

NEWSLETTER

OF THE ASEE GULF-SOUTHWEST SECTION

September 2021

Newsletter Editor Corner



The Chair's Corner

Howdy! I have the great privilege of presenting the ASEE Gulf-Southwest (GSW) Section Newsletter for Fall 2021. Baylor University hosted the 2021 ASW Conference under the excellent direction of Dr. Ken W. Van Treuren. We are reporting news items from that conference. Next year's conference is in the very capable hands of Dr. John Attia of Prairie View A&M University.

As we continue to work through the challenges of the COVID pandemic, we continue to adapt our work habits and interactions as we did for the virtual conferences in 2020 and 2021. We look forward to the 2022 conference to be held in person. Plan now to participate and attend!

As well, we'd love for you to share what you are doing at your institution in terms of engineering education. Contact me at the email address below. Stay safe!

Paula deWitte, Section Newsletter Editor
paula.dewitte@tamu.edu

Greetings!

The fall semester came too quickly. While the hope was to return to "normal" on our campuses, it seems we are not quite there yet. COVID continues to make its presence known and will do so for the near future. At Baylor we are back on campus but continue to wear masks in the classrooms. Debates persist over the wearing of mask or whether or not we should get vaccinated. Whatever your views on these topics, let's not let this get in the way of our primary task, educating our students. Let's take the precautions we

feel necessary to feel safe and to keep our students safe as well. We learned many new skills in the past year. Most faculty feel they are better in the classroom because of these new skills. I know our students appreciate the effort we make to help them be successful. We need to continue to share with each other what we have learned and what we will continue to learn in the future. ASEE Gulf Southwest is the perfect place to share these ideas.

Baylor was honored to host the past ASEE Gulf Southwest Annual Section Conference in March. While we were forced to have a virtual conference due to the circumstances at the time, it was still a great time to meet people virtually and see the remarkable things they are doing in the section. Next year's conference will be hosted by Prairie View A&M and the Program Chair will be John Attia. John is planning for the conference being held on their campus. This will give us an opportunity to get to know Prairie View A&M and see their facilities. I'm also looking forward to a more "normal" conference and to meet you face to face.

There are several items I hope we can accomplish this next year. One is to update our By-Laws to more closely reflect how we run our section. It has been several years since this has happened. Any proposed changes will be brought to the section and will eventually need to be approved by ASEE National. A second goal is to archive past ASEE Gulf Southwest Section papers in ASEE Peer. This past year's conference was automatically transferred to ASEE Peer and our Section Webmaster, Dr. Ulan Dakeev, is already hard at work making this happen for previous years. Having our papers on ASEE Peer will make them more accessible and make our section more visible to those outside ASEE Gulf

Southwest. A third goal is to increase the interconnectivity of ASEE Gulf Southwest during the year, not just during the conference. I would like to see us use the website more for this purpose perhaps to do more with social media. The newsletter is another great place to get information to the section on great things going on at your campus. Awards and other recognitions are always welcome. Any ideas you might have concerning this topic please let me know. July 1 marked the transition to the new officer positions in for the section, which are listed below. As always, the section depends on the generosity of individuals who volunteer their time to keep the section moving forward. I want to thank Tariq Khraishi for his excellent leadership this past year. He will continue in an advisory role as the Past Chair this next year and takes my place as the ASEE Zone III Chair on the ASEE Board of Directors. My thanks to all who agreed to serve the section this next year. If you have an interest to be involved with the leadership of the section, please contact me and we can find a place for you to serve.

Last, I would like to inform the section that I have been asked to run for President-Elect of ASEE. Should I be elected, this position will begin in July 2022 when my term as Section Chair of ASEE Gulf Southwest expires. Having served on the Board of Directors as the ASEE Zone III Chair these past two years, I have enjoyed being a part of shaping the future for ASEE. As President-Elect I would emphasize the continued importance of engineering education basics, especially as we transition to meet future challenges. We must make sure our students receive the skills and tools needed to be successful in their chosen profession. ASEE Gulf Southwest has a long tradition of ASEE Presidents and I hope I can count on you to help elect me to

this position. More information will be forthcoming. Have a great year and let's continue to make the ASEE Gulf Southwest the best section in ASEE!

