ASEE Gulf-Southwest Conference

Reimagining Engineering Education for a Changing World | March 23-26, 2021

Hosted by

Baylor University
SCHOOL OF ENGINEERING & COMPUTER SCIENCE
About ASEE Gulf-Southwest Section 2021

The ASEE Gulf-Southwest Section has a rich tradition of regional engineering education conferences. As part of the ASEE Zone III, this spring conference is an excellent opportunity each year to gather educators from across Louisiana, Texas and New Mexico to explore engineering education. Encouragement and collaboration are customary at this conference. New friendships are made and new ideas formed as a result of this conference. The ASEE GSW Section is one of the more active ASEE sections.

This year the engineering education community adapted to the rapidly changing requirements imposed by the COVID-19 pandemic. Very quickly educators were thrust into teaching in an online environment. The challenge was not only to deliver the material in a new medium, it was also to keep our students engaged with the course and with life. As we are facing an uncertain future, no one knows what the new “normal” will be. The 2021 conference is an opportunity to discuss the lessons learned with the transition to online education. More importantly, where do we go from here.

The 2021 ASEE Gulf-Southwest Annual Conference will be hosted by Baylor University and held virtually March 23-26, 2021.
Letter from the Dean

Dear 2021 ASEE Gulf-Southwest Conference Participants

On behalf of the School of Engineering and Computer Science at Baylor University, I welcome you to the 2021 ASEE Gulf-Southwest Conference. While Baylor is the oldest continually operating university in Texas, chartered in 1845, the School of Engineering and Computer Science represents one of the newest programs on campus. Last year we celebrated our 25th Anniversary. Our program attracts students from across the U.S. and includes three departments with Ph.D. programs in each. We have a dedicated research facility, the Baylor Research Innovation Collaborative, where most engineering research is conducted. It's an excellent example of re-purposing an old tire manufacturing plant into a modern research center. We prepare our graduates for professional practice and responsible leadership with a Christian worldview. Thank you for attending this conference where you can improve your skills and to be exposed to new ideas. It is an incredible time to be an engineer. Innovation and creativity are alive and well despite the pandemic.

While we all hoped this conference could be held on campus, sadly it was not to be. Last spring engineering education had to adapt very quickly to the changing conditions. Everyone had a part to play and we were all stretched in many ways. The transition to deliver an academic program completely online happened quickly and is a testimony to the quality of people in engineering education such as yourselves. It is only fitting that we come together at this conference to learn from each other and to help us become better at what we do in this “new normal”. The title of the conference, “Reimagining Engineering Education in a Changing World”, states our challenge for the future. I trust you will make many new friends at the conference and come away renewed in your desire to be the best you can be for your students and your university. Look for one or two ideas that can help you both in and out of the classroom. Then go back to your institution and see how they might work.

While we are disappointed that you will not experience the Baylor campus, I trust that you will take some time to learn about Baylor University and our distinctive role as a Christian university in the Baptist tradition. Perhaps the future might hold an opportunity to drop by our campus and visit our facilities. We would look forward to seeing you.

Dennis L. O’Neal
Dean
Letter from the Program Chair

Dear 2021 ASEE Gulf-Southwest Conference Participants

After months of waiting and planning, the ASEE Gulf-Southwest Conference is finally here! Our conference, “Reimagining Engineering Education for a Changing World,” describes what we have been through over the past year. For some it was a difficult transition to technology. For others, some of whom were already teaching online, it was not a big stretch. What is true is that last spring each institution and their faculty stepped up to the plate and were able to deliver entire engineering education programs online given a short notice. The learning curve was very steep. It might not have been perfect, but it worked and did get the job done.

It is good for us to come together at a conference like this and reflect on engineering education experienced over the past year. There are things that went very well. There are things that could have gone better. Each institution responded in ways that were unique to their campus culture. We learned about modalities: synchronous, asynchronous, and hybrid. While things went well for the most part, there were underlying issues that needed attention. One is assessment. Is online testing as important? Are there other ways to assess a student’s progress? What about mental health issues for both faculty and students? Students are under increased pressure with how classes are being conducted. This is going to be an increasingly important topic for years to come. Is the quality of education the same as before the pandemic? I learned about ZOOM fatigue. What will become the “new normal”? What about Covid testing? Will the vaccine be required? I could go on and ask even more questions. Many of these topics are going to be presented in this conference and others will be explored for years to come.

