for “Devices and Methods for Interactive Augmented Reality.” Quàrelle, along with clinicians and business professionals, formed MedCognition Inc, to help save lives through the PerSim® augmented reality (AR), holographic medical patient simulator training system. The technology’s immersive AR overcomes key shortcomings of traditional, mannequin-based medical simulation that do not adequately prepare medical personnel to perform well when presented with uncommon, dangerous medical conditions.

Eugene Britton John is a professor in the Klesse College of Engineering and Integrated Design’s Department of Electrical and Computer Engineering. He directs the Laboratory for Low Power VLSI Design and Machine Learning Hardware. His research interests include energy-efficient computing, ultra-low energy computing for implantable cardiac devices, AI/machine learning, hardware security, and computer architecture and benchmarking.

2021

2020

2019

Anson (Joo L.) Ong

Ravi Sandhu

Rena Bizios

Amanda Fernandez

Douglas Frantz

Thomas Forsthuber

Paul Rad

2020

2019

NAI SENIOR MEMBERS

2021

NAI FELLOWS

2021

2020

2019

22

DISCOVERY 10 MAGAZINE | UTSA

UTSA RESEARCH, ECONOMIC DEVELOPMENT, AND KNOWLEDGE ENTERPRISE 23
Early Career is the National Science Foundation’s (NSF) most prestigious award designed to support early-career faculty who demonstrate potential to serve as academic role models in research and education. Faculty members may apply for the award to recognize research activities that set a firm foundation for a lifetime of leadership in their academic discipline. This designation, among others, helped UTSA advance closer to National Research University Fund (NRUF) eligibility. Since 2019, there have been 13 UTSA faculty members who have received a NSF Early Career award.

2022

Christopher Rathbone, assistant professor of biomedical engineering in UTSA’s Margie and Bill Klesse College of Engineering and Integrated Design, in his CAREER project will examine adipocytes (fat cells) in diabetic skeletal muscle during muscle repair and regeneration. An in vitro model of tissue-engineered skeletal muscle (TE-SKM) will be used as a tool to deconstruct the role of adipocytes in diabetic muscle injury. The knowledge and experience gained from this work will lead to the comprehensive tissue engineering models for understanding and treating skeletal muscle complications. Rathbone believes that the findings generated with this work will extend to the engineering of tissues beyond skeletal muscle. As a result of this award, Rathbone will receive $503,000 of funding over the next five years.

Anthony Rios, assistant professor of information systems and cyber security in the Carlos Alvarez College of Business at UTSA, received a $550,000 National Science Foundation CAREER award to study natural language processing (NLP) within artificial intelligence. The five-year award is part of their Faculty Early Career Development Program. Rios, who also serves as associate director of the Cyber Center for Security and Analytics at UTSA, will apply the grant funding to develop frameworks for practitioners to develop population-specific NLP models.

Wei Gao received $500,723 for his Career award entitled “Atomistic Investigation of Phase Transition in Nanostructured Silicon – Towards Convergent Understanding with Mechanics-Informed Machine Learning Potential,” a five-year award to study natural language processing (NLP) within artificial intelligence. The five-year award is part of their Faculty Early Career Development Program. Rios, who also serves as associate director of the Cyber Center for Security and Analytics at UTSA, will apply the grant funding to develop frameworks for practitioners to develop population-specific NLP models.

2021

Gabriela Romero Uribe, assistant Professor in the Department of Biomedical Engineering and Chemical Engineering College of received a $611,004 NSF CAREER Award. This research and educational programs studies transport phenomena principles at the nanoscale to develop the next generation of neuromodulation technologies. Her research interests lie within the field of biomaterials, specifically the development of macromolecular bio-interfaces towards challenging biomedical problems. Prior to join UTSA, she was a Senior Scientist at Vindico Pharmaceuticals.

Ahmad F. Taha received a $265,000 National Science Foundation (NSF) Grant Award for his research in "Collaborative Research: Advanced Robust Control and State Estimation of Converter-Based Power Systems".

2020

Murtuza Jadiwalla, assistant professor in UTSA’s computer science department, was awarded $499,512 five-year award for his research on securing modern ubiquitous sensing and computing technologies. His NSF CAREER Award received $525,046 for his award entitled "A Prosthetic Elbow with Network of Soft and Modular Thermo-Active Actuators for Mobility Impaired Patients". It aims to create fundamental innovation in wearable assistive robots by introducing a new paradigm for portable and powerful networks of modular soft actuators that work through liquid-gas phase transition.

Bing Dong’s NSF CAREER Award of $500,181 will support his project, “Holistic Assessment of the Impacts of Connected Buildings and People on Community Energy Planning and Management.” The funding allowed Dong to develop a new method of energy planning and management for smart communities and cities.
Nikolas Gatsis furthered his research on electricity distribution networks and water distribution systems as part of his project, “Optimal Interdependent Operation of Electricity Distribution Grids and Water Distribution Systems in Smart Cities”. His $500,000 CAREER award supported the development of more reliable and cost-effective electricity and water delivery.

Teja Guda was awarded $530,688 for his project, “Programming Vascularization by Design in Porous Composites”, which generated new discoveries about how blood vessels grow. What they learned about how these vessels grow would allow them to design new biomaterials solutions for tissue engineering and regenerative medicine. Understanding the underlying science could also potentially help understand what goes wrong with vessel formation during cancer, when competent, structured networks of vessels are not formed.

Alexis Godet was awarded a National Science Foundation (NSF) Faculty Early Career Development (CAREER) Award of $550,462 to support his five-year project, “CAREER: Environmental forcing on the resilience of carbonate platforms during the Early Cretaceous super greenhouse period”. The funding allowed him to expand on his research into the impact of ancient environmental conditions on shallow marine ecosystems.

