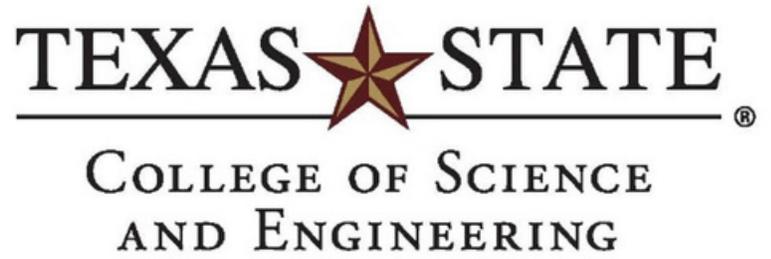# TXST STEM
## CONFERENCE
### SHARE IDEAS. START CAREERS.

**2026 TXST STEM CONFERENCE • MARCH 27TH, 2026**
**LBJ STUDENT CENTER • SAN MARCOS, TX**

GENERACIÓN STEM

TEXAS STATE
COLLEGE OF SCIENCE
AND ENGINEERING

BOBCAT IDEA · RESEARCH FOR EVERYONE

QUANTA

TEXAS STATE UNIVERSITY
Translational Health Research

# 2026 TXST STEM CONFERENCE

Welcome to the Fourth Annual TXST STEM Conference!

The Fourth Annual TXST STEM Conference brings together students, researchers, educators, alumni, and industry partners from across Texas and beyond to explore the 2026 theme, "From Lab to Landscape: Building a Bigger, Better Texas." Hosted at Texas State University, the conference highlights how STEM innovation is moving beyond the lab and into communities, industries, and environments across our state.

This year's conference frames STEM as a driver of opportunity in Texas. Participants will engage with work spanning energy, water, artificial intelligence, advanced manufacturing, agriculture, bioscience and health, with a shared focus on how discovery becomes real-world impact. The theme also underscores the importance of adaptation science in a broad sense—using data, creativity, and collaboration to respond to a changing world, from extreme weather and water challenges to evolving technologies and workforce needs.

The program emphasizes three core ideas. First, that Texas is one of the most dynamic places in the nation to build a STEM future, with growing roles for scientists, engineers, educators, and innovators across sectors. Second, that students can use their time at Texas State to sharpen skills, pursue research, gain hands-on experience, and become top competitors for graduate programs, fellowships, industry positions, and entrepreneurial ventures. Third, that modern STEM careers are increasingly transdisciplinary, blending technical expertise with policy, business, communication, community engagement, and leadership.

Our keynote speakers and panelists embody these themes. Kyle Seipp, Senior Director of Postsecondary and Workforce Readiness at E3 Alliance, brings a statewide perspective on how K–12, higher education, and policy can work together so more Texas students see themselves as college- and career-ready. Sarah Rountree Schlessinger, CEO of the Texas Water Foundation, highlights the intersection of water, science, policy, and leadership in securing Texas' long-term resilience.

A keynote panel moderated by Cody Gould of Texas State's Translational Health Research Center features STEM leaders whose careers demonstrate the power of working across fields. Dr. Matthew Thomas Ferreira (NeurAdaptive) draws on training in neuro-oncology, metabolism, and molecular epidemiology to help translate complex research into neurotechnology and biotech strategies. Charles Woodin, CEO of Geekdom, leads a startup incubator at the crossroads of entrepreneurship, community building, and regional economic development. Albert Swantner, CTO of Verdara, has built and scaled deep-tech ventures while engaging in extensive community and nonprofit leadership. Sara Wisser, a proud two-time Texas State alumna and Global Senior Manager of Genetic Sciences Business Development at Thermo Fisher Scientific, combines scientific insight with global business development to advance molecular diagnostics and biotechnology.

Several of these speakers are Bobcats who have returned to campus as keynote voices and mentors, illustrating the full circle of the TXST experience—from student, to professional, to leader investing in the next generation.

Throughout the day, attendees will participate in keynote talks, fireside-style conversations, student presentations, and networking opportunities designed to spark collaboration and highlight emerging STEM pathways. Students are encouraged to use this conference to explore interdisciplinary interests, build relationships with mentors and peers, and imagine how their time at Texas State can position them to lead on both the job market and the innovation front.

Together, the TXST STEM Conference community is helping to strengthen Texas' STEM workforce and innovation ecosystem—from lab to landscape, and from campus to career.

# 2026 TXST STEM CONFERENCE

## MORNING SCHEDULE AT-A-GLANCE

| TIME | SESSION | NOTES |
|---|---|---|
| 8:00 AM | **Registration Opens**<br>*LBJSC Grand Ballroom Pre-Function Lounge* | AM Poster Set-up |
| 8:45 AM | **Welcome & Opening Remarks**<br>*LBJSC Grand Ballroom* | AM Poster Set-up |
| 9:00 AM | **Keynote Speaker**<br>*LBJSC Grand Ballroom*<br><br>**KYLE SEIPP** 🐾<br>*Senior Director of Postsecondary and Workforce Readiness*<br>*E3 Alliance* | |
| 10:00 AM | **Coffee Break - Move to Morning Poster Session & Platform Talks** | Refreshments in Pre-Function Lounge |
| 10:15 AM | **Morning Poster Session**<br>*LBJSC Ballroom*<br><br>**Platform Talks**<br>*LBJSC Grand Ballroom* | |
| 11:30 AM | **Break - Move to Luncheon**<br>*LBJSC Grand Ballroom* | AM Poster Take-down<br><br>PM Poster Set-up |

🐾 = **TEXAS STATE ALUMNI**

## AFTERNOON SCHEDULE AT-A-GLANCE

| TIME | SESSION | NOTES |
|---|---|---|
| 11:45 AM | **Fireside Chat Luncheon**<br>*LBJSC Grand Ballroom*<br><br>**CHARLES WOODIN**<br>*Chief Executive Officer*<br>*Geekdom*<br><br>**MATTHEW THOMAS FERREIRA, PH.D.** 🐾<br>*Life Science Strategist and Executive Team Member*<br>*NeurAdaptive*<br><br>**ALBERT SWANTNER**<br>*Chief Technology Officer*<br>*Verdara*<br><br>**SARA WISSER, M.S.** 🐾<br>*Global Senior Manager, Genetic Sciences Business Development*<br>*Thermo Fisher Scientific* | |
| 1:30 PM | **AFTERNOON POSTER SESSION**<br>*LBJSC BALLROOM*<br><br>**PLATFORM TALKS**<br>*LBJSC GRAND BALLROOM* | |
| 3:00 PM | **KEYNOTE SPEAKER**<br>*LBJSC GRAND BALLROOM*<br><br>**SARAH ROUNTREE SCHLESSINGER**<br>*Chief Executive Officer*<br>*Texas Water Foundation* | PM POSTER TAKE-DOWN |
| 4:00 PM | **NETWORKING MIXER**<br>*LBJSC Grand Ballroom* | |
| 4:50 PM | **POSTER AWARDS & CLOSING**<br>*LBJSC Grand Ballroom* | |
| 5:00 PM | **CONFERENCE ENDS** | |

# SPEAKER BIOS

## KEYNOTE SPEAKERS

Kyle is the Senior Director of Postsecondary and Workforce Readiness at the E3 Alliance, a non-profit education data and research intermediary based in Austin, TX, where he works with the team to support policy-to-practice implementation in postsecondary programming, including HB3 and HB8. Kyle has a unique background, serving in both the K12 and Higher Ed spaces. He began his career in education as a HS Mathematics Teacher and Instructional Coach in Northwest ISD, outside of Fort Worth. He later became the first Director of College and Career Readiness. He later joined the Institute for Public School Initiatives in the College of Education at the University of Texas at Austin as an Executive Master Teacher, focused on scaling algebra readiness in middle schools and on supporting school districts and community colleges in establishing Early College High School Partnerships across the state. Before E3 Alliance, he led partnership development in the Office of Strategy and Policy at the University of Texas at Austin for the OnRamps programming that has connected more than 200,000 students from 200+ districts across TX to 'see themselves as college students' before transitioning into postsecondary.

