DIVISION OF RESEARCH AND SPONSORED PROGRAMS

Empowering Innovation: Unveiling the Impact of Fulfilling Our Vision

**Research Horizons** 2023 Annual Report

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Cover Photo: *The TSU Olympian* Designed and constructed by Jane-Allen McKinney, Associate Professor of Art College of Liberal Arts

### TENNESSEE STATE UNIVERSITY PRESIDENT

## DR. GLENDA B. GLOVER



TENNESSEE STATE UNIVERSITY 3500 JOHN A. MERRITT BOLLEVARD NASHVILLE, TENNESSEE 37209-1561

OFFICE OF THE PRESIDENT

October 2, 2023



Dear Research and Sponsored Programs Community:

I am pleased to present the 2023 Research and Sponsored Programs Annual Report. This report highlights the many achievements of our faculty, staff, and students in securing and managing external funding for their research and scholarly endeavors. This past year, TSU received over \$100 million in external funding, a record for the university. This funding supports a wide range of research projects in areas such as STEM education, health disparities, social justice, and economic development.

I am particularly proud of the following achievements made during my tenure as President:

- TSU has recruited and retained top research talent from around the world.
- The university has increased the number of undergraduate and graduate students involved in research.
- TSU has established a new Smart Global Technology Innovation Center.
- TSU has increased its external funding by more than 100% since 2017.

These achievements are a testament to the hard work and dedication of our research and sponsored programs community. I am grateful for your contributions to making TSU a leader in research and innovation. As I prepare to retire from my position as President at the end of this year, I am confident that TSU will continue to thrive in the years to come. I am particularly excited about the university's new strategic plan, which places a strong emphasis on research and innovation.

I am hopeful that TSU's journey to Carnegie Classification R1 status is well within our reach. With the continued support and dedication of our research and sponsored programs community, I believe that TSU can achieve its goal of becoming a nationally recognized research university. I want to thank everyone in the research and sponsored programs community for your support and dedication. Together, we have made great strides in advancing TSU's mission as a researchintensive university.

Sincerely,

Johenda Jobover

Dr. Glenda B. Glover President

"Think • Work • Serve" AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER M/F

## ASSOCIATE VICE PRESIDENT FOR RESEARCH AND SPONSORED PROGRAMS AND CHIEF RESEARCH OFFICER

## DR. QUINCY QUICK

In this fiscal year, we successfully secured over \$100 million, the highest funding in the history of the institution. This accomplishment is a testament to the hard work and dedication of our faculty and staff, positioning TSU to embark upon a new era of research excellence. Our faculty and staff conducted high-impact research across various disciplines, resulting in several groundbreaking achievements. This milestone not only demonstrates the exceptional abilities of our research community but also sets a new benchmark for the institution's research capabilities. Our researchers made substantial contributions to their respective fields, publishing a significant number of high-quality papers in renowned journals. Their work has garnered attention, both nationally and internationally, further enhancing the reputation of TSU as a research-intensive institution.



This accomplishment is an exceptional feat that signifies a turning point for Tennessee State University. To ensure the sustainability of this new level, we aim to foster strong partnerships with industry leaders, government organizations, and other research institutions. By capitalizing on shared resources, expertise, and funding opportunities, we can enhance our research capabilities and expand our impact. TSU will continue to strengthen its research capabilities towards achieving the coveted R1 status. We will strategically invest in research infrastructure, recruit topnotch researchers, and expand our research programs to align with the criteria set forth by leading research institutions. Our success validates the efforts and commitments of our faculty and staff in promoting research excellence at TSU. With continued dedication and support, Tennessee State University is well-positioned to make a significant impact on research, innovation, and the advancement of knowledge.