Xiaoyin Wang used his $492,358 CAREER award to develop techniques for better detection and repair of software bugs in his project, “Analysis and Repair of Build Scripts for DevOps Software Practice”.

Dhireesh Kudithipudi is a professor and the McDermott Endowed Chair in the department of electrical engineering and computer science, whose innovative research program is focused on brain-inspired algorithms and neuromorphic computing. Kudithipudi is the founding director of the MATRIX AI Consortium for Human Well-Being, which has brought together researchers from throughout San Antonio, including UTSA, UT Health San Antonio, Southwest Research Institute, and the Texas Biomedical Research Institute, as well as fostering partnerships with industry leaders, to address critical questions in AI research and develop solutions that promote human well-being. She also runs the NUAI lab housed in the Margie and Bill Klesse College of Engineering and Integrated Design.

David Akopian, Ph.D., is a professor of electrical and computer engineering and associate dean of research for the College of Engineering and Integrated Design. His research interests are in a broad area of communication and navigation systems, focusing on wireless sensing, communication, location technologies and mobile applications such as human-machine automated dialog systems and mobile health. Akopian was inducted as a fellow of the National Academy of Inventors in 2016 and has over 30 patents. He is the founder and director of the UTSA Software Communications and Navigation Systems Laboratory. Since 2004, his lab has trained more than 100 students who have gone on to successful careers at a variety of companies.

Bridget Drinka, Ph.D., has been a professor of linguistics in the Department of English since 1991. She specializes in Indo-European and historical linguistics. Her research has focused on such issues as the sociolinguistic motivations for language change, the role of contact in linguistic innovation, and the importance of geographical contiguity in the diffusion of changes across the Indo-European languages. Drinka was also a faculty research fellow for UTSA Knowledge Enterprise, helping to launch the Academy Fellows Speaker Series. Her greatest research achievement is her latest book, Language Contact in Europe: The Periphrastic Perfect through History.
(2017), published by Cambridge University Press. In 2019, the book was awarded the most prestigious book award in the field of linguistics, the Leonard Bloomfield Book Award, by the Linguistic Society of America. The book takes an in-depth and comprehensive look at the malleable construction, the “periphrastic perfect,” as it spread across the map of Europe from its earliest attested usage in Ancient Greek to the modern European languages.

Krystel Castillo, Ph.D., is the GreenStar Endowed Professor in Energy in the Department of Mechanical Engineering. She has led research efforts in energy and sustainability through the Texas Sustainable Energy Research Institute since 2017, including the strategic alliance and research portfolio of up to $50 million with CPS Energy, the largest municipally-owned electric and gas utility in the country. Castillo has built a strong research group with expertise in the creation of optimization algorithms to solve large-scale instances of engineering systems, as well as big data analytics methods with applications to the diagnosis of clean energy, defense manufacturing and cybersecurity for manufacturing. As part of the $111 million Cybersecurity Manufacturing Innovation Institute residing at UTSA, Castillo serves as its vice president for energy efficiency, a position she has held since 2017, in which she is mission-driven in contributing theoretical and pragmatic innovations to secure and sustain American leadership in global manufacturing competitiveness.

Aimin Liu, Ph.D., is the Lutcher Brown Distinguished Chair in Biochemistry in the Department of Chemistry. His research group studies metalloprotein-based biological processes and mechanisms. His primary research interest is determining the chemical basis for the biological roles of metal ions and protein-based free radicals. His laboratory has well-recognized expertise in mechanistic enzymology, metalloprotein structure-function relationships, and free radicals processes involved in oxygen activation and electron/radical transfer processes in biology. His ongoing research projects span a broad range of topics involving amino acid metabolism, cofactor biosynthesis via protein posttranslational modification, biosynthesis of novel antimicrobial products and antibiotics, and redox sensing and regulations. Liu has contributed to the understanding of oxygen activation by metalloenzymes and protein-based free radicals in electron/radical transfer processes in biology. Over the years, he has made significant strides expanding the molecular basis of tryptophan and sulfur metabolism as well as enzymatic oxygenation chemistry. Some of those discoveries are conceptual contributions to bioinorganic chemistry, biochemistry, chemical biology and biophysical chemistry. His interdisciplinary and highly productive research program has been well-supported by both the National Institutes of Health and National Science Foundation.

Rogelio Saenz, Ph.D., a sociologist & demographer, is a professor in the Department of Demography. His current research is calling attention to and tracking the impact of COVID-19 on the Latino population. He has been nationally recognized for his contribution to scholarship on Latinos and on social justice with an eye toward driving equity, justice and equal human rights for racially marginalized populations. Most recently, this includes collaborative research on a grant funded by the Department of Health and Human Services for strengthening health literacy and recovery from COVID-19 in San Antonio.

His book Latinos in the United States: Diversity and Change was a labor of love, with the goal to increase the visibility of Latinos in this country. It is one of the few written broadly with numerous topics related to Latinos and is popular with undergraduate classes across the country. Along with his former graduate student and now established scholar, Cristina Morales, they are working on the second edition of the book. Saenz is the recipient of the 2021 American Sociological Association Cox-Johnson-Frazier Award and the 2020 Saber es Poder Academic Excellence Award from the University of Arizona’s Department of Mexican American Studies.

Jenny Hsieh, Ph.D., is a recognized expert in the field of brain health, specializing in epilepsy, neurogenesis and stem cell research. Hsieh is a professor in the Department of Biology and the Stem Cell Biology. She also directs the UTSA Brain Health Consortium, a campuswide transdisciplinary research initiative that spans stem cells and precision medicine, neuroscience, biomedical engineering, psychology and behavior, with over 40 participating full-time faculty members.