**Kyle Seipp**
**Senior Director of Postsecondary and Workforce Readiness**
**E3 Alliance**

Sarah Rountree Schlessinger is the CEO of Texas Water Foundation, a statewide nonpartisan nonprofit that works in water policy, workforce and leadership initiatives, and a statewide water campaign. She previously worked in groundwater policy and regulation, and has experience with international nonprofits and disaster response. Sarah served as an appointed member of the Water Conservation Advisory Council for 10 years and is a current board member for Open ET.

**Sarah Rountree Schlessinger**
**CEO**
**Texas Water Foundation**

## KEYNOTE PANELISTS

Life-science strategist and member of the executive team at NeurAdaptive, working at the intersection of neurotechnology, scientific strategy, and innovation ecosystems. Trained in neuro-oncology, metabolism, and molecular epidemiology, he helps biotech and med-tech ventures translate complex research into real-world impact. TXST alumnus dedicated to mentoring the next generation of STEM leaders.

**Dr. Matthew Thomas Ferreira**
**Life-Science Strategist & Executive**
**Team Member at NeurAdaptive**

Charles Woodin is the CEO of Geekdom, a startup incubator founded in 2011 dedicated to growing San Antonio's entrepreneurial ecosystem. Since joining Geekdom in 2017 as a Business Development Manager, Charles took on increasing responsibilities, moving into the role of Membership Director before being appointed CEO in 2019.

Under his leadership, Geekdom has redefined its mission, launched key initiatives such as the Accelerate South Texas Fund, and partnered with the City of San Antonio to oversee Launch SA, fostering innovation and small-business growth. A former U.S. Air Force Staff Sergeant, Charles served for eight years as an Airborne Cryptologic Language Analyst, specializing in intelligence collection and training.

Originally from Michigan, Charles now calls San Antonio home, where he is deeply committed to its growth. Outside of work, he enjoys traveling, hiking national parks, and spending time with his daughters, Penelope and Amelia.

**Charles Woodin**
**CEO of Geekdom**

**Albert Swantner**
**Chief Technology Officer at Verdara**

Albert Swantner is currently the CTO of Verdara, working on delivering amazing retirement experiences after orchestrating the sale of SaveDay, a 401(k) technology company to Vestwell. He is also the Co-Founder of Nameless CPG, a consumer goods platform backed by Abo Ventures, that owns Taos Bakes, Wander Beauty, Awkward Essentials, and Wile Women.

Previously, Albert was Co-Founder and CTO of Mobile Tech RX, a software platform for the automotive reconditioning industry. What began as a dent repair app grew into the market leader, introducing AI-powered estimating and workflow automation for repair professionals. He led engineering, product, and support as the company scaled nationwide, raised a Series A from Silverton Partners, and was acquired by Repairify, Inc.

He holds both a Bachelor's and a Master's in Mechanical Engineering from the University of Texas at Austin and has been inducted into the Academy of Distinguished Alumni. Active in the Austin community, he serves on the boards of Make-A-Wish Central Texas, Keep Austin Beautiful, The Adventure Project, and The Contemporary Austin. His honors include Diversity Champion of the Year from the Austin Black Business Journal, Austin 40 Under 40 Winner, Distinguished Engineering Graduate from the Cockrell School of Engineering, and, together with his family, the Pilcher Family Volunteering Award.

Albert lives in Austin with his wife, Sarah, and their two sons, Elliott and Everett.

**Sara Wisser, M.S.**
Global Senior Manager of Genetic Sciences Business Development at Thermo Fisher Scientific

Sara Wisser, M.S., is a proud Texas State University alumna and a global business development leader advancing scientific innovation across the life sciences. As Global Senior Manager of Genetic Sciences Business Development at Thermo Fisher Scientific, she drives multimillion-dollar partnerships, high-impact global collaborations, technology commercialization, and strategic initiatives that shape the future of molecular diagnostics and biotechnology. Over her distinguished career, Sara has been recognized with numerous awards, including Top Global Genetic Sciences Business Development Manager and Thermo Fisher Scientific's prestigious Chairman's Club honor.

She is recognized for her influential leadership to bring transformative scientific technologies closer to the customers and communities they serve throughout biotechnology, molecular diagnostics, and biopharma markets worldwide.

A committed advocate for STEM engagement and women in science, Sara is a frequent speaker on leadership, negotiation, and career advancement. Her previous keynote engagements include the Oregon Bioscience Association Women's Organization and the University of Oregon Women in Graduate Sciences. She also serves on the Executive Board of Thermo Fisher's Women's Empowerment-Employee Resource Group, leading professional development programs that elevate emerging scientific leaders.

As a two-time Texas State graduate, she credits the university with sparking her passion for innovation and STEM advocacy, making her return to speak at this conference both meaningful and full circle.

## MODERATOR

**Cody Gould**
**Community Health Research Associate**
Translational Health Research Center at Texas State University

Cody Gould is a Program Faculty member for the Translational Health Research Center. His primary expertise is in the areas of communication (interpersonal, leadership, and training and development studies), sales, coaching, change management, people and culture, higher education and health and wellness. Cody also has extensive experience with the corporate world after spending 7 years in marketing, recruiting, commercial real estate sales, change management, training and development, as well as founding his own coaching and consulting business while teaching at Texas State University in the Communication Studies Department.

Cody is joining the Translational Health Research Center at Texas State from the Communication Studies Department, where he was a full-time lecturer. He has a passion for coaching, teaching, and mentoring young adults and helping those who need assistance in enhancing their mental and physical health.

Cody received his undergraduate degrees in Communication Studies and Psychology from Canisius University in Buffalo, NY, and holds a Master's Degree in Communication Studies from Texas State University. He has served as a mentor and lecturer at the University, as well as a TEDxTexasStateUniversity Coordinator.

# PLATFORM TALKS

A select group of posters have been chosen to present Platform Talks that spotlight their work. These brief presentations offer a closer look at the ideas, research, and impact behind the poster. Keep an eye out for the ⛪ icon in the Poster Presentations section to find which posters will be giving Platform Talks.

