



Tennessee STEM Education Center
Science · Technology · Engineering · Math

MIDDLE TENNESSEE STATE UNIVERSITY

Message From The Director

Dear Colleagues and Friends,

As we reflect on our Fall 2025 semester, I am grateful for the steady momentum and shared purpose that continue to define the work of the Tennessee STEM Education Center. This edition of our newsletter highlights the many ways our faculty, staff, students, and partners are advancing STEM education through outreach, research, and leadership development.

TSEC has remained deeply engaged with our local communities. This semester, our team participated in STEAM-A-Palooza at the Discovery Center and a STEM Night at Christiana Middle School. From “Frankenfoam” chemistry demonstrations to hands-on drone activities, these events invited students and families to experience science as active, creative, and connected to everyday life. Moments like these are often a first spark, helping young learners begin to see themselves as capable STEM thinkers.

We are also excited to share continued progress across several of our signature initiatives. The LEADS program completed its first semester with a strong cohort of Master Teaching Fellows. Led by a team that includes Kevin Krahenbuhl, Seth Jones, Kate Miller, Sydney Buvvaji, and myself, the program blends data science, leadership development, and intentional community building. The ACT-STEM project, led by PI Sarah Bleiler-Baxter also wrapped up its first semester of TRIOS programming, with faculty from across CBAS engaging in collaborative reflection and shared inquiry around teaching practice. This work continues to strengthen teaching cultures across departments.

This issue also highlights national and international engagement. I had the opportunity to present work on STEM teacher leadership at ESERA in Copenhagen and on collaborative group work in chemistry at Pacifichem in Honolulu. These experiences allow us to contribute to broader conversations about teaching and learning while bringing fresh perspectives back to our campus. In addition, Aspen Malone’s leadership of a project management workshop at SSERC reflects the depth of expertise within our staff and their growing influence beyond MTSU.

Finally, we look ahead to several important milestones, including the upcoming Regional Science Olympiad, supported by a grant led by Kevin Ragland and the Middle Tennessee STEM Innovation Hub, and the 20th anniversary of Posters at the Capitol. Both events exemplify what we value at TSEC: collaboration, student voice, and meaningful engagement with the broader community.

Thank you for taking time to explore this issue and for the many ways you support and partner with TSEC. We look forward to what lies ahead as we continue this work together.

Warm regards,
Gregory T. Rushton, Ph.D.
Director, Tennessee STEM Education Center



TSEC Team during our “Souper” Holiday party, where we enjoyed a variety of soups and fun activities!

Community Outreach

TSEC Showcases Chemistry at STEAM-A-Palooza 2025

On Saturday, October 11, 2025, the Tennessee STEM Education Center (TSEC) joined community partners at the Discovery Center's annual STEAM-A-Palooza, the signature event of the Tennessee STEAM Festival. Since 2017, this free celebration has connected Middle Tennessee residents with hands-on opportunities to explore Science, Technology, Engineering, Arts, and Mathematics (STEAM).

Rooted in the Discovery Center's legacy of impact since 1988, the festival continues to bring people of all ages closer to science through interactive experiences. Now in its 38th year, the Discovery Center remains a regional hub for curiosity and learning.

This year, TSEC's Frankenfoam demonstration captivated crowds with a bubbling chemical reaction that highlighted catalysts, energy, and the fun of "spooky-season" chemistry. Families left both entertained and inspired, with ideas to recreate science at home.

TSEC's participation reflects our mission to connect curiosity with careers. By making science engaging and accessible, we aim to encourage the next generation of Tennessee innovators while strengthening partnerships that keep learning at the heart of our community.

