
The University of Texas at San Antonio
The Office of the Vice President for Research

Bernard Arulanandam, Ph.D., M.B.A.
Interim Vice President for Research

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Assistant Vice President, Research Finance and Operations

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Director, Office of Commercialization and Tech Transfer

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Director, Research Support

Prepared by the Office of the Vice President for Research. Design and Production: Austin Gutierrez and Sarah Hada

Revised 2018. Data sources include: Office of Sponsored Programs Administration, Office of Research Support, Office of Commercialization and Innovation, Office of Research Integrity, and Office of Research Finance and Operations. All financial data has been rounded to the nearest dollar. Contributors include: Neal Guentzel, Ana Laredo, Arya Singh, UTSA Today, and more.

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Associate Deans for Research
Hazem Rashed-Ali
College of Architecture, Construction & Planning

Hamid Beladi
College of Business

Amaury Nora
College of Education and Human Development

Harry Millwater
College of Engineering

Raquel Marquez
College of Liberal and Fine Arts

Robert Tillyer
College of Public Policy

Janakiram Seshu
Graduate School

Floyd Wormley
College of Science
Welcome to our annual report for 2016-2017, focused on the research activities of the faculty, students, staff, and partners at the University of Texas at San Antonio (UTSA).

Over the past year (FY 2017), UTSA grew its institutional research portfolio, engaged more students, and built partnerships with industry and government to expand funded research, leading UTSA research expenditures to reach an institutional record high. Total research expenditures increased from $56.8 million (FY 2016) to $68.1 million (FY 2017), an increase of 19.9 percent. The university’s restricted research expenditures grew from $36.4 million (FY 2016) to $40.1 million (FY 2017). This growth will help UTSA move closer toward becoming recognized as a research intensive (R1) university, as measured by the Carnegie Foundation for the Advancement of Teaching, and meeting eligibility for Texas’ National Research University Fund (NRUF).

Our office has developed key strategies in evolving and enhancing our initiatives and programs, and growing and diversifying our funding dollars and base. Everyone plays an active role in achieving this milestone. We celebrate our faculty, students, administrators and collaborators, engaged in discovery. We want everyone to feel empowered to seize the available opportunities and be bold in their approach in growing the research enterprise on campus.

We hope you enjoy this snapshot of our current activities and welcome your feedback.

Regards,

Bernard Arulanandam
Interim Vice President for Research, Economic Development, and Knowledge Enterprise
Expenditure Summary

**TOTAL EXPENDITURES**

Research Expenditures

**$68,137,972**
### Research Expenditure Breakdown by College/Unit

<table>
<thead>
<tr>
<th>College</th>
<th>Amount Requested</th>
<th>College</th>
<th>Amount Requested</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architecture, Construction, and Planning (CACP)</td>
<td>$316,138</td>
<td>Honors College</td>
<td>$10,953</td>
</tr>
<tr>
<td>Business (COB)</td>
<td>$4,437,624</td>
<td>University (UNIV)</td>
<td>$3,389,529</td>
</tr>
<tr>
<td>Education &amp; Human Development (COEHD)</td>
<td>$3,871,790</td>
<td>Vice President for Research (VPR)</td>
<td>$3,171,964</td>
</tr>
<tr>
<td>Engineering (COE)</td>
<td>$14,414,150</td>
<td>VPAA, VPSE, VPBA, VPEA</td>
<td>$713,173</td>
</tr>
<tr>
<td>Liberal &amp; Fine Arts (COLFA)</td>
<td>$4,547,638</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public Policy (COPP)</td>
<td>$1,071,522</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sciences (COS)</td>
<td>$32,193,490</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$68,137,972</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Expenditure Percentage

**By College**

- 0.5% CACP
- 6.5% COB
- 5.7% COEHD
- 21.2% COE
- 6.7% COLFA
- 1.6% COPP
- 47.3% COS
- 0.02% HONORS
- 5.0% UNIV
- 4.7% VPR
- 1.1% VPAA, VPSE, VPBA, VPEA
## Expenditure Breakdown by Type

