

# NEWSLETTER

## OF THE ASEE GULF-SOUTHWEST SECTION

September 2016



Welcome to a new installment of the ASEE Gulf-Southwest Section Newsletter, which is typically issued annually. The Section had a wonderful meeting in Ft. Worth, Texas (hosted by TCU). The meeting location close to the TCU campus and to downtown, including the famous Ft. Worth zoo, was an excellent one. The campus where the meeting was held and the food served during the meeting were outstanding. The topics covered were truly informing and educating. The meeting was well attended with lots of attendees in sessions. I salute the organizers for their efforts to put an excellent product for all attendees.

The 2017 meeting (see more info below) is gearing up to be another excellent edition for our GSW Section. This conference comes when there is a lot of pressure nationally on higher education and we, the educators, need to come together and discuss these important issues affecting our profession. Dallas here we come! ☺

*Tariq Khraishi*, Section Newsletter Editor



### The Chair's Corner

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The Gulf-Southwest section of the ASEE is one of the most populated and vibrant ASEE sections. The section covers the States of Louisiana, New Mexico, and Texas and has forty-five Institutions offering Engineering degrees. Nine of these of institutions of higher learning consistently appear in the list of the 100-best Universities. The section regularly holds an annual meeting in one of the cities of the Gulf-Southwest region that is invariably hosted by engineering faculty in one of these Institutions.

In 2016 the Annual Conference of the section occurred in Fort Worth. It was hosted by Texas Christian University (TCU) and the meeting events took place in the Tucker Technology Center, where the TCU Department of Engineering is located. The theme of the Conference was *Engineering Education in the 21<sup>st</sup> Century*. We have had

a total of 104 attendees for the meeting (a recent record!) who presented 64 papers. The papers on Engineering Education covered all aspects of a modern curriculum from laboratory experimentation and testing; to online courses; to proposed amendments on the ABET criteria. The attendees also had the opportunity to take a tour of several Engineering Department laboratories and hear from the professors in charge about laboratory objectives and the pedagogy they follow.

The flowers in the TCU Campus were in full bloom early in March and the attendees enjoyed a full display of colors and shapes on their way to the student union, where the Conference lunches were held. All the conference participants enjoyed the meals, discussions, networking and cheerfulness during the lunches at the student union and the banquet at a restaurant in the famous Stockyards District of Fort Worth.

Our annual conferences are vibrant, educational events where a great deal of information is exchanged. I hope to see you all in the 2017 Conference, which will be organized by UT-Dallas.

Stathis Michaelides, 2016 Conference Chair

## A *Word* from Program Chair



Upcoming section meeting:  
**The American Society for Engineering  
Education (ASEE)  
The 2017 ASEE-GSW Annual  
Conference**  
**Organized by the University of Texas at  
Dallas**

**March 12-14, 2017**

**Richardson, Texas**

## “Shaping the Future of Engineering”

The Eric Jonsson School of Engineering and Computer Science at the University of Texas at Dallas (UTD) is honored to host the 2017 ASEE Gulf Southwest Annual Regional Conference. The conference will be held March 12-14, 2017 on the UTD campus in Richardson, Texas. Engineering and technology educators, students, and industry professionals are invited to attend the conference. Further details can be found on the conference website at <http://ecs.utdallas.edu/aseegsw17>.

The organizing committee invites potential authors to submit an abstract of 300 words or less by November 1, 2016. Faculty contributions must focus on topics relevant to education in engineering and engineering technology fields. The conference will also provide a forum for undergraduate and graduate students to publish and present technical work related to research or design projects.

Abstract submission information, registration dates, and other deadlines can be found on the conference website. Authors whose abstracts are accepted will be notified by November 15. Faculty authors will have the option of submitting either a full paper or extended abstract to accompany their oral presentation at the conference. Students will be required to submit a full technical paper. Student submissions should primarily be the work of the student author(s) (faculty co-authors are acceptable) and must be presented by a student at the conference.



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**Find Us on the Internet!**

You can find us on-line at the following URL:  
<http://www.aseegsw.net/>

This link contains searchable proceedings from past Section meetings.



**2015-16 ASEE-GSW Awards**

@ the 2016 ASEE-GSW Section Annual Meeting

by Habib P. Mohamadian, Section Awards Committee Chair

- ***Outstanding Campus Representative Award (Certificate):***  
Dr. Walter Buchanan, Texas A&M University, College Station
- ***Outstanding Teaching Award (Certificate and \$500):***  
Not awarded
- ***Outstanding Young Faculty Award (Certificate and \$500):***  
Not awarded
- ***Outstanding Service Award (Certificate and \$500):***  
Not awarded
- ***Conference Person-Mile Award (Traveling Trophy):***  
Texas A&M University, College Station.
- ***Faculty Paper Awards***
  - **1<sup>st</sup> Place Award (Certificate and \$300):**  
“Proposed Changes to ABET Criteria 3 and 5”; Ronald E. Barr, University Texas at Austin
  - **2<sup>nd</sup> Place Award (Certificate and \$200):**  
“The Effects of Transitioning from a Face-to-Face Fundamentals of Engineering Review to a Virtual Environment”; Michael V. Gangone, Mohammad Biswas, University of Texas-Tyler