Kern Van Treuren
ASEE Gulf Southwest Section Chair

The new officers are:

Past Chair: *(by default from previous position until June 2022)*

Dr. Tariq Khraishi, Professor
The University of New Mexico

Chair: *(by default from previous position until June 2022)*

Dr. Kenneth W. Van Treuren, Professor
Baylor University

Vice-Chair (Program Chair in 2022): *(for one-year term until June 2022)*

Dr. John Attia, Professor
Prairie View A&M

Associate Vice-Chair (Program Chair in 2023): *(for one-year term until June 2022)*

Dr. Nandika D'Souza, Regents Professor
University of North Texas

Associate Vice-Chair (Program Chair in 2024): *(for one-year term until June 2022)*

Dr. Meagan Vaughan Kendall, Assistant Professor
University of Texas at El Paso

Secretary: *(for three-year term June 2021-June 2024)*

Randy Brooks, Associate Professor of Practice
Texas A&M Engineering Academy – Brenham

Treasurer: *(for three-year term)*

Dr. Amir Karimi, Professor
The University of Texas at San Antonio

Section Campus Rep: *(for three-year term until June 2022)*

Dr. Walter W. Buchanan, Professor
Texas A&M University

Section Awards Committee Chair: *(by annual appointment)*

Dr. Amir Karimi, Professor
University of Texas at San Antonio
Section Nominating & Resolution Committee Chair: *(by annual appointment)*

Dr. Randall D. Manteufel, Associate Professor
University of Texas at San Antonio

Section Webmaster *(by annual appointment)*

Dr. Ulan Dakeev, Assistant Professor
Sam Houston State University

Section Archivist *(by annual appointment)*

Dr. Amir Karimi, Professor
University of Texas at San Antonio

A *Word* from Program Chair



Upcoming section meeting:
**The American Society for Engineering
Education (ASEE)
The 2022 ASEE-GSW Annual
Conference
Organized by Prairie View**

March 16 - 18, 2021

**2022 ASEE GSW CONFERENCE
PRAIRIE VIEW A&M UNIVERSITY
ROY G. PERRY COLLEGE OF
ENGINEERING**

Prairie View A&M University (PVAMU) will host the 2022 American Society for Engineering Education (ASEE) Gulf-Southwest (GSW) Section conference. The conference will be held from March 16-18, 2022, on the campus of PVAMU.

The theme of the conference is **"Engineering Education for Productive People: Preparing Students for the Changing Work Environments."** Professor John Attia, from the PVAMU Department of Electrical and Computer Engineering is the chair of the conference.

The following topics will be explored at the conference: (1) Innovations in the classrooms and laboratories, (2) Innovations in virtual engineering education, (3) Active learning in engineering, (4) Safe learning environments, (5) Increasing student engagement, (6) Community engagements and service-learning, (7) Outreach to community colleges and K-12, (8) Equity, diversity, inclusion in engineering, (9) Computers in education, (10) Design in engineering education, (11) Entrepreneurship in engineering education, (12) Curricular Design, (13) Engineering Leadership, and Ethics, (14) Preparing the Future Engineer, (15) Engineering Accreditation, and (16) College-industry partnerships

The conference provides opportunities for faculty members and staff to publish and present on educational projects and classroom innovations. It also provides opportunities for graduate and undergraduate students to publish and present their technical research. All papers

will be referred and included in the ASEE PEER DOCUMENT REPOSITORY (peer.asee.org) portal for ASEE conference papers.

For all submitted full papers, the expectation is that at least one of the co-authors must register and attend the conference to present the accepted paper. Papers without a registration will not be included in the conference program.

To submit your abstract, use the web link:

<https://www.asee.org/public/conferences/299/papers>

The deadline for abstract submission for a conference presentation is **Nov. 15, 2021**.

Other Timelines are:

November 15, 2021: Abstracts due
December 15, 2021: Notification of abstract acceptance
January 24, 2022: Deadline for submission of draft papers
February 7, 2022: Reviews complete, comments returned to authors, paper acceptance
February 21, 2022: Revised, Final Paper Due
March 16, 2022: Conference begins

The ASEE Organizational Website will be managing our papers this year. Once you click on the link, you will be asked to login to the ASEE website. If you don't have an account, you will need to create one.

The website for the 2022 ASEE GSW conference is <https://www.pvamu.edu/engineering/2022-asee-gsw-conference/>

For questions about the conference, contact Dr. John Attia at joattia@pvamu.edu.

