



ASEE-GSW 2025

March 9-11

The University of Texas at Arlington

Arlington, Texas

SCHEDULE

SUNDAY, MARCH 9

3:30-5:30 PM	Workshop: ABET-EAC Accreditation Evaluation	
6 PM	Mixer	NH Atrium

MONDAY, MARCH 10

8 AM	Welcome and Conference Kickoff Dean Peter E. Crouch, Ph.D.	NH 100
9-10:30 AM	Paper Sessions 1 and 2	
10:30-11:00 AM	Break	
11 AM-12:30 PM	Paper Sessions 3 and 4	
12:30-1:30 PM	Lunch	NH Atrium
1:30-3:00 PM	Paper Sessions 5 and 6	
1:30-3:00 PM	Teams Meeting with NSF Program Manager	
3:00-3:30 PM	Break	
3:30-5:30 PM	Poster Session	
3:30-5:30 PM	Current Affairs Affinity Discussions	
3:30-5:30 PM	Workshop: Conflict Management for Undergraduate Engineering Students	
6:00 PM	Dinner Keynote Speaker: Jamie Rogers, Ph.D. <i>"Who is ABET, why is it important to engineering education, and how you can get involved"</i>	NH Atrium
7:30 PM	ASEE-GSW board meeting	NH 630

TUESDAY, MARCH 11

8:30-10:30 AM	Paper Sessions 7 and 8	
10:30-11:00AM	Break	
11 AM-12:30 PM	Paper Sessions 9 and 10	
12:30-1:30 PM	Lunch ASEE-GSW business meeting and awards	NH 100
2 PM	Choice of Campus or Lab Tours	

PAPER SESSION 1

ROOM 1

Title	ID	Author
Engineering Technology – Agriculture Program	49529	Kenneth Leitch
Visualizing and Identifying Patterns of Student Flow Through Undergraduate Engineering Programs	49549	Bonnie Boardman
Enhancing Student Learning Outcomes Through Brief Cold Working and Annealing Interventions in Materials and Manufacturing Selection in Design Course	49639	Shadi Balawi
Teaching Digital Logic Design Using a Floating-Point Processor	49640	Bill Carroll
Integrating Artificial Intelligence into Construction Education: Assessing the Impact on Students' Perception of Knowledge, Confidence, and Relevance to Career	49642	Ibukun Awolusi
Machine Learning and Vision-Based Embedded Linux System Education	49655	Byul Hur

PAPER SESSION 2

ROOM 2

Title	ID	Author
The Impact of Classroom Learning in Smaller Classroom Sizes	49495	Danaii Elizondo
AI-Enhanced DOBOT Magician for Classroom Education: Hand Gesture Control for Hazardous Material Handling Simulation	49555	Alex Maynes
Teaching Science and Engineering Undergraduates With a Liquid Droplet Solidification Tool	49596	Alexander Hernandez
Fire Behavior of 3D-printed Wooden PLA Materials	49679	Erin Lawlor
Empowering Students to Address Water Challenges: A STEM Initiative	49666	Sandipon Chowdhury
Reengineering Drill Systems: A Lean Six Sigma Approach to Minimizing Defects and Maximizing Efficiency	49691	Mostafa Mohammad

PAPER SESSION 3

ROOM 1

Title	ID	Author
Summer Pre-Engineering Programs Build Confidence and Motivate Continued Interest in STEM	49482	Aricela Ortiz
Intersection of Design and Society: Student and Faculty Reflection on an Interdisciplinary Course	49499	James Nelson
WIP: Fostering Professional Skills Development Through Application in Core Engineering Subject Courses: A Pathway to Holistic Student Development	49522	Randy Brooks
Integrating Peer-Led-Team Learning (PLTL) and Design Thinking to Improve Student Success in Engineering Statics	49649	Haiying Huang
Using Agile Curriculum Development to Design a Systems Engineering Program Curriculum	49677	Paul Componation
Examining Student Usage / Access Statistics From Two Canvas LMS Courses: Undergraduate and Graduate	49680	Tariq Khraishi

PAPER SESSION 4

ROOM 2

Title	ID	Author
Cyber-Physical Systems Challenges for UAVs: Defense Industry Insights	49692	Pedro Cupertino
Evaluating the Effectiveness of Online Instruction for Building an "At-Home" Aquaponics System	49530	Kenneth Leitch
Incorporating Sustainability Knowledge into Construction Education Curriculum: A Case Study of Earthen Masonry	49643	Ibukun Awolusi
Integrating Engineering Research Experiences for Teachers Into the K-12 Classroom	49646	Catherine Lugo
Underwater Robot and Boat Platforms in Embedded Systems and Engineering Technology Education	49660	Byul Hur
Enhancing Teamwork Skills in Engineering Education: Iterative Development of Interactive Lecture Modules	49664	Jonathan Weaver-Rosen