<table>
<thead>
<tr>
<th>Restricted Research</th>
<th>FY 2007</th>
<th>FY 2017</th>
<th>10 Year % Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal</td>
<td>$21,669,297</td>
<td>$29,947,180</td>
<td>38.2%</td>
</tr>
<tr>
<td>Non-Federal</td>
<td>$3,587,767</td>
<td>$10,144,517</td>
<td>182.75%</td>
</tr>
</tbody>
</table>

**FEDERAL**

**NON-FEDERAL**

**FY 2017**  
**RESTRICTED RESEARCH**
Educational, Outreach, and Support Expenditure Breakdown by College

<table>
<thead>
<tr>
<th>College</th>
<th>Amount Requested</th>
<th>College</th>
<th>Amount Requested</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architecture, Construction, and Planning (CACP)</td>
<td>$5,991,419</td>
<td>Public Policy (COPP)</td>
<td>$8,498,770</td>
</tr>
<tr>
<td>Business (COB)</td>
<td>$28,790,478</td>
<td>Sciences (COS)</td>
<td>$32,951,207</td>
</tr>
<tr>
<td>Education &amp; Human Development (COEHD)</td>
<td>$20,217,420</td>
<td>Honors</td>
<td>$1,026,826</td>
</tr>
<tr>
<td>Engineering (COE)</td>
<td>$13,986,041</td>
<td>Other (Library, VPA, VPAA, VPBA, VPEA, VPR, VPSA, VPSE, VPSS, Other, UNIV)</td>
<td>$132,828,965</td>
</tr>
<tr>
<td>Liberal &amp; Fine Arts (COLFA)</td>
<td>$29,068,201</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$29,068,201</strong></td>
<td><strong>$273,359,326</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Expenditure Breakdown by College**

- **2.2%** CACP
- **10.5%** COB
- **7.4%** COEHD
- **5.1%** COE
- **10.6%** COLFA
- **3.1%** COPP
- **12.1%** COS
- **.4%** HONORS
- **48.6%** OTHER (LIBRARY, VPA, VPAA, VPBA, VPEA, VPR, VPSA, VPSE, VPSS, OTHER, UNIV)
# Proposal Submissions

## SUBMISSION BY COLLEGE

<table>
<thead>
<tr>
<th>College</th>
<th>Submitted</th>
<th>Amount Requested</th>
</tr>
</thead>
<tbody>
<tr>
<td>CACP</td>
<td>21</td>
<td>$787,460</td>
</tr>
<tr>
<td>COB</td>
<td>43</td>
<td>$34,794,707</td>
</tr>
<tr>
<td>COEHD</td>
<td>134</td>
<td>$40,889,614</td>
</tr>
<tr>
<td>COE</td>
<td>247</td>
<td>$153,373,772</td>
</tr>
<tr>
<td>COLFA</td>
<td>107</td>
<td>$13,498,430</td>
</tr>
<tr>
<td>COPP</td>
<td>25</td>
<td>$37,386,436</td>
</tr>
<tr>
<td>COS</td>
<td>264</td>
<td>$172,000,946</td>
</tr>
<tr>
<td>UNIV</td>
<td>8</td>
<td>$1,899,412</td>
</tr>
<tr>
<td>VPAA, VPBA, Library</td>
<td>9</td>
<td>$1,577,938</td>
</tr>
<tr>
<td>VPREDKE</td>
<td>31</td>
<td>$8,776,508</td>
</tr>
<tr>
<td>VPSE</td>
<td>19</td>
<td>$8,197,914</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>908</strong></td>
<td><strong>$473,183,136</strong></td>
</tr>
</tbody>
</table>

## SUBMISSION PERCENTAGE BY COLLEGE

- **0.2%** CACP
- **7.4%** COB
- **8.6%** COEHD
- **32.4%** COE
- **2.9%** COLFA
- **7.9%** COPP
- **36.4%** COS
- **1.6%** VPREDKE
- **1.7%** VPSE
- **0.4%** UNIV
- **0.3%** VPAA, VPBA, LIBRARY
Proposal Submissions