**3<sup>rd</sup> Place Award (Certificate and \$100):**

“Development of an undergraduate seminar course for engineering technology majors”; Heidar A. Malki and William Fitzgibbon, University of Houston

- ***Undergraduate Student Paper Awards***

- **1<sup>st</sup> Place Award (Certificate and \$300):**

“The Generation of Free Stream Turbulence Intensity and its Effects on Flow Separation occurring on a Highly Loaded, Low-Pressure Gas Turbine Blade at Low Reynolds Numbers”; Tyler Pharris, Olivia Hirst, Ken Van Treuren, Baylor University

- **2<sup>nd</sup> Place Award (Certificate and \$200):**

“Wireless Communications System for Low Earth Orbit: An Innovative Capstone Design Project”; Dakotah Karrer, Vince Rodriguez, David Smith, Trent Tate, Michael Willey, Texas A&M University

- **3<sup>rd</sup> Place Award (Certificate and \$100):**

“Flexible base course material stabilization using polymer-based stabilizing agents”; J. T. D. Davis and G. Saygili, University of Texas at Tyler

- ***Graduate Student Paper Awards***

- **1<sup>st</sup> Place Award (Certificate and \$300):**

“Noise Generation Using the Eppler 387, NACA 0012, NACA 4412 and NREL S823 Airfoils”; Andrew Hays, Ken Van Treuren, Baylor University

- **2<sup>nd</sup> Place Award (Certificate and \$200):**

“Effects of Chemical Treatments on the Properties of Individual Banana Pseudo-stem Fibers for use in LDPE composites”; Patrick Chester, William Jordan, Baylor University

- **3<sup>rd</sup> Place Award (Certificate and \$100):**

“Knowledge Based System and Optimization of Ashby’s Methodology in Materials Selection for Aircraft Cabin Metallic Structures”; Pashupati Adhikari Reza Mirshams, University of North Texas

## **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: All nominees for awards are expected to register and participate in the annual conference. The winner, if any, will be chosen from amongst those who attend.

### **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.

## Section Campus Representative Report

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](mailto: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](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/>)

**Future ASEE-GSW Section Meetings:**  
The following institutions have volunteered to host future ASEE-GSW meetings:  
2017 University of Texas at Dallas (contact; Robert Hart) - CENTRAL  
2018 University of Texas at Austin (contact: Ronald Barr) - CENTRAL  
2019 University of Texas at Tyler (contact: M. Sathyamoorthy - EAST  
2020 OPEN



**If your institution is interested in hosting a future meeting in 2020 or beyond, please contact Ron Barr at [rbarr@mail.utexas.edu](mailto:rbarr@mail.utexas.edu). The meeting is usually held in mid-March to early April timeframe.**



Let it be resolved that the Gulf-Southwest Section of the American Society for Engineering Education (ASEE) expresses its sincere appreciation to Texas Christian University for hosting our 2016 Annual Section Meeting here in historic Fort Worth, Texas, with the conference theme: "Engineering Education in the 21<sup>st</sup> Century." In particular, we express our sincere gratitude to the conference Program Chair Dr. Stathis Michaelides and all the members of the organizing committees: Professors Becky Bittle, Robert Bittle, Rene Cote, Sue Gong, Morgan Kiani, Tristen Tayag, Patrick Walter, Stephen Weis, and Walter Williamson. And of course, thank you for additional support from TCU staff, including Ms. Teresa Berry and Ms. Tammy Tayag.

Further, let it be recognized that over 65 technical paper presentations were presented during the conference, and that best paper

awards were presented in undergraduate student, graduate student, and faculty categories. In addition to technical sessions, several informal discussions were had on introductory engineering courses, engineering accreditation practices, and best classroom practices.

Let it be noted that the TCU campus served as a beautiful venue for our conference, with excellent ambiance, surroundings, service, and facilities. And of course, the Monday evening reception and dinner at “Los Vaqueros,” in the historic stockyards section of Forth Worth, provided a unique opportunity for conferees to unwind and explore the rich history of the Fort Worth cattle industry.

Thus, let it be recognized that all conferees, from near and far, enjoyed immensely the collegiality and friendships, the technically sound and intellectually inspiring paper presentations, and the unique “Fort Worth Texas” hospitality, with its many world-class attractions. 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 8, 2016

ASEE GSW Section Resolutions Committee

*Ronald E. Barr*

Dr. Ronald E. Barr, Committee Chair