



# **ASEE Gulf-Southwest Conference**

*Engineering Education for Productive People:  
Preparing Students for the Changing Work  
Environments.*

March 16 – 18, 2022

Hosted by



**Prairie View A&M University**  
Roy G. Perry College of Engineering



PRAIRIE VIEW  
A&M UNIVERSITY

## **CONFERENCE LOCATION, CAMPUS MAP AND TRAVELING DIRECTIONS**

### **CONFERENCE LOCATION:**

The conference will be held at the 2<sup>nd</sup> floor of the W.A. Tempton Memorial Student Center (MSC)

### **CAMPUS MAP**

Prairie View A&M University campus map can be found at the following link:

<https://www.pvamu.edu/wp-content/uploads/2013/07/Campus-Map.pdf>

### **TRAVELING DIRECTION TO PVAMU CAMPUS**

Directions to PVAMU can be found at the following link:

<https://www.pvamu.edu/directions/>

### **PARKING**

Parking is available (at no charge to conference participants) at the following Parking Lots: **91, 92 and 93.**

When you enter the campus of Prairie View A&M University, there will be directional signs that will lead you to the Parking Lots.



PRAIRIE VIEW  
A&M UNIVERSITY

## About ASEE Gulf-Southwest Section 2022

The ASEE Gulf-Southwest Section, which part of the ASEE Zone III, has an excellent tradition of regional education conferences. The Gulf-Southwest Section of ASEE represents ASEE members in New Mexico, Texas, and Louisiana. Through the Gulf-Southwest Section, members participate in professional activities at the local level, and form regional networks of educators with common interests and goals. Section activities include conducting an annual section conference; conducting workshops and professional development activities for faculty members and administrators; sponsoring awards for professional excellence; and issuing newsletters.

Through the annual GSW conferences, various aspects regarding engineering education are explored, new friendships are made, and innovative teaching ideas are formed. The 2022 ASEE Gulf-Southwest Annual Conference will be hosted by Prairie View A&M University and held in-person March 16 – 18, 2022





PRAIRIE VIEW  
A&M UNIVERSITY

## Welcome Message from the Conference Chair

John O. Attia, PhD, PE

The Organizing Committee of the 2022 ASEE Gulf-Southwest Section (GSW) Annual Conference welcomes you to Prairie View A&M University (PVAMU) campus. The Roy G. Perry College of Engineering at PVAMU is pleased to be the host of this year's conference. This is the first time PVAMU is hosting a GSW Conference, and we very excited about the opportunity to host this conference.

The theme of this year's conference is *"Engineering Education for Productive People: Preparing Students for the Changing Work Environments."* 67 papers will be presented at the conference. Topics in the presentations include: (i) innovations in teaching, (ii) increasing student engagement, (iii) equity, diversity, and inclusion in engineering, (iv) computers in education, (v) preparing the future engineer, (vi) design in engineering education, (vii) accreditation, (viii) entrepreneurship, and (ix) engineering leadership.

There are special highlights of this year's conference. They include the keynote address that speaks to the theme of the conference, the conference workshop, and the tour of some of the College of Engineering laboratories. The keynote speaker will address some of the significant changes engineering educators may need to embrace to adequately prepare engineers for their future. The workshop will provide some recommendations to increase the low representation of African Americans in the STEM workforce and will address the role of faculty in producing successful students. The tour of the College of Engineering research laboratories will provide faculty members from participating institutions some areas they can collaborate with PVAMU researchers and students.

For the past two years (2020 and 2021), the GSW conferences have been held virtually. This will be our first in-person conference since the pandemic. This is a special opportunity for us to come together to renew our friendships, make new friends and be re-charge with the innovative ideas we shall come across during the conference. I hope that we will depart from the conference with a strong determination to improve our quality of instruction that will benefit our students and our institutions.



