

# Engaging Research

TEXAS  STATE  
RESEARCH AND SPONSORED  
PROGRAMS

Office of the Associate Vice President for Research

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## AVPR Message

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Hello to all of my Texas State colleagues.

I am pleased that we had such positive feedback on our inaugural issue of *Engaging Research* and happy to be introducing the second issue. There is so much going on here at Texas State in the research and scholarly activity arena that our biggest challenge is deciding what to include, but I think you will find some very compelling stories and useful information in these pages. The faculty research spotlights demonstrate all the reasons why Texas State University is “punching above our weight class” as we continue to show growth in our research portfolio. You will read about impressive collaborations and research teams, research addressing real-world problems, and examples of perseverance in staying true to what is important in your career while getting that elusive research grant.

I want to take a moment to thank all of the Research Coordinators for their tremendous work supporting the faculty and for being great partners with my team in the Office of Research and Sponsored Programs. You will see some impressive numbers included in this newsletter documenting our research growth, and that does not happen without great faculty, staff, and students doing the work and everyone pulling together to support them.

Finally, Sara and I have now experienced two winters in Central Texas; so I guess I agree with the saying, “if you’ve seen one winter in Texas, you’ve seen one winter...”. We both appreciated the opportunity to remember how it is back in Northeast Ohio in December but, thank you, just one day is enough.

I look forward to more sunny days and to continuing to work with all of you on advancing our research and scholarly mission.



Dr. Walter E. Horton

## Editorial team

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Kay Hetherly, editor

Evy Gonzales

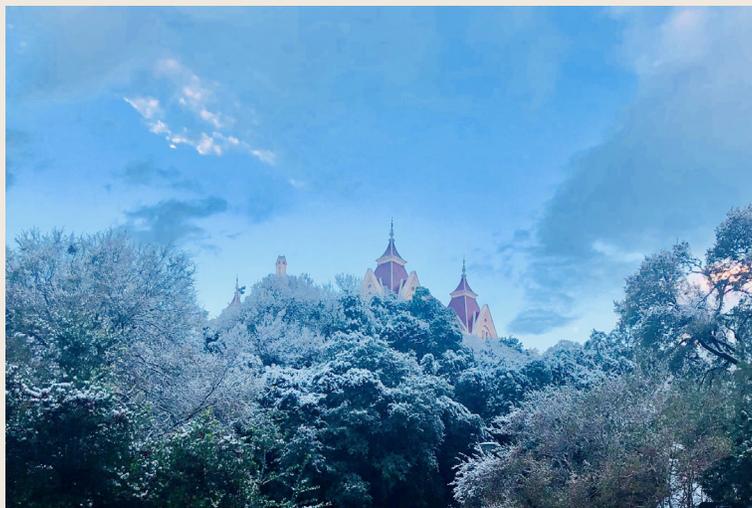
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# Faculty Research Spotlight

## New Faculty Focus: **Shetay Ashford**, Occupational, Workforce, and Leadership Studies

**Background:** I have 13 years of experience in the high-technology industry as a technical trainer, consultant, and global training program manager with Fortune 500 companies such as General Electric and Dell. While working at Dell, I pursued an MSIS degree in the Occupational Education program (OWLS) at Texas State. In May 2016, I graduated with a PhD in career and workforce education from the University of South Florida. As an OWLS graduate, I was inherently drawn to apply for a faculty position at Texas State. In July 2016, I providentially began my journey as a tenure-track Assistant Professor.

**Your research:** My research agenda emphasizes STEM pathways and broadening the participation of historically underrepresented minorities and women of color in the STEM workforce through community economic development, program design and evaluation, intrapreneurship and entrepre-



neurship, and cyberlearning.

Currently, I serve as principal investigator of ACCEYSS (Association of Collaborative Communities Equipping Youth for STEM Success), a design-based research project funded by NSF INCLUDES (Inclusion across the Nation of Communities of

Learners of Underrepresented Discoverers in Engineering and Science). Internally, I have received funding from the Library Research Grant and Research Enhancement Program to support my research on women of color pathways (i.e., counter-life herstories) in computing.