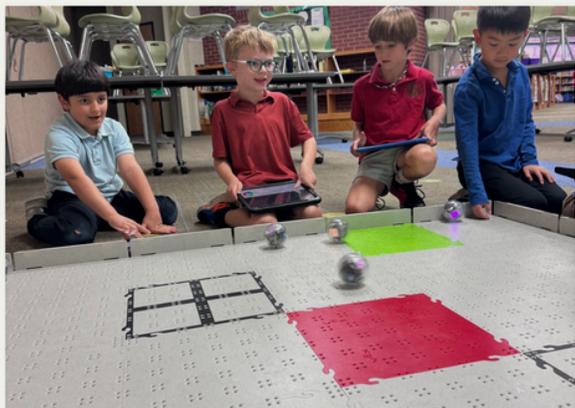


SCIENCE



Coordinator Lindsay Randolph helps participants create "Frankenfoam"

Robotics in the Library: Lending Library Impact at Julia Green Elementary



Classmates maneuver sphero bots on a course



Students display a completed Edison Robot



Vex Robots are assembled by participants

At Julia Green Elementary School in Metro Nashville Public Schools, the library has become more than a place for books. Through the Middle Tennessee STEM Innovation Hub's Lending Library, students are gaining hands-on, technology-rich STEM experiences that build curiosity, collaboration, and problem-solving skills.

Librarian Shannon Meadows has been using robotics kits from the Lending Library to create engaging makerspace-style learning opportunities in the library. Students take turns piloting robots, practicing basic coding, and working together through challenges that connect to classroom learning.

“In the Julia Green library, I integrate the robotics kits I check out from the Tennessee STEM Education Center to spark problem solving and hands-on learning,” Meadows shared. “Students use the robots to practice coding and collaboration as they work through challenges connected to what they are learning in the classroom.”

These sessions encourage students to test ideas, troubleshoot, and grow confident through experimentation. The Lending Library offers free K-12 STEM resources for educators across the Middle Tennessee region.





STEM NIGHT TAKES FLIGHT @ CHRISTIANA MIDDLE SCHOOL



On Thursday, October 16, 2025, the Tennessee STEM Education Center (TSEC) participated in a STEM Night at Christiana Middle School, engaging students and families in hands-on exploration of science, technology, engineering, and mathematics. The event brought together educators, students, and community partners for an interactive evening designed to spark curiosity and excitement around STEM learning.

TSEC Center Coordinator, Lindsay Randolph, led one of the evening's popular activities, inviting students to learn about and operate small drones. With guidance and encouragement, students took turns piloting drones, learning basic flight controls, and discussing how drone technology is used in real-world applications.

"STEM Nights like this give us a chance to connect with students and help them see themselves as capable STEM learners," Randolph shared. "Hands-on experiences with emerging technologies like drones can be especially powerful in building confidence and interest."

Christiana STEM Night was open to students and families across grade levels and featured a variety of interactive stations throughout the school. The event fostered meaningful engagement between students and STEM professionals while reinforcing the importance of accessible, experiential learning opportunities within the community.

TSEC is proud to support events like Christiana STEM Night that strengthen partnerships with local schools and inspire the next generation of STEM thinkers.



Dr. Rushton Presented on STEM Teacher Leadership at ESERA 2025 in Copenhagen

In August, Dr. Gregory Rushton attended and presented at the ESERA 2025 conference in Copenhagen, Denmark. The conference, held at the historic Øksnehallen, focused on the theme “Transitions in Science Education: Sustainability and Digital Advances” and brought together educators and researchers from around the globe to explore how science education is evolving in response to societal changes.



Dr. Rushton with Dr. Gillian Roehrig, from the University of Minnesota, enjoying the scenery by the Slotssøen (Castle Lake) with Frederiksborg Castle in the background

Dr. Rushton’s presentation, titled “Seeing as and Seeing Differently: Professional Vision and STEM Teacher Leadership,” examined how teachers develop “professional vision,” defined as the ability to notice and interpret key classroom events, and how this skill supports their development as leaders. His presentation was part of a collaborative project with Christine Lotter (University of South Carolina), Wendy Smith (University of Nebraska–Lincoln), and Brett Criswell (West Chester University), which explored how enhancing teachers’ observational skills can improve both their teaching and leadership effectiveness.

The team shared examples of how fostering this professional vision in teachers can help them lead more effectively within their schools, guiding their peers and supporting student success. Their work contributed to ongoing discussions about designing professional development programs that respond to the challenges and transitions facing today’s education systems.