# POSTER PRESENTATIONS

| Poster Number | Poster Details |
|---|---|
| **Research Posters**<br>**AGRICULTURAL/ANIMAL/PLANT/VETERINARY SCIENCE AND RELATED FIELDS** | |
| 1R-G AM | **Assessing the Relationship Between Beef Calf Grimace Scores and Circulating Haptoglobin During Castration**<br>*Yazmin Montes\*, Brian Bruner, Jessica Carnal, Dr. Abbie Viscardi, Dr. Merritt L. Drewery* |
| 2R-G AM | **Changes in Total White Blood Cell Counts Associated with Embryo Transfer in Cattle**<br>*Aracely Amaro\*, Dr. Reagan N. Sims, Olivia Brummett, Alaina Dela Rosa, Dr. Jorge A. De los Santos* |
| 3R-U AM | **Comparative Study of DNA Extraction Protocols Using Whole Blood and Hair Follicle Samples for Bovine Genomic DNA**<br>*Abigail Yoder,\* Aracely Amaro, Shrestha Siddhanta, Jorge A. De los Santos* |
| 4R-G AM | **Conservation of miRNA across Crop Plants and Farm Animal Species**<br>*Siddhanta Shrestha\*, Aracely Amaro, Jorge Antonio De Los Santos Funes* |
| 5R-U AM | **Developing Artificial Intelligence Models for Predicting Stress in Cattle Behavior**<br>*Susan Ledezma\*, Merritt Drewery, Damian Valles* |
| 6R-G AM | **Effect of Peroxide Treatments in Tilapia-Lettuce-Basil-Pac Choi Aquaponics**<br>*Elijah Wheat\*, Richard Shultz, Mar Huertas* |
| 7R-G AM | **Effects of a Bovine Appeasing Substance Applied at Estrous Synchronization on Stress, Cyclicity, and Pregnancy**<br>*Alaina Dela Rosa\*, Lauren Solice, Natalie Reyes, Olivia Brummett, Michael Sims, Dr. Eryn Pierdolla, Dr. Cesar Rosales-Nieto, Brian Bruner, Dr. Jeremy Powell, Dr. Reagan Sims* |
| 8R-G AM | **Effects of Bee Pollen Supplementation on Live Weight and Mortality in Weaned Goat Kids**<br>*Bianca Trochez-Vargas\*, Diego Villaseñor-Sagrero , Reagan N. Sims, Brian L. Bruner, Cesar A. Rosales-Nieto* |

# POSTER PRESENTATIONS

| Poster Number | Poster Details |
| --- | --- |
| 9R-U AM | **Effects of Nitrogen Fertilizer or Compost Tea Application on Soil Organic Matter and Nutritional Value of Texas Native Range Forages**<br>*Aidan Hayes\** |
| 10R-U AM | **Gut Microbiome Responses to Transport-Induced Stress in Santa Gertrudis Show Cattle and the Potential of Probiotics as a Mitigating Strategy**<br>*Leena Daghri\*, Dr. Emily Fowler* |
| 12R-U AM | **In-situ Evaluation of Forage Grown in Soils Amended with Manure from Cattle Fed Different Biochar Types**<br>*Kim Boardman\*, Lauren Orlando, Sabrina Fortunatti, Dr. Samira Islas Valdez, Dr. Nicole Wagner, Dr. Merritt Drewery* |
| 13R-U PM | **Investigating Intra-Field Crop Yield Predictability Using Machine Learning and Deep Learning**<br>*Samar Ranjit\*, Eunsang Cho, Simon Kraatz, Annelise Holguin, Jisung Chang, Feng Gao, Martha Anderson, David Johnson, Michael Cosh* |
| 14R-U PM | **Investigating Types of Composts for Use as a Peat Alternative in Greenhouse and Nursery Production**<br>*Parker Carlson\*, Dr. Tina Cade\*, Dr. Nicole Wagner\** |
| 15R-G PM | **Machine Learning-based Sub-field Crop Yield Prediction Using Satellite Remote Sensing Data**<br>*Annelise N. Holguin\*, Eunsang Cho, Simon Kraatz, Samar Ranjit, Jisung Chang, Martha Anderson, Feng Gao, David Johnson, Haoteng Zhao, Richard Cirone, Michael Cosh* |
| 16R-U PM | **Model Plant Arabidopsis Pic20 Mutant is Insensitive to Ethylene and Demonstrates Altered Stress Responses**<br>*Claire Taylor\*, Sunethra Dharmasiri, Nihal Dharmasiri* |
| 17R-G PM | **Preconceptional Maternal Nutrition Affects Growth Performance Trajectories in Singleton Female Lambs**<br>*Amanda R Davis\*, Dr. Cesar A Rosales Nieto, Dr. Almaden's Veiga-Lopez* |
| 18R-U PM | **Price Formation and Quality Signals in Secondary Commodity Markets: Evidence from Graded Trading Cards**<br>*Beau Kelly\*, Abrielle Cisneros \*, Dr Jesse Backstrom* |
| 19R-G PM | **Quality Over Quantity: The Oxygen Advantage of Bee Pollen Supplementation**<br>*Andrea Aldape\*, Payton Kinney, Bianca Trochez-Vargas, Brian L. Bruner, Cesar A. Rosales-Nieto* |
| 21R-C PM | **Soil health and mycobiome diversity across urban crop production sites in San Antonio, Texas**<br>*Nathan North\*, Pierce Lynch, Dr. Allison Veach PhD* |

# POSTER PRESENTATIONS

| Poster Number | Poster Details |
|---|---|
| 22R-G PM | **Stress-induced tRF Extension: Chimeric RNAs Production and Their Role in Sequence-specific Gene Activation**<br>*H L Thilakshi  Abeywickrama*, Sung-Il Kim, Hong Gu Kang* |
| 23R-G PM | **Sustainable Concrete Using Agricultural Byproducts**<br>*Jogi Pallavi*, Karki Bishal, Konstantinos Kalfas* |
| 24R-H PM | **Sweet Relief: The Advantages of Using Bee Pollen Supplementation to Regulate Immune Response and Live Weight**<br>*Payton Kinney*, Andrea Aldope, Bianca Trochez-Vargas, Brian Bruner, Cesar A. Rosales-Nieto* |
| 25R-G PM | **The Effect of Different Types of Biochar Supplementation on Forage Utilization in Beef Steers**<br>*Sabrina Fortunatti*, Emily C. Fowler, Merritt L. Drewery* |
| **Research Posters**<br>**NATURAL RESOURCES AND CONSERVATION** | |
| 26R-G AM | **(Dis)connections Beyond the Bottle: Viticultural Marketing Claims and Soil Conditions in Texas Hill Country**<br>*Annie Vo*, Dr. Colleen Myles* |
| 27R-G AM | **Estimating PFAS Exposure Risk Under Climate Stress Using Machine Learning**<br>*Kathleen I. Shank*, Himmat Basnet, Eunsang Cho, Sangchul S. Hwang* |
| 28R-C AM | **An Integrated Geospatial Modeling Framework for Predicting Groundwater Contamination Risk of Quarried Karst under Post-Mining Reclamation Scenarios, Edwards Aquifer Recharge Zone**<br>*Kaitlyn Tran** |
| 29R-U AM | **Seasonal Distribution, Activity Patterns, and Habitat Associations of Nycticeius humeralis in Texas: Effects of Weather and Landcover**<br>*Mikayla McClish*, Maria Ramirez, Madison Gover, Madison Nadler, Dr. Sarah Fritts* |
| **Research Posters**<br>**COMPUTER AND INFORMATION SCIENCES AND SUPPORT SERVICES** | |
| 30R-U AM | **CognitiveSky: Scalable Sentiment and Narrative Analysis for Decentralized Social Media**<br>*Gaurab Chhetri*, Dr. Anandi Dutta, Dr. Subasish Das* |
| 31R-U AM | **Data Twin: Proactive Data Quality Risk Assessment for Loan Applications**<br>*Aarya Chapagain*, Tami Nafal*, Ekin Tahir** |
| 32R-U AM | **Formal Verification of Ring Buffer–Based System Monitoring in Rust (kernel ebpf and verus)**<br>*Sudrit Ghimire** |