**Research impact:** My research informs policymakers, educators, and researchers about the experiences of historically underrepresented minorities and women of color in STEM education and workforce. It leverages strategic partnerships to widely disseminate innovative and effective strategies for preparing students and women of color to enter and persist in the STEM workforce.

**About you:** I am a native Floridian, born in Tallahassee. In my early childhood, I lived in Neu Ulm, Germany for five years while my father served in the Army. I have also served as a missionary in Ongata Rongai, Kenya and Karnplay, Liberia.

## **Brenda Scheuermann**, Curriculum & Instruction: “I recommend working with a team on smaller projects before submitting a big proposal.”

**Your research:** I am working with Kathy Martinez-Prather and Joe McKenna from the Texas School Safety Center on a project funded by the U.S. Department of Justice, National Institute of Justice (NIJ). We are conducting a randomized controlled trial to evaluate a collaborative, data-driven framework for implementing school-based law enforcement to improve school climate and discipline.

**Research impact:** School-based law enforcement (SBLE) is an increasingly common practice in school districts, yet there have been no rigorous studies to identify optimal implementation of SBLE or components of SBLE programs that contribute to positive outcomes. Our goal is to address that research void and provide guidance for enhancing the efficacy of SBLE programs.

**Highlights:** I think the most exciting aspect to date has been the eagerness to participate that we see in school administrators and law enforcement personnel in our

six partner school districts. Not only are our partner districts excited to be a part of the project, but we have had inquiries from school districts and SBLE programs around the state that are interested in participating. NIJ also seems interested in our work—we have already been asked to present our project at the annual NIJ Comprehensive School Safety Initiative Conference.

**Advice:** I recommend working with a team on smaller projects before submitting a big proposal. That way, you know everyone’s strengths, and you can demonstrate to the funder that your team has a proven track record of collaboration. In your proposal, be sure that your research methods are clear and appropriate for your research questions (explain your instruments and analysis methods for evaluating each research



Joe McKenna, Brenda Scheuermann, and Kathy Martinez-Prather

question). Finally, it is very important to pay attention to every detail of the project in advance: clearly explain how every aspect of your project (e.g., personnel, budget, time commitments, evaluation methods, and instruments) addresses your research questions.

**About you:** I spend a lot of time with family: children, grandchildren, and extended family. I also pursue several hobbies, including dance, yoga, paddle-boarding, travel, and hiking. Sometimes, I’m able to combine several of those interests!

# Faculty Research Spotlight

## Todd Ahlman, Center for Archaeological Studies: “If you cannot sell potential teaming partners on your project, then can you really sell an agency or foundation on your project?”

**Your research:** I have several ongoing research projects. The largest is the university’s five-year cooperative agreement with the US Army Corps of Engineers that has resulted in several archaeological and architectural history projects across the western United States and a natural resources project in Florida.

On campus we are wrapping up a multi-year investigation of the archaeological resources around Spring Lake. This project is funded by the City of San Marcos and has expanded our knowledge of the prehistoric occupation of San Marcos and Central Texas. In addition, I am starting an archaeological project in the Caribbean with Drs. Ashley McKeown and Nicholas Herrmann of the Department of Anthropology, examining how globalization has affected historic communities on the Dutch island of St. Eustatius. We have applied for a National Science Foundation



Research Experiences for Undergraduates grant to fund this research.

**Research impact:** My research focuses on the identification, preservation, and interpretation of archaeological sites. Archaeological sites are fragile, non-renewable resources that are being destroyed on a daily basis, and this loss impacts our ability to gain a better understanding of the past. Through our research, we are able to reach a wider au-

dience and stress the importance of preservation of archaeological sites and other cultural resources in Texas, across the United States, and around the world.