By participating in ESERA 2025, Dr. Rushton added valuable insights to the conference’s conversations about the future of science education, digital advances, and sustainability in teaching practices.

Middle Tennessee STEM Innovation Hub Convenes Regional Advisory Council at MTSU

On December 4, 2025, the Middle Tennessee STEM Innovation Hub, housed within the Tennessee STEM Education Center, hosted an Advisory Committee meeting at Middle Tennessee State University. The meeting brought together a strong and diverse group of partners, including representatives from industry and trade organizations, along with teachers and administrators from Bedford County Schools, Metro Nashville Public Schools, Murfreesboro City Schools, Rutherford County Schools, and Sumner County Schools.

The purpose of the Advisory Council is to help guide the Middle Tennessee STEM Innovation Hub in its mission to strengthen K-12 STEM education across the region while also creating and deepening workforce development partnerships that benefit students, educators, and the mid-state economy.

Regional STEM Innovation Hubs serve as a nucleus of STEM activity, bringing together school districts, post-secondary institutions, STEM-focused businesses, and community organizations in a formal partnership designed to amplify and accelerate high-impact STEM programs. By supporting local innovation, STEM Hubs help transform learning experiences in classrooms across surrounding districts. Through collaboration among stakeholders, hubs across Tennessee develop effective programs such as teacher professional development and other STEM initiatives tailored to meet the needs of local schools, students, and educators.

As the core STEM hub serving the mid-state region, the Middle Tennessee STEM Innovation Hub exists to provide a valuable exchange of ideas, networks, and resources among K-12 schools, colleges and universities, and community partners. Our shared goal is to increase student interest, improve student achievement, and expand access to high-quality STEM learning experiences, helping prepare students for STEM college pathways and future careers.



Dr. Joy Rich (Nissan), Brandi Stroecker (TSIN), Bryce Warden (TN Score), Dr. Chatoria Franklin (Rutherford County Schools)

LEADS MTFs Finish their 1st Semester of Programming

The **LEADS (Leaders in Education Advancing Data Science)** program wrapped up its first semester of programming with the 16 Master Teaching Fellows (MTFs), marking an important milestone in the fellows' journey as teacher leaders. Throughout the semester, the MTFs engaged in coursework, leadership development, and community-building experiences designed to strengthen both their instructional practice and leadership skills.

Academically, the fellows completed a Data Science course with Dr. Seth Jones and Dr. Kate Miller, building foundational knowledge in data literacy and exploring classroom applications. They also completed their Ed.S. seminar with Dr. Kevin Krahenbuhl and a teacher leadership course taught by Dr. Greg Rushton and Sydney Buvvaji, which emphasized leadership development, reflection, and collaboration.

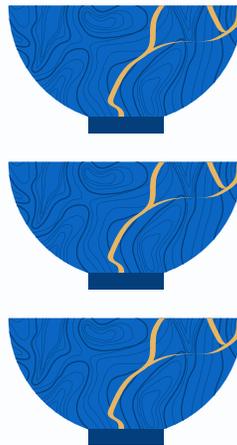
Beyond coursework, the MTFs visited Murfreesboro City Schools (MCS) and attended three LEADS Days focused on developing leadership skills and strengthening relationships within the cohort. These days blended professional learning with intentional community building, including a few fun Lord of the Rings-themed references that helped reinforce shared goals and teamwork.

Reflecting on the experience, MTF Teri Morton shared, "I hope that my classmates take away the idea that change and creating new habits doesn't have to be grand or overwhelming... As long as we are committed, we can take small intentional steps to become the leader we want to be."

The semester concluded with a meaningful gesture from Dr. Rushton and Sydney Buvvaji, who presented each MTF with a kintsugi bowl, symbolizing the idea that breakage and repair are natural parts of life and growth—and something to be honored rather than hidden.