While these questions might sound somewhat overwhelming, be assured there is hope, especially when faculty such as you attend conferences such as this. We have many best practices to share with each other in hopes that we can improve the quality of our instruction. The students will ultimately benefit but so will we. Technology can be our friend. I hope that you will use this opportunity at the conference to connect with other faculty and encourage one another. Our ASEE Gulf-Southwest Conference attendees have a wealth of experience from which to draw. Be sure to make those connections as this will help us navigate the changing world that lies ahead.

Kenneth W. Van Treuren, Professor
Associate Dean for Research and Faculty Development
2021 ASEE Gulf-Southwest Conference Program Chair
ASEE Gulf-Southwest Conference

2021 Committees

Program Chair: Ken Van Treuren, Baylor University

Technical Program Chairs:
- Anne Spence, Baylor University
- Cindy Fry, Baylor University

Registration and Budget: Joseph Donndelinger, Baylor University

Website Administrator: Jill Anderson, Baylor University

Program Planning and Conference Hosting:
- Ken Carriveau, Baylor University
- Scott Koziol, Baylor University

Technical Program Committee:
- Gabriel Acosta-Aguirre, New Mexico Institute of Mining and Technology
- Edward Anderson, Texas Tech University
- Ken Carriveau, Baylor University
- Raj Desai, Midwestern State University
- Joseph Donndelinger, Baylor University
- David Ewing, The University of Texas at Arlington
- Cindy Fry, Baylor University
- Cyrus Hagigat, The University of Toledo
- Catherine Anne Hubka, University of New Mexico
- Nathan Jackson, University of New Mexico
- Amir Karimi, The University of Texas at San Antonio
- Tariq Khraishi, University of New Mexico
- Scott Koziol, Baylor University
- Byron Newberry, Baylor University
- Anne Spence, Baylor University
- Roman Taraban, Texas Tech University
- Ken Van Treuren, Baylor University
Table of Contents

Program for Tuesday, March 23rd ................................................................. 7
Program for Wednesday, March 24th .............................................................. 10
Program for Thursday, March 25th ................................................................. 14
Program for Friday, March 26th ...................................................................... 18
Abstracts of Conference Presentations-Attendify Link .................................... 22
Tuesday, March 23rd

Pre-Conference Seminar

Host: Ken Van Treuren

1:00pm – 2:00pm: Session 1: Teaching and Learning Seminar One
“Post-Pandemic – Designing for the Unexpected”, Chris Zakrzewski

2:00pm – 2:15pm: Break

2:15pm – 3:15pm: Session 2: Teaching and Learning Seminar Two
“Resilient Pedagogy: Base Isolation for Teaching”, Christopher Richmann

Speaker Biographies and seminar information are located on the next two pages
Pre-Conference Seminar Presenter

Pre-Conference Speaker: Tuesday, March 23, 2021, 1 pm

Dr. Chris Zakrzewski, Director of Learning Design, Baylor University

Dr. Chris Zakrzewski is the Director of Learning Design at Baylor University. He has spent 15 plus years in higher education working with administrators and faculty to develop a culture of innovative empowerment. Chris believe strongly that teaching innovation is a journey and that it requires a commitment to positive one-on-one interaction with faculty to flourish. Chris has spent time in the classroom teaching undergraduate and graduate class in-person, online and in hybrid formats. Chris most recently spent time as the Director of Educational Technology and the NYU School of Professional Studies and before that as the Assistant Provost for Technology and Instructional Innovation at Saint Xavier University. Chris speaks across the country on creating cultures of innovation and on the development of innovative learning spaces. Most recently Chris' work on Experiential Problem-based Learning was published in the Journal of Problem-based Learning in Higher Education.