**Collaboration:** The hardest part of putting together a collaborative team is trying to get everyone on the team as excited about your project as you are. I often come up with important selling points about the project’s benefits before approaching potential teaming members. This really helps me hone the message that can then be refined for the proposal. If you cannot sell potential teaming partners on your project, then can you really sell an agency or foundation on your project?

**About you:** When I am not managing various projects and seeking more funding, I enjoy spending time with my family, antique shopping, and cheering on my beloved Huskers.

## Liqin Du, Biochemistry: “Be creative and bold. Research is about discovery of the unknown.”

**Your research:** My primary focus is neuroblastoma, with a goal to identify novel drugs for differentiation therapy. Neuroblastoma is one of the most common and aggressive types of pediatric cancer. It accounts for more than 15 percent of cancer-related deaths in childhood. Differentiation therapy plays a critical role in treating neuroblastoma. However, over 50 percent of patients are resistant to current differentiation agents. Such poor outcomes demand development of more effective differentiation agents.

My research has been supported by multiple federal and local grants since 2012. I was recently awarded an R15 from the National Cancer Institute, National Institutes of Health. This is a multi-disciplinary project that combines expertise in cancer cell biology, chemistry, and preclinical pediatric cancer research.

**Research impact:** I expect that this R15 project will lead to the discovery of novel differentiation-inducing compounds,

which will pave the way to develop more effective therapeutics. In addition, since failure in cell differentiation is a common cause of pediatric cancers, I hope this study will have an impact on exploring differentiation therapy in a broader spectrum of pediatric cancers.

**Advice:** Be creative and bold. Research is about discovery of the unknown. When you read and study, “crazy” ideas jump into your mind frequently. When an idea comes, don’t assume it is impractical since nobody has done it. Pursue it by searching literature, drafting a research plan, and filling the to-do details, and even doing a pilot experiment until it is clear whether it is practical to pursue.

Be collaborative. Biomedical research is becoming more and more inter-

disciplinary. Interact with other researchers and find collaborations, and that will benefit your grant applications.

Be focused and be broad. Find your research interest and stay focused on it. In the meantime, broaden your knowledge of the larger field. This will not only bring you collaborative opportunities, but will also enlighten your mind with new ideas on pursuing your established research interest.



Dr. Du (second from left) with members of her lab

# Translating Research To Reality

by **Melinda Villagran**

## Texas State Professors, We Need You!

A local billboard highlighting “Research with Relevance” at Texas State University reminded me of a 2014 op-ed in the *New York Times*: “[Professors, We Need You.](#)” Author Nicholas Kristof made the following observation about what happens when academics fail to disseminate relevant research evidence to community end users seeking to solve societal issues:

“Some of the smartest thinkers on problems at home and around the world are university professors, but most of them just don’t matter in today’s great debates.”

Kristof claimed most academic research, “glorifies arcane unintelligibility while disdaining impact and audience,” but the new Texas State billboard led me to investigate what it would take to develop a different kind of research culture. Recent publications provide potentially useful recommendations on how to increase the reach and impact of research:

**Make Connections Early** — Consider potential links between the research question and larger societal issues during the formative stage of research to more effectively

anticipate potential theoretical, practical, or policy implications that might result from your study. It’s never good to overestimate the relevance of research before it is conducted, but creating a plan to disseminate potentially relevant outcomes on different aspects of the project can increase its potential relevance with different audiences.

**Include Diverse Voices in the Research Process** — The impact of research can be expanded if the study is designed to address questions for multiple stakeholders. It’s often easiest to collaborate with colleagues from your own department or discipline, but groupthink that hinders creativity in the research process is much more likely to occur among those with similar backgrounds and training. What specific types of expertise are needed to maximize the potential reach and real-world practicality of the project? How can you limit unnecessary barriers for anyone outside the author’s discipline who seeks to read the study?

**Include Knowledge Transfer in the Research Plan** — Terms such as knowledge transfer, tech transfer, and translation-

al knowledge are used to describe efforts seeking to close the know-do gap between research and reality. Partnerships among universities, corporations, and government and public audiences offer new pipelines to transfer information from one audience to another.