PRAIRIE VIEW  
A&M UNIVERSITY

## **ASEE Gulf-Southwest Conference - 2022 Committees**

**Program Chair:** John Okyere Attia, *Prairie View A&M University*

### **Technical Program Chairs:**

- Dr. Judy Perkins, *Prairie View A&M University*
- Dr. Sarhan Musa, *Prairie View A&M University*
- Dr. Sherri Frizell, *Prairie View A&M University*

### **Steering Committee:**

- Dr. Pamela Obiomon, Dean of the Roy G. Perry College of Engineering, *Prairie View A&M University*
- Ms. Carol Campbell, Executive Director for University Special Events and Protocol, *Prairie View A&M University*
- Dr. John Attia, Texas Instruments Endowed Professor, *Prairie View A&M University*

### **Technical Program Committee:**

Dr. Shuza Binzaid, *Prairie View A&M University*  
Dr. Sherri Frizell, *Prairie View A&M University*  
Dr. Jaejong Park, *Prairie View A&M University*  
Dr. Judy Perkins, *Prairie View A&M University*  
Dr. Sarhan Musa, *Prairie View A&M University*  
Dr. Nabila Shamim, *Prairie View A&M University*

### **Website Administrators:**

Ms. Ashley Albee, *Prairie View A&M University*  
Mr. Hassan Abbasi, *Prairie View A&M University*

### **Local Arrangements Committee:**

Mr. Anthony Hill, *Prairie View A&M University*  
Mr. Chris Galvez, *Prairie View A&M University*



## **2022 ASEE GSW CONFERENCE**

### **SCHEDULE AT A GLANCE**

#### **Wednesday (3/16):**

- 2:00 – 5:00 p.m. Registration – MSC 2<sup>nd</sup> Floor
- 3:00 – 5:00 p.m. Workshop – MSC Ballroom A
- 5:00 – 7:00 p.m. Reception – MSC 2<sup>nd</sup> Floor Foyer

#### **Thursday (3/17):**

- 8:00 – 8:30 a.m. Refreshments – MSC 2<sup>nd</sup> Floor
- 8:00 – 5:00 p.m. Registration – MSC 2<sup>nd</sup> Floor
- 8:30 – 9:00 a.m. President/Dean Welcome Remarks – Opal Johnson Smith Auditorium
- 9:00 – 10:00 a.m. Keynote Plenary Session – Opal Johnson Smith Auditorium
- 10:00 – 10:30 a.m. Morning Break - MSC 2<sup>nd</sup> Floor Foyer
- 10:30 – 12:00 p.m. Paper Sessions 1 (A, B, C, D)
- 12:00 – 1:30 p.m. Lunch (MSC) – MSC Ballroom B
- 1:30 – 3:00 p.m. Paper Sessions 2 (A, B, C, D)
- 3:00 – 3:30 p.m. Afternoon Break - MSC 2<sup>nd</sup> Floor Foyer
- 3:30 – 5:00 p.m. Tour of Research Labs – College of Engineering Labs
- 5:30 – 6:30 p.m. GSW Officers Meeting – MSC Student Chambers
- 5:30 – 8:00 p.m. Dinner on own or in groups

#### **Friday (3/18)**

- 8:00 – 8:30 a.m. Refreshments – MSC 2<sup>nd</sup> Floor
- 8:00 – 11:00 a.m. Registration – MSC 2<sup>nd</sup> Floor
- 8:30 – 10:00 a.m. Paper Sessions 3 (A, B, C, D)
- 10:00-10:30 a.m. Morning Break – MSC 2<sup>nd</sup> Floor Foyer
- 10:30 – 12:00 pm. Paper Sessions 4 (A, B, C, D)
- 12:00 – 1:30 p.m. Lunch and Award Ceremony -MSC Ballrooms A and B
- 2:00 – 3:00 p.m. Annual GSW Meeting - MSC Ballroom A

## 2022 ASEE GSW CONFERENCE / WORKSHOP

### **Title of Workshop:**

Diversity Equity Inclusion and Belonging: The Role of Faculty in Producing Successful Students

**Presenter:** Dr. Fred Bonner II

**Date and Time:** Wednesday, March 16, 2022 from 3:00 to 5:00 p.m.

**Place:** MSC Ballroom A

### **Abstract:**

A significant facet of increasing students of color participation in STEM is to understand the role of faculty in student matriculation, graduation and participation in the workforce. The overarching goal of this research is to develop solutions to the conundrum of low representation of African Americans in the STEM workforce.