Presentation: Post-Pandemic – Designing for the Unexpected

Abstract: As we explore what higher education will look like post-pandemic, there are strategies that we can integrate across modalities to ensure continuity of teaching and learning. The recent weather in Texas and the immediate action by university leadership to switch modalities is a perfect example of what might lie ahead. This workshop will build upon what we have learned this past year about clarity, consistency and connectedness.
Dr. Christopher Richmann is Assistant Director for the Academy for Teaching and Learning and affiliate faculty in the Department of Religion. His research focuses on the pentecostal-charismatic tradition and Lutheran spirituality. In the areas of teaching and learning, Dr. Richmann has special interests in academic authority, teaching as vocation, and how theories of human development influence teaching. He has published research in International Journal for the Scholarship of Teaching and Learning, and along with Dr. Lenore Wright, Dr. Richmann edited Called to Teach: Excellence, Commitment, and Community in Christian Higher Education (Pickwick). In addition to his duties as Assistant Director for the ATL, Dr. Richmann teaches courses in history of Christianity in the Religion Department and courses in world cultures in the Baylor Interdisciplinary Core.

**Presentation:** Resilient Pedagogy: Base Isolation for Teaching

**Abstract:** When disruptions to teaching caused by personal matters, weather conditions, or institutional incidents are (or seem) infrequent and low-intensity, instructors tend to take an ad-hoc approach, making adjustments that may or may not be efficient, coherent, or in the best interest of learning. The COVID pandemic, however, has normalized disruption, calling for a “resilient pedagogy” that, like base-isolation in buildings, can ensure that disruptions have a minimal negative impact. This session will share the principles and examples of resilient pedagogy and encourage participants to create or adjust course elements that protect teachers’ work and students’ learning in times of disruption.
Wednesday, March 24th

12:00pm – 12:50pm: Opening Remarks and Keynote Presentation
12:50pm – 1:00pm: Break
1:00pm – 2:15pm: Concurrent Sessions
2:15pm – 2:35pm: Break
2:35pm – 3:50pm: Concurrent Sessions

Keynote Biography and Concurrent Session Papers are located on the next pages
ASEE Gulf-Southwest Keynote Presentation

**Keynote Speaker:** Wednesday, March 24, 2021

**Dr. Nancy Brickhouse, Vice President and Provost, Baylor University**

As Baylor’s chief academic officer, Dr. Brickhouse oversees the University’s 12 colleges and schools, research enterprise, University Libraries, and centers and institutes. She previously served as provost at Saint Louis University (SLU), a Jesuit research university with 8,000 undergraduate students and 6,000 graduate students at its main campus in St. Louis. During her tenure, she played a key role in repositioning SLU’s finance, operations, and academic endeavors to meet a rapidly changing higher education landscape. She is a tenured Professor of education and a nationally recognized scholar. Dr. Brickhouse graduated from Baylor magna cum laude with a bachelor’s degree in chemistry, going on to earn a master’s degree in chemistry and a doctorate in science education from Purdue University.

**Presentation:** Baylor and Engineering: Past, Present, and Future

**Abstract:** Hear from Baylor University’s provost, Dr. Nancy Brickhouse, about the changes that Baylor University has undergone since her time as an undergraduate in Baylor’s College of Arts & Sciences, as well as what she sees in the university’s future. Learn about the impact that the pandemic has had on Baylor, and hear about the role Dr. Brickhouse envisions for Engineering in the university’s strategic plan.
1:00pm – 2:15pm: Concurrent Sessions

Day 1, Session 1, Track A: Undergraduate Papers

Moderator: Ken Carriveau  
Host: Scott Koziol

35092 An Improved Magnetically Bistable Piezoelectric Energy Harvester  
Carolyn Fulton, Brian P. Bernard (Schreiner Univ), Brian P. Mann (Duke Univ)

35077 Senior Capstone Project Raven: Study of an Autonomous System Design for Power Line Inspection Based on the Quanser QDrone Platform  
Jovany Avila, Tristan Brouwer, Nick Castillo IV, Michael Frye (Univ of the Incarnate Word)

33848 Taking Control of Control Systems: A student developed, multimedia and simulation tool for control systems education  
Matilda Ho, Casey Hatfield, Jieun Kim (Univ of Texas-Dallas)

35095 Delivering Hands-On Introductory Design Experiences in a Hybrid Curriculum  
Lorena I. Velásquez, Jett Emms, Curtis O’Malley (New Mexico Inst. Of Mining and Tech.)