SUBMISSION BY SPONSOR TYPE

<table>
<thead>
<tr>
<th>Sponsor Type</th>
<th>Submitted Requests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Government</td>
<td>334</td>
</tr>
<tr>
<td>State Government</td>
<td>169</td>
</tr>
<tr>
<td>Private</td>
<td>116</td>
</tr>
<tr>
<td>Federal Pass Through</td>
<td>151</td>
</tr>
<tr>
<td>Foundation</td>
<td>69</td>
</tr>
<tr>
<td>Local Government</td>
<td>32</td>
</tr>
<tr>
<td>Other Government</td>
<td>19</td>
</tr>
<tr>
<td>Business</td>
<td>17</td>
</tr>
<tr>
<td>Development &amp; Gifts</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>908</strong></td>
</tr>
</tbody>
</table>

36.5% FEDERAL GOVERNMENT
18.7% STATE GOVERNMENT
12.8% PRIVATE
16.8% FEDERAL PASS THROUGH
7.6% FOUNDATION
3.6% LOCAL GOVERNMENT
2.1% OTHER GOVERNMENT
1.9% BUSINESS
0.1% DEVELOPMENT & GIFTS
# College Awards

## NUMBER OF AWARDS BY COLLEGE

<table>
<thead>
<tr>
<th>College</th>
<th>FY 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>CACP</td>
<td>12</td>
</tr>
<tr>
<td>COB</td>
<td>11</td>
</tr>
<tr>
<td>COEHD</td>
<td>47</td>
</tr>
<tr>
<td>COE</td>
<td>70</td>
</tr>
<tr>
<td>COLFA</td>
<td>72</td>
</tr>
<tr>
<td>COPP</td>
<td>14</td>
</tr>
<tr>
<td>COS</td>
<td>85</td>
</tr>
<tr>
<td>UNIV</td>
<td>7</td>
</tr>
<tr>
<td>VPAA, VPBA</td>
<td>5</td>
</tr>
<tr>
<td>VPREDKE</td>
<td>27</td>
</tr>
<tr>
<td>VPSE</td>
<td>14</td>
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</tbody>
</table>

## AMOUNT AWARDED BY COLLEGE

<table>
<thead>
<tr>
<th>College</th>
<th>FY 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>CACP</td>
<td>$181,155</td>
</tr>
<tr>
<td>COB</td>
<td>$4,067,204</td>
</tr>
<tr>
<td>COEHD</td>
<td>$5,171,807</td>
</tr>
<tr>
<td>COE</td>
<td>$12,849,155</td>
</tr>
<tr>
<td>COLFA</td>
<td>$5,686,775</td>
</tr>
<tr>
<td>COPP</td>
<td>$1,098,416</td>
</tr>
<tr>
<td>COS</td>
<td>$31,665,072</td>
</tr>
<tr>
<td>UNIV</td>
<td>$2,453,126</td>
</tr>
<tr>
<td>VPAA, VPBA</td>
<td>$920,450</td>
</tr>
<tr>
<td>VPREDKE</td>
<td>$9,043,395</td>
</tr>
<tr>
<td>VPSE</td>
<td>$2,970,112</td>
</tr>
</tbody>
</table>

## AWARD PERCENTAGE

### BY COLLEGE

- **0.2%** CACP
- **5.3%** COB
- **6.8%** COEHD
- **16.9%** COE
- **7.5%** COLFA
- **1.4%** COPP
- **41.6%** COS
- **3.2%** UNIV
- **1.2%** VPAA, VPBA
- **11.9%** VPREDKE
- **3.9%** VPSE