Hsieh came to UTSA from UT Southwestern, where she and her team made significant contributions to understanding the role of epigenetic and transcriptional regulation in adult neurogenesis. A major focus of her work was to understand the transcriptional/epigenetic regulatory circuitry that guides neural stem cell fate decisions in both normal and pathological states, and this work continues at UTSA.

Hsieh serves as a study section member for the National Institutes of Health and the American Epilepsy Society. She is also on the editorial board as a reviewing editor for The Journal of Neuroscience. Hsieh received her Ph.D. in biology from Johns Hopkins University.

Robert Hard, Ph.D., is a professor in the Department in Anthropology. As an archaeologist, he explores important questions in anthropology, such as the adoption and spread of farming, which leads to later, dramatic cultural changes. His research is largely focused in the Mexican state of Chihuahua and the U.S. Southwest. His work has focused on some of the most spectacular archaeological sites in the region—hilltop fortified settlements, known as cerros de trincheras. Working with colleague John Roney of Albuquerque and UTSA students, they have excavated a number of these de trincheras, seeking to understand the relationship between these remarkable sites and the adoption of agriculture.

Hard and Roney recently published a volume titled Early Farming and Warfare in Northwest Mexico, presenting the multyear archaeological investigations of Cerro Juanaza, which represent a series of watershed developments. This includes substantial dependence on agriculture and early experiments with village living, fortified settlements, collective labor and communal architecture. The emergence of large fortified agricultural villages at 1300 B.C.—before the use of ceramics—was an unexpected discovery that changed how archaeologists view early agriculture in this region.
Focused on driving San Antonio’s knowledge economy, The UTSA Office for Research, Economic Development, and Knowledge Enterprise (REDKE) announced it has awarded its annual seed grants to spark innovation on campus. A total of $340,000 was awarded among 14 recipients—money that will fund new research projects or new lines of inquiry to advance their research portfolio through the discovery process.

The UTSA Research seed grant programs will fund 12 of the projects through its three funding mechanisms—Grants for Research Advancement and Transformation (GREAT), the Internal Research Awards (INTRA) and the Connecting Through Research Partnerships program. The Brain Health Consortium Collaborative Seed Grant program, launched in collaboration with the UTSA Brain Health Consortium in 2021, returned to fund two research projects.

The annual funding programs support basic and applied research across a range of disciplines: arts, humanities, social sciences, engineering and science. The grants help faculty explore new ideas and new disciplines, support student engagement in research activities, expand scholarly work, create new collaborations in complementary fields and acquire necessary data to apply for more complex external funding.

“Our seed grant program is vital to support new ideas and collaborations, particularly for those researchers in the arts and humanities,” explained Jaclyn Shaw, Interim Vice President for Research and Economic Development. “It’s a program that has an immediate return on investment for our research community. These seed projects have led to extramural funding from federal agencies, and have long-term beneficial societal impact.”

Over the past five years, REDKE seed grant programs have funded 133 faculty members with over $1.5 million dollars of seed money.

**Internal Research Awards (INTRA)**

- October 1, 2022 through July 31, 2023

The Internal Research Awards (INTRA) program is part of coordinated efforts to promote research and scholarship of the highest quality. This program offers experience in identifying and submitting applications to potential funding sources, provides preliminary data to support applications for extramural funding, and enhances scholarly and creative activities: $45,000 awarded: $5,000 per researcher, nine new research projects.

**Klesse College of Engineering and Integrated Design**

- Bastian Wibranek
  - School of Architecture and Planning
  - Deconstructing Deconstruction: A case study exploring stakeholder perceptions of a San Antonio-based circular economy initiative

**Alvarez College of Business (COB)**

- Samson Alva
  - Department of Economics
  - The Limits to Learning from Big Data

**Yuanxiong Guo**

- Department of Information Systems and Cyber Security
  - Democratizing Artificial Intelligence in Healthcare with Federated Learning

**Min Wang**

- Department of Management Science and Statistics
  - A generative Bayesian procedure to modeling high-dimensional data with mixed-type outcomes

**College of Education and Human Development (COEDH)**

- Priscilla Rose Prasath
  - Department of Counseling
  - El HERO que llevo dentro - Validation of the Spanish version of the revised Compound PsyCap Scale (CPC-12)

**College of Liberal and Fine Arts**

- Valeria Meiller
  - Department of Modern Languages and Literatures
  - Ruge el Bosque: Southern Cone Ecopoetry Anthology (Part II)

**Robert Tokunaga**

- Department of Communications
  - Intergroup Differences in Cyberbullying Perpetration

**College for Health, Community and Policy (HCOP)**

- Kelly Cheever
  - Department of Kinesiology
  - Factors influencing musculoskeletal injury reporting behavior among adolescent student athletes

**Denver Brown**

- Department of Psychology
  - Investigating the influence of 24-hour movement behaviors on indicators of mental health among youth with epilepsy

**Grants for Research Advancement and Transformation (GREAT)**

- October 1, 2022 through July 31, 2023

The GREAT program provides seed grants to support new areas of research for faculty at UTSA, to assemble preliminary data that can be used to seek extramural funding and advance the institution’s Tier One status: $40,000 awarded: $20,000 per researcher, two new projects.