ASEE GSW Meeting Site Rotation

- 2012 University of Texas at El Paso (Vivek Tandon) - WEST
- 2013 University of Texas at Arlington (Lynn Peterson) - CENTRAL
- 2014 Tulane University in New Orleans (Damir Khismatullin) - EAST
- 2015 University of Texas at San Antonio (Randy Manteufel) - CENTRAL
- 2016 TCU in Fort Worth Texas (Stathis Michaelides) - WEST
- 2017 University of Texas at Dallas (Robert Hart) - CENTRAL
- 2018 University of Texas at Austin (Ronald Barr) - CENTRAL
- 2019 University of Texas at Tyler (Michael McGinnis) - EAST
- 2020 University of New Mexico, Albuquerque, NM (Tariq Khraishi) - WEST
- 2021 Baylor University, Waco (Kenneth W. Van Treuren) - CENTRAL
- 2022 Prairie View A&M University (John Attia) - EAST
- 2023 University of North Texas, Denton (Nandika D'Souza) - CENTRAL
- 2024 University of Texas at El Paso, (Meagan Vaughan Kendall) - WEST
- 2025 University of Texas at Arlington (David Ewing) - CENTRAL
- 2026 Texas A&M University, College Station (Tracy Hammond) - EAST



**Find Us on
the Internet!**

Checkout our website! <https://gsw.asee.org/>. including

links to previous and future conferences, newsletters, and information about our Section.

You will find the proceedings from previous conferences in PEER.

The old website will remain available through October 2022 and contains searchable proceedings from past Section meetings: <http://www.aseegsw.net/>



Awards

2020-2021 ASEE-GSW Awards

by Amir Karimi, Section Awards Committee Chair

2021 ASEE-GSW Section Awards

<https://www.asee.org/member-resources/awards/full-list-of-awards/section-awards>

The 2021 ASEE-GSW Section Virtual Annual Meeting
Hosted by the Baylor University, Waco, Texas

Person Mile Award:

Not awarded – No travel—Virtual conference

Outstanding Teaching Award

Dr. Anne Spence, Baylor University (\$500)

Outstanding Young Faculty Award:

Dr. Adeeba Raheem, University of Texas-El Paso (\$500)

Outstanding GSW Section Service

Award:

Lynn Peterson, University of Texas-Arlington (\$500)

Outstanding Campus Representative

Award

Dr. Amir Karimi, University of Texas -San Antonio (Certificate)

Selected by: ASEE-GSW section Campus Representative Committee Chair

Best Paper Awards

Faculty/Staff Paper Awards:

1st Place: (\$300)

David Joseph Ewing, University of Texas-Arlington, “Evaluation of a Peer-Led Team Learning Course Designed to Increase Underprepared Students Success in Engineering”

2nd Place (\$200)

Joseph Donndelinger, Adam Weaver, and James Carlton Bates, “Timothy Russell, Baylor University, “Automating Project Team Formation with Heterogeneous Project Preferences and Skill Mix Constraints”

3rd Place (\$100)

Tracy Hammond, Karan Watson, Samantha Ray, Robert Lightfoot, Shawna Thomas, and Drew Casey, Texas A&M University, “The Development of a Texas A&M University Faculty of Engineering Education”

Undergraduate Student Paper Awards:

1st Place (\$300)

Matilda Ho, Casey Hatfield, and Jieun Kim, University of Texas-Dallas, “Taking Control

of Control Systems: A Student Developed, Multimedia and Simulation Tool for Control Systems Education”

2nd Place (\$200):

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

3rd Place (\$100):

Carolyn Fulton, Brian P. Bernard, Schreiner University, and Brian P. Mann, Duke University, “An Improved Magnetically Bi-stable Piezoelectric Energy Harvester”

Graduate Student Paper Awards:

1st Place (\$300)

Monikka M. Mann and George Tan, Texas Tech University, “Recent Strategies for Improving Undergraduate Engineering Education: A Review”

2nd Place (\$200)

Andres Enriquez Fernandez, Louis J. Everett, and Miguel Cedeno, University of Texas-El Paso, “UAV Parameter Estimation Through Machine Learning”

3rd Place (\$100)

Prasanna V. Kothalkar, John H. L. Hansen (University of Texas-Dallas), Dwight Irvin, Jay Buzhardt (University of Kansas), Beth S. Rous (University of Kentucky), “Child vs Adult Speaker Diarization of Naturalistic Audio Recordings in Preschool Environment Using Deep Neural Networks”

Awards

Info

The Chair of the Section Awards Committee, Professor Amir Karimi, wants to share with Section members information regarding Section awards and nomination procedures below. This information should be kept on file if you anticipate making or getting a nomination.

