

ASEE Southeastern Section Newsletter

September 2014

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Summer/Fall Edition

University of Florida to Host 2015 Conference

Plan to head south for the best weather of the year in Gainesville as the University of Florida hosts the 2015 ASEE-SE Annual Section Meeting April 12-14, 2015.

Bring your family as the campus and surrounding community has a lot of fun places to visit, and you could turn the trip into a vacation by extending your travel to visit the many tourist attractions in Orlando, Cape



Canaveral, and Tampa. The theme of the conference is “Preparing Engineers for the Grand Challenges of the Future”. Papers are encouraged that address

instructional methodologies, curricula issues, outcomes assessments, research and graduate programs, retention, ethics and professional practice, technology in the classroom, accreditation, capstone design experiences, distance education and virtual classrooms, case histories, K-12 engineering outreach, and, if your interests do not fit in one of those topics, any other topic related to engineering education. In addition, if you have a workshop you would like to present, please contact the hosts to arrange that.

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President Sulbaran’s Message

The ASEE Southeastern Section Conferences are very well attended, very affordable, and they provide outstanding benefits for all attendees (including faculty, students, and administrators). Some of these benefits include:

1. Professional Development: In addition to the multiple technical sessions, a variety of workshops are available to the attendees.
2. Peer-Review Publication: Papers are blind reviewed by a panel of critical reviewers and published in the conference proceedings.



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ASEE Vision Statement

“ASEE will serve as the premier multidisciplinary society for individuals and organizations committed to advancing excellence in all aspects of engineering and engineering technology education.”

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SE Section Web Address:

<http://www.asee-se.org>

ASEE SOUTHEASTERN SECTION CONFERENCE

APRIL 12-14, 2015

UNIVERSITY OF FLORIDA
GAINESVILLE, FLORIDA

PREPARING ENGINEERS FOR THE GRAND CHALLENGES OF THE FUTURE

Engineers educated now will be the catalyst of change and will propel society forward through new technologies for decades to come. Thus, it is the responsibility of engineering educators to prepare these engineers to meet the grand challenges facing them currently and in the future. Problems and opportunities will be mastered by those best prepared to learn new skills and adapt. Curricula, courses, and other learning experiences that provide the engineering skills and mindset necessary to meet these future challenges are the focus of this conference.

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
- First Year Engineering Programs
- Organizational Structures to Promote Interdisciplinary Engineering
- Engineering Common Cores
- Teaching/Learning Practices: Past, Present, and Future
- Distance Learning in Engineering
- Ethics and Professional Practice
- Technologies for Efficient Learning
- Engineering K-12 Outreach Programs
- Engineering Learning Communities
- ABET Accreditation Projects
- Engineering Recruitment and Retention
- Partnerships
- Capstone Design Courses or Projects
- Engineering Professional Development

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

Papers will be accepted based on a peer review of manuscripts. Authors are expected to present their papers at the conference to facilitate the transfer of knowledge through discussion and debate. All accepted papers presented by a timely-registered author will be included in the conference proceedings. A limited number of abstracts may be accepted for presentation. These abstracts will be published in the book of abstracts but will neither be peer-reviewed nor 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 poster session in which undergraduates discuss their experiences in engineering education (design projects, research, etc.) is anticipated. Information about this session will be available in the fall.

SCHEDULE FOR SUBMISSION OF PAPERS AND ABSTRACTS

Friday, October 3, 2014	Abstracts submitted by authors for consideration
Friday, October 10, 2014	Authors notified regarding acceptance
Tuesday, December 2, 2014	Manuscripts due from authors for review
Friday, January 9, 2015	Reviewed manuscripts returned to authors
Friday, January 30, 2015	Final manuscripts and extended abstracts due from authors
Friday, February 20, 2015	Deadline for presenters to register for conference

Submit a 250-300 word abstract in doc, docx, or pdf file format by October 3, 2014.
Conference Paper Submission Site will be announced at www.asee-se.org.