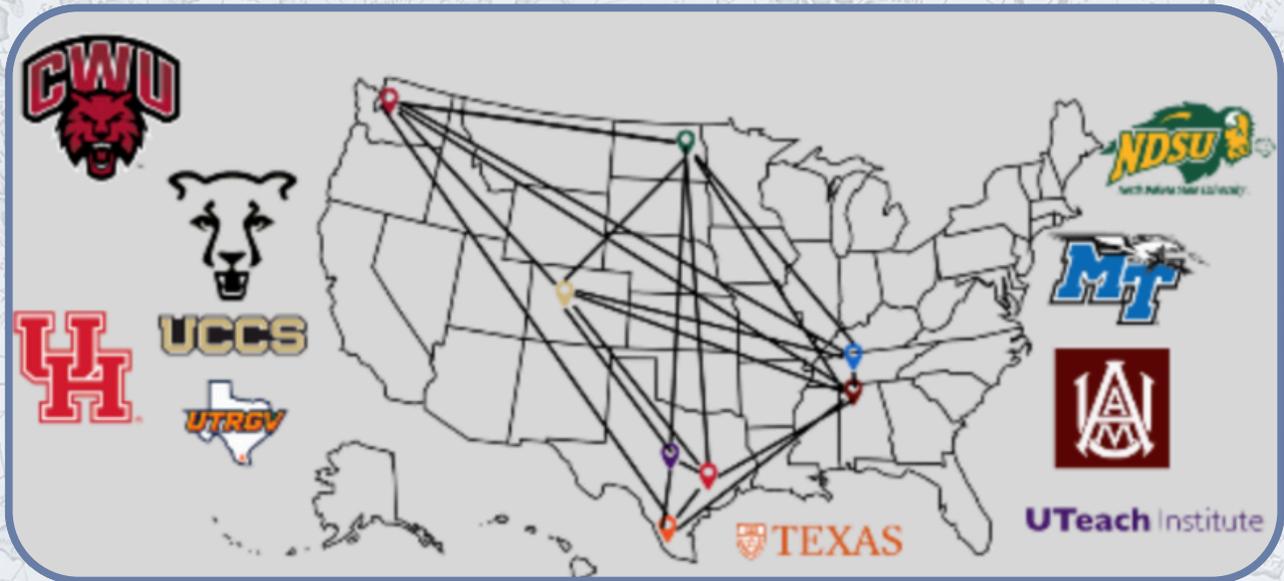
LEADS Kick-Off Event, October 30th, 2025



LEADS Day, December 3rd, 2025

Programming will continue in the spring with another teacher leadership course, a data science course, a school visit in Warren County, and an additional Data Dive LEADS Day as the fellows continue building their leadership capacity together.

iTREKS Project Funded for \$1.2 million from NSF



The iTREKS project, Improving Teacher Retention and Effectiveness through Knowledge Sharing, is a newly launched Track 4: Noyce Research initiative supported by the Robert Noyce Teacher Scholarship Program. The project addresses the national need to improve STEM teacher retention and effectiveness in high-need school districts (HNSDs) by building a collaborative Community of Practice (CoP) across multiple universities.

This national consortium includes: Alabama A&M University, Central Washington University, Middle Tennessee State University, North Dakota State University, University of Colorado Colorado Springs, University of Houston, University of Nevada–Reno, University of Texas at Austin, and University of Texas Rio Grande Valley. At Middle Tennessee State University, the iTREKS effort is being led by Kim Evert, Heather Green, and Gregory Rushton.

Together, the team is examining how STEM teacher preparation programs influence early-career teacher persistence and effectiveness. Using a mixed-methods research approach, the project combines large-scale data analysis with classroom observations, surveys, interviews, and focus groups. Findings will help identify preparation practices that support long-term success for STEM teachers and inform evidence-based strategies for recruiting and supporting educators in high-need schools.

By strengthening collaboration among teacher preparation programs, the iTREKS project aims to improve equitable access to high-quality STEM instruction and contribute to a more diverse and sustainable STEM teacher workforce.

DR. RUSHTON PRESENTS AT PACIFICHEM 2025 IN HONOLULU, HAWAII

In December, the International Chemical Congress of Pacific Basin Societies, known as Pacifichem, held its ninth conference in Honolulu, Hawaii. Founded in 1984 and hosted about every five years, Pacifichem brings together scientists from across the Pacific region to share new research and build international connections. The 2025 conference took place December 15–20 and continued its reputation as a major gathering for the global chemistry community.