Important Note on Section awards: The nominees of ASEE-GSW section awards are strongly encouraged to attend the conference.

ASEE Section Outstanding Teaching Award

This award is given by each ASEE section, with support, where possible, from local industry. The award, which focuses on outstanding classroom performance, recognizes teachers of engineering and engineering technology students and serves as an incentive to make further significant contributions to teaching.

The Award: The award consists of a certificate, prepared by ASEE National Headquarters, and an appropriate honorarium, where possible, presented by the local section. Each section shall determine its own level of the honorarium and fund the honorarium from its Banking and Accounting Services System fund. Presentations are made at the section annual meeting with notation in the ASEE Annual Awards Banquet Program.

Qualifications: Candidates may be teachers of any subject included in an ABET/CEAB accredited engineering or engineering technology curriculum (including TAC/ABET). In addition to technical courses, subjects may include the humanities and social studies, mathematics and science.

The teacher, as an individual, must:

1. Possess and be able to communicate a broad and accurate knowledge of the subject area.
2. Possess self-confidence, create a feeling of harmony between self and students and be able to meet difficulties with poise.
3. Possess a sense of proportion, stressing fundamentals and disregarding trivial detail. Give assignments that challenge students, demanding thinking in the completion of assignments.
4. Demonstrate such an intense interest and enthusiasm for the subject area and for the enhancement of learning processes that students are motivated to their fullest capacities.
5. Be available for advising and counseling students before and after graduation.
6. Teach a minimum of two semester or three quarter courses per calendar year.
7. Have considerable endorsement from students, using both regular course evaluations and individual letters of recommendation as evidence.
8. Attend the section annual meeting at which the award is presented; and make a presentation at that meeting (or the following section meeting) to share some elements of his/her success as a teacher.
9. Possess a strong record of activity in ASEE or the educational activities of another professional society.

The teacher's contributions to the profession should include at least three of the following:

1. Participation in the development of courses or curricula.
2. Development of teaching equipment or development of a wider application of teaching equipment previously developed.
3. Contribution to the improvement of laboratories or other facilities.
4. Development or authorship of instructional material or a text that enhances the student learning process.
5. Publication of original work, through any medium, that enhances the engineering and engineering technology education process or adds to the literature pertaining to teaching methodologies.

6. Service as a mentor to other teaching faculty or participation in the conduct of seminars and workshops that are focused on helping other teachers improve their classroom effectiveness.

Outstanding Section Campus Representative Award

ASEE has initiated this award in order to recognize those ASEE Campus Representatives who have achieved excellence in their roles as the Society's representative on campus. The ASEE Campus Representative acts as a liaison to help determine members' interests and reactions to Society programs and publications, to stimulate interest among the faculty in section and national meetings and to promote individual membership and involvement. This award is bestowed annually upon those ASEE Campus Representatives who have demonstrated staunch support for ASEE on their campuses.

The Award: The award consists of a certificate to the ASEE Campus Representative selected from each section and is presented at the section meeting.

Qualifications:: Nominees must have served ASEE significantly through active participation in the following areas:

1. Recognition of outstanding teaching and research activities on his or her campus by submitting ASEE award nominations and support of the New Engineering Educators program.
2. Encouragement of faculty members to submit articles to ASEE publications.
3. Encouraging faculty members to submit papers for presentation at section and national meetings.
4. Promotion of individual membership in ASEE.
5. Encouragement of faculty attendance at section, division and national ASEE meetings.

Selection: Each ASEE Campus Representative must complete an annual activity report. The report is completed

[online](https://www.asee.org/public/campus_reps/online) (https://www.asee.org/public/campus_reps/reports) and copies will automatically be forwarded to ASEE headquarters and their dean/head of engineering. The report is open from early-August through late-December each year. Following the closure of the online report, copies will be sent to each Campus Rep's Section Chair. Upon reviewing the reports and following section bylaws, an Outstanding Section Campus Rep will be selected based on the evidence that indicates consistent and outstanding promotion of ASEE on campus according to the above award criteria.