Ruincy Quick

Associate Vice President Research and Sponsored Programs Chief Research Officer Tennessee State University

### **RESEARCH CENTERS AND INSTITUTES**

### Research Centers and Institutes at Tennessee State University

Agricultural Research and Education Center (AREC)

Center on Aging Research and Education Services (TSUCARES)

Center for Entrepreneurship and Economic Development (CEED)

Center for Prevention Research

Center of Excellence for Battlefield Sensor Fusion

Center of Excellence for Learning Sciences (COELS)

Center of Excellence in Information Systems Engineering and Management (COE-ISEM)

College of Agriculture Cooperative Extension Program

Institute of Agricultural and Environmental Research

Nanoscience and Biotechnology Core Facility

Otis L. Floyd Nursery Research Center at McMinnville

SMART Innovative Technologies Division

TSU Interdisciplinary Graduate Engineering Research (TIGER) Institute



Health Sciences Building



Andrew P. Torrence Hall



Agricultural Biotechnology Building

### UNIVERSITY RESEARCH CAPACITY

Founded in 1912, Tennessee State University (TSU), a Historically Black College and University (HBCU), fosters scholarly inquiry and research, lifelong learning, and a commitment to service. This 1890 land grant institution with three farms is Nashville's comprehensive public university, as well as a Carnegie R2 Doctoral – High Research Activity institution. TSU has demonstrated expertise as a robust, expanding educational and entrepreneurial research engine with a continuous positive impact on the economic ecosystem of Nashville, the State of Tennessee, regionally and nationally. Through a myriad of collaborations and an interdisciplinary approach, the university offers unique research, creates entrepreneurial opportunities, produces workforce ready talent, and provides educational and technical assistance services to students, scholars, industries, communities, and business partners.

#### Strategic Research Priorities

Tennessee State University delivers solutions from local to global challenges through strategic priority areas:

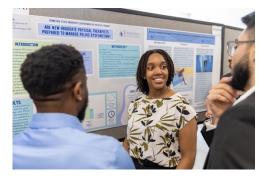
- 1. Cybersecurity, Cyber Physical Systems, Bioinformatics, & Interoperability
- 2. Renewable Energy
- 3. Big Data Analytics
- 4. Education Innovation and Leadership
- 5. Food Supply Security and Sustainability
- 6. Plant and Animal Genetics
- 7. Health Disparities and Disease Prevention/Treatment
- 8. Workforce Pipeline Development
- 9. Early Childhood Education
- 10. Rural Economic Development and Urban Planning
- 11. Biotechnology, Nanosciences, and Advanced Materials
- 12.Astrophysics
- 13. Transportation Systems
- 14. Advanced Manufacturing
- 15. Autonomous Vehicles
- 16. Robotics and Mechatronics

#### **Research Methods and Techniques**

The university offers an array of techniques, approaches, methodologies, and services for solving the world's most pressing issues and aiding communities. Common approaches include Feasibility Studies, Economic Impact Modeling, Simulation Testing, Prototype Development, Data Mining, Trend Analysis, Market Analysis, Stress Testing, Automatic Target Recognition Testing, Learning and Behavioral Assessments, Confocal Imaging, and Needs Assessments.

#### For more information, contact the

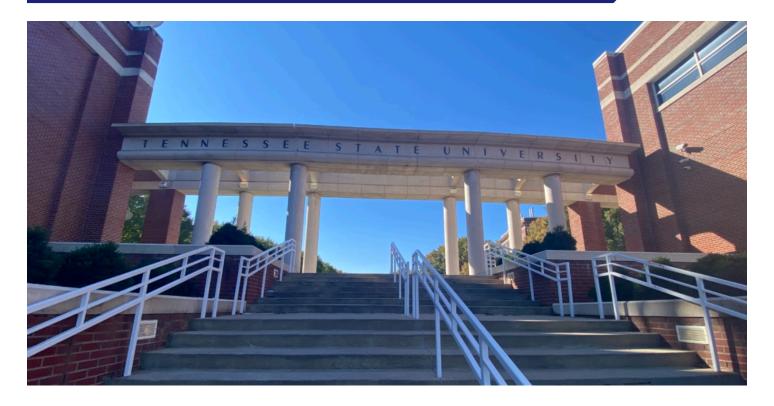
Office of Research and Sponsored Programs at research@tnstate.edu.