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Total: 364 awards

Total: $76,106,667
# Top 10 Largest Grants

<table>
<thead>
<tr>
<th>Rank</th>
<th>Name(s)</th>
<th>Department(s)</th>
<th>Project Description</th>
<th>Source(s)</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ravi Sandhu, Nicole Beebe, Jeff Prevost, Guadalupe Carmona-Dominguez, Ram Krishnan</td>
<td>Institute for Cyber Security (ICS) COS, Cyber Center for Security and Analytics (CCSA) COB, Open Cloud Institute (OCI) COE, College of Education and Human Development</td>
<td>Computing (C-SPECC)</td>
<td>National Science Foundation</td>
<td>$5,000,000</td>
</tr>
<tr>
<td>2</td>
<td>Gregory White, Nicole Beebe</td>
<td>College of Sciences, Cyber Center for Security and Analytics (CCSA) COB</td>
<td>Renewal of the Scholarship for Service Program</td>
<td>National Science Foundation</td>
<td>$3,737,836</td>
</tr>
<tr>
<td>4</td>
<td>Zenong Ying, Erica Sosa, Meizi He</td>
<td>College of Education and Human Development</td>
<td>Obesity Prevention in Head Start: The Maranos! Program</td>
<td>National Institutes of Health</td>
<td>$3,154,923</td>
</tr>
<tr>
<td>5</td>
<td>Gregory White, Natalie Granado</td>
<td>Center for Infrastructure Assurance and Security (CIAS), Center for Infrastructure Assurance and Security (CIAS)</td>
<td>State and Community Coordinated Cybersecurity Training</td>
<td>US Dept of Homeland Security</td>
<td>$3,015,000</td>
</tr>
<tr>
<td>6</td>
<td>Rhonda Gonzales</td>
<td>History COLFA</td>
<td>Emporium Math Core Curriculum Redesign and Scale-up: STEM and Business</td>
<td>Univ of TX System 720</td>
<td>$2,957,228</td>
</tr>
<tr>
<td>7</td>
<td>Albert Salgado</td>
<td>Small Business Development Center IED</td>
<td>South West TX SBDC Program Renewal FY16-17 YR2</td>
<td>US Small Business Administration</td>
<td>$2,684,228</td>
</tr>
<tr>
<td>8</td>
<td>Charles Wilson</td>
<td>Neurosciences Institute (NI) COS</td>
<td>Oscillations and Resonance in Basal Ganglia Circuits</td>
<td>NIH Natl Inst of Neuro Disorder/Stroke</td>
<td>$1,984,497</td>
</tr>
<tr>
<td>9</td>
<td>Karl Klose</td>
<td>South Texas Center for Emerging Infectious Diseases (STCEID) COS</td>
<td>Vaccine Candidates for Type A Francisella tularensis</td>
<td>US Dept of Defense</td>
<td>$1,894,583</td>
</tr>
<tr>
<td>10</td>
<td>Shouhuai Xu</td>
<td>Institute for Cyber Security (ICS)</td>
<td>Modeling, Analyzing and Predicting Cyber Attacks</td>
<td>US Dept of the Army</td>
<td>$1,687,509</td>
</tr>
</tbody>
</table>
Office of Commercialization & Innovation

The Office of Commercialization and Innovation (OCI) promotes the creation and commercialization of intellectual property at UTSA by faculty, staff, and students. We manage the university’s portfolio of intellectual property, engage companies in research and commercialization partnerships, and provide intellectual property education and training. OCI also helps bridge the gap between basic research and applied innovation by operating a proof-of-concept fund, supporting commercialization development programs such as the NSF I-Corps™, and promoting entrepreneurship. Through the UTSA New Venture Incubator, we enable university start-ups and partner companies to grow our commercialization activities on campus.

MILESTONES / SUCCESSES

UTSA PROFESSOR DAVID AKOPIAN NAMED FELLOW OF THE NATIONAL ACADEMY OF INVENTORS

David Akopian, professor of electrical and computer engineering, was named a Fellow of the National Academy of Inventors (NAI) in 2017. The honor places Akopian among an elite group of professionals that includes presidents and senior leaders of research universities, Nobel laureates, National Inventors Hall of Fame inductees and National Academies members. With 32 patents to his name, his productivity as an inventor and researcher is exemplary. Due to his industry background, he infuses a real-world, multidisciplinary perspective into his laboratory and classroom.

