

SOUTHEASTERN SECTION NEWSLETTER



2018 Section Conference Set for Daytona Beach, Florida

Embry-Riddle Aeronautical University (ERAU) is pleased to host the 2018 ASEE-SE Annual Section Meeting from March 4th to 6th, 2018 in beautiful Daytona Beach, FL. The conference theme is “Educating the engineer of the future”. We hope prior and first-time ASEE SE attendees will come to attractive, affordable, and accessible Daytona Beach in March, and we welcome everyone interested in educating future engineers to come to the Sunshine State and “The World’s Most Famous Beach” to discuss and exchange ideas on topics related to engineering education.

The conference site is the Shores Resort & Spa in Daytona Beach Shores, which is the only AAA Four-Diamond luxury hotel/conference center in Daytona

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Beach with premier accommodations and numerous meeting rooms. The distinctive oceanfront hotel location is also conveniently near to many popular attractions such as Beach Street shopping and historic district, Ponce de Leon Lighthouse, deep sea fishing, Daytona Beach International Speedway, PGA Golf Course, and an array of water sports including paddle boarding, surfing, kayaking, kite boarding and scuba diving. The Shores is less than a 90-minute drive to all Orlando area attractions and

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Embry-Riddle Aeronautical University (ERAU) at Daytona Beach



Shores Resort & Spa at Daytona Beach

2018 Section Conference Set for Daytona Beach, Florida

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theme parks as well as other world famous sites including Kennedy Space Center, Port Canaveral, and St. Augustine—America’s Oldest City.

Daytona Beach is a town with many personalities. From “The World’s Most Famous Beach” to “World Center of Racing”, hundreds of thousands of race enthusiasts come to the home of the National Association for Stock Car Auto Racing (NASCAR) for the Daytona 500, the Pepsi 400, and other races throughout the year. The weather in March is usually warm and sunny with highs in the 72–77 °F range and lows of 51–57 °F.

Our host ERAU was founded in 1926, just 23 years after the Wright Brothers’ historic flight. After 90 years, it has become the world’s largest, fully accredited university specializing in aviation and



The nearby Kennedy Space Center Visitor Complex

aerospace with more than 40 baccalaureate, master’s and Ph.D. degree programs in its colleges of Arts and Sciences, Aviation, Business, and Engineering. The main campus stands next to Daytona Beach International Airport, which not only facilitates training for students interested in becoming professional pilots but also enables research projects in airspace technologies, alternative fuels, and unmanned systems.



Message from Section President, Hodge Jenkins

Welcome to all ASEE Southeastern Section members and friends! The Southeastern Section has been fortunate to have the strong and capable leadership of John Brocato, Section President 2016–17. Let me express my thanks to John and all other section officers for their superb leadership and service over the past year and beyond.

Thanks also to the General Conference Chair, Barbara Bernal, who very effectively and capably lead the planning and implementation of the Zone 2 Conference in San Juan this past March, and to Technical Program Chair Dan Budny and ASEE Zone 2 Chair Gary Steffen, and the all Zone 2 Section Presidents for hosting an

outstanding 2017 ASEE Zone 2 Conference. Our Zone 2 Conference was truly a great success.

The Southeastern Section will continue to build the momentum of the 2017 Zone 2 Conference. Our 2018 section conference is scheduled for March 4–6, 2018 at the Shores Resort & Spa in Daytona Beach, Florida, hosted by Embry–Riddle Aeronautical University (ERAU). The importance of the theme, “Educating the Engineer of the Future,” can be observed by the engineering evolution of the space industry and continued growth of local industries near the conference venue. New challenges, technological discoveries, and changing workplaces await new engineers. Our students require the knowledge and skills to succeed both now and in an unclear future. I encourage all our ASEE Section members to attend, engage and continue their development in advancing engineering education at our 2018 conference.

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Message from Section President, Hodge Jenkins

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Authors interested in presenting at this conference should submit an abstract by September 8, 2017; please see the call for papers in this newsletter for additional details. I want to thank Lulu Sun for serving as our enthusiastic host-site coordinator, planning the conference exceptionally well. Additionally, I want to recognize Sally Pardue who is our technical program chair, a key position for the conference success.

Our annual section conference is an excellent and very cost-effective way to get involved in engineering education by publishing, presenting, moderating, networking with fellow educators, and serving as a section officer, all with the focus of improving your teaching and enhancing student learning. The section conference itself is much smaller than the national conference (150–200 or so attendees vs. 3500–4000), which many of us find enables an easier, more substantive, and more effective exchange of ideas. It's also significantly less expensive – the section early registration rate for the past few years has been \$350 or less (including all meals)! This is just half the

national registration rate of \$700.