### **Short Bio of Presenter:**

Dr. Fred A. Bonner, II is Professor and Endowed Chair in Educational Leadership and Counseling and Founding Executive Director and Chief Scientist of the Minority Achievement, Creativity and High-Ability (MACH-III) Center at Prairie View A&M University. He is formerly the Samuel DeWitt Proctor Endowed Chair in Education in the Graduate School of Education at Rutgers University and an esteemed expert in the field of diversity in education. Prior to joining Rutgers, he was Professor of Higher Education Administration and Dean of Faculties at Texas A&M University-College Station. He earned a B.A. in Chemistry from the University of North Texas, an M.S. Ed. in Curriculum and Instruction from Baylor University, and an Ed.D. in Higher Education Administration & College Teaching from the University of Arkansas. Bonner has been the recipient of numerous awards, including the American Association for Higher Education Black Caucus Dissertation Award and the Educational Leadership, Counseling and Foundation's Dissertation of the Year Award from the University Of Arkansas College Of Education. In 2020, Dr. Bonner was selected for the prestigious Regents Professor Award by the Texas A&M University System. His work has been featured nationally and internationally. He is the author of the recently released book, *Square Pegs and Round Holes: Alternative Approaches to Diverse College Student Development Theory* (2021).





## PLENARY SESSION - TALK

**Title of Talk:** Preparing Our Curricula and Ourselves in order to Prepare Our Graduating Students for the Changes They will see in Their Careers.

**Presenter:** Dr. Karan Watson

**Date and Time:** Thursday, March 17, 2022, from 9:00 to 10:00 a.m.

**Place:** MSC Opal Johnson Smith Auditorium

**Abstract:**

The societal and career changes that our currently graduating students will experience far exceed the changes most instructors of engineering education have or will see in their careers. Observations indicate we need to assess how well our curricula and pedagogy have served in the past, and how nimble we are at managing change ourselves, before we propose what is needed for the future. I believe a quick look at the systemic and personal successes and short-comings of our distant and recent past, will point to some of the significant changes we should consider championing to adequately prepare engineers for their future.

**Short Bio of Presenter:**

Karan L. Watson, Ph.D., P.E., is currently Provost Emeritus and a Regents Senior Professor of Electrical and Computer Engineering, having joined the faculty at Texas A&M University in 1983 as an Assistant Professor. She served as the Co-Director of the Institute for Engineering Education and Innovation and is currently a distinguished fellow of this Institute. She has served in numerous administrative roles at Texas A&M University, including: provost and executive vice president, vice provost, dean of faculties and associate provost, interim VP for diversity, associate dean of Engineering, and program chair for interdisciplinary engineering. Dr. Watson is a fellow of three organizations : the Institute of Electrical and Electronic Engineers (IEEE), the American Society for Engineering Education, and the Accreditation Board for Engineering and Technology (ABET). Her awards and recognitions include the U.S. President's Award for Mentoring Minorities and Women in Science and Technology, the American Association for the Advancement of Science mentoring award, the IEEE International Undergraduate Teaching Medal, the American Society for Engineering Education Lifetime Achievement Award, and numerous faculty awards at Texas A&M University. She has served as President of the Accreditation Board for Engineering and Technology (ABET) and the President of the Education Society of IEEE.







**PRESENTATION SCHEDULE**  
(MSC = Memorial Student Center)

**Thursday, March 17, 2022**

**Session 1 (A to D), 10:30 a.m. – 12:00 Noon) – Concurrent Sessions**

**Session 1A: Innovations, Curriculum Design and DEI – MSC Ballroom C**

**Session Chair: Dr. Judy Perkins, PE**

<a href="#"><u>35739</u></a>	<i>Innovations in Engineering Education for Fast-Paced Virtual Summer Courses</i> , Samuel Garcia (NASA EPDC) and Eleazar Marquez (The University of Texas Rio Grande Valley)
<a href="#"><u>35787</u></a>	<i>Reporting Student Gender Identity in Papers Presented at the ASEE Gulf-Southwest Conference</i> , Valerie Lynch, Brandon Bakka, and Mia Markey, (University of Texas at Austin)
<a href="#"><u>35793</u></a>	<i>eSMART: A collaborative, competitive challenge to foster engineering education</i> , Paul Koola, Jay Porter, and Rahul Subramanian (Texas A&M University)
<a href="#"><u>35813</u></a>	<i>Comparisons of Student Performance in Similar Courses prior to, during, and after Online Instruction Due to COVID-19 Pandemic</i> , Amir Karimi and Randall Manteufel, (The University of Texas at San Antonio)
<a href="#"><u>35815</u></a>	<i>Factors Affecting the Success Rate of First Year Chemical Engineering Students</i> , Sheena Reeves (Prairie View A&M University)