# POSTER PRESENTATIONS

| Poster Number | Poster Details |
|---|---|
| 33R-U AM | **Fraudsphere**<br>*Aarya Chapagain\*, Aidan Quintero\*, Dr. Tahin Ekin* |
| 34R-H AM | **Physics-Informed Explainable Deep Learning Framework for Exoplanet Atmospheric Classification Using Transmission Spectroscopic Data**<br>*Suchit Peddoju\*, James R. Pittman* |
| 35R-U PM | **PRISM: Pipeline for Research Innovation with Scientific Multi-Agents**<br>*Biplov Pandey\*, Gaurab Chhetri, Dr. Subasish Das* |
| 36R-U PM | **Short-Term Wildfire Burned Area Prediction Using Multi-Source Environmental Features and Event-Level Cross-Validation in California.**<br>*Samrakshyan Adhikari\*, Dr. Eunsang Cho* |
| 37R-U PM | **When Can We Trust the Market? Interpreting Prediction Market Signals for Decision Support**<br>*Aidan Quintero\*, Tami Nafal, Dr. Tahir Ekin* |
| **Research Posters**<br>**ENGINEERING** | |
| 38R-U AM | **Laboratory analysis of water resistivity with suspended sediment**<br>*Josh Del Bosque\*, Andrew Gombac\** |
| 39R-G AM | **A Multiplexed Electrochemical Biosensor for In-Vitro Detection of Gastric Cancer tRF Biomarkers.**<br>*Mir Imran Bin Samad\*, Dr. Hong-Gu Kang, and Dr. Namwon Kim* |
| 40R-G AM | **Assessing Roadway Network Risk to Compound Flooding in Galveston County, Texas: An Integrated Hydrodynamic and Machine Learning Approach**<br>*Md Shah Mominul Islam Momin\*, Eunsang Cho, Eunsaem Cho, Subasish Das* |
| 41R-U AM | **Benchmarking Transformer Models for Detecting Mental Health Disclosures in Decentralized Social Media**<br>*Irfan Sarwar Pranjol\*, Gaurab Chhetri, Subasish Das PhD* |
| 42R-U AM | **Biochar-Enhanced Filtration Technology for Removing Industrial Pollutants from Energy-Sector Wastewater**<br>*Aaditya Jha\*, Dr. Sujata Mandal* |
| 43R-U AM | **Bottom-Up Assembly of DNA-Nanoparticle-Dumbbells for Quantum Bits**<br>*Ashok Paudel\*, Rigo Mayorga-Luna, Dr. Yoichi Miyahara, Dr. Tania Betancourt* |
| 44R-G AM | **Computational Investigation of the Structural and Electronic Properties of Spinel $MgGa_2O_4$ for Machine Learning Training.**<br>*Joya Rani Debnath\*, Nathan Rabelo Martins\*, Luisa M. Scolfaro, Ariful Haque* |

# POSTER PRESENTATIONS

| Poster Number | Poster Details |
|---|---|
| 45R-G AM | **Computer Vision Framework for Identity-Aware Cattle Behavior Monitoring in Ranch Systems** <br> *Md Sakif Uddin Khan\*, Dr. Damian Valles Molina, Dr. Merritt L Drewery, Dr. Bahram Asiabanpour* |
| 46R-U AM | **Correlating Surface Potential and Topography in Stacked Hexagonal Boron Nitride by Kelvin Probe Force Microscopy** <br> *Subodh Aryal\* , Md Madmul Hasan\*, Rajendra Rai\*, Nazwa Chowdury\*, Priyanshi Patel\*, Dr. Miyahara Yoichi"\** |
| 47R-G AM | **Design of Energy-Efficient Low-Carbon Mortars with Enhanced Thermal Insulation** <br> *Anika Salsabiyl\*, Dr. Wilson Espinoza* |
| 48R-U AM | **Detecting Suicidal Ideation on Bluesky with Transformers and Hybrid Models** <br> *Bidisha Shrestha\*, Gurab Chhetri, Dr. Subasish Das* |
| 49R-G AM | **Effect of Atomic H on Molecular Beam Epitaxy of GeSn Thin Films** <br> *Mohammed Reaz Rahman  Munna\*, Khorshed Alam, Biddhut Lamichane* |
| 50R-G AM | **Engineering Performance of Lightweight Mortar with a Carbon-Sequestering Additive** <br> *Prabeshika Khanal\*, Dr. Wilson Espinoza* |
| 51R-G AM | **Enhanced Stability and Controlled Drug Release in PEG-Based Hydrogels: Ionic Interaction Strategy Using PEG-Amine and PEDOT Nanoparticles** <br> *Sakib Hossain Bhuiyan\*, Tania Betancourt* |
| 52R-G AM | **Epitaxial Growth and Characterization of N-Type Dopant-Tuned $MgGa_2O_4$ Thin Films using Pulsed Laser Deposition for High Power-Electronic Applications** <br> *Mahamudul Hassan Fuad\*, Brian Samuels, Dhanu Chettri, Ariful Haque* |
| 53R-G AM | **Ergonomic and Musculoskeletal Risk Patterns Among Roofers and Non-roofers: Evidence from a Comparative Field Study** <br> *Rujan Kayastha\*, David Canas Vanegas, Sujan Acharya, Krishna Kisi and Jitendra Tate* |
| 54R-G AM | **Exploring the Sensitivity of UAV-Based Gamma-Ray Signals to Soil Moisture in Semi-Arid Rangelands, Texas** <br> *Jipeng Liu\*, Dr. Eunsang Cho* |
| 57R-G PM | **Indentation-Based Mechanical and Creep Properties in Granite Samples** <br> *Alisha Poudel\*, Dr. Wilson F. Espinoza* |
| 58R-G PM | **Integrating Spatial Scale and Hydrologic Memory for Predicting Spring Discharge and Groundwater Levels Using GRACE-DA-DM and Bias-Corrected Climate Forcing: The Edwards Aquifer** <br> *Himmat Basnet\*, Cho Eunsang* |

# POSTER PRESENTATIONS

| Poster Number | Poster Details |
|---|---|
| 59R-G PM | **Laser-Assisted Co-Doping of Polycrystalline Diamond Films with Boron and Lithium: Towards n-type Conductivity**<br>*Fardeen Md Toushique\*, Ariful Haque* |
| 60R-G PM | **Lowering Contact Resistance of Lab-Grown Boron-Doped Diamond Using Pulsed Laser Annealing for Next Generation Electronic Devices**<br>*Mahfuz Ahmed Azmain\*, Ariful Haque* |
| 61R-G PM | **Machine learning-aided suitable n-type dopant discovery for diamond**<br>*Maria Sultana\*, Dr. Ariful Haque* |
| 63R-G PM | **Mechanisms of Grain Boundary Assisted Doping in Diamond using Laser Driven Non-equilibrium Processing**<br>*Adedayo Alaga\*, Saif Taqy, Ariful Haque* |
| 65R-U PM | **Modeling & Simulation of Academic Makerspace with AnyLogic**<br>*George Bruen\*, Aleah White\*, Natalie Huth\** |
| 66R-U PM | **Modification of SLA Printer to Fit in Halbach Cylinder for Anisotropic Magnetic Soft Composite Printing**<br>*Bishu Banjara\*, Md Anisul Islam, Leo Rodriguez, Anil Kumar Mandal, Wilhelmus J. Geerts* |
| 68R-G PM | **Multi-Objective Reliability Design and Optimization for Permanent Lunar Habitation Base**<br>*Ahsanul Abedin\*, Dr. Tongdan Jin* |
| 69R-G PM | **Polishing of Polycrystalline Diamond using Dynamic Friction Polishing and Chemical Mechanical Polishing**<br>*Sagira Zaman Eva\*, Mohammad Ahsan Hussain, Balmiki Sah Gupta, Himal Bhandari, Saif Taqy, Dr. Ariful Haque* |
| 71R-U AM | **Reducing School District Food Waste Through Data Analysis and Optimization**<br>*Claire Pauwels\*, Clara Novoa, Wenquan Dong* |
| 73R-U PM | **ROS2 GPS-based Autonomous Vehicle Navigation in the Agriculture and Livestock Space**<br>*Nathan Charles\*, Utsav Adhikari\*, Dr. Damian Valles* |
| 74R-G PM | **Selectively Detecting PFOA With a MOF 3D-Printed Electrochemical Sensor**<br>*Andrew Haney\*, Collins Kiguye, Dr. Sangchul Hwang, Dr. Namwon Kim* |
| 75R-G PM | **Solvothermal synthesis and functionalization of Zr-based MOFs (NU-1000) using Solvent-Assisted Ligand Incorporation (SALI)**<br>*Collins Kiguye\*, Andrew Hanney, Sangchul Hwang, Namwon Kim* |