### TSU QUICK FACTS: 2022 - 2023



- Carnegie Classification: Doctoral Universities: High Research Activity (R2)
- 360 Full-time Instructional Faculty
- Undergraduate Student-to-Faculty Ratio: 14 to 1
- **1** 83 Majors in Eight Undergraduate and Graduate Colleges and Schools
- 520 Campus Acres, Two Campuses, Three Farms
- Fall 2022 Undergraduate Student Enrollment: 7,678
- Fall 2022 Graduate Student Enrollment: 1,540

### COLLEGES OF THE UNIVERSITY

#### College of Agriculture and Human Sciences

The faculty of the College of Agriculture are engaged in conducting innovative research and communicating new knowledge through Extension activities in the agricultural and environmental sciences and human sciences. The College of Agriculture addresses the needs of humankind, focusing on finding solutions to challenges faced by socially and economically disadvantaged groups, and contributing to the prosperity of the citizens of Tennessee, the nation, and the world. Research areas include agricultural economics and rural communities; agriculture systems and technology; animal health, production, and products; bioenergy, natural resources, environment; food safety, nutrition, and health; plant health, production, and products; family well-being and youth development.

#### College of Business

The College of Business (COB) is uniquely poised as a strong, robust, and expanding educational options with the Accelerated and Executive MBA programs. These graduate programs provide convenient and flexible options for working individuals and students taking the next step in management. Preparing students for the corporate environment or entrepreneurship, the COB is positively impacting the entrepreneurial and economic tapestry of Nashville, the State of Tennessee, and the world. The faculty are engaged in conducting applied, discipline-based, and pedagogical research in accounting, business management, economics, finance, and information systems and technology.

#### College of Education

The College of Education faculty are engaged in research that examines disparities in education and student learning. They strive for developing, and implementing, innovative models of programs, instruction, and assessment along with integrating technology to influence student learning outcomes; elevating teaching and leading; designing clinical experiences to transform human capital pipeline, developing strategic partnerships; using data to inform program development, and applying human capital decision making processes; strategies for developing pathways to excellent teaching; and more

#### College of Engineering

The College of Engineering faculty are conducting research in nanomaterials, signal and image processing, intelligent control systems, robotics and mechatronics, artificial intelligence, bioinformatics and big data, health monitoring, systems engineering, wireless communication, and cybersecurity across various systems and software. Our engineering programs house Masters and Ph.D. degree opportunities.

#### College of Health Sciences

The faculty of the College of Health Sciences, our largest college, are engaged in conducting research that includes speech pathology and audiology, behavioral science approaches to reduce health disparities, obesity, diabetes, and breast cancer prevention and treatment. The COHS is housed in our new 100,000 sq. ft. facility. The college also houses the Tiger Community Rehabilitation Clinic, a studentrun occupational and physical therapy clinic.

#### College of Liberal Arts

The faculty of the College of Liberal Arts are engaged in conducting research in areas that reflect knowledge and potential of new interdisciplinary fields while continuing work in the traditional academic disciplines at the heart of a university. The research includes studies in geosciences and environmental justice; global perspectives on civil rights and justice issues; African American history, literature, and culture; education in music, history, literature, and language; global perspectives in art; and criminal justice.

#### College of Life and Physical Sciences

The Department of Chemistry is dedicated to cuttingedge research spanning environmental science, cancer, viruses, drug design, the synthesis of novel inorganic materials, and the intricate interactions within various biological systems and membrane constituents. The Department of Biological Sciences, comprising a faculty deeply immersed in cellular and molecular biology, conducts research ranging from the effects of plant extracts on cancer cell growth to exploring the role of D3 receptors in neuronal development, delving into collagen assembly and trafficking, and addressing issues in global change ecology. The Department of Mathematical Sciences hosts faculty members with diverse research interests encompassing applied mathematics, mathematical modeling, functional and numerical analysis, algebra, mathematics education, wavelets, physics, and astronomy. Together, these departments contribute to a vibrant and interdisciplinary research environment at the university.

#### College of Public Service

The faculty of the College of Public Service are engaged in conducting research specific to leadership; intergovernmental relations, public finance, public policy; policy and economics of education; environmental policy and justice, urban planning and policy, economic development, gentrification, non-profit management and community revitalization; public administration and policy analysis; state lottery policy; health policy; social work; and aging.