Akopian’s research interests are in a broad area of communication and navigation systems. He focuses on human-machine interactive mobile applications, wireless sensing, location-finding and software-defined radio technologies. His most recent research projects have focused on mobile interactive solutions for health promotion interventions. One project had his team of students create a series of automated messaging systems that can simulate human conversation, known as “chat-bots,” with the intention of promoting smoking cessation and healthier living. And it’s bilingual: it speaks English and Spanish, with the ability to expand into other languages.

In the course of his academic career, Akopian has acquired 25 issued and seven pending patents exploring various aspects of wireless localization systems, indoor wireless technologies and human-machine wireless concepts. Several of his patents have been used in Nokia products and UTSA testbed systems serving several federal and state projects. He has received four inventor awards from UTSA and Nokia.

His research has been supported by the National Science Foundation, National Institutes of Health (NIH), USAF, NAVSEA, ONR, Texas Higher Education Coordinating Board, CPRIT-TX, San Antonio Life Sciences Institute (SALSI) and the US Air Force Academy (USAFA).

STUDENT-LED TEAM DEVELOP INFRAVEIN, A VEIN-FINDING MEDICAL DEVICE

InfraVein, a student-led team, was awarded $50,000 grant from the National Science Foundation (NSF) to commercialize and support the continued development of InfraVein. InfraVein uses an infrared camera to make veins easier to detect, so that needle insertion is as simple and painless as possible. The original team of engineering and business undergraduate students included Kristen Hamalainen ’16, Sanjiv Patel ’16, Andrew Shiel ’16, Kreg Zimmern ’16, Rachel Loeffler ’16, Cody Baker ’16, Alexis Morales ’16 and Ileana Gonzales ’16. They won the top prize at the UTSA Center for Innovation, Technology and Entrepreneurship (CITE) $100K Student Technology Venture Competition in 2016.

The team headed to Boston for the NSF I-Corps to test and expand their business model and explore ways to market the device. They have since discovered that their device had many possible applications, from helping doctors insert needles in people with small veins or aiding in catheter insertion, to helping babies whose tiny veins can be hard for medical professionals to find and access. Dr. Teja Guda (College of Engineering) is the mentor.
Commercialization Activity Summary

Technology innovation and commercialization are major focuses of the UT System and other Tier One universities throughout the state and nation. The office establishes UTSA procedures and policies for technology transfer and commercialization, and provides training to faculty, staff, and students. It also spearheads a commercialization council that connects UTSA with regional technology commercialization partners.

<table>
<thead>
<tr>
<th>Activity</th>
<th>FY 13</th>
<th>FY 14</th>
<th>FY 15</th>
<th>FY 16</th>
<th>FY 17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial Agreements (Contract, SRA, MOU, NDA, &amp; MTA)</td>
<td>52</td>
<td>84</td>
<td>105</td>
<td>143</td>
<td>109</td>
</tr>
<tr>
<td>New Invention Disclosures</td>
<td>62</td>
<td>56</td>
<td>41</td>
<td>53</td>
<td>62</td>
</tr>
<tr>
<td>Patents Filed</td>
<td>76</td>
<td>75</td>
<td>69</td>
<td>71</td>
<td>53</td>
</tr>
<tr>
<td>Copyrights &amp; Trademarks</td>
<td>6</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>New License/Options Signed</td>
<td>10</td>
<td>5</td>
<td>7</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>New Technologies Licensed/Optioned</td>
<td>10</td>
<td>8</td>
<td>7</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>Student Entrepreneurs</td>
<td>Business Plan Competition</td>
<td>128</td>
<td>102</td>
<td>74</td>
<td>83</td>
</tr>
<tr>
<td>Student Companies</td>
<td>Business Plan Competitions</td>
<td>19</td>
<td>16</td>
<td>14</td>
<td>18</td>
</tr>
<tr>
<td>Entrepreneurs Trained at Boot Camp</td>
<td>295</td>
<td>310</td>
<td>329</td>
<td>376</td>
<td>499</td>
</tr>
<tr>
<td>Companies Incubated (New Venture Incubator)</td>
<td>13</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>7</td>
</tr>
</tbody>
</table>

5-YEAR (‘13–’17) INVENTION DISCLOSURES

BY COLLEGE

- College of Engineering: 63%
- College of Sciences: 38%
- Other (All Other UTSA College Units): 5%

2017 INVENTION DISCLOSURE BY COLLEGE

BY COLLEGE

- College of Engineering: 71%
- College of Sciences: 24%
- Other (All Other UTSA College Units): 5%
The Office of the Vice President for Research (VPR) offers a variety of internal awards to encourage faculty to seek out new research ideas and expand scholarly works.