PAPER SESSION 5

ROOM 1

Title	ID	Author
The Role of Artificial Intelligence in Enhancing Classroom Learning: Ethical, Practical, and Pedagogical Considerations	49594	John Ajamobe
Integrating Artificial Intelligence in Engineering Education: A Work-in-Progress Systematic Review of Applications and Challenges	49625	Thomas Hallmark
Case Studies on Hands-on STEM Program in Chemical Engineering for High School Students	49656	Ali Mohammad Garib
BSEKit: A Recipe for Success in Building Science and Architectural Engineering	49658	June Young Park
Comparison, Design Review, and Prototype Model of Robotic Tool Changers for Multi-Purpose Unmanned Ground Vehicle Applications: Learning Through Industry Partnership	49669	Joshua Hicks-Ward
Project-Based Learning: Finite Element Analysis of CNC Tooling Surfaces	49689	Oliver Harrison

PAPER SESSION 6

ROOM 2

Title	ID	Author
Widely Varying Grade Distributions in Courses Taught by Different Instructors	49559	Amir Karimi
Robotic Opportunities for Rural Communities: Building a STEM Pipeline for K-12 Students	47536	Fiona Litiku
Examining Educators' Impact on Learning Environment, Technological Literacy, and Teaching Effectiveness through Integrating AI in the Classroom	49519	Brinley Boyett
Learning Languages through Interactive Gaming	49651	Colby Kurtz
Cultivating Future Water Scientists in the Texas Panhandle: A STEM Education Program	49667	Sandipon Chowdhury
Curiosity-Driven Counter UAS Solution	49688	Sivaganeshwar Subramaniam

PAPER SESSION 7

ROOM 1

Title	ID	Author
Integrating Conference Poster Presentations into a Data Science Class	49493	Matthew Fendt
EZ-RA: Enhancing Research Access for Career-Ready Success of Undergraduates	49520	Chen Pan
Welcome Letters to Families of New Graduate Students	49521	Mia Markey
Improving Retention in STEM Programs	49525	Raj Desai
Stepping Back from a Digital Age: Paper and Pen Coding Exams in a Post-GenAI World	49535	Lance White
Development of a Novel Graduate Pedagogy to Enhance Job Readiness in Semiconductor Education Based on Role-Playing Internship Experience	49540	Nathan Jackson
Laser Cutters vs. 3D Printers for Mechanical Engineering Projects	49554	Dani Fadda
Creating Pathways to Industry for Pre-College Students and Two-Year Undergraduates	49668	Kenie Moses

PAPER SESSION 8

ROOM 2

Title	ID	Author
Exploring Early-Stage Research Experiences Among Underrepresented on Minority Students in Aerospace Engineering	49566	Mengqi Zhan
Navigating the Impact of AI in Engineering Education: Enhancing Learning Outcomes and Addressing Ethical and Assessment Challenges	49571	Maurizio Manzo
Hands-On Fluid Mechanics: A Laboratory Course Development Story	49641	Matthew Kuester
Putting Transparent Thinking Approach Solution Factory (TTASF) Into Production Implementation of Innovative TTA Genefic Tools	49502	Mohammad Aliedeh
Closing the Gap Through Guided Pathways Into the Engineering and Computer Science Workforce	49550	Nandika D'Souza
LLM-Assisted Performance Indicators for Student Outcome Assessment	49439	Rahul Renu
Accidental Engineer's Accidental University Engagement and Mentorship	49644	Hoo Kim

PAPER SESSION 9

ROOM 1

Title	ID	Author
WIP: Developing Hands-On Semiconductor Fabrication and Testing Courses Through Industry-University Partnerships in a Teaching-Focused Undergraduate School	49645	Hoo Kim
Foster Engineering Identity through Collaborative Learning in Math and Basic (CLIMB) Engineering	49650	Haiying Huang
Proof of Concept: Offshore Workforce Development Using YouTube Methods	49661	Heidar Malki
Exploring AI's Impact on Undergraduate Mechanical Engineering Education	49558	Randall Manteufel
A Rigorous Capstone Peer Evaluation Process	49588	Todd Polk
Bringing College Level Engineering Research Experiences into the K-12 Classroom	49652	Kendra Zagozda