The conference is also an excellent opportunity to become more involved in ASEE. The process of starting to take on leadership roles in the section is very easy. Begin by attending the annual section conference.

1. During the conference, we hold meetings during the Monday and Tuesday breakfasts at which Division officers are elected. Come to one or both breakfasts and volunteer for an office.
2. The Division officer election process begins by promoting the previous year's Vice Chair to the Chair position, and the Secretary to the Vice Chair position. A new Secretary is then elected, which could be you!

Please help continue sustaining and enhancing our ASEE–SE section, encourage new faculty to attend. Join us in March 2018 at ERAU in Daytona Beach, FL. Become an active member of the section, and consider becoming an officer within the organization. Hope to see you in March!

Highlights from the 2017 Zone 2 Conference in San Juan, PR

ASEE Zone 2 hosted a joint conference March 2–5, 2017 for the North Central Section, the Illinois Indiana Section and the Southeastern Section, which constitutes Zone 2, at the Caribe Hilton Resort in beautiful San Juan, Puerto Rico. The conference was well attended and a huge success with over 202 conference attendees, 156 papers and presentations, along with 61 student poster presentations given by 100 participating students. At last report, 80 institutions were represented at the conference.

Twelve Workshops were scheduled for Thursday. Thursday evening, a welcome reception was held at the Caribe Hilton Resort. Delicious, local cuisine specialties were served.

An outstanding Friday Special Session featured a panel discussion with Invited Speakers: Dr. Bevelee Watford, ASEE President Elect, Dr. Louis Martin–Vega, ASEE President, Dr. Joseph Rencis, ASEE Immediate Past



Special Zone 2 Conference session with Engineering Society Presidents on “Engineering Everywhere for Everyone”

President, Dr. J. P. Mohsen, ASEE Past President, Dr. Claudio da Rocha Brito, IEEE Computer Society President, and his wife, Dr. Melany M. Ciampi on the topic “Engineering Everywhere for Everyone.”

The Awards Banquet on Friday evening was also held at the Caribe Hilton. A summary of the section awards, including the student poster session awards is provided in the next section.

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Highlights from the 2017 Zone 2 Conference

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Saturday afternoon a Special Guided Tour of the Arecibo Observatory was arranged. Many attendees explored sites on their own, including Old San Juan, the historic forts, or El Yunque Rainforest tropical rain forest. Conference presentations extended through Sunday morning.

Many thanks to ASEE Zone 2 Chair, Gary Steffen, Barbara Bernal, Dan Budny and all his team for organizing and hosting an outstanding conference. Also, thanks to Richard Stansburry of Embry-Riddle Aeronautical University for smoothly running the Student Poster Competition. The Caribe Hilton Resort and San Juan were a wonderful venue to host the conference.



San Juan, PR: Site of 2017 ASEE Zone 2 Conference

*Current section officers,
Conference information,
and much more
can be found at
asee-se.org*

2017 Section Awards

At the 2017 Annual Section Meeting, as part of the Zone 2 Conference, a number of awards were given for excellence in engineering education. The list of recipients and the awards are:

Thomas C. Evans Engineering Instructional Paper Award: Mary Katherine Watson, The Citadel

Section Outstanding Teaching Award: Jason Howison, The Citadel

Section Outstanding Mid-Career Teaching Award: Monica Bubacz, The Citadel

Section Outstanding New Teacher Award: Kevin Skenes, The Citadel

Section New Faculty Research Award, First Place: Cong Trinh, University of Tennessee, Knoxville

Section New Faculty Research Award, Second Place: Jamie Coble, University of Tennessee, Knoxville

Outstanding Campus Representative Award: John Brocato, Mississippi State University

Tilsmans-Dion Section Service Award for Outstanding Service to the Section: Barbara Bernal,
Kennesaw State University

*ASEE-SE Conference information can be found at
asee-se.org*

Student Poster Competition Winners 2017 ASEE-SE Zone 2 Conference

1st Place – Individual Research Poster

Anika Coolbaugh, Sadhika Veeramachaneni, Dr. Melissa Morris, and Dr. Lizzie Y. Santiago, “Promoting Critical Thinking Skills in Non-Calculus Ready First Year Engineering Students,” West Virginia University

2nd Place – Individual Research Poster

Michelle Marrero-García, David Florián, Angelisse Ramos-Morales, and Oscar Marcelo Suárez, “The Portevin-Le Chatelier Phenomenon in Al-Mg Alloys Containing Nanoparticles,” University of Puerto Rico