#### University Honors College

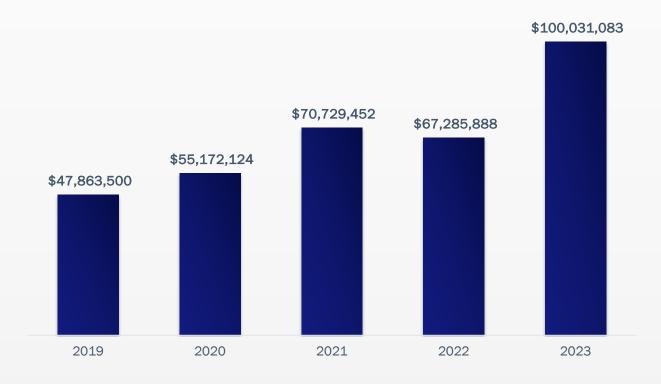
The University Honors College (UHC) provides an especially rich and challenging set of academic offerings to talented and highly motivated students at Tennessee State University. Through special courses, a vigorous intellectual community, and emphasis on undergraduate research, the Honors College enables students to reach new heights of excellence.



Goodwill Manor

### RESEARCH AWARDS: 2022 - 2023

### Annual Research Awards: Five-Year Results



### **High-Impact Funding Highlights**



During fiscal year 2023, the University was awarded over \$100 million in grants and contracts. This is the highest amount of external funding in Tennessee State University's history.



Faculty and staff submitted 221 proposals, resulting in 184 awards. The total value of the proposals exceeded \$237 million dollars.



Total funding from grants and contracts has increased 109% over the last five years.

### RESEARCH AWARDS: 2022 - 2023

### 2023 Awards by College, Division, or Center

Center of Excellence for Information Systems Engineering Management	\$10,000	
Veterans Affairs	\$15,801	
Center for Extended Education	\$50,000	
Athletics	\$62,400	
College of Public Service	\$216,250	
College of Liberal Arts	\$153,451	
College of Health Sciences	\$181,111	
Auxiliary Services	\$217,500	
College of Business	\$373,351	
Financial Aid	\$832,000	
College of Education	\$1,047,853	
Academic Affairs	\$1,375,535	
College of Life and Physical Sciences	\$1,537,615	
College of Engineering	\$6,076,542	
Research and Sponsored Programs	\$9,302,987	
Title III	\$11,195,289	
Center of Excellence for Learning Sciences	\$19,943,301	
College of Agriculture	\$47,440,09	

### FACULTY RESEARCH HIGHLIGHTS

### ASSISTANT PROFESSOR

## DR. BRENDA K. BATTS

*Empowering Communities through Health Education and Innovation* 

Dr. Brenda K. Batts is committed to enhancing the health outcomes of the African American community by tackling significant public health issues like tobacco use and asthma. Dr. Batts utilizes her clinical expertise to educate the community on health matters and to mentor students in service projects that educate youth and the community. As a licensed respiratory care practitioner and cardiopulmonary professor, she specializes in mentoring undergraduate students in qualitative and quantitative research methodology, clinical research, respiratory and cardiovascular disease management, and program evaluation.

Dr. Batts invests her time in providing service to the community and educating young people about asthma management and hospitalization prevention, both of which have become increasingly apparent. She believes that to effectively engage the youth, it is crucial to develop innovative and culturally relevant materials that capture their attention and interest.

Dr. Batts has been actively involved in numerous community-based projects, demonstrating her dedication to improving public health. Novartis, a global healthcare company, is funding Dr. Batts' project to increase knowledge about asthma self-management and use educational materials in various settings to improve asthma and COVID-19 disease management. The project, titled "Improving Cardiorespiratory Health through Innovative Educational Interventions," will focus on two primary goals. First, working with a community advisory board to develop culturally appropriate videos and educational materials for asthma and COVID-19 disease management. Second, collaborating with musicians to create a hip-hop video to improve knowledge about asthma and COVID-19 disease management among African American youth in Nashville/Davidson County. The project aims to address the issues of high morbidity and mortality from Asthma and COVID-19 affecting African American adolescents and improve overall outcomes.



Dr. Brenda K. Batts is an Assistant Professor and Director of the Cardiorespiratory Care Science Program.



Dr. Batts with students conducting a demonstration in a TSU Cardiorespiratory class.