**FY 2017 AWARD TOTALS**

<table>
<thead>
<tr>
<th>Institution</th>
<th>Awards</th>
<th>Total Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>CACP</td>
<td>2</td>
<td>$25,000</td>
</tr>
<tr>
<td>COB</td>
<td>7</td>
<td>$35,000</td>
</tr>
<tr>
<td>COE</td>
<td>6</td>
<td>$179,821</td>
</tr>
<tr>
<td>COEHD</td>
<td>4</td>
<td>$35,000</td>
</tr>
<tr>
<td>COLFA</td>
<td>10</td>
<td>$63,128</td>
</tr>
<tr>
<td>COPP</td>
<td>3</td>
<td>$30,000</td>
</tr>
<tr>
<td>COS</td>
<td>2</td>
<td>$40,000</td>
</tr>
</tbody>
</table>

**Total**

$407,949

**IN FISCAL YEAR 2016, THE VPR AWARDED:**

44 Seed Grant Awards

**Totaling**

$559,066

VPR tracks two years of research output. Return on seeding research for FY2015 Awardees generated:

**AS OF SPRING 2017**

35 Grant Submissions

13 Awards

40 Submitted Publications

43 Undergraduate Students

23 Graduate Students

01 Patents/Copyrights Filed

13 Other Scholarly Works

**RESULTED IN A RETURN ON INVESTMENT TOTALING:**

$2,102,090

**TOTALING**

$2,102,090
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 UTSA’s goal of reaching Tier One status.

The CONNECT Program is a joint effort between The UTSA and the Southwest Research Institute (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.

The Connect program was founded to enhance scientific collaboration between SwRI and UTSA and increase their research funding base. The two selected projects will investigate biofilm corrosion in pipelines and an ultrasound drug delivery methodology.

**Heather Shipley, Ph.D, UTSA and Tony Reeves, Ph.D, SwRI**

**Molecular Characterization and Quorum Sensing of Microbiologically Influenced Corrosion (MIC) Bacteria in Pipeline Populations**

**Jing Yong Ye, Ph.D., UTSA and Jian Ling, Ph.D., SwRI**

**Ultrasound Mediated Drug Delivery in 3D Tissue Model Quantified by Photoacoustic Tomography**

**College of Architecture**

**Shelley Roff, Ph.D.**

The Inventory and Analysis of the Tools and Building Materials of Eighteenth-Century Spanish Mission Architecture in the Texas Region

**College of Engineering**

**Jie Huang, Ph.D.**

Converting Ubiquitous Biomass into Sustainable Civil Engineering Materials Based on Polymerization and Cross-linking

**Pranav Bhounsule, Ph.D.**

Highly Customizable, Light Weight Artificial Legs Based on Embedding Actuators and Sensors in 3D Printed Parts.

**Xiaowei Zeng, Ph.D.**

Advancing Cohesive Interface Zone Model for Biomechanics Applications

**College of Public Policy**

**Michael Caudy, Ph.D.**

Elucidating the Mechanisms of Reentry

**College of Sciences**

**Yongli Gao, Ph.D.**

Isotopic Study of Sea Ice: Tracing Moisture Sources of Precipitation and Snow Accumulation in the Polar Regions
The Internal Research Awards (INTRA) program is part of the UTSA Vice President for Research’s 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.

**College of Architecture**

Jae Yong Suk, Ph.D., *Department of Architecture* » Development of Shading Control Algorithm for Enhanced Occupant’s Thermal and Visual Comfort in Buildings

**College of Business**

Edgar A. Ghossoub, Ph.D., *Department of Economics* » What were the effects of the Federal Reserve’s Term Discount Window Program?