Academic conferences and high impact journals are valuable channels to share new knowledge inside academe, but they lack wide visibility and accessibility. Ted Talks and other unconventional channels can be used to disseminate new knowledge and increase its relevance to large and diverse audiences, but newer channels often lack the peer review processes used to assess research quality. The relevance of research differs based on needs of the end user, so researchers should seek multiple dissemination pathways to highlight all relevant research outcomes for different audiences.

Read more about these recommendations in “[Crossing the Research Valleys of Death: The University of Pittsburgh Approach](#)” and “[Ten Reflective Steps for Rendering Research Societally Relevant.](#)”



## TEXAS STATE UNIVERSITY TRANSLATIONAL HEALTH RESEARCH

Texas State Faculty and Community Guests are invited to attend  
**2018 HEALTH SCHOLAR SHOWCASE**

February 23, 2018 at 2:00 PM  
Texas State University Performing Arts Center



### FEATURING:

- A Panel Discussion on National and Regional Health Research Trends
- An Interactive Poster Session Showcasing Texas State Research on Social Determinants of Health
- A Networking Reception for Faculty and Community Partners

Up to three posters presented at the Showcase will be awarded up to \$5,000 each to extend, expand, or seek external funding for the research

Follow this link to RSVP today

Visit [www.txstate.edu/research/health](http://www.txstate.edu/research/health) for additional information, or email us at [healthresearch@txstate.edu](mailto:healthresearch@txstate.edu)

## Keynote Speaker: Mary Woolley

We are thrilled to welcome Mary Woolley as keynote speaker of the 2018 Health Scholar Showcase. Dr. Woolley is President of Research!America, the nation’s largest not-for-profit alliance working to make health research a higher national priority. Joining Dr. Woolley are distinguished speakers William Buster, Executive Vice President of Community Investments, St. David’s Foundation, and Suzanne Anderson, Interim CEO and President, Special Olympics of Texas. Come hear what these exciting speakers have to share with us about health trends and health research.

[Register here](#)

[Speaker bios](#)

[Health Scholar website](#)

[Translational Health website](#)

# GUEST COLUMN by Debbie Pitts, University Libraries

## Texas State University Dataverse Provides Avenue to Store and Share Research Data

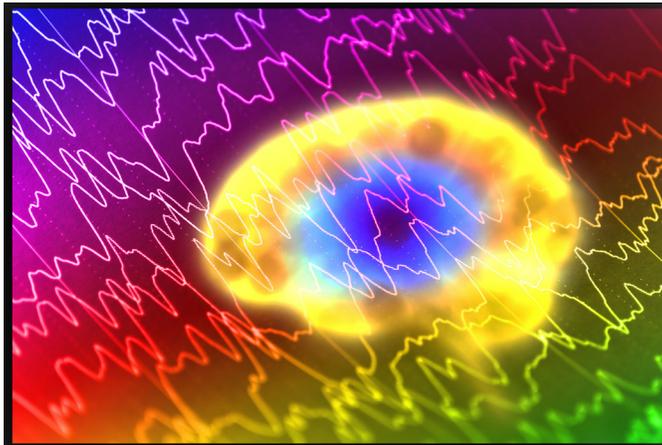
Researching human brain behavior is predictably complex and requires voluminous datasets for analysis. For Dr. Logan Trujillo, Assistant Professor of Psychology, research for a summer 2017 [article on the effects of electroencephalogram \(EEG\) reference choice](#) required not only large datasets, but also a place to publish and share the data.

“I study human perception and cognition from basic and applied viewpoints,” Trujillo explained. “This research is very data intensive and generates a lot of code for analysis. It’s difficult to share because the research requires tens, if not hundreds, of gigabytes of data.”

Not only did Trujillo need a place to publish research data for his article, he was also working on a grant application for the National Science Foundation which requires researchers to publicly share their research data.

