

NEWSLETTER

OF THE ASEE GULF-SOUTHWEST SECTION

September 2020



Hello! I am happy to present you with another ASEE Gulf-Southwest (GSW) Section Newsletter. This covers info from 2019-2020. The last conference was hosted virtually by the University of New Mexico and is covered herein. Also covered is info on the upcoming Section conference hosted by Baylor University in 2021 (see section by the Program Chair). This is a special newsletter edition since it comes in the midst of a pandemic that has affected all of our lives. We hope that you all will stay safe and well and we look forward to more progress for the Section. Next year's conference is in capable hands. Baylor University has hosted this conference in the past and has done an excellent job last time. We expect no less. On any rate, we hope you will be part of our next Conference coming to you in 2021. We'd love for you to share what you are doing at your institution in terms of engineering education.

Tariq Khraishi, Section Newsletter Editor



The Chair's Corner

The Chair's Corner

The 2020 was special. It was the first ASEE GSW Conference to be held totally online or virtually thanks to no other but COVID-19. The conference was planned and slated to occur face-to-face (F2F) for many months and then about a month before it was to take place, things were decided to move to a virtual setting since all travel and people's health's got disrupted.

It took about a month to convert things to an online Zoom setting. What was going to be a 1.5-day affair ended up being stretched to a 3-day conference (8-5 basically). The reason for that is that the conference sessions were all held in series each of these days and not in parallel to ensure good attendance of the sessions (since these were uncharted territory for us going with a purely online format).

The 2020 ASEE Gulf-Southwest (GSW) Section meeting was held during the

following dates: 4/23/2020, 4/24/2020 and 4/29/2020. The theme of the conference was “Engineering Engineering Education (E³): Innovations in the Classroom and Beyond”.

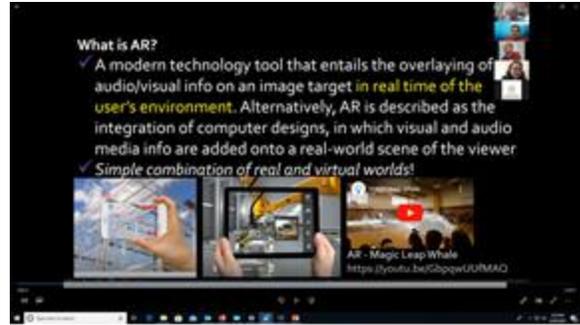
The total number of submissions to the conference was 98 and the total number of proceedings papers published via the ASEE PEER portal were 76. There were also 55 faculty/staff/professionals presentations and 32 student presentations.

At the start of the conference, the attendees were greeted by the University of New Mexico’s School of Engineering Dean, Prof. Christos Christodoulou. There were also two presentations by representatives of ASEE National, Dr. P.K. Imbrie titled “Engineering Education into the Future: What it could look like and the learning spaces needed to support it” and Dr. Jacqueline El-Sayed.

In the end, I want to thank all the organizing committee and attendees for making this conference a big success. Although we were kind of jumping into the unknown, things worked out quite well in the end and we are happy with the outcome.

I really recommend for you to participate in next year’s conference organized by Baylor University. I expect another successful conference that will represent our Section quite well with great exchange of information and ideas.

Dr. Tariq Khraishi, 2020 Conference Chair



Pictures from the zoom sessions during the 2020 ASEE GSW Conference

A *Word* from Program Chair



Upcoming section meeting:
The American Society for Engineering Education (ASEE)
The 2021 ASEE-GSW Annual Conference
Organized by Baylor University

March 24-26, 2021

“Reimagining Engineering Education for a Changing World”

This past spring engineering education got complicated. The beginning of the spring semester started “normally” but by spring break our world was changed. Moving online in a week or less presented a challenge but, everyone seemed to rise to the occasion. While not perfect, we all learned about Zoom and how to conduct a virtual class with our students. This also presented new challenges that were the result of being online, some of these were keeping students engaged, conducting team projects, and testing. As faculty, we all adapted our

classroom teaching to this new environment. This experience led to our selection of the conference theme, “Reimagining Engineering Education for a Changing World.” While all engineering education topics are welcome, we are especially interested in the following:

- Preparing Students for New Work Environments
- Online or on campus? What is in the future?
- Distance learning – what works and what doesn’t
- Course planning for online, hybrid, and F2F education
- Learning Management Systems and meeting software
- Keeping students and faculty safe
- Mental health and the classroom
- Increasing Student Engagement
- Innovations in Online Engineering Education

Baylor University is excited to host this year’s conference. No one knows what next spring will be like. Many spring breaks are already canceled. With all the uncertainty on Baylor’s campus surrounding meeting room availability and procedures for bringing guests on campus, the decision was made for the conference this year to be virtual. This should enable easy participation for everyone.

The deadline for Abstract submission is November 30, 2020.

The website for the conference with full info is: www.ecs.baylor.edu/2021aseegsw
The conference provides the opportunity for you and your colleagues to present your work/activities in engineering education and for students (graduate and undergraduate) to present their scientific/technical work.

There will be monetary awards for best faculty/staff/professional papers and for student papers (both graduate and undergraduate).

Please spread the news to your colleagues, students and anyone who may be interested in this conference opportunity. Members of ASEE, as well as non-members, can participate in the conference.

Expected attendees range from all over the country and beyond. Refereed papers from the conference proceedings are expected to be archived online on the ASEE PEER website.

We look forward to seeing you at the 2021 ASEE GSW Conference.

Sincerely,

Dr. Ken Van Treuren
Baylor University
ASEE GSW 2021 Conference Chair

Section Officers

Past Chair: *(by default from previous position until June 2021)*

Michael McGinnis
Associate Dean of Engineering
Associate Professor
Civil Engineering Department
RBS 1011
University of Texas at Tyler
Tyler, TX 75799
(903) 565-5870
Email: MMcGinnis@uttyler.edu

Chair: *(by default from previous position until June 2021)*

Tariq Khraishi
Professor
Mechanical Engineering Department
MSC01 1150
The University of New Mexico
Albuquerque, NM 87131
Phone: (505) 277-6803
FAX: (505) 277-1571
Email: khraishi@unm.edu

Vice-Chair (Program Chair): *(for one-year term until June 2021)*

Kenneth W. Van Treuren, Professor
Associate Dean for Research and Faculty Development
School of Engineering and Computer Science
Baylor University
One Bear Place #97356 (or 105 Baylor Ave.)
Waco, TX 76798-7356
(254)-710-6659
Email: Kenneth.Van.Treuren@baylor.edu

Secretary/Treasurer: *(for three-year term until June 2021, completing the term for Reza Mirshams)*

Amir Karimi
Professor
Mechanical Engineering Department
The University of Texas at San Antonio
One UTSA Circle
San Antonio, TX. 78249-0615
(210) 458-5514
Email: amir.karimi@utsa.edu

Section Campus Rep: *(for three-year term until June 2021)*

Walter W. Buchanan, Professor
Engineering Technology and Industrial Distribution
304D Fermier Hall, 3367 TAMU
Texas A&M University
College Station, TX 77843-3367

(979) 845-6764

Email: buchananw@tamu.edu

Section Newsletter Editor: *(for three-year term until June 2023)*

Tariq Khraishi
Professor
Mechanical Engineering Department
MSC01 1150
The University of New Mexico
Albuquerque, NM 87131
Phone: (505) 277-6803
FAX: (505) 277-1571
Email: khraishi@unm.edu

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

Amir Karimi
Professor
Mechanical Engineering Department
The University of Texas at San Antonio
One UTSA Circle
San Antonio, TX. 78249-0615
(210) 458-5514
Email: amir.karimi@utsa.edu

Section Nominating Committee and Resolutions Committee Chair: *(by annual appointment)*

Randall D. Manteufel, Ph.D.
Associate Professor
Mechanical Engineering Department
The University of Texas at San Antonio
One UTSA Circle
San Antonio, TX. 78249-0615
(210) 458-5522
Email: rmanteufel@utsa.edu

Section Webmaster *(by annual appointment)*

John Miller
Senior Lecturer and Assistant Chair
Electrical and Computer Engineering Department
Baylor University
Rogers 300D

Waco, TX 76798
(254) 710-3974 (office)
Email: John_Miller1@baylor.edu

Section Archivist (by annual appointment)

Amir Karimi
Professor
Mechanical Engineering Department
The University of Texas at San Antonio
One UTSA Circle
San Antonio, TX. 78249-0615
(210) 458-5514
Email: amir.karimi@utsa.edu



Find Us on the Internet!