TSEC's Dr. Gregory Rushton attended and delivered a presentation titled "Designing and Implementing High-Engagement Collaborative Group Work Activities in Chemistry Classrooms." His talk focused on practical ways to boost student participation and learning through structured, interactive group work.

Dr. Rushton worked on this project with partners at the University of Arizona and the University of Iowa. Together, they explored how well-designed group activities can support deeper understanding, better problem-solving, and more inclusive classrooms in undergraduate chemistry courses.

During his session at Pacifichem, Dr. Rushton shared early results and examples of how instructors can implement collaborative activities effectively in a range of teaching environments. His presentation highlighted strategies that encourage active engagement, accountability, and meaningful peer interaction—key ingredients for helping students succeed in STEM.

At the conference, Dr. Rushton contributed to ongoing conversations about improving chemistry teaching and continued building connections across the Pacific Basin scientific community for future collaboration.



***Dr. Rushton with Dr. Renee Cole
(University of Iowa).***



***Dr. Rushton at the top of Diamond
Head Crater.***

ACT-STEM FINISHES FIRST SEMESTER OF TRIOS STRONG!

The **ACT-STEM (Advancing the Culture of Teaching in STEM)** initiative at Middle Tennessee State University recently completed its first semester of TRIOS programming with faculty from seven departments in the College of Basic and Applied Sciences (CBAS). Faculty participants represented Agriculture, Aerospace, Geosciences, Mathematics, Biology, Chemistry, and Physics, coming together to explore teaching practices and build cross-disciplinary connections.



ACT-STEM celebrating at the team holiday party!

ACT-STEM is a National Science Foundation–funded project focused on strengthening STEM teaching cultures through collaboration, reflection, and faculty learning communities. The TRIOS program supports faculty in examining instructional practices, engaging in peer dialogue, and fostering a shared commitment to effective and inclusive teaching across departments.

In addition to local programming, ACT-STEM work was shared with national audiences during summer 2025. On July 11, 2025, Dr. Alyssa Freeman presented a paper titled “Understanding the GTA Experience: A Scoping Review of STEM GTAs’ Psychological Needs” at the Society for the Advancement of Biology Education Research (SABER) conference in Minneapolis, Minnesota.

ACT-STEM research was also featured at the Mathematical Association of America MathFest in Sacramento, California, on August 7, 2025, where Cory Wang and Dr. Cassandra Mohr presented a poster titled “More Than the Sum: A Four Frames Analysis of Mathematics Departmental Teaching Culture.” This work examined how departmental culture shapes teaching practices and faculty experiences in mathematics.

The ACT-STEM TRIOS program will continue in the spring semester, building on the momentum of its first term and continuing to support faculty as they work to strengthen teaching cultures across STEM disciplines.



SSERC

SOUTHEASTERN STEM EDUCATION
RESEARCH CONFERENCE

On January 9-10 2026, TSEC celebrated the **20th anniversary** of one of its signature events: the Southeastern STEM Education Research Conference, hosted at the University of Alabama at Birmingham. This year, SSERC welcomed attendees representing 17 institutions across the Southeast, showcasing the depth of scholarship and sustained commitment to advancing STEM education across the region. The conference once again showcased the depth of scholarship and sustained commitment to advancing STEM education across the region.

One of the highlights of the program was the Early Career Panel, featuring four panelists alongside MTSU CBAS Associate Dean for Faculty Affairs and Professor of Mathematics Education, Dr. Sarah Bleiler-Baxter. The panel reinforced the conference's ongoing focus on collaboration, mentorship, and professional growth within the STEM education research community.

This year's program also included a special project management workshop led by TSEC's own Aspen Malone. The session offered attendees a fresh perspective on effective leadership, emphasizing the critical roles of trust and transparency in managing teams. In addition, the conference welcomed keynote speaker Dr. Michael Saag, Professor of Medicine, Microbiology, and Public Health at the University of Alabama at Birmingham.