Contacts: Tanya Kunberger, Technical Program Chair, (239) 590-7644, tkunberg@fgcu.edu
John Abbitt, Conference Site Coordinator, (352) 392-7557, jda@ufl.edu

Highlights of 2014 Conference at Macon

The 2014 Southeastern Section Meeting was hosted by Mercer University in Macon, Georgia on March 30 - April 1. The conference theme was "Preparing Engineers for the Grand Challenges of the Future." The total registration for the conference was 198. This included 123 conference registrants from over 45 schools/organizations and 75 registrants for the student poster competition. More than 95 papers/presentations were on the program.

Opening day activities included seven workshops attended by 56 registrants. Workshops were designed to enhance instructional skills and improve student learning in a number of areas. The workshops included *Integrating Software Engineering Practice into the Engineering Curriculum* by Barbara Bernal; *Combining the Grand Challenges into the Freshman Introduction to Engineering Courses by adding Writing to the Curriculum* by Dan Budny; *Improvisational Design of Engineering Alternatives* by Peter Ludovice and Lew Lefton; *Laboratory Pedagogy for Embedded Computing Courses with Emphasis on Reinforcing General Engineering Concepts from Across Multiple Disciplines* by Harry C. Powell; *Microfluidic Fabrication for the Laboratory or Classroom* by Kevin Seale and Ron Reiserer; *Introduction to Arduino* by Richard Stansbury and Tim Wilson, and *Intermediate Arduino* by Richard Stansbury and Tim Wilson.



Dr. Craig McMahan delivers keynote address

In the afternoon, buses were available to take conferees from Mercer University's Science and Engineering Building to the Museum of Aviation located in Warner Robins, Georgia. The museum has a large collection of aircraft and affords visitors with a rich history of aviation. Heavy hors d'oeuvres and live music helped make it a delightful evening.

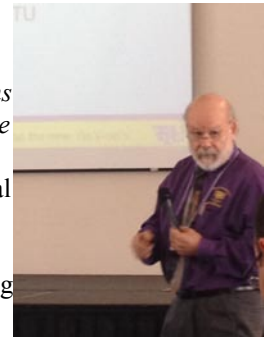
The conference keynote address was delivered by Mercer University's Dr. Craig McMahan, who serves as the University Minister and Dean of the Chapel. Dr. McMahan highlighted examples of his "Mercer On Mission" program that provides students with service-learning challenges in developing countries.



Dr. Norman Fortenberry, Executive Director of ASEE

Dr. Norman Fortenberry, Executive Director of ASEE, delivered the Luncheon Address on Monday. His topic, in keeping with the theme of the conference, was "*Preparing Students to Meet the Grand Challenges of the 21st Century.*"

Also presented at the Monday luncheon was the Thomas C. Evans Instructional Paper Award for the most outstanding paper pertaining to engineering education. Pedro Arce of Tennessee Tech University presented the paper, which was entitled "*The Da Vinci Foundry: A Powerful Learning and Thinking Systems to Develop the 21st Century Renaissance Engineer.*" Co-authors on the Evans Award paper were J. Biernacki, J. Pascal and J. R. Sanders of Tennessee Tech.



Thomas C. Evans Instructional Paper Award Recipient Pedro Arce

The Awards Banquet on Monday evening was held at the Brickyard Golf Club in Macon. Live music was provided for the occasion.

Upcoming Conference Locations

2015	University of Florida	Gainesville, FL
2016	University of Alabama	Tuscaloosa, AL

Student Poster Competition Winners

2014 ASEE-SE Conference

First and Second Year Engineering and/or Engineering Technology Design Teams

First place – James McNichols, Spencer Penley (“Development of a Low-cost High Altitude Research Platform”) - Mercer University, Phillip McCreanor, Advisor.

Second Place – Jordan Leaman, Alec Thibodeaux, Ryan Swartzentruber, Cameron Parks, David Sprunger, Jonathan Nisly (“Solar Powered Greenhouse”) - Eastern Mennonite University, Esther Tian, Advisor.