35138 Learning About Equity from an Undergraduate Research of a University Campus Parking System  
Andrea Ramić, Dick. T. Apronti (Angelo State Univ)

Day 1, Session 1, Track B: Faculty/Staff/Professional Papers

Moderator: Paul Griesemer  
Host: Ken Van Treuren

34393 Blended Learning to the Rescue: How one Construction Management Program is Mitigating the Risk of COVID-19 in the Classroom  
Peter D. Rogers (Univ of Southern Mississippi)

35091 Simulation of Production and Inventory Control using the Computer Game Factorio  
Bonnie S. Boardman, Caroline C. Krejci (Univ of Texas-Arlington)

35141 Integrating Computational Thinking in an Interdisciplinary Programming Course for Engineering Undergraduates  
Prabha Sundaravadivel (Univ of Texas-Tyler)

35082 A Cornerstone Course for Engineering Education: The Design Graphics Collaboratory  
Ronald E. Barr (Univ of Texas-Austin)

35083 Using MUTISIM software to reinforce use and application of Norton’s theory in electrical circuits  
Cyrus Hagigat (Univ of Toledo)
2:35pm – 3:50pm: Concurrent Sessions

Day 1, Session 2, Track A: Faculty/Staff/Professional Papers

Moderator: Matthew Green  Host: Scott Koziol

35151 The Development of a Texas A&M University Faculty of Engineering Education
Tracy Hammond, Karan Watson, Samantha Ray, Robert Lightfoot, Shawna Thomas, Drew Casey (Texas A&M Univ)

34685 Efficacy of Using Producer Price Indexes for Bulk Chemical Prices in Student Design Projects
David E Hubbard (Texas A&M Univ)

35066 Evaluation of a Peer-Led Team Learning Course Designed to Increase Underprepared Students Success in Engineering
David Joseph Ewing (Univ of Texas-Arlington)

35101 Automating Project Team Formation with Heterogeneous Project Preferences and Skill Mix Constraints
Joseph Donndelinger, Adam Weaver, James Carlton Bates, Timothy Russell (Baylor Univ)

35144 Broad faculty participation in course-level evaluation of student outcomes supporting continuous improvement of an undergraduate engineering program
Randall D. Manteufel, Amir Karimi (Univ of Texas-San Antonio)

Day 1, Session 2, Track B: Graduate Papers

Moderator: Anne Spence  Host: Ken Van Treuren

35105 Recent Strategies for improving Undergraduate Engineering Education: A Review
Monikka M. Mann, George Tan (Texas Tech Univ)

35140 UAV Parameter estimation through machine learning
Andres Enriquez Fernandez, Louis J. Everett, Miguel Cedeno (Univ of Texas-El Paso)

35155 Indentation Testing of 3D Metal-Printed Alloys used in Aerospace Applications
Laith Ahmed Alqawsami, Tariq Khraishi, David A. Otazu, Pankaj Kumar (Univ of New Mexico)

35158 Child vs Adult Speaker Diarization of naturalistic audio recordings in preschool environment using Deep Neural Networks
Prasanna V. Kothalkar, John H. L. Hansen (Univ of Texas-Dallas), Dwight Irvin, Jay Buzhardt (Univ of Kansas), Beth S. Rous (Univ of Kentucky)
Thursday, March 25th

12:00pm – 12:50pm: Opening Remarks and Keynote Presentation
12:50pm – 1:00pm: Break
1:00pm – 2:15pm: Concurrent Sessions
2:15pm – 2:35pm: Break
2:35pm – 4:05pm: Concurrent Sessions

Keynote Biography and Concurrent Session Papers are located on the next pages
ASEE Gulf-Southwest Keynote Presentation

