

Zone 4 ASEE Conference 2026



Auditorium

Session 1	<p>Student support and learning</p> <p>Moderator: Ashton Greer</p>	<p>54541 People and Place: Engineering Leaders through Experiential Learning and Community Engagement</p> <p>Elisabeth Arnold Weiss</p>	<p>54558 Comparison of Student Perceptions of Undergraduate Research by STEM College and Demographic Characteristics</p> <p>Natalie Schaal</p>	<p>54602 How Financial and Instructional Academic Supports Shape STEM Student Performance</p> <p>Pitiporn Asvapathanagul</p>	<p>54536 A Quantitative Analysis of Engineering Identity and Belonging Across Academic Majors and Demographics</p> <p>Mackenzie Samuel</p>
Session 2	<p>Technology assisted instruction</p> <p>Moderator: Pitiporn Asvapathanagul</p>	<p>54552 Addressing Asymmetric Preparedness in an Introductory Engineering Programming Course through Diagnostic Assessment, Scaffolded Instruction, and AI assistant</p> <p>Fatemeh Nayebloie</p>	<p>54535 Extending Intelligent Discussion Boards with Video-Based Learning: Integrating Kultura Video Analysis in ChatBook for Enhanced CS Education</p> <p>Abbas Attarwala</p>	<p>54534 Hardware Software Integration in an Introductory Computer Science Course</p> <p>Oyku Eren Ozsoy</p>	<p>54565 "Don't tell me what ChatGPT told you, I will spontaneously combust": Instructional team members on teaching introductory programming in the age of AI</p> <p>Natascha Trellinger Buswell</p>
Session 3	<p>Navigating Engineering Identity formation</p> <p>Moderator: Harly Ramsey</p>	<p>54513 The Impact of Undergraduate Activities on STEM Identity</p> <p>Miguel Antonio Vasco-Torres</p>	<p>54516 Student Sensemaking in a Gatekeeper Course: Exploring Public Online Forums as an Analytic Lens</p> <p>Emily Fitzpatrick</p>	<p>54569 Structured for Connection: Friendship Development and Embedded Study Abroad Engineering Courses</p> <p>Hansini Ramachandran</p>	<p>54496 Rotational Social Grouping in Classrooms</p> <p>Alessandro Hill</p>

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Session 4	<p>Workforce readiness with AI</p> <p>Moderator: Nolan</p>	<p>54517 Building Workplace Skills Through Lean Six Sigma: A Modular Aircraft Float Manufacturing Study</p> <p>Thomas Jay Morrison</p>	<p>54584 Developing Tomorrow's Workforce Through Digital Structural Analysis of a Light-Sport Aircraft Spar</p> <p>Adam Carlton Lynch</p>	<p>54604 Building an AI-Ready Aerospace Workforce Through Industry Projects</p> <p>Pedro Cupertino</p>	54605
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Valley Vista

Session 1	<p>Project Driven Student Learning</p> <p>Moderator: Nolan Tsuchiya</p>	<p>54560 Exploring the Evolution of Engineering Capstone Students' Learning Goals</p> <p>Andrea L. Schuman</p>	<p>54561 Student Leadership Experiences in Competitive Engineering Research Teams</p> <p>Dianne Grayce Hendricks</p>	<p>54509 Effectiveness of Teaching Construction Sequencing Using BIM Model</p> <p>Euysup Shim</p>	<p>54585 Making Connection of Learning and Teaching Different Levels and Different Subject Courses' Laboratories with Upper-Level Engineering Courses</p> <p>Jiliang Li</p>
Session 2	<p>AI to Accelerate Generation</p> <p>Moderator: Rebekah O.</p>	<p>54600 Know Thy AI-nemy: What Co-Developing a Domain-Specific Language with ChatGPT Taught Me About Teaching Engineering in the Age of Generative AI</p> <p>Andrew Danowitz</p>	<p>54595 Vibes, Narrative, and Judgment Under Acceleration: Re-Thickening Time in AI-Mediated Engineering Education</p> <p>Harly Ramsey</p>	<p>54498 Reframing Technical Writing for the AI Era: Sociotechnical Communication and Workforce Preparation in Graduate Engineering Education</p> <p>Douglas Havard</p>	<p>54571 Generative AI as a Brainstorming Partner for Students Learning Problem Definition in Engineering Design</p> <p>David A. Copp</p>
Session 3	<p>Workshop</p>	<p>More than just a game</p> <p>Ashton Greer</p>			

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Session 4	Workshop	Accessible digital course materials Jennifer M Peuker
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Mountain Vista 1