Emeka T. Nwaeze, Ph.D., *Department of Accounting* » Seasons of Auditor-Client Relation: Auditor performance and accounting quality

Hu Harrison Liu, Ph.D., *Department of Accounting* » Corporate Responses to the Repatriation Incentives and Domestic Production Activities Deduction of the American Jobs Creation Act of 2004

Juan Mao, Ph.D., *Department of Accounting* » Individual Auditor Audit Workload and Job Turnover: Evidence from China

Matthew W. McCarter, Ph.D., *Department of Management* » It’s a trap! Examining the relationship between self-control and population growth in the 18th century Swedish Commons

**College of Education and Human Development**

Kristen Lindahl, Ph.D., *Department of Bicultural-Bilingual Studies* » The Intersection of Language Awareness and Ideology among in-service Teachers of Emerging Bilinguals

**College of Liberal and Fine Arts**

Andrew Konove, Ph.D., *Department of History* » The Black Market in Mexico City

Bridget Dinka, Ph.D., *Department of English* » The International Conference on Historical Linguistics

LaGuana Gray, Ph.D., *Department of History* » Black Women and Delta Pride: A Tale of Mississippi Catfish

Luis Hestres, Ph.D., *Department of Communication* » New Directions for Research Framing and Networked Gatekeeping

**College of Public Policy**

Francine Romero, Ph.D., *Department of Public Administration* » Political and Policy Dynamics of Municipal Annexation in Texas

Megan Augustyn, Ph.D., *Department of Criminal Justice* » Using the National Crime Victimization Survey to better understand the determinates of help-seeking behavior among victims of intimate-partner and sexual assault

**College of Architecture**

Victor De Oliveira, Ph.D., *Department of Management Science and Statistics* » Modeling Geostatistical Binary Date: Models, Properties and Connections

Zhongxia (Shelly) Ye, Ph.D., *Department of Accounting* » Consequences of Voluntary Disclosures in the Audit Committee Report

**College of Education**

Matthias Hofferberth, Ph.D., *Department of Political Science and Geography* » Get your act(ors) together! Theorizing Agency in World Politics

Thad Bartlett, Ph.D., *Department of Anthropology* » The Singing Apes of Fraser’s Hill: Gibbon Density in a Human Modified Landscape

Viviana Rojas, Ph.D., *Department of Communication* » Iraqi Refugees and Their Integration to the Texas School System

Walter Wilson, Ph.D., *Department of Political Science and Geography* » From Inclusion to Influence: Latino Representation in Congress

Whitney Chappell, Ph.D., *Department of Modern Languages and Literatures* » A Sociophonetic Perception of Spanish Speakers in San Antonio

**College of Public Policy**

Francine Romero, Ph.D., *Department of Public Administration* » Political and Policy Dynamics of Municipal Annexation in Texas

Megan Augustyn, Ph.D., *Department of Criminal Justice* » Using the National Crime Victimization Survey to better understand the determinates of help-seeking behavior among victims of intimate-partner and sexual assault
$30,000 AWARDED:
$10,000 PER RESEARCHER
X 3 NEW RESEARCH PROJECTS

The program is a joint initiative between the Office of the President, Office of the Vice President for Research (VPR), and the College of Education and Human Development (COEHD) at the University of Texas at San Antonio (UTSA). The objectives of this program addressed the UT Chancellor’s Texas Prospect Initiative.

**College of Education and Human Development**

**Becky Huang, Ph.D., Department of Bicultural-Bilingual Studies** » The Contributions of Language Skills to Bilingual Children’s Literacy Development in Early Elementary Grades

**Mistry Sailors, Ph.D., Department of Interdisciplinary Learning and Teaching** » Inferential Thinking in Early Childhood Classrooms

**Rosalind Horowitz, Ph.D., Department of Interdisciplinary Learning and Teaching** » Designing Academic Conversations: Effects on Writing and Reading Argumentation in Science and History