**Margie and Bill Klesse College of Engineering and Integrated Design**

- Hugo Giambini
  - Department of Biomedical Engineering and Chemical Engineering
  - Computational framework for estimations of spine loads

**Carlos Alvarez**

- College of Business
  - Elias B. Haro
  - Department of Information Systems
  - Securing Water Quality’s Health from Cyber and Physical Attacks by Instrumenting Physics-Aware Honeyspots

**Connecting through Research Partnerships (Connect)**

- October 1, 2022 through September 30, 2023

The CONNECT Program is a joint effort between UTSA and SwRI. The program encourages interaction between investigators in support of the acquisitions of established extramural, peer-reviewed research funding. This agreement provides unprecedented opportunities for researchers to work together in addressing issues of mutual interest and need: $125,000 awarded: $50,000 to UTSA, $75,000 to the Southwest Research Institute (SwRI)

**College of Sciences**

- Kathryn Mayer, UTSA and Josh Mangum, SwRI
  - High-Surface Area Carbon Microparticles for Hydrogen Storage

UTSA and Southwest Research Institute are collaborating to improve storage materials for hydrogen fuels with a hybrid metal-carbon microstructure that combines both chemical and physical hydrogen storage mechanisms. To address these challenges, SwRI and UTSA will create high surface area carbon (HSAC) microstructure particles that can physically and chemically absorb the hydrogen, allowing it to be transported safely and cost-effectively.

**Brain Health Consortium Collaborative Seed Grant Program**

- October 1, 2022 through July 31, 2023

The Brain Health Consortium Collaborative Seed Grant program supports a broad range of trans-disciplinary research that may yield fundamental insights into the mechanisms underlying brain disorders. Two research projects were each awarded $15,000 for a total of $30,000.

**College of Sciences**

- Nicole Wicha
  - Department of Neuroscience, Developmental, and Regenerative Biology
  - Effect of mild traumatic brain injury on predictive processing in language comprehension

**College for Health, Community and Policy**

- Chantal Fahmy
  - Department of Criminology and Criminal Justice
  - The Long-Term Impact of Traumatic Brain Injury on Reentry after Incarceration: A Vulnerability Assessment
Meet UTSA’s newest college: HCaP

The College for Health, Community, and Policy

The College brings together health researchers with local impact -- and global reach

by Viviane Callier

Research in human health is becoming more interdisciplinary than ever before, but academic departments, as traditionally arranged, can solidify into silos that are difficult to break down. That creates hurdles for solving big, complex problems -- health disparities, economic inequality, mental health -- that all impact human health. To address this issue, UTSA has created a new college that brings together faculty from departments of criminology & criminal justice, psychology, public administration, public health, social work, and sociology to advance interdisciplinary research.

This arrangement "brings a lot of different researchers together to really bolster our work, to form interdisciplinary teams that otherwise might not exist, and to really find synergies among the departments," said Associate Dean for Research Erica Sosa.

The new college represents a rearrangement of existing departments from the College of Public Policy and the College of Liberal Arts to support a "more coordinated effort to address complex societal issues related to health, community and policy," explains Sosa. "We typically talk about these complex issues and try to use one lens to address them, which doesn’t work. I think this interdisciplinary, broader approach is where funding is going, it is where research is going, and now it’s where the college is lined up to go."

The new arrangement also will help students navigate all of the health-related programs available at UTSA, which were previously scattered across the university in different colleges.

It heightens the visibility of the health-related research opportunities for students and opportunities for outside business or industry partners to collaborate with UTSA researchers. All of that, Sosa hopes, will facilitate the formation of teams to submit competitive transdisciplinary research grants. That said, existing faculty in the college are already doing exciting work with local impact -- and global reach. Within the college, the Center for Community-based and Applied Health Research works with community partners to identify health issues, create solutions, and evaluate the outcomes. "If it’s a health issue in San Antonio, we’re probably looking at it -- we look at diabetes, obesity, some cancers, and HIV prevention;" Sosa said. The criminology department has done a lot of work with local police stations as well. The goal with this work is to address local issues and serve the local population, not just study them, Sosa said. For instance, Dr. Metzi He is leading a program, "Building a Healthy Temple," which meets people where they are -- in church communities -- to implement interventions for diabetes management.

In kinesiology, Dr. Kelly Cheever is studying the long-term health outcomes of college athletes, in particular the long-term effects of head injury and musculoskeletal injuries. Research has previously established that student athletes are on the whole more successful in navigating their professional lives. But there could also be drawbacks to college sports participation, for instance if concussions lead to cognitive deficits or mental health problems. With increased public awareness of the long-term impacts of concussions in football, Dr. Cheever is particularly interested in measuring the long-term health outcomes of these student athletes -- an issue that has become the subject of national discussion.

Dr. Katelyn Sileo, a recent hire in the department of public health, works primarily in sub-Saharan Africa, specifically in Uganda. Her research focuses on developing behavioral and health system interventions to improve men and women’s engagement in sexual reproductive health services. She has recently returned from Uganda where her team is launching two projects funded by the National Institutes of Health.

Uganda has among the highest unmet need for family planning in the world. Sileo’s first project is to develop and test and community-based intervention to increase family planning among couples in rural Uganda. Her earlier work showed that women’s decision to use family planning was influenced by their perception of whether their partner would approve of it, but there was a lack of communication about it. "We’re developing an intervention to engage the men in communicating with their partners and increasing joint decision making between men and women around these issues. We are also trying to alter the community norms that might influence a woman’s decision to use contraceptives;" Sileo explained.

Uganda is also one of the countries most impacted by HIV, and there are gender disparities in health outcomes. Women are more likely to be HIV-infected, but men are less likely to know their status and seek care in a timely manner, and they are less adherent to their medication. Therefore, men are more likely to have poor outcomes and more likely to die compared to women, Sileo explained. Her research is looking at gender norms that influence why men are less likely to engage in health services. She is developing an intervention for HIV providers to provide more gender-sensitive HIV counseling to men and women. "By improving the quality of the relationship between the health care provider and the men and women, we’re hoping that they would improve men and women’s actual retention in HIV services;" Sileo said.