# POSTER PRESENTATIONS

| Poster Number | Poster Details |
|---|---|
| 76R-G AM | **Vapor Phase Deposition of Electroactive Polymers on Electrospun Commodity Polymer Nanofibers for Energy Storage**<br>*Shuvo Brahma\*, Scott L. Barrett, Aidan Gustafson, Alyssa Libonati, Dr. Marcus Goss, Dr. R. Kōnane Bay, Dr. Jennifer Irvin, Dr. Tania Betancourt* |
| **Research Posters**<br>**ENGINEERING/ ENGINEERING-RELATED TECHNOLOGIES** | |
| 77R-U AM | **Energy-Efficient Biochar-Based Sustainable Concrete for Enhanced Curing and Performance**<br>*Denisse A. Morales\*, Sujata Mandal* |
| 78R-G AM | **Impact of Coarse Aggregate Properties on the Performance of Concrete Pavements**<br>*Fereshteh Rahmani\*, Dr. Hyunhwan Kim, Dr. Soon-Jae Lee* |
| 79R-G AM | **Influence of GRACE Satellite Data Assimilation on Snowmelt Flood Simulations**<br>*Harisankar Manoj\*, Eunsang Cho, Eunsaem Cho, Bailing Li, Carrie Vuyovich, Jennnifer M Jacbos, Augusto Getirana* |
| 81R-H PM | **Micro-Gap Thermal Rectifier: Quantifying Ambient Interference in Near-Field Heat Transfer via Engineered Interfaces**<br>*Nikhitha Swaminathan\** |
| 82R-G PM | **Printed Silver Thin-Film Heater for Continuous-Flow Isothermal DNA Amplification**<br>*Shreyas Inamdar\*, Tanzila Kamal Choity, Daniel S. Park, Sangchul Hwang, Hong-Gu Kang, and Namwon Kim* |
| 83R-U PM | **Transforming Waste into Solutions: Modified Avocado Biochar for Hazardous Dye and Lead Removal**<br>*Olsan Karki\*, Jordy Pantoja\*, Dr. Sujata Mandal* |
| 84R-U PM | **WiFi HaLow for Resilient Crowd Management at the Ingram Makerspace**<br>*Ashok Paudel\*, Tyler Larson\*, Zach Gayman\*, Thomas Tran\*, Dr. Marcelo Menezes De Carvalho* |
| **Research Posters**<br>**BIOLOGICAL AND BIOMEDICAL SCIENCES** | |
| 85R-G AM | **Assessing the Transport of Nitrite and Nitrate Using a Peptide/Histidine Transporter Expressed in Xenopus Laevis Oocytes**<br>*Nicole Restrepo\*, Giulia Casoli, Elena Bossi, Mar Huertas* |
| 86R-U AM | **Bisazobenzene Aqueous batteries**<br>*Nathalia Sauceda\*, Scott Barrett, Dr. Bill Brittain* |

# POSTER PRESENTATIONS

| Poster Number | Poster Details |
|---|---|
| 87R-U AM | **Characterization of a Plasmodium Falciparum Serine Hydrolase**<br>*Jamaree Coleman\*, Syeda Taufiqa, Sumit Mukherjee* |
| 88R-U AM | **Characterization of SUMO Specific Proteases in Malaria Parasites**<br>*Jasper Travis\*, Dr. Sumit Mukherjee* |
| 89R-U AM | **Chronic Effects of IGF-1 supplementation on Microglial Activation After Traumatic Brain Injury**<br>*Dillon Shadowen\*, Bharat Salvady, Brock Braden, Reagan Dominy, Gabriel Arisi, Jaclyn Iannucci, Lavanya Venkatasamy, Lee A. Shapiro* |
| 90R-U AM | **Conservation of Innate Immune Genes in the Other Cnidarian Symbiosis: The Green Hydra**<br>*Kevin Tran\*, Caleb Butler, Carly Travers, Raul Gonzalez-Pech* |
| 91R-G AM | **Copper-Binding and Redox Properties of Cbi Protein Isoforms in Pseudogymnoascus destructans**<br>*Ian Smith\** |
| 92R-G AM | **Deconvoluting the Spatiotemporal Patterning of Melanoma-Prone pigment cell - macromelanophore**<br>*Jarred Barron\*, William Boswell, Mikki Boswell, Xing Yanting, Lindsey Sanchez, Markita Savage, Dr. Yuan Lu* |
| 93R-U AM | **Determining the Cytotoxicity of Photoisomeric Spiropyran Compounds on Neuroblastoma**<br>*Kieran Ross\*, Alexandra Vernaza, Jaedyn Ramirez, Ella Shifman, Taylor Beckford, Anjali Aggarwal, Jake Howerton, Mosab Odeh, Dr. William Brittain, Dr. Shiva Rastogi, and Dr. Liqin Du* |
| 94R-U AM | **Developing a Russian-Doll-Inspired Biomaterial for the Smart Delivery of Doxorubicin**<br>*Dillon A Gee\*, Nathaniel Conrad, Adrianne Rosales, Tania Betancourt* |
| 95R-U AM | **Development of Poly(lactic-co-glycolic acid) (PLGA) Nanoparticles for Retinoic Acid Delivery in Neuroblastoma Cells**<br>*Brandon Taylor\*, Keya Das, Tania Betancourt* |
| 96R-U AM | **Divergent A-Ring Functionalization of Lycorine for Structure–Activity Relationship Studies in Glioblastoma**<br>*Ben Williams\*, Dr. Alexander Kornienko* |
| 97R-U AM | **Domain Mapping of ZGRF1-RAD51 Interaction: A Stepping Stone to Understanding Regulators of Homologous Recombination**<br>*Ava Miller\*, Lillian Eliaz, Dr. Xiaoyu Xue* |
| 98R-G AM | **Effects of Chronic Nitrite Exposure on Reproduction in a Live-Bearing Fish Model (Xiphophorus couchianus)**<br>*Trinity Parkman\*, Yuan Lu, Mar Huertas* |