Fortunately for Trujillo, Texas State University Libraries had recently launched a free, open-source research data repository

called [Texas State University Dataverse](#) (Dataverse) that offered a solution to both needs. Dataverse is an online platform for publishing and archiving research data sets created by faculty, staff, and students. The



research repository model was developed by Harvard University, and the [Texas Digital Library-hosted site](#) was created by a consortium of Texas universities.

Liberal Arts college Research Coordinators told Trujillo about the new online

resource, and he was pleased that Dataverse not only met the grant requirements for data sharing, but also increased the visibility of his work. He found the tool to be easy to use and was able to enter metadata discoverable by search engines such as Google and Google Scholar that will likely lead to increased citations. Trujillo recommends that users also upload text files that provide researchers with an outline of what was uploaded and how to utilize it.

“I think it’s a great tool. I believe in open sharing of scientific data,” Trujillo said. “It helps to further scientific research because everyone can check and verify results and build on the work of others.”

Trujillo’s paper and his data have received many views, and his research will help clinicians better conduct and analyze electrophysiological complexities and brain cognition through EEG monitoring of brain activity. To learn more about the Texas State University Dataverse, visit the [library’s Dataverse webpage](#).

## Research Coordinator Q&A

### Research Enhancement Program: Tips for Easy Execution of Your REP Award

Whether you have recently been awarded or plan to seek REP funding in the future, these tips and reminders from your Research Coordinators (RCs) will help you successfully manage your award.

REP award packages include a form entitled *Request for New Research Project Account*. Before you can access REP funds, you must complete this form and return it to the Office of Research and Sponsored Programs (ORSP). ORSP staff do not manage REP awards, so you will be asked to designate staff in your area for administrative support. REP support varies by college and may include your department administrative assistant and/or your RC. If in doubt, contact your RC for guidance. Be aware that funds cannot be accessed until compliance require-

ments are met. If your project involves human or animal subjects, expect delays if IRB or IACUC protocols are not yet approved. If approvals have been secured, include the approval number(s) on the request form to expedite account setup.

Reach out to your REP support staff ASAP to develop an expenditure plan. This will facilitate timely processing of expenditures and mitigate last-minute issues. For example, summer salary can only be paid during June, July, or August. Summer teaching assignments affect the distribution of these funds, so it is important to share your teaching schedule with support staff as soon as possible.

Remember that funds are intended for the expenses identified in your REP propos-

al. Adjustments are allowed, but approval is required for significant budget modifications or expenses that do not clearly relate to the scope of work. Be sure to work closely with your account administrator to ensure compliance with all university policies and procedures.

Finally, be mindful of the REP budget period. Funds must be expended within 18 months (January through May of the following year). While extensions are possible, they are only granted in extraordinary circumstances. Alert your account administrator of any changes to your expenditure plan to reduce errors, save time, and ensure all program requirements are met.

[REP Guidelines](#) are available for additional information.

**Research or grant questions for RC Q&A? Send them [here](#) or [contact your college RC](#).**

# ORSP News & Updates

## Growth in the Texas State Research Enterprise

Last fiscal year (FY17) saw an impressive continuation of the sustained growth of the research enterprise at Texas State University. The university produced new institutional benchmarks for both Restricted Research and Total Research and Development Expenditures. In FY17, Total Research and Development Expenditures were \$60.7 million and the Restricted Research Expenditures were \$33.1 million, which represent approximately 12 and 10 percent increases, respectively, over FY16.