Outstanding Zone Campus Representative Award

Each Section Chair will forward to the respective Zone Chair the name of the Section Campus Representative Award recipient together with the appropriate documentation. The Zone Chairs will then select the recipients of the Outstanding Zone Campus Representative Awards.

The Award: The award consists of a plaque to be presented to the ASEE Campus Representative, selected by each Zone Chair, at the ASEE Annual Conference.

Best Paper Awards

Each year three awards are given to the best engineering education papers published and presented at the annual meeting of the ASEE-Gulf Southwest (GSW) Section. Awards in the amounts of \$300, \$200, and \$100 are given to the first, second and third placed papers, respectively. In addition certificates of recognition are presented to the authors of the selected papers. In the case of co-authors, individual certificates will be presented, but the honorarium will be split among the number of authors. Award presentations are made at the Honors and Awards Luncheon of the ASEE-GSW section.

Qualifications: The paper must be presented by the author(s) at the annual meeting. The

paper must be an original paper written specifically for and published in the Proceedings of the ASEE-GSW Section Annual Conference. It is permissible that the paper be of similar content to the papers written by the same author(s) for other conferences.

Selection: The members of the ASEE-GSW Section Awards Committee will select the best papers.

Outstanding Service Award

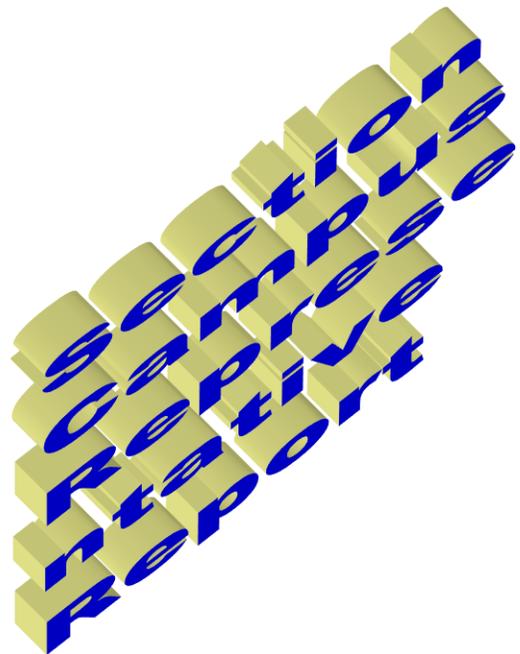
Purpose: To recognize a member who has demonstrated a long history of service to engineering education and/or the ASEE-GSW section.

The Award: The award consists of a \$500 honorarium and a certificate of recognition. Presentations are made at the section annual meeting with notation in the ASEE Annual Awards Banquet Program.

Qualifications: Any current or past member of GSW section with a distinguished record of service to engineering education and/or the ASEE-GSW section shall be eligible for this award.

Nomination: Any member of the section may nominate candidates for this award by preparing a nomination package that includes an ASEE General Award Nomination Form, candidate's curriculum vitae, and a nomination rationale statement highlighting the service to engineering education and/or the ASEE-GSW section. Supporting letters are recommended to strengthen the nomination but not required.

The selection will be made by the Section Awards Committee. The nomination package should be mailed to the ASEE-GSW section Awards Committee Chair.



The following is a summary of topics that might be useful to new Campus Representatives (CRs), prospective CRs, and the general membership.

What is a Campus Representative?

An ASEE Campus Representative is designated by their institution to serve as the liaison between ASEE Headquarters and faculty and students on campus.

Campus Representatives play a crucial role in recruiting new ASEE members and in keeping current and potential members informed of ASEE activities. As the local, grass-roots presence of the Society, the importance of the services Campus Representatives provides to their schools and to ASEE cannot be overemphasized. They are the direct link between colleagues with questions, concerns, and comments about ASEE and the staff who can best respond. Their role is vital in getting information on membership opportunities

and ASEE activities to potential members on campus. The growth, stability, and effective operation of ASEE in accomplishing its mission of promoting excellence in engineering education directly depend upon Campus Representatives across our nation.