# POSTER PRESENTATIONS

| Poster Number | Poster Details |
|---|---|
| 99R-G AM | **Effects of proline mutations within the LaRP6 La Module**<br>*Maria Martinez Hernandez\*, Adamari Cabrera, Madisyn J. Johnson, Katherine Burkhart, Nour Essa, Dr. Karen A. Lewis* |
| 100R-U AM | **Elucidating KIAA1143's Role in the Abscission Checkpoint and Cancer**<br>*Kevin Tat\*, Micaela Vargas* |
| 101R-G PM | **Engineering Thermoresponsive Perylene Diimides for G-Quadruplex Targeting**<br>*Hailey Dudley\*, Adrian Fernandez, Spencer Smith, Nikki Broussard, Sean M. Kerwin* |
| 102R-G PM | **Environmental stress and plant survival: Potential role of IBR5 in plant responses to environmental stress.**<br>*Prianka Acharjya\*, Heshini N. Weerakkody, Israel Arellano, Sunethra Dharmasiri, Nihal Dharmasiri* |
| 103R-U PM | **Exploring Ligand Effects in Copper-Catalyzed Cross-Coupling of Azoles with Bromoalkynes**<br>*Nikki Ziaei\*, Mauricio A Jemal, Dr. Sean Kerwin* |
| 104R-G PM | **From Leaves to Root: Role of Auxin in Carbohydrate Allocation in Plants**<br>*Ikechukwu Opara\*, Sherry Albers, Sunethra Dharmasiri, Nihal Dharmasiri* |
| 105R-P PM | **Identifying ephemeral Reddish Egret foraging habitat using remote sensing and tidal simulations in the northern Gulf of America**<br>*Daniel A. Guerra\*, M.Clay Green* |
| 106R-U PM | **Investigating the Effect of the Subunit Nse5/6 on Smc5/6 E3 Activity**<br>*Paris Salmon\*, Heather McEntire-Benitez, Dr. Xiaoyu Xue, Thomas Forbes* |
| 107R-G PM | **Investigating the presence of immune priming in the cnidarian model organism Exaiptasia diaphana**<br>*Carly Travers\*, Dr. Lauren Fuess* |
| 108R-C PM | **Loss of snai2 causes zebrafish to develop hyper-mineralized and brittle bone consistent with osteopetrosis in humans.**<br>*Mykayla Fenner, Julie Grijalva, Paulomi Modi, Emma Aune, Misa Ito, Terry Shackleford, Anil Challa, Myron Ignatius* |
| 109R-U PM | **Narciclasine Isolation Targeting Cytoskeletal and Transcriptional Vulnerabilities in Therapy Resistant Glioblastoma**<br>*Kamryn Hamilton\*, Alexander Korneinko, Travis Anderson* |
| 110R-G PM | **One goal, two paths: Role of PIC5 and its homolog in regulating plant response to increasing temperature**<br>*Heshini N. Weerakkody\*, Sunethra Dharmasiri, Nihal Dharmasiri* |

# POSTER PRESENTATIONS

| Poster Number | Poster Details |
|---|---|
| 111R-U PM | **Potential role of IBR5 in regulating the 26S-proteasome activity during auxin signaling in plants.** <br> *Nicole Dietz*, Nicholas Siepert, Heshini Weerakkody, Sunethra Dharmasiri, Nihal Dharmasiri* |
| 112R-G PM | **Targeted Anti-Cancer Therapy Derived from Daffodil Alkaloid Narciclasine** <br> *Travis Anderson** |
| 113R-G PM | **The Pseudogymnoascus destructans Proteome Under Copper Stress Conditions** <br> *Alyssa Friudenberg*, Saika Anne, Yuan Lu, Susan Weintraub, Ryan Peterson* |
| 114R-G PM | **Thermodynamic Investigation of G-Triplex DNA and ligand interactions** <br> *Malay Kumar Das*, Mitchell Myhre, Dr. Sean M. Kerwin* |
| 115R-U PM | **TTC31 as a Novel Modulator of Liver Disease Pathogenesis** <br> *Paige Coltman*, Dr. Micaela Vargas* |
| 116R-G PM | **ZGRF1 helicase and BRCA1-BARD1 regulation of pathological R-loops in DNA damage repair pathways** <br> *Lillian Eliaz*, Dr. Xiaoyu Xue* |
| 156R-U AM | **Origin and Diversity and Origin of Hydra spp. in Central Texas** <br> *Katie Sheppard** |
| **Research Posters** <br> **MATHEMATICS AND STATISTICS** | |
| 118R-G AM | **Enhancing the Adversarial Robustness of Machine Learning Models: Application of a Dynamical Formulation of Optimal Transport** <br> *Abu Zobayer*, Jeremiah Birrell, Reza Ebrahimi* |
| **Research Posters** <br> **PHYSICAL SCIENCES** | |
| 119R-U AM | **Ag-Coated Optical Fiber for Mechanical Parametric Amplification and Noise Squeezing of Atomic Force Microscopy Cantilever** <br> *Apar Timsina*, Utsab Pandey*, Yoichi Miyahara* |
| 120R-U AM | **Axia ChemiSEM Elemental Composition Analysis of Kingfisher Meteorite** <br> *Jessy Ingersoll*, Dr. Elizabeth Czajka, Dr. Ran Sivron, Walker Wardrop* |
| 121R-U AM | **Determination of Supercurrent in Mn5Si3 Josephson Junctions** <br> *Tyler Kuhn*, Arjun Sapkota, Kurt Lorenzen, Nathan Satchell* |
| 122R-G AM | **Doping of Diamond using Pulsed Laser Annealing for Electronic Applications** <br> *Saif Taqy*, Pujan Lamsal*, Mahfuz Ahmed Azmain, Dr. Ariful Haque* |

# POSTER PRESENTATIONS

| Poster Number | Poster Details |
|---|---|
| 123R-G AM | **Effects of 3D Carbon Scaffold and Anion Environment on Electrochemical Performance of Nickel Hydroxide Cathodes for Alkaline Nickel-Zinc Batteries** *Jackelyn Rodriguez Leal\*, Jaret Manley, Christopher Rhodes* |
| 124R-G AM | **Engineered Gate-Defined Quantum Dots in Two-Dimensional Materials for Scalable Qubit Implementation** *Shivam  Nigam\*, Prof. Y Miyahara* |
| 125R-U AM | **Exploration of the Aza-Bergman Cyclization of 1,5-Dialkynylpyrazoles** *Tegan Dagley\*, Shamsul Alam, Dr. Muppidi Subbaro, Dr. Sean Kerwin* |
| 126R-U AM | **Ground-Based Magnetic Attitude Determination for Low-Cost CubeSat Missions** *Johnny McCaskill\*, Evan Jellison, Blagoy Rangelov* |
| 127R-G AM | **Growth and Integration of Altermagnetic $Mn_5Si_3$ Material into Nb/Pt/$Mn_5Si_3$/Pt/Nb Josephson** *Arjun Sapkota\*, Kurt M Lorenzen, Tyler Kuhn, Nathan Satchell* |
| 128R-U AM | **Investigating Spin-Triplet States in NbRe: A Superconducting Noncentrosymmetric Material** *Kaylee Perez\*, Nathan Satchell* |
| 129R-G AM | **Kelvin Probe Microscopy Study of Moiré-Induced Electronic  Modulation in 2D Semiconductors** *Nazwa Chowdhury\*, Md Mahamudul Hasan, Subodh Aryal, Priyanshi Patel, Kenji Watanabe, Takashi Taniguchi, Yoichi Miyahara* |
| 130R-U PM | **LabVIEW-Automated Stress–Strain Characterization of Magnetic Polymer Composites** *Kripa Paudel\*, Anisul Islam, Wilhelmus J. Geerts* |
| 131R-U PM | **Laser Synthesis of Metal Nitrides for Photoelectric Catalysis** *Mego Paquet\*, Dr. Ben Martin* |
| 132R-U PM | **Laser Synthesis of Mixed Metal Ilmenite and Pseudobrookite Structures for Electrocatalysis** *Eryn Russell\*, Alan Martinez, Isabella Horcha, Ben Martin* |
| 133R-U PM | **Laser Synthesis of Mixed Metal Spinel Materials for the Oxygen Evolution Reaction** *Mal Millholland\*, Dr. Ben Martin* |
| 134R-G PM | **Regional Water Balance Analyses and Quantifying Snowmelt Contribution to Streamflow: A Case Study of the Smith River Watershed, Montana, USA** *Farhaan Cooverji\*, Eunsang Cho, Bailing Li, Carrie Vuyovich, Jennifer M. Jacobs, Eunsaem Cho, Samuel E. Tuttle, Eric A. Sproles* |