Sileo is bringing some of her expertise to bear on HIV in San Antonio, too. She is involved in the End Stigma End HIV Alliance in San Antonio, a team of volunteers who are working with local institutions to reduce stigma around HIV. She and Arita Baldwin, another professor in UTSA’s department of public health, are conducting a mixed-methods assessment to assess HIV stigma in health care settings in San Antonio. The outcome of this study will be to identify actionable items around reducing stigma in those facilities, Sileo says.

Her work bridges the local and global. "I think we have to start to look at even local issues with a global lens, because the boundaries between countries are not real boundaries when it comes to health issues;" Sileo says, pointing to the coronavirus pandemic as an example. "What I’m doing in Uganda is definitely informing what I’m doing here. You can use what you learned globally and inform what you do locally, and vice versa."
HCAP FACULTY NEWS BRIEFS

This past spring, UTSA welcomed esteemed scholar Rhonda BeLue as a Lutcher Brown Endowed Distinguished Professor in the Department of Public Health. BeLue was hired under the 2020 Connected Program of the university’s Strategic Faculty Hiring Initiative. Part of the Clustered and Connected Program (CCP), the 2020 Connected Program was specifically designed to attract and recruit scholars that will advance the institution’s national role as an advocate for equity and inclusion.

In her new role at UTSA, BeLue will serve as the nexus for leading public health and biomedical innovators to provide real world instruction, thoughtful leadership and expertise to solve problems in health equity and inclusion.

UTSA professor Sarah Ullevig was selected to receive a three-year, $1.18 million grant from the National Institutes of Health (NIH) to address older adults’ challenges to access health care as a result of COVID-19.

The pandemic highlighted and increased disparities in health access and outcomes for older adults in San Antonio and nationwide. Ullevig, an associate professor of nutrition and dietetics in HCAP, hopes to close this gap. The NIH grant will go toward efforts to offer a training course to older adults and collect data.

Rogelio Sáenz, a professor in the UTSA Department of Demography, has been selected for membership to the Census Scientific Advisory Committee (CSAC). Sáenz has spent his career examining census data and methods, and his appointment will help the committee measure all populations properly to disburse federal funds.

The CSAC is a 21-member board appointed by the director of the Census Bureau. The committee provides recommendations on the design, operation and implementation of Bureau programs. It also aims to address emerging Census challenges including demographic, economic and statistical research, adaptive design, cyber infrastructure, and technical and operational priorities.

Researchers from HCAP received a seed grant from the UTSA Brain Health Consortium and the UTSA Research office to fund their studies of traumatic brain injury (TBI) among people reentering the community after incarceration. The researchers’ aim is to gather information on these mild TBI exposures and their effect on the long-term health and behavior of the individuals.

Chantal Fahmy, assistant professor of criminology and criminal justice, and Alicia Swan, assistant professor of psychology are the co-PIs on the project. Other researchers on the project include Alex Testa, formerly a UTSA professor who is now at UT Health Houston, and Katherine Kelton, a post-doctoral fellow at the Veterans Administration (VA).

UTSA COLLEGE OF ENGINEERING AND INTEGRATED DESIGN NAMED AFTER MARGIE AND BILL KLESSE IN HONOR OF $20 MILLION GIFT AND YEARS OF SUPPORT

Former Valero CEO and Chairman of the Board Bill Klesse and his wife, Margie, committed a transformational $20 million gift to UTSA College of Engineering and Integrated Design to advance student success through the creation of new endowments for student scholarships, faculty support and programs to promote student success. In recognition of the gift, The University of Texas System Board of Regents authorized the naming of the college to the Margie and Bill Klesse College of Engineering and Integrated Design. The Klesse’s gift has enabled the College of Engineering and Integrated Design to expand its scholarship support for students, create endowments for faculty recruitment and retention, and support student success.

In 2017, the Klesse Foundation made a $1 million gift to UTSA to establish the Klesse Unit Operations Laboratory so that a new Chemical Engineering program could be established. This gift enabled the university to acquire state-of-the-art equipment including a two-story distillation column that attracted national attention and to create the Margie and Bill Klesse Endowed Scholarship in Chemical Engineering, which has benefitted 10 top-performing students. The first cohort of 16 students graduated from UTSA with a bachelor’s in chemical engineering in May 2021 and 154 are currently enrolled in the program.

The new college is administratively organized into two schools: one that includes Civil Engineering, Environmental Engineering and Construction Management and a second that includes Architecture and Planning. It also houses three departments: Biomedical and Chemical Engineering, Mechanical Engineering, and Electrical and Computer Engineering. The college is home to approximately 4,300 students, 120 faculty members and 40 staff members, and it is becoming a destination for top faculty members and postdoctoral researchers.

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ALVAREZES GIFT $20 MILLION, ADVANCES COLLEGE OF BUSINESS RESEARCH, PROGRAMS

Carlos and Malú Alvarez committed a $20 million gift to UTSA’s College of Business. The gift from the Alvarez family is the first of its kind in the university’s history and was used to advance research-enhancing activities, including establishing endowed faculty positions, graduate research fellowships and undergraduate research programs.

In recognition of the significance of this gift, The University of Texas System Board of Regents authorized the renaming of the College of Business to the Carlos Alvarez College of Business, making it the first named college at UTSA.

Nationally ranked and recognized, the College of Business encompasses more than 1,900 students, seven academic departments and two research centers. To date, the college has produced nearly 40,000 graduates.

Home to the No. 1 ranked cybersecurity program in the country, the college offers innovative programing at the undergraduate, graduate and doctoral levels in areas such as business analytics, data analytics, and real estate finance and development as well as traditional business disciplines.

The College of Business was named one of the top five undergraduate business programs in Texas by Bloomberg Businessweek and the No. 10 graduate business school in the nation for Hispanics by Hispanic Business. Accredited by AACSB International, the Association to Advance Collegiate Schools of Business, the college offers innovative programing at the undergraduate, graduate and doctoral levels in areas such as business analytics, data analytics, and real estate finance and development as well as traditional business disciplines.