The ASEE Campus Representative resources can be accessed through the following ASEE link:
<https://www.asee.org/member-resources/groups/campus-representatives>

ASEE-GSW Section Bylaws: The GSW Section Bylaws are posted on-line at our Section's website (<http://www.aseegsw.net/> or <https://gsw.asee.org/>)

Gulf-Southwest Section **American Society for Engineering Education**

RESOLUTION

Let it be resolved that the Gulf-Southwest Section of the American Society for Engineering Education (ASEE) expresses its sincere appreciation to Baylor University for hosting the 2021 Annual Section Meeting, with the conference theme: "Reimagining Engineering Education for a Changing World." In particular, we express our sincere gratitude to the conference Host Committee Chair Dr. Kenneth W. Van Treuren (Professor and Associate Dean for Research and Faculty Development), Dr. Dennis O'Neal (the Dean,

School of Engineering and Computer Science), and all Baylor faculty and staff members contributing to the Conference.

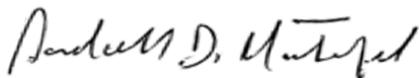
Further, let it be recognized that there were 63 technical paper presentations with 72 faculty/staff and 27 students in registered attendance. Awards were presented for 1st, 2nd and 3rd place best papers authored by undergraduate students, best papers by graduate students and best papers by faculty/professional/staff. In addition to the technical sessions, the pre-conference seminars by Chris Zakrzewski and Christopher Richmann were especially informative. The keynote address by Dr. Nancy Brickhouse, Vice President and Provost of Baylor University was informative describing how Baylor has adapted to the Covid Pandemic and the vision of engineering in Baylor's strategic plan. The Thursday keynote presentation by Lauren Dreyer on "Launching Our Future: SpaceX Overview" was both informative and inspirational. The Friday keynote speaker, Kim Mackenroth, gave a presentation on "Bridging Our Path to the New Normal" which described how Textron, Inc. met the challenges of the COVID-19 pandemic. So many papers and presentations focused on encouraging future engineers to excel to meet the exciting opportunities being created all around us.

Let it be noted that the attendees missed visiting the Baylor University campus because of the Covid Pandemic, but attendees experienced the exemplary virtual

accommodations provided by Attendify and Zoom software platforms, which allowed excellent virtual mobility during the conference. The conference proceeded smoothly as each conference session had both a volunteer host and moderator. This conference appears to be the second virtual conference of any ASEE Section, with last year's ASEE-GSW conference being the first virtual conference of this type.

Thus, let it be recognized that all attendees enjoyed the technically sound and intellectually inspiring paper presentations, and the organization of the conference. Finally, let this resolution be recorded on the permanent records of the Gulf-Southwest Section and be distributed to appropriate officers of the Society.

Respectfully Submitted on March 25,
2021



Randall Manteufel,
Chair, ASEE
GSW Section Resolutions Committee



\$Financial Report \$

These are the balances of GSW accounts:

GSW-BASS Account: \$31,881.89 as of 12/31/2020.

GSW-BASS Account: \$23,833.92 as of 09/30/19

GSW-TIAA-CREF Mutual Fund Account: \$40,481.63 as of 3/22/2021

Member News:

- Dr. Ken Van Truren, the current GSW Program Chair, is now the past as the ASEE Zone III Chair.
- Dr. Tariq Khraishi, the past GSW Section Chair, is now serving as the Chair for the ASEE Zone III and is a member of the National ASEE Board of Directors.

If you have news you would like to share in future newsletters, please contact the Newsletter Editor, Paula deWitte, at paula.dewitte@tamu.edu.

From Ulan Dakeev, the Webmaster for the ASEE GSW Section:

With the help of a student, we were able to compile and organize 768 papers from

past conference years, and communicated with ASEE PEER and provided them with all needed papers info. They are currently working on uploading these papers online into PEERS. Special thanks to the Section's former Webmaster John Miller for helping us to make this happen."

The following is reported from Candice Myers, B.S., Computer Science, and M.S., Program Specialist for Communications, candicemeyers@tamu.edu:

<https://ieei.tamu.edu/texas-am-university-at-the-asee-gsw-conference/>

Texas A&M University
Computer Science &
Engineering is hiring for APT
positions at both the College
Station and Galveston
campuses!

<https://engineering.tamu.edu/cse/faculty-positions.html>