3rd Place – Individual Research Poster

Jenipher D. Gonzalez-Aponte, Miguel A. Goenaga-Jimenez Ph.D., and Lisandro F. Cunci-Perez Ph. D., “Image Processing Based Bio-Sensing System for Cancer Cells Detection,” Sistema Universitario Ana G. Méndez

1st Place – First/Second-Year Design Team Poster

Ben Zook, Dylan Grove, James Paetkau, Collin Longenecker, Austin Engle, Ben Stuzman, and Esther Tian, “Sustainable Stationary Bicycle,” Eastern Mennonite University

2nd Place – First/Second-Year Design Team Poster

Brandon Roberts, Jonathan Burkeen, and Michael LePage, “Art Stamper,” University of Tennessee – Chattanooga

3rd Place – First/Second-Year Design Team Poster

Fabián Vélez – Vicente, Eduardo Hidalgo-Rijo, Jaimar Cruz-Cabrera, and Wilma Pabón-Ramírez, “SERVISER: A Car Maintenance and Repair Tracking Program,” Universidad del Turabo

1st Place – Third/Fourth-Year Design Team Poster

Kaitlyn Babiarz, Anna Barr, Jason Bensusur, Blake Dantio, Leilani King, Sabrina Rider, Alexis Stahl, and Nicholas Williams, “Design of Portable Filtration Device for Arsenic Removal for use in Developing Countries,” Gannon University

2nd Place – Third/Fourth-Year Design Team Poster

Alejandro Aponte Lugo and Francisco Matos Ortiz, “Photovoltaic Testing: Low-Cost Smart Solar Simulator,” University of Puerto Rico

3rd Place – Third/Fourth-Year Design Team Poster

Anna Barr and Sidney Smith, “Globally Utilized Tabletop Sterilizer,” Gannon University

Best Overall – Illinois-Indiana Section

Shubhankar Gandhi, Thomas James, and John Michael Van Treeck, “Starting a New Technology Business in the Drone Marketplace,” Rose-Hulman Institute of Technology

Best Overall – North Central Section

Anika Coolbaugh, Sadhika Veeramachaneni, Dr. Melissa Morris, and Dr. Lizzie Y. Santiago, “Promoting Critical Thinking Skills in Non-Calculus Ready First Year Engineering Students,” West Virginia University

Best Overall – Southeast Section

Michelle Marrero-García, David Florián, Angelisse Ramos-Morales, and Oscar Marcelo Suárez, “The Portevin-Le Chatelier Phenomenon in Al-Mg Alloys Containing Nanoparticles,” University of Puerto Rico

Future Section Conference Locations

2018 Embry-Riddle Aeronautical University, Daytona Beach, FL

2019 Auburn University, Auburn, AL

2020 The University of Memphis - Memphis, TN

2021 George Mason University - Fairfax, VA

2022 The Citadel - Charleston, SC

ASEE Southeastern Section Officers

The new officers for the 2017-2018 year are:

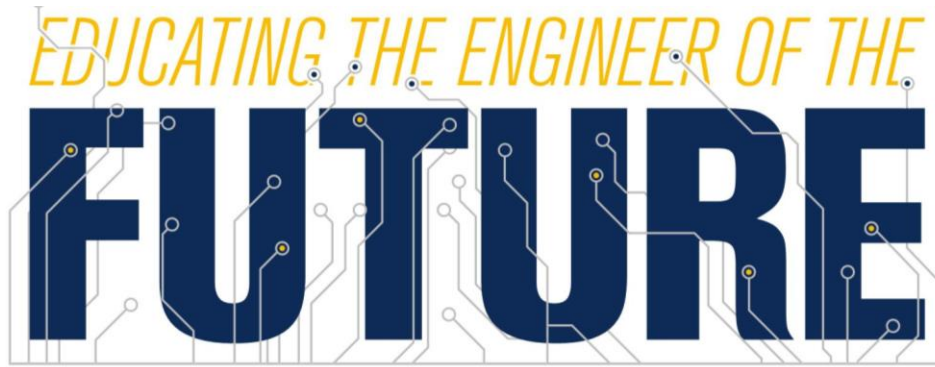
President	Hodge Jenkins	Mercer University	478-301-2831
President Elect	Sally Pardue	Tennessee Tech University	931-372-3792
Immediate Past President	John Brocato	Mississippi State University	662-325-1493
Secretary	Cecelia Wigal	UT Chattanooga	423-425-4015
Treasurer	Daniel Kohn	University of Memphis	901-347-0382
Paper Management & Website Coordinator	Tyson Hall	Southern Adventist University	423-236-2916
Newsletter Editor	Hodge Jenkins	Mercer University	478-301-2831
Campus Rep. Coordinator	Kenneth Ball	George Mason University	703-993-1500
Proceedings Editor	Barbara Bernal	Kennesaw State University	678-915-4283