Third Place – Daniel Petrella, Blake Rymer, William Quigley (“Graphical Communications”) - Embry-Riddle Aeronautical University, Lulu Sun, Advisor.

Junior/Senior Engineering and/or Engineering Technology Design Teams

First place – David Vutetakis, Eric Schaus, Andrew Bills, Gustavo Cruz, Thomas Galloway, Mitchell Cloud, Derrick Rink, Timothy Clingenpeel, Michael Keese, Zachary Upshaw (“NASA Robotic Mining Competition”) - University of North Carolina at Charlotte, Aidan F. Browne, Advisor.

Second Place – Trung Thanh Le, Benjamin McDeed (“Biomechanical Evaluation of Non-locking Bone Plate Fixation with Hybrid Screw Constructs in Humerus Mid-Shaft Fractures: A Study on Cadaveric Bone”) - Mercer University, Ha Van Vo, Advisor.

Third Place – Caroline Cooper, Matheus Ramin (“Treatment of Gray Water with Sand Filters”) - Mercer University, Phillip McCreanor, Advisor.

Undergraduate Research Individual

First place – Jana Thompson (“ERAU Baja SAE Steering and Suspension Systems”) - Embry-Riddle Aeronautical University, Lisa Davids, Advisor.

Second place – Anthony W. Taylor (“21st Century Newton Cart”) - Tennessee Technological University, Sally J. Pardue, Advisor.

Third Place – Bich Nguyen (“The Biomechanical Effect of Different Screw Angle Configurations with Locking Compression Plates on Stability of Femoral Shaft Fracture Fixation”) - Mercer University, Ha Van Vo, Advisor.

Best Overall Student Poster

Jana Thompson, Embry-Riddle Aeronautical University.

President’s Message

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3. Awards: Several awards opportunities, from early career to seasoned faculty, are available.
4. Student Activities: Students have the opportunity to interact with students across the Section and benchmark their education against students from other universities
5. Fellowship / Network: Friendly, knowledgeable attendees create an enjoyable environment to share ideas and experiences that you can implement in your classes and research activities.
6. Service / Leadership: The section provides an assortment of position opportunities with varying levels of responsibilities and time commitments.

The 2015 ASEE Southeastern Section Conference will be hosted by the University of Florida in Gainesville, Florida on April 12-14 with excellent venues and extraordinary social activities. I am sure the attendees will have both a productive and enjoyable time.

The ASEE Southeastern Section Conferences have been successful for many years due to significant commitment of the authors, reviewers, officers, chairs and deans. I would like to give special thanks to the 2015 Technical Program Chair Tanya Kunberger, Conference Site Coordinator John Abbitt, and Paper Management Website Coordinator Tyson Hall. I also want to recognize the endless hours marked by great fellowship put into the section by Past President Priscilla Hill, President-Elect Paul Palazolo, Secretary/Treasurer Daniel Kohn, Newsletter Editor Ken Brannan, Campus Rep Coordinator John Brocato, and Proceedings Editor Barbara Bernal.

I have been participating in the ASEE Southeastern Section since 2001, and it has helped me tremendously in my professional career. Additionally, over the years, I have developed wonderful friendships with many of the attendees. For all these reasons, I want to encourage you to participate in the 2015 ASEE Southeastern Section Conference!