Session 1	Using AI in Learning Moderator: Paul Nissenson	54494 Using AI to Integrate Sustainability into Engineering Curriculum from the Start Riley Moller	54568 What and how to teach mechanical engineering students in the age of AI? Sundararajan V	54501 Use It as a Tool, Not a Crutch: Student Experiences with Unrestricted Generative AI Use in an Undergraduate Engineering Lab Course Paul Morrow Nissenson	
Session 2	Developing Engineering Identity Moderator: Elisabeth Arnold Weiss	54544 Engineering Identity and Belonging: Qualitative Evaluation of a First-Year Learning Community for Women in Engineering Xianglong Wang	54593 First-Year Engineering Students' Perceptions of Socio-Technical Learning in the Age of AI and Emerging Technology Quintana M. Clark	54526 Seen, Safe, and Heard: A Three-Part Framework for First-Year Engineering Education Jill Davishahl	54559 Engineering Is Not Neutral: Faculty Experiences Teaching Sociotechnical Lessons Andrea L. Schuman

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Session 3	Materials and Lab Experiments	<p>54540 Analysis of the Tensile Strength and Corrosion Resistance of MIG-TIG Double-Sided Arc Welding: An Educational Study Demonstrating Hybrid Welding</p> <p>Jonathan Gregory Osorio</p>	<p>54557 Teaching Properties of Dissimilar Metals Through Resistance Spot Welding for Automotive Manufacturing</p> <p>Bryan Thien Ban Truong</p>	<p>54539 An Undergraduate Learning Approach to Teach Rigid Body Dynamics Using Euler Parameters</p> <p>Caroline Kwan</p>	
Session 4	<p>Lab Projects and Student Learning</p> <p>Moderator: Andrew D.</p>	<p>54519 A Modular, Open-Source, Low-Voltage Microgrid Testbed for Workforce Preparation in Modern Power Systems</p> <p>Jason Poon</p>	<p>54581 Development and Pilot Evaluation of a VR Oscilloscope Learning Module</p> <p>I-Hung Khoo</p>	<p>54573 Engaging engineering students through dual coding using verbal and visual storytelling</p> <p>Nikos J. Mourtos</p>	<p>54547 AI-Assisted Development of Parsons Problems to Scaffold MicroPython Programming in an Introductory Engineering Course</p> <p>Eric Davishahl</p>

Mountain Vista 2

Session 1	<p>ABET Accreditation</p> <p>Moderator: Paul Hottinger</p>	<p>54528 Assignment Creation (Motivation, Faculty Engagement, Draft Assignment and Final Assignment)</p> <p>Seema C Shah-Fairbank</p>	<p>54529 Rubric, Critical Thinking and ABET SO6</p> <p>Seema C Shah-Fairbank</p>	<p>54562 Implications of the Revised ABET Accreditation Program Criteria for Aerospace Engineering Programs - Moving from Content to Competency Prescriptive Framework</p> <p>Satchi Venkataraman</p>	
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Session 2	Project Based Lab Instruction	<p>54579 Mechatronics in Flight: A Case Study in Multidisciplinary Engineering Design</p> <p>Tyler Ritchie</p>	<p>54512 A Full-Scale Autonomous Vehicle Platform for Engineering Education</p> <p>Mohammadparsa Ghasemi</p>	<p>54551 Beyond the Black Box: A Project-Based Framework for Integrating AI-Driven Image Analysis into UAS and Geomatics Education</p> <p>Su Jin Lee</p>	
Session 3	<p>Scaling up student projects</p> <p>Moderator: Masood</p>	<p>54587 Scaling Conceptual Problem Practice and Physical Reasoning in Undergraduate Solid Mechanics Courses</p> <p>Marko Lubarda</p>	<p>54576 Project-Based Learning in Machine Design: Comparing Well-Defined and Open-Ended Term Projects</p> <p>Abdenmour C Seibi</p>	<p>54588 Flexible Problem Design for Practice and Assessment in Engineering Mechanics</p> <p>Marko Lubarda</p>	<p>54543 Establishing a Historical Interpretive Display of the Tacoma Narrows Bridge Tragedy at UWT</p> <p>Mark A. Pagano</p>
Session 4	<p>Workforce Preparation</p> <p>Moderator: Jes K.</p>	<p>54553 Developing Tomorrow's Engineering Leaders: Implementing Engineering-Management Role-Play with Custom GPTs in Senior Computer & Electrical Engineering Projects</p> <p>Amin Malek</p>	<p>54594 Comprehensive Land Development Subdivision as Senior Design Project</p> <p>marwan N. yousef</p>	<p>54518 AI-Enhanced Course Projects as Scaffolding for Engineering Learning and Workforce Preparation</p> <p>Xian Li</p>	