Vice Presidents

Programs Unit	Priya Goeser	Armstrong State University	912-344-2874
Awards & Recognition Unit	Otsebele Nare	Hampton University	757-727-5818
Publications & Promotion Unit	Monika Bubacz	The Citadel	843-953-0530

Division Chairs

Administrative Division	Tyson Hall	Southern Adventist University	423-236-2916
Bioengineering Division	James Warnock	Mississippi State University	662-325-2270
Chemical Engineering Division	Jeffrey Rice	Auburn University	334-844-5833
Civil Engineering Division	Dimtra Michalaka	The Citadel	843-953-7676
Computer Engineering and Technology Division	Richard S Stansbury	Embry-Riddle Aeronautical University	386-226-7923
Electrical Engineering Division	Otsebele Nare	Hampton University	757-727-5818
Engineering Graphics Division	vacant		
Engineering Technology Div,	Daniel Kohn	University of Memphis	901-347-0382
Industrial Engineering Div.	Laura Moody	Mercer University	478-301-2349
Instructional Division	Tanya Kunberger	Florida Gulf Coast University	239-590-7644
K-12 Division	Dustin Spayde	Mississippi State University	662-325-6711
Mechanical Engineering Div.	Chris Wilson	Tennessee Tech University	931-372-3216
Professional Skills Division	Claire McCullough	UT Chattanooga	423-425-4352
Research Division	David Calamas	Georgia Southern University	912-478-5751
Software Engineering Div.	Donna Reese	Mississippi State University	662-325-2756



ASEE SOUTHEASTERN SECTION CONFERENCE

March 4-6, 2018

Embry-Riddle Aeronautical University | Daytona Beach, Florida



Smart phones and smart materials; reusable launch vehicles and more-electric aircraft; UAVs and self-driving cars; global networking and instantaneous communications: the engineered world of today is vastly different from that of just a generation ago.

How do we prepare students to work and thrive as engineers in an environment of rapid technological change with accompanying social impact? The **2018 Southeastern Section Conference** will focus on how we approach engineering education to facilitate success by the next generation of engineers.

CALL FOR PAPERS AND PRESENTATION ABSTRACTS

Authors are invited to submit full-length manuscripts for presentation at the conference and inclusion in its proceedings. Papers addressing the conference theme will have first priority and may include topics related to the following:

- | | |
|--|-------------------------------|
| Innovative Curricula or Courses | ABET Accreditation |
| First Year Engineering Programs | Internships and Co-ops |
| Cross-Discipline Practices | Recruitment and Retention |
| Online and Blended Approaches | Industry Partnerships |
| Ethics and Professional Practice | Engineering Common Cores |
| Effective Learning Technologies | Capstone Design |
| K-12 Outreach | Professional Development |
| Learning Communities | Discipline-Specific Practices |
| Evidence-Based Instructional Practices | Industry Practices and Tools |

Authors may also address other topics of interest to the engineering education community. Guidelines for manuscript preparation are available via the Author Instructions at se.asee.org at the Conference page.

Papers will be accepted based on peer review of manuscripts. Authors are expected to present at the conference. All accepted papers presented by a timely-registered author will be included in the conference proceedings. An author/co-author can be associated with as many papers/presentations as is appropriate, but a registrant can serve as the presenter of record on a maximum of three presentations. A limited number of abstracts may be accepted for presentation. These abstracts will be neither peer-reviewed nor included in the conference proceedings.

The conference will include a student program including poster presentations for lower- and upper-division design and for undergraduate research with details announced in fall 2017.

SCHEDULE FOR SUBMISSION OF PAPERS AND ABSTRACTS

- | | |
|----------------------------|---|
| Friday, September 8, 2017 | Abstracts submitted by authors for consideration |
| Friday, September 15, 2017 | Authors notified regarding acceptance |
| Friday, November 10, 2017 | Manuscripts due from authors for review |
| Friday, December 8, 2017 | Reviewed manuscripts returned to authors |
| Friday, January 5, 2018 | Final manuscripts and extended abstracts due from authors |
| Friday, January 19, 2018 | Deadline for presenters to register for conference |

Submit a 250-300 word abstract in doc, docx, or pdf file format by September 8, 2017.

Conference paper submission site will be announced at se.asee.org