Section Awards for Excellence

At the 2014 Annual Meeting in Macon, a number of awards were given for excellence in engineering education. The list of recipients and the awards are:

Section Outstanding Teaching Award	David Dampier	Mississippi State University
Section Outstanding New Teacher Award	Matthew Cooper	North Carolina State University
Section Outstanding Mid-Career Teaching Award	Priya Goeser	Armstrong Atlantic State University
Section New Faculty Research Award:First Place	Treavor Boyer	University of Florida
Section New Faculty Research Award:Second Place	Islam El-adaway	Mississippi State University
Outstanding Campus Representative Award	John Brocato	Mississippi State University

Thomas Evans Instructional Paper Award: Pedro Arce, J. Biernacki, J. Pascal and J. R. Sanders of Tennessee Technological University for their paper “*The Da Vinci Foundry: A Powerful Learning and Thinking Systems to Develop the 21st Century Renaissance Engineer.*”

Outstanding Paper Award for 2014 ASEE-SE Conference: Kacie C. D’Alessandro (Washington and Lee University), Matthew K. Swenty (Virginia Military Institute), and William N. Collins (Virginia Tech) for their paper “*Integrating History into Engineering Curriculum.*”

ASEE-SE Selects New Officers

The new officers for the 2014-2015 year are:

President	Tulio Sulbaran	University of Southern Mississippi	601-266-6419
President Elect	Paul Palazolo	University of Memphis	901-678-3275
Secretary-Treasurer	Daniel Kohn	University of Memphis	901-347-0382
Immediate Past President	Priscilla Hill	Mississippi State University	662-325-8249
Vice Presidents			
Programs Unit	Jerry Newman	University of Memphis	901-318-5614
Awards and Recognition Unit	Paul Palazolo	University of Memphis	901-678-3275
Publications and Promotion Unit	Donna Reese	Mississippi State University	662-325-2756
Division Chairs			
Administrative Division	Tim Wilson	Embry-Riddle Aeronautical University	386-226-6994
Bioengineering Division	Sinjaee Hyun	Mercer University	478-301-2214
Chemical Engineering Division	J. R. Sanders	Tennessee Tech University	931-372-3494
Civil Engineering Division	Chuck Newhouse	Virginia Military Institute	540-464-7364
Computer Engineering and Technology Division	Omar Elkeelany	Tennessee Tech University	931-372-3677
Electrical Engineering Division	Claire McCullough	University of Tennessee at Chattanooga	423-425-4352
Engineering Graphics Division	Michael Woo	The Citadel	843-953-7679
Engineering Technology Division	Aidan Browne	UNC Charlotte	704-687-5033
Industrial Engineering Division	Laura Moody	Mercer University	478-301-2349
Instructional Division	Paul Palazolo	University of Memphis	901-678-3275
K-12 Division	Sally Pardue	Tennessee Tech University	931-372-3792
Mechanical Engineering Division	Hodge Jenkins	Mercer University	478-301-2831
Professional Skills Division	Otsebele Nare	Hampton University	757-727-5818
Research Division	Richard Stansbury	Embry-Riddle Aeronautical University	386-226-7923
Software Engineering Division	Sarah Lee	Mississippi State University	662-325-2756
Campus Representative Coordinator	John Brocato	Mississippi State University	662-325-1493
Proceedings Editor	Barbara Bernal	Southern Polytechnic State University	678-915-4283
Newsletter Editor	Ken Brannan	The Citadel	843-953-7685

A complete listing of the section officers may be found on the ASEE-SE web site at <http://www.asee-se.org>

Campus Rep Corner

I want to begin my first Campus-Reps column by saying an enormous THANK YOU to all of my fellow Campus Reps. As someone who's now served as a Campus Rep for 10 years, I know all too well how much you do to help advance ASEE and the cause of excellent engineering education. You truly are the conduit between ASEE National, ASEE Section, and your institution. We obviously need administrative support within our home institution to be effective representatives, but without willing and hard-working individuals like yourselves, such support would mean very little. So, again, thank you!