Keynote Speaker: Thursday, March 25, 2021

Lauren Dreyer, Sr. Director Starlink Business Operations, SpaceX

Lauren Dreyer is SpaceX’s Sr. Director of Starlink Business Operations. She previously held roles in SpaceX as a Principal Operations Engineer, and Sr. Director of Human Resources and Business Operations. Dreyer joined SpaceX in 2006 after receiving a Bachelor of Science in mechanical engineering from Baylor (’05) and an MBA from Texas A&M (’06). In her 14+ years at SpaceX, Dreyer has pursued unique applications of her engineering and business skills and supported sales, compliance, risk management, advanced projects, human resources, recruiting, and corporate finance. Notable accomplishments include closing billions of dollars of launch contracts, negotiating technical and business terms for the world’s largest single commercial launch deal ever signed, managing site selection of the world’s first commercial orbital launch site in south Texas, and being appointed by Governor Abbot to the Texas Aerospace and Aviation Advisory Committee.

Presentation: Launching Our Future: SpaceX Overview

Abstract: SpaceX was founded under the belief that a future where humanity is out exploring the stars is fundamentally more exciting than one where we are not. Today SpaceX is actively developing the technologies to make this possible, with the ultimate goal of enabling human life on Mars. Lauren Dreyer, SpaceX’s Sr. Director of Starlink Business Operations, will provide a brief overview of SpaceX’s progress to date and plans for the future.
1:00pm – 2:15pm: Concurrent Sessions

Day 2, Session 1, Track A: Undergraduate Papers

Moderator: Tracy Hammond Host: Joe Donndelinger

35086 Distance Measure Concepts for Bayesian Inference of Chaotic Dynamical System Parameters
Colin Burdine (Baylor Univ)

35094 Design and Development of a House with Recycled and Renewable Materials
Hannah Lynn Johnson, Ulan Dakeev (Sam Houston State Univ)

35102 Design of An Innovative Module for Mars Habitation
Edgar Reyes, Mohammad Abu Rafe Biswas, Andres C Garcia, Benjamin Lee Stilwell, Jongin Aaron Sithideth, Christian Puckett, Christopher Nobinger, Cassandra Ellis (Univ of Texas-Tyler)

35107 Development of a Hybrid Ultraviolet Imaging Algorithm for Optical Sensing Systems
Ron D. Cooper Jr., Okan Caglayan (Univ of the Incarnate Word)

35118 Automated Oscillating Fan Using Microcontroller
Iftekhar Ibne Basith, Joseph Strachan (Sam Houston State Univ)

Day 2, Session 1, Track B: Graduate Papers

Moderator: Lynn Peterson Host: Anne Spence

35071 Towards Scalable Clinical Immersion Experiences for Engineering Students
Brandon Bakka, Henry Grady Rylander III, Mia K. Markey (Univ of Texas-Austin), Julia N. Savoy (Univ of Wisconsin-Madison)

35078 Creation of a Novel Tool for the Design and Evaluation of UAS Propellers
Brett Bennett, Kenneth Van Treuren (Baylor Univ)

35114 Thermoelectric Generation in Waste Heat Recovery Methods
David Walden, Kenneth R. Leitch, Roy Jean Issa, Emad Manla (West Texas A&M Univ)

35154 Stress Field of a Rectangular Dislocation Loop
Luo Li, Tariq Khraishi (Univ of New Mexico)

35176 FPGA/MATLAB Hardware in the Loop Testbed for Stochastic Artificial Neural Networks
Jacob Boline, Matthew Carrano, Scott Koziol (Baylor Univ), John DiCecco, Eugene Chabot (Univ of Rhode Island)
2:35pm – 4:05pm: Concurrent Sessions

Day 2, Session 2, Track A: Faculty/Staff/Professional Papers

Moderator: Mohammad Biswas  Host: Joe Donndelinger

35040 Design and Development of Virtual Reality Engineering Expeditions - Innovations in Online Engineering Education
Araceli Martinez Ortiz, Cindy D. Rojas Annicchiarico, B. J. Spencer (Texas State Univ)

35065 Teaching Engineering Virtually: A Rapid Response to Address the Academic Challenges Generated by COVID-19
Eleazar Marquez (Rice Univ), Samuel Garcia Jr. (Texas State Univ)