# POSTER PRESENTATIONS

| Poster Number | Poster Details |
|---|---|
| 135R-G PM | **Robust Pauli-limit violation and 2D–3D superconducting crossover in NbRe thin film**<br>*Pukar Sedai\*, Kaylee Perez, Sydney Mock, Nathan Satchell* |
| 136R-U PM | **SEM analysis of chondritic meteorite Horace**<br>*Walker Wardrop\*, Elizabeth Czajka, Ran Sivron, Jessy Ingersoll* |
| 137R-G PM | **Silver-Coated Copper Nanowire Purification**<br>*Scott Barrett BS MS\*, Joshua Ivy PhD\*, Christopher Reyes PhD\*, William J. Brittain PhD\** |
| 138R-G PM | **Structure–Activity Relationship Study of Amaryllidaceae Alkaloid Lycorine for Improved anti-Glioblastoma Activity**<br>*Kaylea Corcoran\*, Alex Kornienko* |
| 139R-U PM | **Surface Morphology of CdTe(211) and PbTe/CdTe(211) Epitaxial Surfaces via Atomic Force Microscopy**<br>*Tyler Sheppard\*, Sam Cantrell, John Miracle, Dr. Theodoropoulou* |
| 140R-P PM | **Visualizing Ferroelectric Domains in Twisted Hexagonal Boron Nitride using a Robust Highly-sensitive Kelvin Probe Force Microscopy**<br>*Md Mahamudul Hasan\*, Michael Goodman, Noah Austin-Bingamon, Yoichi Miyahara* |
| **Research Posters**<br>**SCIENCE TECHNOLOGIES** |
| 141R-U PM | **Colchicine shows anti-cancer potential in neuroblastoma cells**<br>*Brynn Del Buono\*, Liqin Du* |
| 142R-G PM | **Flow- Induced Magnetic Anisotropy in 3D- Printed Strontium Ferrite/PA12 Magnetic Composites**<br>*Anil Mandal\*, Fatima TuZ Zohora Toma, Anisul Islam, Leo Rdriguez, Wilhelmus J. Geerts* |
| 143R-U AM | **TC0_bilayer Project: Simulation and Fitting of Thin Superconducting-Ferromagnetic Systems**<br>*Sean Starks\*, Nathan Satchell* |
| **Research Posters**<br>**STEM EDUCATION** |
| 144R-U AM | **A GIS-Based Heat Risk Index for San Marcos, Texas**<br>*Jyotsana Kandel\*, Wesley Kimeli* |
| 145R-U AM | **Evaluating Deep Learning Approaches for Subseasonal Streamflow Forecasting**<br>*Eunsang Cho\*, Hrishant Shiwakoti Sharma\** |

# POSTER PRESENTATIONS

| Poster Number | Poster Details |
|---|---|
| 146R-U PM | **Exploring Learning Assistants' Perceptions of Department Transitions Within the STEM Communities LA Program** <br> *Saige Toedtman*, Kelsey Lincoln, and Dr. Alice Olmstead* |
| 147R-G AM | **Family Obligations and Gender Wage Gaps Across STEM Subfields** <br> *Maria Zaman*, Dr. Li Feng, Dr. Muxin Zhai, Education Policy Lab (EPL)* |
| 148R-U AM | **How does district overall teacher salary spending relative to overall school expenditures affect student math achievement?** <br> *Joe Jackson*, Kalli Cain, Damian Lopez* |
| 149R-G AM | **How Students Make Sense of Graphs: The Role of Graph Features in Interpreting Real-Life Data** <br> *Marina Ferreira*, Candice Hamilton, Dr. Hwa Young Lee* |
| 150R-G PM | **Immunomodulation Potential of Conductive Polymer Nanoparticle Mediated Photothermal Therapy for Cancer Treatment** <br> *Moriom Afiza*, Dr. Tania Betancourt* |
| 151R-U PM | **Laser Synthesis of Cobalt Molybdate for the Oxidation Evolution Reaction** <br> *Ian Morgan*, Edward Yu, Dr. Ben Martin* |
| 152R-G PM | **Situated Expectancy Value Theory (SEVT) in STEM Education: A Framework for Understanding the Impact of Subjective Task Values in Student Motivation** <br> *Antu Dutta*, Dr. Shelly Forsythe, Dr. Jonathan Vontsteen* |
| 153R-P PM | **Small RNA-Mediated Activation: A Global Overview and Its Role in Plant Immunity** <br> *Mehtab Muhammad Aslam*, Hong-Gu Kang* |
| 154R-U PM | **The Smile Divide Project** <br> *Morgan Pendergrass** |
| **Research Posters** <br> **HEALTH PROFESSIONS AND RELATED PROGRAMS** | |
| 155R-O PM | **AI for Leaders: Automate Tasks, Reduce Stress, and Boost Team Performance** <br> *Andria Barrett** |
| **Design Posters** | |
| 20D-U PM | **Shark Behavioral Analysis and Adaptation to Dolphins in Captivity** <br> *Alexis Ruiz** |
| 55D-U PM | **FSAE Interconnected Hydraulic Suspension System** <br> *Reece Cavallo*, West Masone*, Ethan Wilfur*, Kira Smith** |

# POSTER PRESENTATIONS

| Poster Number | Poster Details |
| --- | --- |
| 56D-U PM | **HDPE Low-Pressure Injection Molder**<br>*Mia De La Torre\*, Bea Murri\*, Ankit Rai\*, Will Gellner\* and Corbin Whitaker\** |
| 62D-U PM | **Mechanical Design of an Autonomous Robot For Cattle Monitoring**<br>*Jillian Grubenhoff\*, Kevin Castenada\*, Isabella Willis\*, Alexandra Gilmore\*, Pawan Pradhan\** |
| 64D-U PM | **Mini Golf Hole Redesign**<br>*Brian Earle\*, Collin Lueb\*, Landon Meade\*, Nikola Andric\** |
| 67D-U PM | **MOST-Based Video Analysis of Disassembly Operations**<br>*Claire Pauwels\*, Kenya Frias Rodriguez\*, Tyler Haug\*, Jade Ong\** |
| 70D-U PM | **Redesigning the Diver-Below Buoy**<br>*Logan Mallow\*, Ryan Beakley\*, Andres Herrera\*, Claudia Quilter\** |
| 72D-U PM | **Robotics Dashboard**<br>*Dylan Hahn\*, Jimena Gonzalez, Gilberto Hernandez* |
| 80D-U AM | **Lunar and Mars Surface Habitat Module Manufacturing**<br>*Liam Byrom\*, Chloe Hinojosa\*, Scott Yeatman, Tony Diehl, John Hearn* |
| 117D-G AM | **Design and Implementation of an Interactive Spatial Analytics Dashboard for Multi-dimensional Socioeconomic, Health, and Environmental Data Visualization in Hays County, Texas.**<br>*Okeke Joshua Onyedikachi\** |
| **CoSE EEC Milestone 4 Capstone Poster** | |
| 157E-U AM | **CoSE EEC Milestone 4 Capstone Poster**<br>*Isabella Arevalo\** |
| 158E-U AM | **CoSE EEC Milestone 4 Capstone Poster**<br>*Nikki Ziaei\** |

# TEXAS STATE UNIVERSITY
## Translational Health Research

## THRC'S FIVE AREAS OF FOCUS

Infrastructure & Environment

STEM & Healthcare Workforce

Personal Health & Wellbeing

Digital Healthcare Transformation

Emergency Preparedness

## INNOVATION THROUGH COLLABORATION

PROJECTS

PROGRAMS

THRC

PARTNERSHIPS

THRC leads research projects, programs, and partnerships to foster innovative collaborations. Our system encourages synergy and produces comprehensive and impactful results.