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The UTSA Office of the Vice President for Research, Economic Development, and Knowledge Enterprise (REDKE) has created five new Research Interest Groups (RIGs) to provide a collaborative platform for UTSA researchers and the extended research community to work on emerging transdisciplinary fields in academia. The new groups build on the success of three inaugural RIGs launched over a year ago.

Most of the RIGs are driven by large, institutional research initiatives. Some of the established RIGs have representatives from the university’s key cluster hiring programs alongside collaborating researchers such as UT Health San Antonio, the City of San Antonio, Morgan’s Wonderland and Southwest Research Institute. The RIGs meet once a month and are self-governing with management support from REDKE.

“With more than 160 faculty researchers collaborating across eight distinct fields of research, the Research Interest Groups show how important transdisciplinary research is in addressing global grand challenges,” said Siddhant Fleming, REDKE’s senior director for research development. “Every college is represented in the RIGs, with members focused on obtaining funding to advance their research.”

REDKE has convened five new research interest groups in the past year:

**DATA SCIENCE:** Led by David Mongeau, founding director of the UTSA School of Data Science, and Jianwei Niu, professor of computer science, the group provides a forum for UTSA researchers from across disciplines and the extended community to work collaboratively on emerging transdisciplinary fields in data science. In addition to their involvement in the opening of San Pedro I in January, the Data Science RIG team will participate in a spring Generation AI Summit, driven by the MITRE GenAI Team.

**INTERNET OF THINGS (IOT):** Led by Dakai Zhu, professor of computer science, this RIG enables researchers from across different disciplines to work collaboratively on related projects from foundations in design and development of IoTs to their applications, including IoT design and optimization, IoT-enabled intelligent systems, and IoT-driven data analytics. The members are organizing the Cyber-Physical Systems & Internet-of-Things Week, which would bring five worldwide top conferences—Hybrid Systems: Computation and Control, International Conference on Cyber-Physical Systems, Internet of Things Design and Implementation, Information Processing in Sensor Networks (IPSN), and the Real-Time and Embedded Technology and Applications Symposium—to UTSA in May 2023. Sponsorship options are available and interested parties should contact the RIG.

**CLIMATE & GLOBAL SUSTAINABILITY:** Led by Chris Packham, professor of astronomy, members of this RIG are interested in the intersection of the physical and human in the social realm, law and policy-related issues, the effect of climate change on communities, education, and monitoring and modeling. They are focused on applying for federal grants regarding climate and education, and monitoring and modeling. Researchers also present their ongoing projects at each monthly meeting.

**COMMUNITY SOLUTIONS:** Led by Adolfo Matamoros, professor of civil engineering, members focus on joint projects championed by and with the City of San Antonio’s Office of Innovation to improve the quality of life for residents. UTSA faculty members work on research projects designed to improve the quality of life for city residents; pursue federal funding for these collaborative projects; and inform policy that can impact economic development and urban planning. The relationship was solidified with the signing of a memorandum of understanding (MOU) to create the R&D League back in 2020 with the university being a founding member.

**QUANTUM COMPUTATION AND QUANTUM INFORMATION:** Led by Jeff Prevost, professor of electrical and computer engineering, the Quantum RIG is working on a $5 million National Science Foundation (NSF) award application for a project entitled, “Expanding Capacity in Quantum Information Science and Engineering (ExpandQISE).” The NSF funding will help UTSA quantum researchers expand their efforts into new areas, leading to both novel research and new course offerings. One particularly critical area where advances in quantum are expected to make a societal-level impact is in cryptography.

**HUMAN PERFORMANCE:** The Human Performance RIG enters its second year with a leadership change. Marzieh Hajaghamemar, professor of biomechanical engineering, has taken over the reins. Members of the Human Performance RIG have submitted proposals for internal funding from REDKE that will be announced in the new year.

**SOCIAL AND ENVIRONMENTAL CHALLENGES IN LATIN AMERICA (SECLA):** Led by Jason Yaeger, professor of anthropology, the SECLA RIG had a successful first showcase on Earth Day earlier this year. SECLA members gave brief presentations on their current research in social and environmental challenges in Latin America. Valerie Muller, veteran of modern languages and literatures, showed her short film, “El Caso de la Carne/The Case of Meat.” Jessica Elise, professor of communication, presented and discussed her book, “Colombian Coffee Farmers and the Fight to Adapt to Climate Change: Engaged Research in Action.”
UTSA BECOMES FOUNDING MEMBER OF ALLIANCE OF HISPANIC SERVING RESEARCH UNIVERSITIES, FOCUSES ON INCREASING STUDENT AND FACULTY DIVERSITY

The University of Texas at San Antonio has become a founding member of the Alliance of Hispanic Serving Research Universities, a consortium established by 20 of the nation’s top research institutions.

To advance social mobility and economic opportunities for Latino students and their communities, members of the Alliance initially aim to double the number of Hispanic doctorate students and increase the number of Hispanic faculty members by 20% at their institutions by 2030.

Looking ahead, the Alliance intends to pursue federal and philanthropic funding opportunities to further advance its goals and to collaborate closely around research opportunities in STEM fields with significant underrepresentation. UTSA will intentionally leverage its membership in the Alliance to build on its efforts to grow and diversify its doctoral programs and faculty.

The founding membership of the Alliance for Hispanic Serving Research Universities includes seven Texas institutions by 2030.

Other founding members include Arizona State University, City University of New York Graduate Center, Florida International University, University of Arizona, University of New Mexico, UC Irvine, UC Riverside, UC Santa Barbara, UC Santa Cruz, University of Central Florida, University of Colorado Denver, University of Illinois Chicago and University of Nevada, Las Vegas.