35087 Analysis of undergraduate students' learning experience regarding hands on laboratory courses using new innovated techniques of hybrid delivery
Md Shahriar J. Hossain, Rafiqul Islam (Northwestern State Univ)

35093 Interactive Creativity Activities in Remote Learning
David Novick (Univ of Texas-El Paso)

35097 Teaching Modalities During the COVID-19 Pandemic
Dani Fadda, Oziel Rios, Roopa Vinay (Univ of Texas-Dallas)

35098 Online delivery of engineering courses where hand calculations are vital
Dani Fadda, P. L. Stephan Thamban (Univ of Texas-Dallas)

Day 2, Session 2, Track B: Faculty/Staff/Professional Papers/Abstract Only

Moderator: Scott Koziol  Host: Anne Spence

35089 Delivering a Hyflex Statics Course in a Flipped Classroom Model
Paul R. Griesemer (Univ of Mary Hardin-Baylor)

35146 Engineering Leadership: Transitioning from Soft Skills to Hard Data
B. Michael Aucoin, Brandon Bowen (Texas A&M Univ)

35111 Intro to Mechanical Engineering: A New Course to Improve Major Trajectory
Ahmed Hasan, Tariq Khraishi (Univ of New Mexico)

35073 REU: A Balancing Act (Abstract Only)
Margo Cousins, Laura Suggs, Mia K. Markey (Univ of Texas-Austin)

35112 Preparing for an Online ABET Visit
Matthew G. Green, Chad L. File (LeTourneau Univ)

35113 Preparation of Documents for ABET Accreditation During the COVID-19 Pandemic
Amir Karimi, Randall D. Manteufel (Univ of Texas-San Antonio)
Friday, March 26th

12:00pm – 12:50pm: Opening Remarks and Keynote Presentation
12:50pm – 1:00pm: Break
1:00pm – 2:30pm: Concurrent Sessions
2:30pm – 2:50pm: Break
2:50pm – 4:05pm: Concurrent Sessions
4:05pm – 4:15pm: Break
4:15pm – 4:30pm: Best Paper Awards
4:30pm – 4:45pm: Promotion for ASEE GSW 2022
4:45pm – 4:55pm: Closing the Conference

Keynote Biography and Concurrent Session Papers are located on the next pages
Kimberly A. Mackenroth is vice president and chief information officer for Textron Inc. In this role, she leads the business unit chief information officers and the Textron Information Systems (TIS) organization. She oversees Textron's Information Management Council and manages Textron's information technology supplier and outsourcing relationships. Mackenroth joined Bell in 1996 and held numerous positions of increasing responsibility across functions such as supply chain, manufacturing and integrated product teams in support of helicopter programs. Appointed as director of IT in 2008, she led a multi-discipline team that provided IT services to the global business during a period of significant business system change. In 2011, she was named VP & CIO of Textron Tools & Test, a position she held for two years before being appointed to her role at Textron Aviation. She holds a B.S. in management from Baylor University and an M.B.A. from the University of Texas at Arlington.

Presentation: Bridging Our Path to the New Normal

Abstract: Textron is a multi-industry company employing 35,000 talented makers, thinkers, creators and doers worldwide. We serve customers in industries spanning aerospace and defense, specialized vehicles, turf care and fuel systems. Throughout the COVID-19 pandemic, Textron has focused on fulfilling our commitments to our customers while swiftly enhancing the safety of our workplaces to protect the health of our employees. We have also worked closely with our business partners and suppliers and provided help and supplies to the communities where we work and live. Discover some of the ways we are rising to meet the challenges of this unprecedented event.
**Concurrent Sessions**

**Day 3, Session 1, Track A: Faculty/Staff/Professional Papers**

**Moderator: Ken Van Treuren**  
**Host: Ken Carriveau**

- **35108** Simulated Laboratory-Based Learning in A Thermal Fluid Laboratory Course  
  *Mohammad Abu Rafe Biswas, Benjamin Stilwell, Edgar Reyes (Univ of Texas-Tyler)*

- **35142** Improving the Instructional Strategies of Traditional Electrical Engineering Course during the Pandemic  
  *Yasser Mahgoub, Prabha Sundaravadivel (Univ of Texas-Tyler)*