Middle Tennessee State University was well represented at SSERC 2026, with research contributions featured across both oral and poster sessions. These presentations highlighted a broad range of topics, including mathematics education beliefs, barriers to professional development, religious identity in science, teaching culture, and virtual reality as a tool for learning.



Early Career Panel led by Dr. Bleiler-Baxter



Project Management Workshop led by Aspen Malone



Dr. Michael Saag, Keynote Speaker



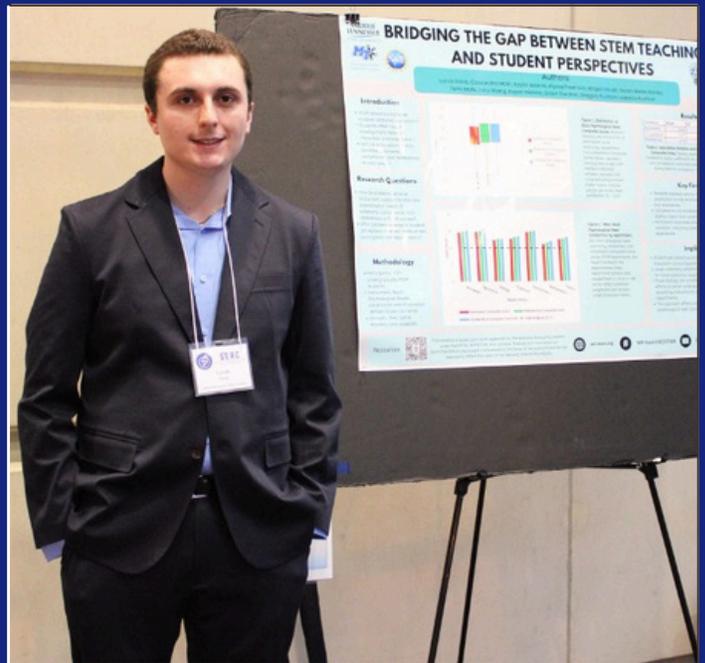
MTSU Faculty, MSE Graduate Students, and Postdoctoral Scholars coming together outside for a group photo.



Dr. Alyssa Freeman (MTSU) delivering an oral presentation, titled "Understanding Cultural Dissonance and its Potential to Foster Change in STEM Departmental Teaching Cultures".



Dr. Jonan Phillip Donaldson (UAB) in discussion regarding his poster titled, "A Learning Sciences STEM Education Agenda for the Age of AI".



TSEC Student Worker, Lucas Davis, posing with his poster titled, "Bridging the Gap Between STEM Teaching and Student Perspectives".

MTSU to Host Annual Regional Science Olympiad for Aspiring STEM Leaders

The Tennessee STEM Education Center (TSEC), in collaboration with MTSU faculty, staff, and student volunteers, will host the annual MTSU Regional Science Olympiad on Saturday, February 21, 2026. This exciting event invites middle and high school students to showcase their STEM talents through a series of competitive and engaging activities.

The Science Olympiad, an international nonprofit organization, is dedicated to fostering student interest in science, technology, engineering, and mathematics (STEM) by recognizing team excellence across 23 STEM-related events. Participants explore disciplines such as biology, earth science, chemistry, physics, engineering, and inquiry, engaging in a wide range of challenges designed to spark curiosity, strengthen critical thinking, and build problem-solving skills.

This year's regional tournament will host 26 teams, each made up of approximately 15 students who spend months preparing through teamwork and intensive study of STEM concepts. During the one-day competition, students will apply their knowledge and skills in a series of hands-on and inquiry-based events. The top five teams from both the middle and high school divisions will advance to the State Science Olympiad tournament in Knoxville this April.

This event is made possible through the support of the College of Basic and Applied Sciences and a \$35,000 grant secured by Dr. Kevin Ragland and the Middle Tennessee STEM Innovation Hub. The grant, funded by the Tennessee STEM Innovation Network and Battelle Education, underscores a shared commitment to expanding STEM opportunities for young learners.



Posters at the Capitol: Building on 20 Years of Impact

Looking ahead, TSEC has another exciting milestone to celebrate: the 20th anniversary of Posters at the Capitol. For two decades, this event has introduced undergraduate researchers to the art of science communication while providing a unique opportunity to engage directly with their state legislators.