## HOW THRC SHARES RESEARCH

### Research Engagement
Such as guest speakers, sponsorships, meetings, conferences, seminars, webinars, social media, trainings, and academic/community conversations.

### Data Visualization & Mapping
Such as data visualization, GIS maps, poster presentations, promo materials, videos, our website, and social media.

### Research Publications, Proposals, & Reports
Such as grant proposals, reports, research papers, articles, brochures, blogs, and other print/digital media.

## THRC EVENTS

### Health Scholar Showcase
An annual campus-wide event that highlights faculty research and sponsored programs at TXST while bring together faculty, researchers, staff, and community members for an afternoon of networking, collaboration, and discovery

### Health + Resilience Research Network
Quarterly luncheons where attendees connect with colleagues across campus and guest speakers highlight their current research.

### ECHO TXST
Virtual learning networks using the innovative ECHO model - where all teach, all learn.

### THRC Partner Events
We engage academic, government, and private sector partners for events that spark new innovations.

## CONTACT US

healthresearch.txst.edu
healthresearch@txstate.edu
512.245.0444

**INTERESTED IN BECOMING A THRC STUDENT FELLOW?**
**TO LEARN MORE ABOUT FELLOWSHIP OPPORTUNITIES, EMAIL HEALTHRESEARCH@TXSTATE.EDU.**

# SERVICE-LEARNING IMPACT

Service-learning is an experiential learning approach in which students apply concepts relevant to their coursework and degree program in service-based projects with community partners and critically reflect on service activities.

## Faculty

- Deepen student engagement through real-world application of course content.
- Expand faculty expertise and research opportunities in community contexts.
- Enrich teaching quality through innovation and reflection.
- Build lasting partnerships that strengthen civic and professional identity.
- Advance meaningful learning outcomes through intentional course design.



## Communities

- Gain meaningful, needs-driven service that supports organizational goals.
- Build lasting, collaborative relationships with the university.
- Engage motivated students who contribute skills, energy, and fresh perspectives.
- Strengthen community capacity while shaping future civic leaders.

# WE LEARN AS WE SERVE.

## Students

### Personal Outcomes

- Increases in personal efficacy, personal identity, spiritual growth, & moral development
- Increases in the ability to work well with others, leadership, and communication skills

### Social Outcomes

- Increases sense of social responsibility
- Increases commitment to service

### Learning Outcomes

- Improves academic performance (writing skills, complexity of understanding, problem analysis, critical thinking skills, & cognitive development)
- Students report increased motivation in service-learning classes
- Improves students' ability to apply what they've learned

# CAREER SERVICES

## OUR SERVICES AT A GLANCE:

★ CAREER EVENTS AND FAIRS

★ RESUME AND COVER LETTER HELP

★ ONE-ON-ONE CAREER PLANNING

★ PROFESSIONAL HEADSHOT PHOTOBOOTH

★ PROFESSIONAL ATTIRE

★ INTERVIEW PREPARATION

## 15 MINUTE DROP-IN SESSIONS

**MONDAY-FRIDAY 10 A.M.-3 P.M.** Career-peer sessions to help with general resume & cover letter reviews, Handshake assistance, part-time job search assistance, and interview preparation.



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Scan to check out upcoming chances to meet employers, brush up on professional skill, grab a free cup of coffee and more.

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**TEXAS STATE UNIVERSITY**
College of Science & Engineering

# ASPIRE TXST STUDENT FELLOWS

## ACADEMIC SUCCESS | PROFESSIONAL INTEGRATION | RESEARCH EXPERIENCES FOR UNDERGRADUATE STUDENTS

The ASPIRE Student Fellow Program at Texas State University, supported by a National Science Foundation grant, expands student access and success in STEM fields. As an ASPIRE Student Fellow, you benefit from targeted mentorship, hands-on paid research opportunities, and academic support designed specifically for undergraduate students—including transfer students. By joining ASPIRE, you'll connect with experienced faculty mentors and gain valuable research experience that promotes scientific identity, self-confidence, and marketable skills.

Student fellows are at the heart of this initiative, gaining hands-on research experience guided by dedicated faculty mentors who help foster both academic and professional growth throughout your journey as an ASPIRE fellow.



*Eligibility requirements for the ASPIRE Student Fellow Program follow NSF guidance; students who identify as U.S. citizens, nationals, or permanent residents are encouraged to apply using the link or QR code on the back of the flyer. Applicants must have a minimum 2.0 GPA to be eligible.*

# Achieve More in STEM. Grow Your Skills.

Participate as an ASPIRE student fellow to engage in faculty-mentored research that enhances your academic growth, strengthens your confidence in STEM, and supports the development of your scientific identity at Texas State University.

## ACADEMIC SUCCESS

As an ASPIRE student fellow, you have access to a range of resources and academic success workshops tailored to STEM students. These opportunities, along with guidance that meets your academic needs, help you address challenges, strengthen your STEM foundation, and build confidence and persistence toward your educational goals.

## PROFESSIONAL INTEGRATION

This year, ASPIRE student fellows participate in a semester-long experience focused on professional development, including individualized development planning and skill-building workshops that help students identify and nurture skills aligned with their career goals. The program provides flexible options for students with a minimum 2.0 GPA and demonstrated resilience, supporting confidence and essential preparation for success in STEM professions.

## RESEARCH EXPERIENCE

ASPIRE student fellows participate in paid, faculty-mentored research for 8–10 hours per week, gaining firsthand experience on meaningful projects within their STEM discipline. As part of the program, student fellows also receive structured professional development, including the *CIMER Entering Research Training*. This evidence-based training offers a series of activities and workshops helping students develop research comprehension, communication, practical skills, research ethics, and researcher identity. The holistic support structure enhances the impact of the research experience and prepares fellows for future academic and professional pursuits.

Interested students should complete the application form by April 30th to apply for a Fall 2026 - Spring 2027 appointment as an ASPIRE Fellow. Be sure to scan the QR code provided to the right to submit your materials.

# Zeus certifications

Zeus is an online learning platform that offers short-term, postsecondary credential opportunities to help create a skilled and knowledgeable workforce. Each certification will be industry-recognized and incorporate the skills and knowledge required by high-demand careers.

## Supercharged Online Learning

Schools within the Texas State University System are working together to bring these certification courses to you in a way that will create multiple pathways to success—through earning college credit, a certification, or advancing with your current employer.

Create a path to your destiny with one of our cutting-edge certification programs! Our courses are fully online and designed to be completed in under a year so you can jumpstart your career.

## Current Courses

### VMH
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This course will equip participants with the knowledge and skills to build and use a customized mental health dashboard for their organization.

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Earn the Professional ABDA™ Certificate and/or the Texas State University System Undergraduate Certificate in Data Science.

### MPH
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**Our vision is to develop the best-qualified professionals by providing high-quality, industry-leading certifications of value for a low price.**