**Session 1B: Design in Engineering Education - MSC Ballroom D**

**Session Chair: Dr. Annamalai Annamalai**

<a href="#"><u>35744</u></a>	<i>Improving Minority Students' Career Readiness Through Enhanced Senior Design Experiences</i> , Ricardo Garcia Pineda, Jaya Goswami, Kai Jin and Hua Li, (Texas A&M University Kingsville)
<a href="#"><u>35790</u></a>	<i>Capstone Project Progress on the Floating Buoy IoT device Development for Mosquito Research</i> , Zach Adelman, Octavio Carrillo, Simon Castro, Byul Hur, Kevin Myles, and Rene Villegas, (Texas A&M University)
<a href="#"><u>35794</u></a>	<i>An Effective Way of Teaching Electrical and Computer Engineering Capstone Senior Design Courses for Underrepresented Students</i> , Sarhan Musa and Vewiser Turner, (Prairie View A&M University)
<a href="#"><u>35796</u></a>	<i>Exploring the Effects of Solid Modeling Approaches and Manufacturing Process Knowledge on Quality of Students' Execution of Engineering Design Course Projects</i> , Joseph Donndelinger, Lisa Retzlaff and Savannah Richards (Baylor University)



### Session 1C: Computers in Education – MSC Ballroom A

Session Chair: Dr. Sarhan Musa

<a href="#">35842</a>	<b><i>Performance of an Omnidirectional Wind Energy Harvesting System for Low Wind-Speeds</i></b> , Olatunde Adeoye, John Attia, Shuza Binzaid (Prairie View A&M University)
<a href="#">35845</a>	<b><i>Implementing Strategies for Virtual Engineering Education</i></b> , Hashmath Fathima, and Kofi Nyarko (Morgan State University)
<a href="#">35756</a>	<b><i>Integrating Usability into the Agile Software Development Life Cycle Using User Experience Practices</i></b> , Tori Gardner, and Ozgur Aktunc (St. Mary's University)
<a href="#">35938</a>	<b><i>The Use of Topology Optimization in Enhancing the Structural Property of an Automotive Front Sub-frame</i></b> , Da'Quan Prince-Floyd, Jaejong Park, and Jianren Zhou (Prairie View A&M University)
<a href="#">35773</a>	<b><i>Development of Dynamic Modulus Predictive Model Using Artificial Neural Network (ANN)</i></b> , Mena Souliman, and Prashanta Kumar Acharjee (The University of Texas at Tyler)

### Session 1D: Computers in Education and Student Engagement – MSC Student Chambers

Session Chair: Dr. Nabila Shamim

<a href="#">35781</a>	<b><i>Effective Index of Silicon Nanowires on Silicon Substrates</i></b> , Toriano Thomas, (Norfolk State University, NSU), Sunday Ajala (NSU), Bini Ben (NSU), Puspita Panigrahi (NSU), Matthew Bickett (Minnesota State University), Alberto Rivera (Universidad Ana G. Mendez), Ryan Shahan (Old Dominion University) and Sacharia Albin (NSU)
<a href="#">35788</a>	<b><i>Smartphone-Based Self-Diagnosis of Parkinson's Disease</i></b> , Makarand Deo, Sacharia Albin, Jailyn Battle, Monica Brown, Jordan Burton, Karl McKenzie, Ve'an Randall, Sheryl Shaji, and Bright Tsevi (Norfolk State University)
<a href="#">35976</a>	<b><i>Using Neural Networks to Distinguish Children's Age with Visual Features of Sketches</i></b> , Aniket Patel, Tracy Hammond and Seth Polsley (Texas A&M University)
<a href="#">35935</a>	<b><i>Quantifying Engagement in Preschool Classrooms - Conversational Turn-Taking &amp; Topic Initiations</i></b> , Sarah Tao (University of Texas at Dallas), Jay Buzhardt (University of Kansas), Satwik Dutta (University of Texas at Dallas), John Hansen (University of Texas at Dallas), Dwight Irvin (University of Kansas), and Yagmur Seven (University of Kansas)
<a href="#">35832</a>	<b><i>Thematic and Authorship Analysis of ASEE Gulf-Southwest Conference Papers</i></b> , Anna Huang, Tracy Hammond, Amanda Latham, and Erika Yao (Texas A&M University)