Dr. Brenda K. Batts is an accomplished healthcare professional with a diverse educational background and a strong commitment to community health improvement. She holds a Bachelor of Science in Cardiopulmonary Science from Georgia State University, a Master of Public Health (M.P.H.) in Maternal and Child Health from the University of Alabama at Birmingham, and recently earned her Doctorate in Health Administration (D.H.A.) from Virginia University of Lynchburg in May of 2023.

### FACULTY RESEARCH HIGHLIGHTS

### ASSISTANT PROFESSOR

## DR. RAFAEL HARUN

Bridging Research and Equity in Urban Development

Dr. Rafael Harun began his journey at Tennessee State University in the fall of 2021. Outside of teaching courses from the Urban Studies discipline, such as, Applied GIS, Urban Geography, and Intro to Urban Studies, he ardently pursues his research interests in the intersection of urban development and planning and socioeconomic inequalities. Dr. Harun's passion is to find ways to improve the lives of marginalized populations in urban areas. "My work is primarily on the challenges the marginalized population groups are facing and how policy or planning can improve or mitigate those challenges." One of his most recent projects, funded by the Payne Center for Social Justice, involves the investigation of the evolution patterns of corporate owned single-family rental housings in the greater Nashville region and the implications on the African American communities.



Dr. Rafael Harun is an Assistant Professor of Urban Studies in the Department of Social Work and Urban Studies.

Dr. Harun believes that collaborative research is essential to understanding

and addressing the challenges facing marginalized population groups. He envisions a research institute that would bring together scholars from different fields to study issues like gentrification, healthcare, transportation, and food deserts. "...we need more multi-dimensional, multidisciplinary collaborative research to understand thoroughly the urban dynamics and how the urban systems work. If we want to investigate any kind of issues and try to bring forward solutions, we need to tackle the issues from different disciplinary perspectives."

Dr. Harun is also committed to working with students. In addition to teaching Urban Studies courses, he works towards creating experiential learning opportunities for students by involving them in his research. He encourages students who are interested in making a difference in their communities to reach out to him, even if they are not Urban Studies majors. "Even if they have the slightest interest in making cities a better place to live, or deal with challenges facing their neighborhoods; approach us. Let's work together." His vision is one where, not only social science intellects work on addressing complex urban challenges, but minds from diverse disciplines, including computer science, business, and mathematics, work together to create holistic solutions for a better future.

Dr. Rafael Harun's research holds the potential to shape policy, drive change, and improve the lives of marginalized populations everywhere. His dedication to creating a more equitable urban landscape will undeniably be a testament to the power of research and collaboration in addressing the challenges faced by minority communities in our cities.

### FACULTY RESEARCH HIGHLIGHTS

#### PROFESSOR

## DR. JOHN C. RICKETTS

Empowering the Next Generation in Food, Agriculture, Natural Resources, and Human Sciences

Dr. John C. Ricketts is passionate about introducing students to and preparing them for the high-paying, job-plentiful, and rewarding careers in the industry of Food, Agriculture, Natural Resources, and Human Sciences (FANHS). His teaching, extension, and research responsibilities at TSU focus on agricultural student development. To support his research, Dr. Ricketts has secured nearly \$21 million in funding over the years as Principal Investigator. As Co-PI, he has helped other TSU scientists on student-related projects to the tune of over \$9.3 million.

In June of 2023, Dr. Ricketts and his team of researchers from TSU, Alcorn State University, Fort Valley State University, University of Houston, Chief Dull Knife College, Middle Tennessee State University, Vanderbilt University, University of Tennessee at Knoxville, University of Tennessee at Martin, Virginia Tech University, and the National Minorities in Agriculture, Natural Resources, and Related Sciences (MANRRS) organization landed \$18,110,000 from the United States Department of Agriculture (USDA), National Institute of Food and Agriculture (NIFA), *NEXTGeneration Inclusion Consortium (NIC) for Building the Food, Agriculture, Natural Resources, and Human Sciences Pipeline (FANHP)*.