Checkout our website!

<https://gsw.asee.org/>. There, you will find links to previous and future conferences, newsletters, and information about our Section.

On the ASEE PEER repository (linked on our Section website): <https://peer.asee.org/>, you will find the proceedings from three previous conferences (2020, 2018, 2017).

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



Awards

2019-20 ASEE-GSW Awards

by Amir Karimi, Section Awards Committee Chair

- **Outstanding Campus Representative Award:**
Dr. Amir Karimi, University of Texas at San Antonio
- **Outstanding Teaching Award:**
Dr. J. Carter Tiernan, University of Texas at Arlington
- **Outstanding Young Faculty Award:**
Dr. Sharareh Kermanshachi, University of Texas at Arlington
- **Outstanding Service Award:**
Dr. Randall D. Manteufel, University of Texas at San Antonio
- **Conference Person-Mile Award:**
Not awarded – No Travel - Virtual Conference
- **Faculty Paper Awards**
 - **1st Place Award:**
“Using Humanities as Context for STEM Empathy Development: A Discourse Analysis,” by John Carrell, Joshua Cruz and Stephanie Kuzmack, Texas Tech University
 - **2nd Place Award:**
“A Study of the Impact of a NSF Internship and Conference Participation Program on Student Success,” by Kristine Denman, Joel Robinson and Tariq Khraishi, University of New Mexico
 - **3rd Place Award:**

“Pioneering Approach for Offering the Convergence MS Degree in Mechatronics and Associate Graduate Certificate,” by Aleksandr Sergeev, John Irwin and Adrienne Minerick, Michigan Technological University

- **Student Paper Awards**

- **1st Place Award:**

“Thermal Energy Storage: Gaps and Bridges for Concentrating Solar Power Technologies”, Jesus Ortega, University of New Mexico

- **2nd Place Award:**

“The Engineering Design process for the EPICS’ Motorized Art Table for Adults with Intellectual and Developmental Disabilities”, Jiyah Starks, Yuxin Jiao, Danyal Syed, and Reginald McKenzie, University of Texas at Dallas

- **3rd Place Award:**

“Efficient Way of Converting outdated Allen Bradley PLC-5 System into Modern ControlLogix 5000 suit”, Aleksandr Sergeev, Spencer Thompson, Larry Stambeck, Andy Posa and Paniz Hazaveh, Michigan Technological University

- **4th Place Award:**

“Solar Fuels: Importance of Material Compatibility in Their Production”, Irma Rocio Vazquez and Sakineh Chabi, University of New Mexico

- **5th Place Award:**

“Microcontroller-based Custom Test Module for Multifunctional Sensor for Radiation Environments”, Adeyemi Taylor, Shuza Binzaid and John Attia, Prairie View A&M University

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

The Campus Liaison Board of 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.

Award Criteria: 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 Criteria: Each ASEE Campus Representative should submit an annual form to his or her respective Section Campus Representative outlining ASEE activities on his or her campus. The form is found in the Campus

Representative Manual. The appropriate Section Campus Representative will select the recipient of the award 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 Campus Representative 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

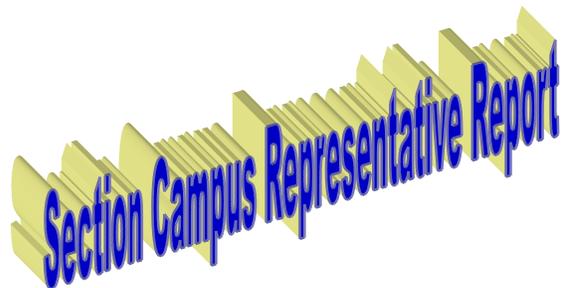
Purpose: To recognize a member who has demonstrated a long history of service to engineering education and/or the ASEE-GSW section.