**Thursday, March 17, 2022**

**Session 2 (A to D), 1:30 – 3:00 PM) – Concurrent Sessions**

**Session 2A: Curriculum Innovations and Active Learning – MSC Ballroom C**

**Session Chair: Dr. Judy Perkins, PE**

<a href="#"><u>35786</u></a>	<i>Enhancing Student Performance in Engineering Mechanics Course Using Mathcad Interactive Tutorial Assessment</i> , Narasimha Malladi (Malladi Academy) and Ramalingam Radhakrishnan (Prairie View A&M University)
<a href="#"><u>35795</u></a>	<i>Creating a Hands on Civil Engineering Materials Laboratory Experience at Home</i> , Michael Gangone and Michael McGinnis, (The University of Texas at Tyler)
<a href="#"><u>35802</u></a>	Why is thermodynamics so hard for students and what can an instructor do about it? Amir Karimi and Randall Manteufel, (The University of Texas at San Antonio)
<a href="#"><u>35803</u></a>	<i>Return to In-person Learning and Undergraduate Student Sense of Belonging during the Fall 2021 Semester</i> , Laura Gelles and Amy Walker (University of Texas at Dallas)
<a href="#"><u>35954</u></a>	<i>The Art of Effectively Teaching Math to Engineering Students</i> , Siew T. Koay (Prairie View A&M University)

**Session 2B: Curriculum Innovations (classroom and virtual) – MSC Ballroom D**

**Session Chair: Dr. Annamalai Annamalai**

<a href="#"><u>35772</u></a>	<i>The Power of the Pre-Course Survey for Course Launch, Addressing Concerns, and Developing Community</i> , Randy Brooks, Robert Lightfoot, Shawna Thomas (Texas A&M University)
<a href="#"><u>35775</u></a>	<i>The Impact of collaborative learning strategies on Engineering Students' Ability to Problem Solve and Apply Theories to Practical Applications</i> , Ruaa Al Mezrakchi and Ahmed Al-Ramthan (Tarleton State University)
<a href="#"><u>35791</u></a>	<i>Transition back to in-person Class for an Embedded System Course in Engineering Technology during the COVID-19 pandemic</i> , Byul Hur (Texas A&M University)
<a href="#"><u>35798</u></a>	<i>Virtual Meetups for Remote Learners</i> , David Novick and Denise Saenz (University of Texas at El Paso)
<a href="#"><u>35919</u></a>	<i>Effect of Recorded Video Instructions on Students Performance and Learning Experience in Engineering Technology Education</i> , Md Shahriar Hossain and Rafiqul Islam (Northwestern State University of Louisiana)



## Session 2C: Computers in Education -MSC Ballroom A

Session Chair: Dr. Sarhan Musa

<a href="#">35971</a>	<b><i>Performance Comparisons for Python Libraries in Parallel Computing and Physical Simulation</i></b> , Olubunmi Adekanmbi, and Lei Huang (Prairie View A&M University)
<a href="#">35840</a>	<b><i>PV Solar Battery Sizing Autonomy for Residential Applications</i></b> , Olatunde Adeoye, Samir Abood, and Penrose Cofie (Prairie View A&M University)
<a href="#">35833</a>	<b><i>Artificial Intelligence (AI) in Chemical Processes</i></b> , Ozoemena Anyaegbu, and Emmanuel Dada (Prairie View A&M University)
<a href="#">35825</a>	<b><i>The Role of Renewable Energy Sources on the Smart Grid and Microgrid</i></b> , Joseph Dowell, Penrose Cofie, and John Fuller (Prairie View A&M University)
<a href="#">35743</a>	<b><i>Promote Supply Chain and Logistics Standards through Interdisciplinary Curriculum Innovation in a Minority Serving Institution</i></b> , Hua Li, Kai Jin and Ruth Chatelain-Jardon (Texas A&M University-Kingsville)