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Session 1	<p>Inclusive Content</p> <p>Moderator: Masood Amin</p>	<p>54580 Inclusive Intelligence</p> <p>Mona ElHelbawy</p>	<p>54546 How Neurotypes Relate to Engineering Students' Mind Maps in a Design Project</p> <p>Angela R Bielefeldt</p>	<p>54562 Implications of the Revised ABET Accreditation Program Criteria for Aerospace Engineering Programs - Moving from Content to Competency Prescriptive Framework</p> <p>Satchi Venkataraman</p>	<p>54606 Same Content, Different Context: A Study-in-Progress Comparing Two Implementations of a One-Session Interdisciplinary Diffusion Lesson</p> <p>Maila Hallare</p>
Session 2	<p>AI in Laboratory and Robotics</p>	<p>54542 A MATLAB-Based Instructional Module for Teaching Machine Learning in Mechanical Vibrations</p> <p>Abdelouahab Arous</p>	<p>54549 Scaling Success with AI Curriculum: Evaluating the Multi-Year Impact of an Industrial Additive Manufacturing Research Experience for Teachers (IAM-RET)</p> <p>Christine Liebe</p>	<p>54586 Pythons and Cobots and Jetsons, oh my! Advanced Robotic Laboratory Experiment with Cobots</p> <p>Nebojsa I Jaksic</p>	<p>54574 Design and Implementation of a Laboratory-Course to Introduce Machine Learning through Experimental Data Collection in Environmental Engineering Education</p> <p>Fatemeh Nayebloie</p>
Session 3	<p>Biomedical and Chemical Engineering labs</p> <p>Moderator: Jessica Perez</p>	<p>54511 Work in Progress: Industry-Driven Laboratory Module Using Laparoscopic Trainers for Undergraduate Biomedical Engineering Education</p> <p>Christine E King</p>	<p>54554 Toward Building a Clinical Immersion Program Incorporating Solution-Agnostic Needs Finding Practices</p> <p>Xianglong Wang</p>	<p>54563 Designing a Wearable Biosensor for Ligament Rehabilitation: An Independent Study Project</p> <p>Dianne Grayce Hendricks</p>	<p>54592 Evaluation of long-term learning gains in 2nd year courses in a chemical engineering program</p> <p>Jonathan Verrett</p>

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Session 4	<p>Community Colleges and First Year Programs</p>	<p>54575 Expanding the talent ecosystem: Community college transfer networks as strategic infrastructure in engineering workforce development</p> <p>Eugene Leo Draine Mahmoud</p>	<p>54504 Estimating π Across Modalities: A Pedagogical Reflection on Computation, Simulation, and Embodied Robotics in a Pre-Freshman Bridge Program</p> <p>Abbas Attarwala</p>	<p>54589 Why an Engineering Associates Degree of Transfer is Difficult to Create</p> <p>Dominic J Dal Bello</p>	<p>54583 Underrepresentation in K-12 CS: A Systematic Literature Review</p> <p>Oliver Tran</p>
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Hillside West

<p>Session 1</p> <p>Moderator: Jonathan Verrett</p>	<p>AI to Enhance Student Learning</p>	<p>54510 AI Avatars as Dialogic Interfaces for Political Theory Instruction</p> <p>Abbas Attarwala</p>	<p>54548 AI-Assisted Systematic Thematic Analysis: A Transparent Workflow for Engineering Education Research</p> <p>Eric Davishahl</p>	<p>54599 Integrating AI Skills into Project-Based Learning to Enhance STEM Student Success</p> <p>Showkat Chowdhury</p>	
<p>Session 2</p> <p>Moderator: Jonathan Verrett</p>	<p>Course Specific AI Integration</p>	<p>54577 A Lecture-Aligned Preprocessing and Retrieval Framework for AI Tutoring in Upper-Division Mechanical Engineering Courses</p> <p>Luciano Bermudez</p>	<p>54596 Finding Equilibrium with AI: The Impact of a Custom ChatGPT-5 Based Tutor on Learning and Teaching in Engineering Statics</p> <p>Jj Petersen</p>	<p>54618 Enhancing Engineering Education in the Age of Generative AI: The STATICS Method Prototype</p> <p>Eugene Kong</p>	<p>54570 Engaging Students in Metacognition Through Diagnostic Assessments in Thermodynamics Course</p> <p>Zahra Sadeghizadeh</p>