PAPER SESSION 10

ROOM 2

Title	ID	Author
Embedding Control Theory in Industrial Automation Operation Technology – A Case Study	49654	Weining Feng
Python-based Microcontroller Architecture and Microcontroller Application Education in Engineering Technology	49662	Byul Hur
Integrating Biological Context into Computing Education: Enhancing Interdisciplinary Learning in Biomedical Engineering	49670	Ernesto Lima
Reframing the Role of Academic Professional Track (APT) Faculty	49673	Karthikeyan Loganathan
Enhancing Engineering Education through Faculty-Library Collaboration	49674	Chassidy Miles
Classroom Implementation of Biology and Architectural Lesson Plans Reflecting Evaluation of Concrete Bridge Decks Using Non-Destructive Evaluation Methods	49647	Nur Yazdani

SPEAKER BIOS

Peter E. Crouch, Ph.D. **Dean, UTA College of Engineering**

Peter E. Crouch became dean of UTA's College of Engineering in 2016. Since arriving he has pursued vigorous support for the UTA President's strategic vision and the powerful growth of the University and the College.

Under Crouch's guidance, the College of Engineering has set multiple records in enrollment and research expenditures and added three undergraduate degree programs, including a first-of-its-kind Resource and Energy Engineering program, two graduate degree programs and multiple certificates. In addition, he helped secure a \$12 million gift, the largest ever to UTA, to help fund faculty positions, laboratory space and equipment, scholarships and student support services for the Resource and Energy Engineering program.

Prior to UTA, Crouch served a total of 21 years as dean of Arizona State University's Ira A. Fulton School of Engineering and dean of engineering at the University of Hawai'i at Mānoa. In his long tenure as a dean, Crouch has led significant enrollment growth, established strong partnerships with businesses and workforce leaders, established strong relationships with community college systems and K-12 institutions, developed multidisciplinary relationships and programs between colleges and their faculties, and elevated the colleges' national rankings. He has helped secure millions of dollars in federal support for major research centers and has led expansion of engineering programs to China, India and Mexico, and enhanced online offerings for working professionals.

A native of England, Crouch earned his undergraduate degree in engineering science from Warwick University in Coventry in 1973, and his master's degree in control theory from Warwick the following year. Crouch then earned his Ph.D. in applied sciences from Harvard University in 1977. After joining Arizona State University in 1984, he rose through the academic ranks before being named dean of what would become the Fulton School of Engineering in 1995. He also served as ASU's vice provost for global engagement from 2005 to 2006. He was appointed the dean of Engineering at the University of Hawaii at Mānoa in July 2006.



SPEAKER BIOS

Jamie Rogers, Ph.D.

Professor

UTA Industrial, Manufacturing and Systems Engineering Dept.

Jamie Rogers is a UT System Regents' Outstanding Teacher, the 2021-26 George & Elizabeth Pickett Endowed Professor, and the Associate Chair of the IMSE Department at UT Arlington, where she has served on the faculty since 1994. She is a Registered Professional Engineer in Texas and prior to joining academia full-time, was an adjunct Professor at UTA while she worked at Texas Instruments in various engineering and management positions in defense electronics and semiconductor business areas.

She is a Fellow of ABET, serving as 2014-15 President. She is also an IISE Fellow and served as the organization's president in 2019-20. She is the faculty advisor for the UTA's Gold Award-winning student Chapter.

Rogers received the UTA Chancellor's Council Award for Teaching Excellence (1999) and was inducted into the UT Arlington Academy of Distinguished Teachers (2011). She has served the Texas Higher Education Coordinating Board as a Member of the Tuning Oversight Council for Engineering and the UT System – Systems Engineering in Healthcare Steering Committee.

She has received over \$3.6M in research funding as PI or Co-PI and served on the National Science Foundation funded Engineering Sustainable Engineers project. In addition, she has successfully supervised over 40 Ph.D. dissertations, published over 140 peer reviewed papers and delivered talks in numerous countries.

Rogers was inducted into the University of Missouri Industrial and Manufacturing Systems Engineering Hall of Fame in 2013. She is a member of the American Society for Engineering Education, AAUW, Tau Beta Pi, Alpha Pi Mu, Omega Rho, Omicron Delta Kappa, Pi Kappa Phi, Sigma Xi, SWE, and Order of the Engineer. She earned her B.S. in Industrial Engineering (Honors Scholar) from University of Missouri at Columbia in 1979, M.S. in IE from UT Arlington in 1981 and Ph.D. in IE from UT Arlington in 1985.



CAMPUS MAP