## Session 2D: Computers in Educations – MSC Student Chambers

Session Chair: Dr. Nabila Shamim

<a href="#">35826</a>	<b><i>Driving GPIO Pins with RISC-V Instruction Set Architecture</i></b> , Darius Gatson, Ryan Barnes, Charles Hoffmeister and Marian Zaki (Houston Baptist University)
<a href="#">35805</a>	<b><i>Design of 3D Printed Molds for Tablet Formation</i></b> , Yazmine Rincon and Sheena Reeves (Prairie View A&M University)
<a href="#">35809</a>	<b><i>AMAR – Autonomous Modular Agricultural Robot</i></b> , Ana Elisa Goulart, Kylie Beal, MaKayla Griffith, Timothy Hawkins, Mondray Matus and Jimmy Oquendo (Texas A&M University)
<a href="#">35811</a>	<b><i>Integrated Multi-Sensor Remote System Design for Real-Time Indoor Air Quality Monitoring</i></b> , Jose Chavez, Okan Caglayan, James Collins, Alyssa Mabry, Christian Andon and Selena Salas (University of the Incarnate Word)
<a href="#">35947</a>	<b><i>Object Detection on Raspberry Pi</i></b> , Xishuang Dong, Xavier Dukes, Joshua Littleton, Tri'Heem Neville, Arthur Quinney, and Christopher Rollerson (Prairie View A&M University)



**Friday, March 18, 2022**

**Session 3 (A to D), 8:30 – 10:00 AM – Concurrent Sessions**

**Session 3A: Curriculum Design and ABET Accreditation – MSC Ballroom C**

**Session Chair: Dr. Jaejong Park**

<a href="#"><u>35741</u></a>	<i>Finite Element Analysis and Design as a Degree Requirement in Undergraduate Mechanical Engineering Curriculum</i> , Shield Lin (Prairie View A&M University)
<a href="#"><u>35784</u></a>	<i>Application-Centric Math Curriculum for Electrical Engineering Majors</i> , Makarand Deo, Maila Hallare and Shahrooz Moosavizadeh (Norfolk State University)
<a href="#"><u>35789</u></a>	<i>The TCCNS and the Effect of Variations on Transferability</i> , Simeon Ntafos (University of Texas at Dallas)
<a href="#"><u>35797</u></a>	<i>Creating a First-Year Course to Prepare Mechanical and Aerospace Engineering Students for the Path Ahead</i> , Paul Davidson and David Ewing (The University of Texas at Arlington)
<a href="#"><u>35906</u></a>	<i>Effective Approaches for Achieving ABET Outcomes in Capstone Design Projects in Civil Engineering</i> , Ramalingam Radhakrishnan (Prairie View A&M University)

**Session 3B: Active Learning and Computers in Education – MSC Ballroom D**

**Session Chair: Dr. Cajetan Akujuobi**

<a href="#"><u>35776</u></a>	<i>An Examination of Black and Latinx Female Youth Experiences in STEM in an Informal Engineering Summer Camp</i> , Alisha Bailey (Southern Methodist University SMU), Alain Mota (SMU) and Kristine Reiley (SMU, Caruth Institute for Engineering Education)
<a href="#"><u>35785</u></a>	<i>Promoting and Assessing Metacognition</i> , A. Anil Kumar (Prairie View A&M University)
<a href="#"><u>35806</u></a>	<i>Creating Course Material through the Automation of Lecture Caption Conversion</i> , Salvatore Indiogine (Texas A&M University), Brandon Le (Texas A&M University), Sidharth Dhaneshkumar Shah (Securonix Inc.)
<a href="#"><u>35816</u></a>	<i>Online Nuclear Power Summer Institute and Day of Science: A two-pronged approach to increasing girls and under-represented minorities towards STEM careers</i> , Merlyn Pulikkathara, Kelvin Kirby, Irvin Osborne-Lee, and Richard Wilkins (Prairie View A&M University)
<a href="#"><u>35780</u></a>	<i>Developing and Applying Manufacturing Process Simulation Tools to Improve Students' Execution of Engineering Design Course Projects</i> , Joseph Anthony Donndelinger, Lisa Joanne Retzlaff, and Savannah Richards (Baylor University)





### Session 3C: Telecommunications – MSC Ballroom A

Session Chair: Dr. Sarhan Musa

<a href="#"><u>35792</u></a>	<i>Simulation of Asymmetric digital subscriber line (ADSL) using the Discrete Wavelet Multitone Modulation (DWMT)</i> , Toya Acharya, Cajetan Akujuobi, and Annamalai Annamalai (Prairie View A & M University)
<a href="#"><u>35835</u></a>	<i>5G Emancipation- A Panacea for An Efficient Communication Growth In Cellular Network Evolution: A Review</i> , Blessing Dike, and Cajetan Akujuobi (Prairie View A&M University)
<a href="#"><u>35849</u></a>	<i>Performance Evaluation of Spectrum Sensing Implementation using Energy Detection Method</i> , Bernice Hoedzoade and Cajetan Akujuobi (Prairie View A&M University)
<a href="#"><u>35818</u></a>	<i>The Fast and Practical Approach to Effectively Securing a Cloud Computing System with Today's Technology</i> , Emmanuel Kolawole, Penrose Cofie and John Fuller (Prairie View A&M University)