The five-year NEXTGEN project will 1) Attract and engage youth through leadership and experiential learning (through Junior MANRRS and Native Youth Clubs establishment and cultivation, youth leadership curriculum development and dissemination,

immersive learning and educators development); 2) Attract and engage high school and college learners through research, work experiences, and study abroad experiential learning opportunities; 3) Fund high quality underserved students through FANHP scholarships (dual enrollment, in-state and out-of-state tuition, room, and board) and cultivate innovative underserved student recruitment and retention strategies; 4) Attract underserved learners through outreach and engagement [Positive Youth Development (PYD) conference, PYD, Diversity, Equity, Inclusion, and Accessibility and Precision/Digital Ag certificates, New Farmer Academy scholarships for nontraditional youth]; and 5) Develop a communication campaign and marketing materials to attract/engage future underserved learners to the FANHP.

Almost simultaneously, Dr. Ricketts (PI) and Dr. Alyssa Rockers (Co-PI) were awarded a 3-year, \$450,000 USDA Capacity-building to conduct needs assessments of students and the industry to develop an Agricultural Communications program and courses; enhance the course sharing collaboration between TSU and UTM to assist students with course and faculty access and on-time matriculation and graduation; integrate Artificial Intelligence applications in the newly developed Agricultural Communications program; and recruit for and launch the agricultural communications curriculum, and evaluate, disseminate, and market the new curriculum. These two projects are a culmination of his career-long goal to recruit, retain, and place students who can enjoy a successful career in the agriculture industry.



Dr. John C. Ricketts is a Professor in the College of Agriculture.



Dr. Ricketts and Agricultural Education student Gabrielle Cameron during a study abroad opportunity in Senegal.

# IN REMEMBERANCE OF **DR. BAQAR HUSAINI**



Dr. Baqar Husaini 1936 -2023 The TSU Research Community lost a dear scholar, mentor, and friend earlier this year with the passing of Dr. Baqar Husaini. Dr. Husaini was a passionate advocate for public health and a visionary leader in the field of health research. He was a dedicated faculty member at Tennessee State University for over 40 years, where he served as the founding director of the Center for Prevention Research (CPR). Dr. Husaini was born in Pakistan and immigrated to the United States in the 1960s in pursuit of higher education. He earned his Master of Public Health and Doctor of Public Health degrees from Wayne State University. In 1973, Dr. Husaini joined the faculty at TSU as an Assistant Professor. He quickly became a respected leader in the Department of Public Health and at the university. He was a prolific researcher and published numerous articles in peer-reviewed journals. His research focused on a variety of public health topics, including cardiovascular disease, cancer, and mental health.

Dr. Husaini was also a passionate educator. He taught a variety of public health courses at TSU and mentored countless students. He was known for his engaging teaching style and his commitment to student success.

In 1976, Dr. Husaini founded the Center for Health Research, later known as the Center for Prevention Research at TSU. CPR is a multidisciplinary research center that conducts research on a wide range of health topics and has received millions of dollars in funding from multiple federal funding agencies such as the Agency for Healthcare Research and Quality (AHRQ), the United States Department of Agriculture (USDA), the National Institutes of Health (NIH), the Centers for Disease Control (CDC) and others.

Dr. Husaini was a visionary leader in the field of health research. As one of the inaugural members of TSU's Million Dollar Research Club, he was passionate about conducting research that would improve the health of underserved communities. Maintaining a strong relationship with the local African American faith community, he was a strong advocate for diversity and inclusion in the field of public health. His work as a mentor was always evident in the inclusion of junior faculty and students with training and hands-on experiences in many of his projects.

Dr. Husaini passed away at the age of 87 on February 25, 2023. He is survived by his wife, two children, and two grandchildren. His legacy is one of passion, dedication, and excellence. He was a pioneer in the field of health research and a role model for many. His work at CPR has had a significant impact on the health of underserved communities in Tennessee and beyond and continues to thrive under the leadership of Dr. Husaini's successor, Dr. Rebecca Selove, who is committed to carrying on Dr. Husaini's legacy of conducting research that improves the health of all people. He was a treasured TSU Tiger and researcher, and he will be missed.



### TENNESSEE STATE UNIVERSITY OFFICE OF TECHNOLOGY TRANSFER

The Tennessee State University Office of Technology Transfer's mission is to support commercialization, start-up creation, and protection of intellectual property for the Tennessee State University community. We work with faculty, staff, and students to support the flow of research and innovation at TSU from the lab to the marketplace to create new products, services, and businesses for the benefit of society.