UTSA EARNED PRESTIGIOUS FULBRIGHT HSI AWARD FOR COMMITMENT TO DIVERSITY, RESEARCH EXCELLENCE

In October 2022, UTSA was named a Fulbright HSI (Hispanic Serving Institution) Leader by the U.S. Department of State’s Bureau of Educational and Cultural Affairs (ECA). This designation recognizes the university’s noteworthy engagement with the Fulbright Program, the U.S. government’s flagship international educational exchange program.

UTSA is one of 43 HSIs to earn this elite designation, which honors the institution’s success in helping students and faculty benefit from a variety of Fulbright opportunities during the 2021-2022 academic year. The designation exemplifies UTSA’s deep commitment to international exchange and to building lasting connections between the U.S. and other countries, noted U.S. Secretary of State Antony J. Blinken in a congratulatory letter to UTSA President Taylor Eighmy.

UTSA’s inclusion in the program is representative of its commitment to purposefully implement policies, practices and systems to accelerate the success of Latinos and other underrepresented communities, noted Eighmy.

HACU SELECTS THREE UTSA FELLOWS FOR LA ACADEMIA DE LIDERAZGO

Three UTSA professionals are among 25 academics nationwide named fellows in the Hispanic Association of Colleges and Universities (HACU) Leadership Academy/La Academia de Liderazgo for the 2022-2023 academic year.

- Sandra D. Garcia, Ed.D., assistant vice president of sponsored project administration, Office of the Vice President for Research, Economic Development, and Knowledge Enterprise
- Juan B. Gutiérrez, Ph.D., professor and chair of the Department of Mathematics, College of Sciences
- René Zenteno, Ph.D., professor, Department of Demography, College for Health, Community and Policy

Among the programs offered at UTSA is the Fulbright Student Program, which provides graduating college seniors, graduate students and young professionals with the opportunity to teach English, earn funding for graduate programs abroad or conduct independent research in any of more than 140 countries with funding from the student program.

UTSA is currently home to nine faculty members who are Fulbright U.S. Scholar award recipients. The program allows American faculty the opportunity to teach, conduct research and lead related professional projects in over 130 countries.

The one-year fellowship program is designed to prepare the next generation of culturally-diverse leaders for executive leadership roles in higher education, in particular, at Hispanic-Serving Institutions (HSIs).

UTSA has had at least one fellow in each cohort since the HACU Leadership Academy began in 2019, including Enrique Aleman, Jr., in 2019-2020, Rhonda Gonzales in 2020-2021, and Juan Manuel Sanchez in 2021-2022.

The academy was developed as a direct response to the declining rate of Hispanic university presidents despite the unprecedented growth of U.S. Hispanic college student enrollment. Founded in 1986, HACU champions Hispanic success in higher education and is the only national association representing existing and emerging HSIs.

UTSA faculty, staff, and students regularly benefit from leadership development and networking opportunities offered through HACU’s highly-regarded institutes, academies, and conferences.
UTSA AWARDED $3M NSF GRANT TO SUPPORT HISPANIC AND UNDERREPRESENTED STUDENTS IN STEM

UTSA has been awarded a five-year, $3 million grant from the National Science Foundation (NSF) to study pedagogical approaches for supporting Hispanic and underrepresented students in STEM disciplines.

The funding will advance the university’s strategic goal to become a model for student success, a great public research university, and an exemplar for strategic growth and innovative excellence.

Senior Vice Provost for Academic Affairs and Dean of the University, Heather Shipey, will serve as principal investigator for the project, titled “HSI Institutional Transformation Project: STEM Undergraduate Education through a Hispanic Student Success Framework.”

Co-principal investigators are Mark Appleford, associate vice provost of undergraduate studies and associate professor of biomedical engineering in the Margie and Bill Klesse College of Engineering and Integrated Design; Arturo Montoya, associate dean of undergraduate studies in the Klesse College and associate professor of civil engineering and environmental engineering and construction management; and Vanessa Sansone, assistant professor of educational leadership in the College of Education and Human Development.

The goal of the cross-disciplinary team, said Shipey, is to develop an HSI Student Success Servingness Framework that can be replicated at other HSIs nationwide.

UT-Led SOUTHWEST RESEARCH TEAM AWARDED NSF I-CORPS HUB FOR $15M

UTSA is a member of the award-winning team that was recently awarded with a new National Science Foundation (NSF) Innovation Corps (I-Corps) award valued at $3 million for five years, for a total of $15 million. Known as the NSF I-Corps Hub: Southwest region (SW Hub), this team will help scale the NSF-led National Innovation Network (NIN), accelerating the translation of discoveries into new solutions that benefit society in the region.

The Southwest team is one of only five teams in the country to receive this award. Comprised of a regional alliance led by The University of Texas at Austin, there are eight partner institutions who have banded together including Louisiana State University, New Mexico State University (NMSU), Oklahoma State University, Rice University, Texas A&M University, The University of Texas at El Paso (UTEP) and UTSA.

The three UT institutions already partner on the established Texas Venture Mentoring Service (VMS), which connects community mentors with entrepreneurial teams at the university. This group promotes commercialization and business partnership for ventures advancing through the I-Corps program to evolve into startups and small businesses. They translate the deep technology sparked on campus into products that benefit the general public and improve quality of life.

UTSA was designated an NSF I-Corps Site back in 2014, making it the first in Texas to receive this designation. To date, UTSA has trained 53 teams through regional programs and assisted 17 to succeed with national program applications. Over 64% of teams trained regionally include at least one member from underrepresented groups, making UTSA a key partner in the SW Hub’s broadening participation activities.