### Session 3D: Engineering Materials, Systems and Engagement – MSC Student Chambers

Session Chair: Dr. Shuza Binzaid

<a href="#"><u>35821</u></a>	<i>Visualizing Child-Adult engagement in preschool classrooms using Chord Diagrams</i> , Sathvik Datla (University of Texas at Dallas), Jay Buzhardt (University of Kansas), John Hansen (University of Texas at Dallas), Dwight Irvin (University of Kansas), and Prasanna Kothalkar (University of Texas at Dallas)
<a href="#"><u>35782</u></a>	<i>Understanding the Anisotropic Characteristics of 3D Printed Parts</i> , Mehmet Bahadir and Richard Williams (Southeastern Louisiana University)
<a href="#"><u>35834</u></a>	<i>A Preliminary Study on the Technoeconomic Feasibility of Industrial-scale Microgreens Production</i> , Carol Akpan, Kendall Lemons and Lealon Martin (Prairie View A&M University)
<a href="#"><u>35819</u></a>	<i>Poly(<math>\epsilon</math>-caprolactone) Nanofiber filter for better thermal comfort in Facemasks</i> , Utomwen Irabor and Nabila Shamim (Prairie View A&M University)
<a href="#"><u>35973</u></a>	<i>Policy Implementation for Microgrid Implementation in Texas</i> , Lance White (Texas A&M University, TAMU), Tracy Hammond, (TAMU), Madison Hawkins (TAMU), Amanda Lacy (TAMU), Huei Hsin Lo (TAMU), Olivia Mills (TAMU), Sarhan Musa (Prairie View A&M University, PVAMU), Larry Powell (TAMU), Jacqueline Torralba (PVAMU), Filza Walters (TAMU), and Xi Zhao (TAMU)



**Friday, March 18, 2022**

**Session 4 (A and C), 10:30 – 12:00 Noon - Concurrent Sessions**

**Session 4A: Entrepreneurship, Leadership and Curriculum Redesign – MSC Ballroom C**

**Session Chair: Dr. Anil Kumar**

<a href="#"><u>35732</u></a>	<i>Engineers and Accountability</i> , Kenneth Van Treuren (Baylor University)
<a href="#"><u>35767</u></a>	<i>Leadership and Ethics in Undergraduate and Graduate Curricula at a Hispanic-serving Institution</i> , Matthew Alexander (Texas A&M University – Kingsville)
<a href="#"><u>35828</u></a>	<i>Is the E in Engineering for Entrepreneurship? An Emerging Concept of Entrepreneurial Engineering Identity</i> , Le Shorn Benjamin (University of Houston), Jerrod Henderson (University of Houston) and Erik Hines (Florida A&M University - Florida State University)
<a href="#"><u>35839</u></a>	<i>Using a Pilot Course to Evaluate Curriculum Redesign for a First year Engineering Program</i> , Janie M. Moore and Jacques Richard (Texas A&M University)
<a href="#"><u>36143</u></a>	<i>Applying a Professional Finite Elements Software in Undergraduate Studies of Structural Analysis and Design</i> , Jorge Antonio Tito (University of Houston Downtown) and Amy Heilig (Dlubal Software, Inc.)

**Session 4C: Engineering Materials – MSC Ballroom A**

**Session Chair: Dr. Sarhan Musa**

<a href="#"><u>35843</u></a>	<i>The Chemical and Structural Analysis of Pipeline Repair Materials</i> , Zsamia Barnes, and Ramalingam Radhakrishnan (Prairie View A&M University)
<a href="#"><u>35921</u></a>	<i>Physicochemical Properties of Poly (É-caprolactone) (PCL) and Mg Incorporated PCL Nanofibers</i> , Daisaku Gicheha and Nabila Shamin (Prairie View A&M University)
<a href="#"><u>35837</u></a>	<i>An Experimental Model and Test of a Novel Sustainable Energy Pad for Bike Lane Applications</i> , Kazi Meharajul Kabir, Shuza Binzaid and John Attia (Prairie View A&M University)