This event exemplifies TSEC's core mission—to encourage, promote, engage, influence, and facilitate. We encourage students to share their research with elected representatives, actively promote this opportunity across our campus and throughout the state of Tennessee, and create meaningful engagement with an audience positioned to effect real change. Above all, TSEC facilitates the platform where these important conversations can take place.

This milestone would not be possible without the continued partnership of seven public institutions across the state. Joining us on April 8, 2026, are Austin Peay State University, East Tennessee State University, Tennessee Tech University, Middle Tennessee State University, The University of Tennessee at Chattanooga, The University of Tennessee at Martin, and The University of Memphis. We are honored to lead this collaborative effort and celebrate two decades of impact together.



Research Activity

Grants

Grants Submitted

Advancing Civil Discourse in Undergraduate Biology Education, Barnes, E (**Rushton, GT**). \$2,679,677. Fund for the Improvement of Postsecondary Education (FIPSE), US Department of Education, 2026-2030. (Submitted December, 2025).

D-START: Data Science Track Award for Research Transition (D/START) (R03-Clinical Trial Optional) Connectomic Signatures of Substance Use Risk in Adolescents with ADHD: A Quantum-Inspired Data Science Approach. Co-PIs: Donglin Wang, Yeqian Lio, Wandi Ding, **Tiffany Rogers** (Submitted October 2025).

DUAL Coaching: Deepening Understanding through AI and Live Coaching. **Rushton GT**. (Ranganathan, J.; Miller, K.; Merritt, A). NSF STEM K-12, \$749,993, 2026-2028. (Submitted December 2025).

Exploring Mentorship Dynamics: Science Norms and Border Crossing for First-Generation College Students, **Hosbein, K.**, Barnes, M. E., Caputo, J., Carter, L., Johnson, S., National Science Foundation (NSF), \$1,929,758, 2025-2028.

Improving Teacher Retention and Effectiveness through Knowledge Sharing: Studying STEM Teachers in High Needs Schools across a Community of Practice, **Rushton, G.T.**, Evert, K., National Science Foundation (NSF), \$1.2 million, 2025-2028.

National STEM Teacher Corps: The Southern Alliance for Recruitment, Retention, and Renewal of Rural STEM Teachers (R4 STEM), **Rushton, G.T.**, Krahenbuhl, K., National Science Foundation, \$2.4 million, 2025-2030.

S-STEM: Scholarships for MS and PhD Students in Data Science (S4DS), Gamble, K., Wu, Q., Wallin, J., **Rushton, G.T.**, National Science Foundation (NSF), \$1,999,076, 2025-2030.

Supporting International Library Collaboration through the Research4Life Academic Alliance. **Sloane, M.E.** (2025). \$25,595 submitted for Lyrasis Catalyst.

Active Grants

Advancing the Culture of Teaching in STEM through Diffusion of Strength-Based Reflexivity (ACT-STEM). Bleiler-Baxter, S., **Rushton, G.**, Gardner, G., National Science Foundation (NSF), \$1,199,915, 2024-2029.

Agri-analytics Fellowship: An Interdisciplinary Approach to Expanding Career Pathways for Undergraduate Students. **Ragland, K.**, Jin, Y., Cui, S., Mosley, C. USDA-NIFA-REEU. \$749,443. 2023-2028.

AgXplore Professional Development Institute for Middle School Agriculture Teachers. **Ragland, K.**, Mosley, C. 2023. USDA-NIFA-PDAL. \$500,000. 2023-2026.

An Investigation of Virtual Reality Initiatives and Workforce Development. Mosley, C., **Sloane, M.E.**, Jin, Y., **Ragland, K.**, Institute of Museum and Library Services. \$549,574., 2023-2026.

Beginnings: Creating and Sustaining a Diverse Community of Expertise in Quantum Information Science (EQUIS) Across the Southeastern United States. Terletska, H., **Rushton, G.T.**, National Science Foundation (NSF), \$264,322, 2023-2026.