Teja Guda, the Jacobson Distinguished Professor of Innovation and Entrepreneurship, is the principal investigator (PI) at UTSA for this most recent NSF award. Since 2018, Guda has been the PI of the UTSA I-Corps Site and has participated himself in regional and national I-Corps programming with student teams. This grant will allow continued programs at UTSA to hold bootcamps, workshops for team-community engagement and coordinated intensive entrepreneurial training cohorts for students and faculty.

SCHOOL OF DATA SCIENCE USES ROWDY DATATHON TO AMPLIFY A STUDENT-LED TRADITION

“Those who lead the resting generation are those who always have the best interests of the next generation at heart,” said Juan Gutiérrez, professor and chair of the UTSA Department of Mathematics. “One of the main considerations was to expose data hackers, or ‘dackers’ to the real complexity of data analysis.”

The UTSA School of Data Science (SDS) recently hosted its first annual Rowdy Datathon at the National Security Collaboration Center’s (NSCC) conference space on the UTSA Main Campus. The event, a partnership between the SDS, NSCC, the Association for Computing Machinery (ACM) at UTSA and the National Security Agency (NSA), continues UTSA’s tradition of student-led computer science events.

The NSA reached out to UTSA to host the event since the university is one of the NSA’s core data science partners. “The NSA wanted to see if we could organize a data science competition for students,” said Jianwei Niu, UTSA professor of computer science, associate dean of University College and an SDS faculty member. “I leveraged the experience UTSA has had in organizing six or seven hackathons in the past and said, ‘We have a wonderful group of student leaders, so let’s see if they can take on this challenge and organize the first datathon on campus.’”

Students who attended the datathon explored data science questions with their peers and competed to investigate the socioeconomic factors that influence low birthweight and newborn mortality. The challenge was framed as a commission by a fictitious government agency attempting to project these outcomes in Texas in the year 2030.

Inaugural Rowdy Datathon winners:
- **Intermediate Track**
  - **First Place:** Team Millison, Ana Sanchez, Swapomiti Surampudi, Clarisse Cabagay and Yamshi Fonalla
  - **Second Place:** Consistency of Birth Analysis Test, Parker Leathers and Laura Barnes
- **Beginner Track**
  - **First Place:** Brown Family, Nathan Zuriga and Dalen Ricks
  - **Second Place:** Cryptobismal, Megan Pedraza, Margaret Heaphy, Aidan Quandt and Arron Delgado

UTSA RESEARCH, ECONOMIC DEVELOPMENT, AND KNOWLEDGE ENTERPRISE
UTSA KNOWLEDGE ENTERPRISE SUPPORTS 76 FACULTY MEMBERS WITH RESEARCH TRAVEL AWARDS

Closing out FY22, the UTSA Office for Research, Economic Development, and Knowledge Enterprise (REDKE) awarded 76 faculty members with over $85,000 in research-related travel awards. Collectively, UTSA researchers logged over 130,000 miles, covering 22 states and nine countries including Guatemala, France, Mexico, Norway, Slovenia, Spain, Thailand, Turkey and Italy.

Complementing similar programs from UTSA Academic Affairs and the colleges, REDKE launched this new travel support program in 2021-22 to help faculty defray the costs associated with their research activities. Travel expenses are often not covered by extramural funding, leaving a gap in faculty member’s ability to travel for scholarly engagements. Dissemination of their research and networking with peers are crucial for professional development. These activities also enhance the institution’s research portfolio and reputation.

“Coming out of the pandemic, where travel was suddenly halted, it was a priority to kickstart faculty research once again,” said Jaclyn Shaw, interim vice president for REDKE. “Some projects have been ongoing for years, supporting the local economies of certain regions, while new projects couldn’t wait any longer. While the majority of the funds support scholarly research, some of the funds were used to develop critical research relationships with peer institutions.”

More than 60% of the overall funds were given to faculty in the arts and social sciences. While the majority of the funds were used by faculty to present research findings at conferences and other scholarly meetings, a small number were used to engage in independent or collaborative research projects. Some met with program officers at granting agencies to pursue additional funding and professional development opportunities. A few were used to support musical performances and one art installation. UTSA faculty subject matter experts were also invited to speak at the DC-based AI & Quantum conference co-hosted by the MATRIX AI Consortium, BigBear.ai, and the Maryland Innovation & Security Institute.

UTSA A KEY CONTRIBUTOR TO INNOVATION ECOSYSTEM AS UT SYSTEM RANKS NO. 3 FOR U.S. PATENTS GRANTED WORLDWIDE

The National Academy of Inventors (NAI) and the Intellectual Property Owners Association (IPO) announced the Top 100 Worldwide Universities Granted U.S. Utility Patents for 2021 with UT System taking the third spot once again.

Researchers from the 13 UT institutions were issued 203 patents collectively from the U.S. Patent and Trademark Office this past calendar year. UT System has ranked in the Top 5 for the past four years.

UTSA contributed 21 patents to the UT System’s collective efforts, which is 10.3% of total patents issued for System, doubling UTSA’s contributing percentage from the previous year. These patents were mostly in biosciences, cyber, and advanced materials, including a number of medical devices. This positions the institution’s output higher above the system average when normalized to research activity.

“UTSA has a history of supporting innovation. We were the first university in Texas back in 2014 to be designated an Innovation Corps (I-Corps) Site. This program, along with our other initiatives, has allowed us to foster a vital ecosystem for ideas to flourish into tangible new technologies and products,” said Rod McSherry, associate vice president for research, economic development, and knowledge enterprise at UTSA.

UTSA’s Office of Commercialization and Innovation, led by Christine Burke, has numerous invention management resources to help the research community, from technology management through commercialization of new products such as prototype development funding, startup assistance, technology licensing, and new venture mentoring.