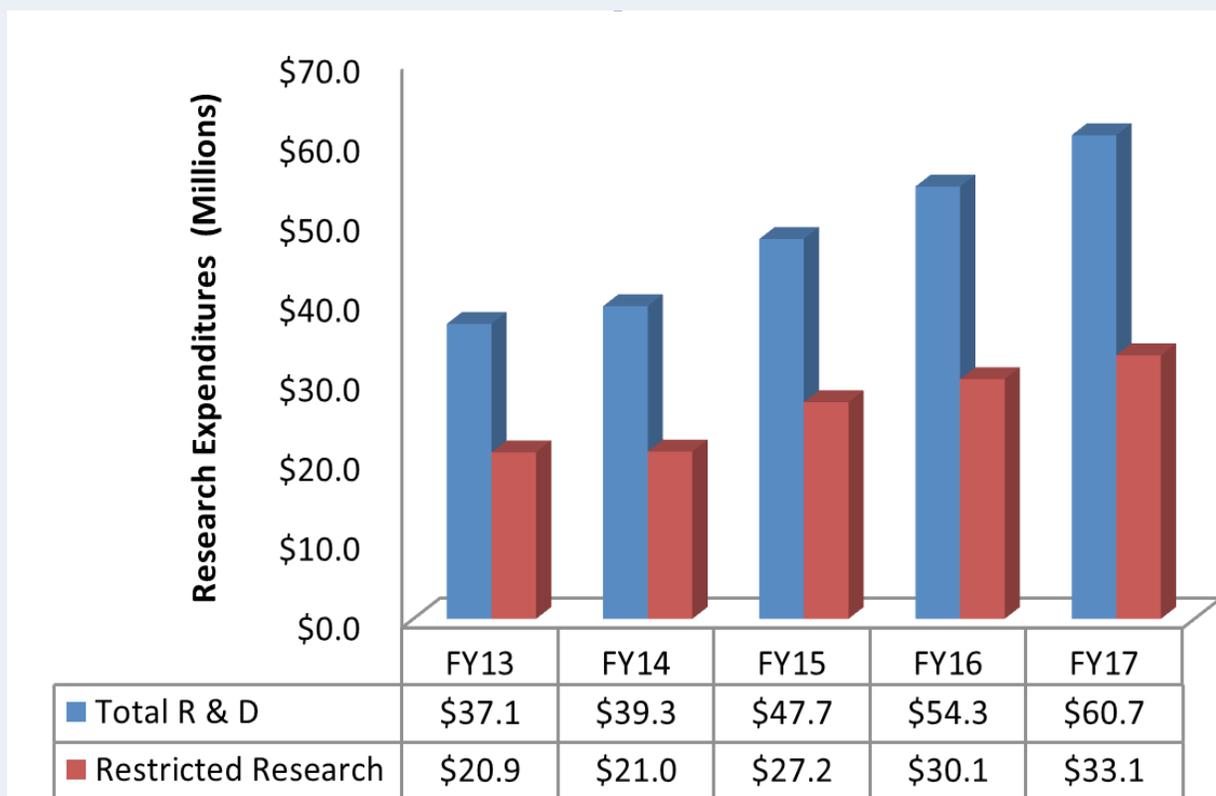
It is important to note that Restricted Research Expenditures are expenditures from **external awards only**, which are restricted by the sponsor to support only research. Total Research and Development Expenditures are the sum of expenditures from a combination of **internal and external funds**, used to support only research functions and reflect the research enterprise in its entirety.

These two metrics are key components for assessing progress to-

wards the institutional goals of establishing National Research University Funding (NRUF) eligibility, determining our institutional allocations under the Governor's University Research Initiative, and impacting our research designation under the Carnegie Classification of research institutions.

Furthermore, over the past five years, Restricted Research Expenditures have increased by 58 percent and Total Research and Development Expenditures have increased 64 percent, demonstrating consistent progress toward our institutional goals of achieving NRUF eligibility and R-1 status.

During the first quarter of the current fiscal year, 2018, Restricted Research and Total Research and Development Expenditures were up 20 and 1.3 percent, respectively. This is a good start to the new fiscal year and reflects hard work and dedication on the part of all those who contribute to this important university mission.



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[Upcoming Workshops and Events](#)

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Would you like to appear in our newsletter or suggest one of your colleagues who's doing cool research? Fill out our [brief story form](#) for consideration.