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?

Campus Representatives serve as the liaison between ASEE Headquarters and faculty and students on campus. They play a vital role in recruiting new members, informing their colleagues about the ASEE meetings announcements, call for papers, and other ASEE activities. If you are a new CR or interested in becoming one, the ASEE Campus Representative Operating Manual provides useful information. This can be accessed through the following ASEE link: <http://www.asee.org/members/resources/campusRepOperatingManual.cfm>

Do you know if you are a Campus Rep?

To have a complete and accurate CR list on file for communication/information purposes, the following is requested:

- i) Check the following link to see if your college holds an ASEE institutional membership
<http://www.asee.org/members/organizations/oncampus/memberSchoolsBySection.cfm>
- ii) Check the following website to see if you or someone else from your institution is listed as a CR.
<http://www.asee.org/members/organizations/oncampus/campusRepsBySection.cfm#303>
- iii) If any corrections or updates are necessary, please contact your *own* Dean's Office and ask them to contact the ASEE-membership department at membership@asee.org, (202) 331-3521.

Campus Representative Activity Report:

As a Campus Representative you are asked to submit a report each year to provide a summary of ASEE activities at your campus. The completion of this report is very simple. Typically, an electronic Activity Report form is sent to Campus Reps in August or September. If you don't receive the form, you may download this form from the following site:

http://www.asee.org/activities/organizations/campus/documents/CR_ActivityRpt06-07.doc. Most common activities are already listed on the form. You just need to mark those activities already implemented or planned for the future on your campus. The form also includes a section on reporting the Dean's actions. Consulting with the Dean in completing the form might also be very useful in gaining his/her support in conducting ASEE activities at your campus. **The deadline for submission of report is the 31st of October each year.** One copy of the report should be sent to your Section Campus Representative and one copy to ASEE's Membership Department.

These reports are used to select the Outstanding Campus Representative for the Section. The reports from the winners of the Outstanding Campus Representatives from each section are given further consideration for the Outstanding Zone Campus Representative Award. The Outstanding Campus Representative Award is presented at the Annual Section meetings. The Outstanding Zone Campus Representative Award is presented at the Awards Banquet at the ASEE Annual Conference along with the Society's other national awards. Our GSW section winners have done well in the past winning the Outstanding Zone III Campus Representative Award. Dr. Troy F. Henson from The University of Texas-Tyler received both awards in 2005.

Spread the Word: This membership promotional program is designed to encourage Campus Reps to spread the word about ASEE membership on their campuses. "The Deans Program" is designed to assist CRs in recruiting new members. Through this program new members can receive two years of free membership. If the Dean provides funds to cover the first year's membership cost, ASEE will waive the

second year's membership fees. Each year during the Campus Representatives receptions at the ASEE Annual Conference awards are presented to the Campus Representatives that recruit the highest number of members and the highest percentage of members in their section.

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/>)

Future ASEE-GSW Section Meetings:
The Section meetings ideally alternate on a yearly basis between the East, Center and West of the Section geography.
The following institutions have volunteered to host future ASEE-GSW meetings:

2021 Baylor University, Waco, Texas
(contact: Kenneth Van Treuren - Center, Kenneth.Van.Treuren@baylor.edu)

2022 (East) OPEN



If your institution is interested in hosting a future meeting in 2022 or beyond, please contact Randall Manteufel at rmanteufel@utsa.edu. The meeting is usually held in mid-March to early April timeframe.



\$Financial Report \$

These are the balances of GSW accounts:

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

GSW-Operating Account: \$550.00 as of 10/1/18

Member News:

- Dr. Ken Van Treuren, the current GSW Program Chair, is serving as the ASEE Zone III Chair
- Dr. Tariq Khraishi, the current GSW Section Chair, is serving as the Chair-Elect for the ASEE Zone III

If you have news you would like to share in future newsletters, please contact the Newsletter Editor.