- **35143** Personal Experiences from Teaching Virtually Online During the COVID-19 Pandemic  
  *Tariq Khraishi (Univ of New Mexico)*

- **35075** Innovative Neighborhood for the Homeless: A Combined Technological-Socioeconomic Approach to Engineering Senior Design  
  *Nathan Howell, Kenneth R. Leitch, Vinu Unnikrishnan, Erick Butler (West Texas A&M Univ)*

- **35123** Self-publish textbook for Embedded System Education using an MSP432 microcontroller  
  *Byul Hur (Texas A&M Univ)*

**Day 3, Session 1, Track B: Faculty/Staff/Professional Papers**

**Moderator: Scott Koziol**  
**Host: Anne Spence**

- **35096** A Mini-Maker Faire Via Zoom  
  *Wei Zhan, Bugrahan Yalvac, Byul Hur (Texas A&M Univ), Yonghui Wang (Prairie View A&M Univ)*

- **35104** Virtual Engineering Summer Camp in the age of COVID-19 Pandemic  
  *Anveeksh Koneru, George Nnanna (Univ of Texas-Permian Basin)*

- **35106** STEM Enhancement in Earth Science (SEES): A Reimagining of an Onsite NASA/TSGC/UTCSR high school internship program  
  *Celena Miller, Margaret Baguio (Univ of Texas-Austin)*

- **35119** Outreach and Recruitment with 3D Printing and CAD  
  *Mehmet Emre Bahadir (Southeastern Louisiana Univ)*

- **35080** First-Year Engineering Program Curriculum ReDesign  
  *Randy H. Brooks (Texas A&M Univ)*

- **35081** A Pre-Baccalaureate Engineering Course for the Road Ahead  
  *Randy H. Brooks (Texas A&M Univ)*
2:50pm – 4:05pm: Concurrent Sessions

Day 3, Session 2, Track A: Faculty/Staff/Professional Abstract Only

Moderator: Ari Torrabla  Host: Ken Carriveau

35125 Work in Progress: Conversion of Collaborative Problem-Based Learning Activities from Face-to-Face to Online*  
Charles Patrick (Texas A&M Univ)

35135 Teaching with STEM Project-Based Learning in a Virtual Summer Camp*  
Michael S. Rugh, Mary Margaret Capraro, Robert M. Capraro (Texas A&M Univ)

35150 How the Pandemic Improved My Teaching: Consolidating gains from a time of loss*  
Byron Newberry (Baylor Univ)

35115 Adjustments Made in Students Delivery of Project Results in Undergraduate and Graduate Courses Due to Covid-19 Pandemic*  
Amir Karimi (Univ of Texas-San Antonio)

Day 3, Session 2, Track B: Faculty/Staff/Professional Papers/Abstract Only

Moderator: Cyrus Hagigat  Host: Anne Spence

35134 Implementation of a new student initiative: Promoting Student Success and Well-Being  
Nina Kamath Telang, Nisha Abraham, Althea Louise Woodruff (Univ of Texas-Austin)

35051 Emergency Management Technology Program*  
HuiRu Shih, Kionna J. Taylor, Amaris Edwards (Jackson State Univ)

35133 Students Involvements in Learning of Pollution Prevention and Energy Efficiency Assessment of Businesses in New Mexico*  
Jalal Rastegary, Jason Dana, Patricia Sullivan, Amirreza Barin (New Mexico State Univ)

35120 Proposing a University Core Course in Leadership Innovation in Engineering*  
Peter Golding, Mike Thomas Pitcher, Diane Elisa Golding, Cole Hatfield Joslyn, Anneliese Mari Fensch (Univ of Texas-El Paso)

35122 Experience Teaching a Two Course Sequence in Engineering Innovation & Leadership*  
Peter Golding, Mike Thomas Pitcher, Cole Hatfield Joslyn, Anneliese Mari Fensch (Univ of Texas-El Paso)

*No paper included in proceedings. Please contact authors for further details
Conference Papers and Abstracts Only

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https://baylor.box.com/s/bc4ije7dg4hthrqers4smq61k84gjof

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