**College of Liberal and Fine Arts**

**Sandra Morissette, Department of Psychology** » Project STRIPE: Student veteran Research in Posttraumatic Experiences

$18,128.00

**College of Sciences**

**Janakiram Seshu, Department of Biology** » Transcriptional and Proteomic Changes in Placental and Neuronal Cell Lines Contributing to Zika Virus Tissue-Tropism

$20,000.00

**College of Engineering**

**Yongcan Cao, Department of Electrical and Computing Engineering** » Human-Inspired Decision Making for Swarm Robots

$19,821.00
The University of Texas at San Antonio’s arts and humanities programs have been ranked No. 66 among the nation’s public universities, according to the 2018 Times Higher Education (THE) World University Arts and Humanities Ranking. The annual rankings measure world-class universities with programs in art, performing arts, languages, history, philosophy, theology, architecture and archaeology.

Drawing upon the methodology for Times Higher Education’s annual World University Rankings, the publication’s arts and humanities ranking is based on key performance indicators in five areas: teaching, research, citations, international outlook and industry income.

UTSA scored particularly high in the citations category, a measurement that evaluates an institution’s research influence by counting the number of times that studies by an institution’s researchers are cited in global scholarly publications.

Overall, Times Higher Education ranked 400 arts and humanities programs in more than 30 countries. One hundred-three U.S. colleges and universities, including six Texas institutions, made this year’s list.

UTSA is one of six Texas universities to be included on this year’s top 400 list. They are:

- UT-AUSTIN
- RICE UNIVERSITY
- TEXAS A&M UNIVERSITY
- BAYLOR UNIVERSITY
- UT-DALLAS
- UTSA

UTSA earns a spot on U.S. News & World Report’s Best Global Universities rankings

The University of Texas at San Antonio (UTSA) has once again been named on a list of the top universities in the world. U.S. News & World Report has ranked UTSA’s academic and research programs No. 75 among U.S. public academic institutions and No. 448 overall in its 2018 Best Global Universities rankings.

U.S. News & World Report assessed the top 1,250 institutions across more than 60 countries and calculated the rankings based on 13 indicators measuring academic and research performance as well as global and regional reputation. They included: regional and global research reputation publications, books, conferences, normalized citation impact, total citations, number and percentage of publications among the top 10 percent most cited, international collaboration, percentage of total publications with international collaboration, and number and percentage of highly cited papers among the top 1 percent most cited.

UTSA scored particularly strong in normalized citation impact (No. 111), regional research reputation (No. 148) and international collaboration (No. 174).
Selected Grant Awards

CLOUD, CYBER, COMPUTING & ANALYTICS
Harry Millwater
Open Cloud Institute (OCI)
"Fleet Management and Efficiency Improvements - Extensions to the SMART|DT Software"
US DOT Federal Aviation Administration
$480,000

ADVANCED MATERIALS
Wassim Ghannoum,
Adolfo Matamoros
Civil Engineering
College of Engineering
“Decision-Oriented Column Simulation Capabilities for Enhancing Disaster Resilience of Reinforced Concrete Buildings”
National Institute of Standards and Technology
$798,892

INTEGRATED BIOMEDICINE
Brian Hermann
San Antonio Cellular Therapeutics Institute (SACTI)
College of Sciences
“Origin and functional significance of the spermatogonial stem cell transcriptome barcode”
National Institutes of Health
$1,547,371

Edward Golob
Jeffrey Mock
College of Liberal & Fine Arts
“Shifting auditory spatial attention: cognitive and neural mechanisms”
NIH Natl Inst of Deafness/Communication
$1,037,531

SOCIAL AND EDUCATIONAL TRANSFORMATION
Joseph Kulhanek
P-20 INITIATIVES
“UB Southside” and “UB Northside - Holmes High School”
US Dept of Education
$2,500,000

SUSTAINABLE COMMUNITIES AND CRITICAL INFRASTRUCTURE
Marcio Giacomoni
Heather Shipley
Civil Engineering
College of Engineering
“Implementation of a Low Impact Development Test Bed on The University of Texas at San Antonio Main Campus”
San Antonio River Authority
$1,069,113