Services we provide include filing patents, copyrights, trademarks, business formation, identifying corporate pilot, and sponsored R&D programs, assisting with SBIR/STTR grant proposals, assisting with fundraising and Venture Capital, and commercialization training and professional development.

We host a number of federal and state programs to advance innovation and commercialization at TSU including the NSF I-Corps Midsouth I-Corps Hub, the Tennessee Technology Advancement Consortium (TTAC), and NSF Regional Innovation Engines.



Robert Turner is the Technology Transfer and Innovation Manager in the Office of Research and Sponsored Programs.

NSF I-Corps: Midsouth I-Corps Hub



The NSF I-Corps program provides commercialization training to STEM researchers and students who want to turn their research, idea, or discovery into a product or business. TSU hosts training programs in consortium with eight schools throughout the

southeast, comprising the Midsouth I-Corps Hub.

Benefits include:

- Immersive short programs designed to provide innovators with the tools and resources they need to evaluate the business potential of an idea
- Interactive sessions
- Instructor office hours
- Access to mentors
- Opportunities for non-dilutive microgrant funding
- A pathway for further mentorship and guidance through the National I-Corps program where teams receive an additional \$50,000 in funding

Tennessee Technology Advancement Consortium (TTAC)

The Tennessee Technology Advancement Consortium (TTAC) is a collaboration funded by Launch Tennessee and provides free resources for commercialization. Through this program the TSU community enjoys an array of resources including access to business mentorship and industry networks, seed and matching funds for startups, entrepreneurial training, and professional development.

### NSF Regional Innovation Engines

The National Science Foundation's Regional Innovation Engines, or NSF Engines program, catalyzes and fosters innovation ecosystems across the United States to:

- Advance critical technologies like semiconductors, artificial intelligence, advanced wireless, and biotechnology
- Address pressing national and societal challenges
- Cultivate partnerships across industry, academia, government, nonprofits, civil society, and communities of practice
- Promote and stimulate economic growth and job creation
- Spur regional innovation and talent

TSU is a core partner in two NSF Regional Innovation Engines Development Awards; "Generate Advanced Manufacturing Excellence for Change (GAME Change)" and "Technology Enabled Advanced Mobility -TN (TEAM -TN)." These are 2-year pilot programs aimed at building a regional consortium of universities, funders, government agencies, community organizations, and industry to advance economic development through research, workforce development, and entrepreneurship. Following the pilot phase these consortia will compete for \$160 million for up to 10 years to sustain the mission of the NSF Regional Innovation Engines program.

For more information on any programs or services for Technology Transfer and Innovation, contact Robert Turner at rturne10@tnstate.edu.



The GAME Change Engine will create a diverse innovation and talent development hub by leveraging the sharing of unmet needs to catalyze use-inspired research and translate innovations to practice. Learn more at gamechangeengine.org.



TEAM-TN is a partnership of over 100 organizations working to build a thriving advanced mobility ecosystem that strengthens Tennessee's leadership in the innovation economy, safeguards the health of our planet, and enhances the overall quality of life. Learn more at teamtn.org.

### RESEARCH AND SPONSORED PROGRAMS STAFF



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# **Division of Research and** Sponsored Programs

Tennessee State University engages in cuttingedge research to address critical challenges in our society. Our research division supports a research community of faculty, staff, and students by taking ideas from conception to fruition in critical areas such as agricultural sciences, engineering, biotechnology, nanomaterials, health sciences, cybersecurity, artificial intelligence, astrophysics, business and the social sciences, and more.

The Office of Research and Sponsored Programs works to enable our research community through:

- New Funding Opportunities
- Proposal Development and Submission
- Pre-award Support
- Post-award Support
- Faculty Development Workshops

New funding opportunities facilitate innovation and propel research progress. Our office stands ready to provide comprehensive support throughout your pursuit of research excellence.

### **Find Your Funding**

Find your funding with these grant search services:



### spin.infoedglobal.com



### grants.gov



tnstate.edu/research (615) 963-7631 research@tnstate.edu



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