Exploring Mentorship Dynamics: Science Norms and Border Crossing for First-Generation College Students, **Hosbein, K.**, Vincent-Ruz, P., Nardo, J., National Science Foundation (NSF), \$591,807, 2024-2027.

From Education to Employment: Building Regional STEM Readiness. **Ragland, K.**, Battelle Education, \$35,000, 2025-2026.

Improving Teacher Retention and Effectiveness through Knowledge Sharing (iTREKS): Studying STEM Teachers in High Need Schools across a Community of Practice. **Rushton, G.T.** (Evert, K.). National Science Foundation (NSF) DUE-2448306, \$1,232,951, 2025-2029.

Incorporating Learning Assistants into High DFW Science Courses to Decrease DFW Rates, **Hosbein, K.**, Barnes, M. E., \$50,000, 2024-2025.

LEADS: Leaders in Education Advancing Data Science, **Rushton, G.T.** (Jones, RS; Gamble, K; Krahenbuhl, K; Miller, K.). National Science Foundation (NSF) DUE #2345138, \$2,999,332, 2024-2029.

Preparation and Refinement of Postdocs in STEM for Disciplinary-Based Education Research, Gardner, G., Barnes, E., Bleiler-Baxter, S.K., Kaplan, J., **Rushton, G.T.**, National Science Foundation (NSF), \$1.25 million, 2023-2026

Sub-award: NEXTGENeration Inclusion Consortium: Attracting and Engaging the Underserved in the Food, Agriculture, Natural Resources, and Human Sciences Workforce. Mosley, C., **Ragland, K.**, Carter, J., Cui, S., Haruna, S. USDA-NIFA-NEXTGEN. \$901,626

Publications

Delinger, S. L., Hillery, E., Leous, J. A., Michael, L. A., Middelkoop, T., Reddy, D. P., **Sloane, M. E.**, & Weiner, M. D. (2025). A collaborative catalog for research computing and data professional development. In Proceedings of the Practice and Experience in Advanced Research Computing (PEARC '25) (pp. 1–6). ACM.

Ekmekci, A.; Aqazade, M.; McGraw, R.; Gibson, D.; **Rushton, GT**; Cerosaletti, C.; Daley, M.; Kucuk, B. Using human, social, structural, and positive psychological capital to explore science and mathematics teacher retention. *International Journal of STEM Education*, 12, 14 (2025).

Samuel, T. K., Rogers, G., Milton, S., Renfro, M., Skjellum, A., Cawood, C., Currie, D., Oelgoetz, J., **Sloane, M. E.**, Wakefield, N., Lowe, R., Qian, L., & Fleming, R. (2025). Creating a regional computing model for research and education in Tennessee: Challenges, experiences, and benefits thus far. In Proceedings of the Practice and Experience in Advanced Research Computing (PEARC '25) (pp. 1–12). ACM.

Zhang, H., Gračanin, D., Zhou, W., Dudash, D., & **Rushton, G.** (2025). Toward Real-Time Posture Classification: Reality Check. *Electronics*, 14(9), 1876.

Thank You to our TSEC Faculty and Staff!



**Tennessee STEM
Education Center**

***820 Fairview Ave, Murfreesboro,
TN 37132***

(615) 904-8573



tsec.mtsu.edu

Gregory Rushton, Ph.D., Director

Kevin Ragland, Ph.D., Associate Director

Lindsay Randolph, Center Coordinator

Aspen Malone, Research Project Manager

Melanie McQuiston, Program Assistant

Jaishree Ranganathan, Ph.D., Associate Director

Mary Ellen Sloane, MLIS, Associate Director

Heather Green, MSE, Faculty Fellow

Katy Hosbein, Ph.D., Faculty Fellow

Tiffany Rogers, Ph.D., Faculty Fellow

Sydney Buvvaji, Graduate Research Assistant

Alex Ayala, Student Worker

Lucas Davis, Student Worker

Stephanie Figueroa, Student Worker

Izzie Rushton, Student Worker

Ashlee Schafer, Student Worker

Stephanie Figueroa, Student Worker