Your service, though, is also why I want to encourage you to take steps that will bring you the recognition you deserve. The main step in this process is the Campus Rep Report, located at http://www.asee.org/public/campus_reps/reports (accessible via your ASEE login and password). This report is easy to complete and submit; it records and reports your Campus-Rep-related activity throughout the past year; and it puts you in contention for the Southeastern Section's Outstanding Campus Rep Award, which comes with a plaque presented at the section conference and a cash award. Moreover, winning the section award also puts you in contention for the Outstanding Zone II Campus Rep Award; while this accolade carries no cash award, it's presented at the national conference's awards ceremony and is thus a higher-profile honor. The last two Zone II awards, in fact, both came from the Southeastern Section (Christopher Rowe of Vanderbilt University, John Brocato of Mississippi State University). So the Southeastern Section is a veritable hotbed of talented Campus Reps!

Here's the problem, though: you have to submit your activity report to be considered for these awards. And this past year, out of the many, many Campus Reps in the Southeastern Section, only four people submitted their activity reports. I'm absolutely positive there are far more Campus Reps doing excellent work out there than that, so, please, get those reports submitted! The deadline for submitting the academic year 2013-2014 activity report is October 1, 2014. As I mention above, the submission process is entirely electronic (http://www.asee.org/public/campus_reps/reports) and takes just a few minutes to complete, so it couldn't be much easier.

Remember too that the ASEE website now provides a variety of helpful resources specifically to help Campus Reps do their job; most of these are available via the Campus Reps Toolbox at <http://www.asee.org/member-resources/groups/campus-representatives/campus-rep-toolbox>.

Once again, thank you very much for all you do as a Campus Representative. If I can help you in any way, just let me know.

John Brocato
ASEE-SE Campus Representatives Coordinator
brocato@enr.msstate.edu

New Name for Service Award

One of the awards given by the Southeastern Section at its annual conference held in the spring recognizes outstanding service rendered to the Section. When the initial service award was given in 2002, it was called the Tony Tilmans Section Service Award in recognition of contributions to the Section by Anthony (Tony) L. Tilmans of Southern Polytechnic and State University, who died in 2000. In its meeting last March, The Executive Board renamed the award the Tilmans-Dion Service Award to honor another of its members – Thomas R. Dion. Dion, who recently retired from The Citadel, served the Section in a number of capacities, including President of the Section (2000-2001), Section Campus Representative Coordinator (2002-2012), his work on the Section Officers Manual and the Constitution, and other positions in the Section. Dion was a recipient of the Tony Tilmans Service Award in 2005.

University of Florida to Host 2015 Conference

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The conference will be held at the Hilton University of Florida Conference Center. The Hilton is adjacent to the UF campus, and has plenty of room to accommodate all attendees. All the meetings and meals will be hosted by the Hilton. A reception is planned Sunday night in the pool area of the hotel with lots of good refreshments and entertainment, and the bar will be open after that for talking with old friends and meeting new colleagues.

Across the street from the hotel within easy walking distance is the Harn Museum of Art which features paintings by Monet, the Butterfly Rainforest, and the Florida Museum of Natural



University of Florida Campus Scene

History. Kanapaha Botanical Gardens is a five-minute drive from the hotel. The Marjorie Kinnan Rawlings historic state park, a national historic landmark, is a pleasant 30-minute drive through the Florida country side, and the Gulf of Mexico and the Suwanee River are both about 45 minutes away.

The University of Florida is the state's oldest and most compre-

hensive university. In 1853, the state-funded East Florida Seminary took over the Kingsbury Academy in Ocala. The seminary moved to Gainesville in the 1860s and later was consolidated



Marston Science Library

with the state's land-grant Florida Agricultural College, then in Lake City. In 1905, by legislative action, the college became a university and was moved to Gainesville. Classes first met with 102 students on the present site on Sept. 26, 1906. UF officially opened its doors to women in 1947. UF now has an enrollment of nearly 50,000 students, and is home to sixteen colleges and more than 150 research centers and institutes. The College of Engineering offers fifteen degree programs, has 6015 undergraduate students, and 2613 graduate students.

The spring is a great time of year in Gainesville, and the conference is a great way to see old friends and learn what others are doing at their institutions. Bring a new colleague and introduce them to the benefits of the conference. Hope to see you all soon!



Weil Hall