



Southeastern Section Newsletter

August 2011

Editor: Ken Brannan, The Citadel 843-953-5083 ken.brannan@citadel.edu

Summer Edition

Mississippi State University to Host 2012 Conference

Starkville, Mississippi and its surrounding Golden Triangle region provide the perfect setting for the 2012 Annual Meeting of the American Society for Engineering



Education, hosted by the Bagley College of Engineering at Mississippi State University. The conference will be held April 1-3, 2012 on the Mississippi State campus.

Conference papers will focus on all manner of pedagogy and engineering education. Special areas of emphasis will include papers related to the confer-

ence theme, "The Global Reach of Engineering," as well as topics that go beyond the traditional technical skill sets: educating for nontraditional engineering careers;

recruiting and educating veterans in engineering; capstone and multi-disciplinary design; engineering communication issues and innovations; and so on. As past attendees can attest, participation in the Southeast Section Regional Conference provides the ideal opportunity to share successes and setbacks with colleagues, gain new insights into pedagogical techniques, and discuss new and emerging

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President Jenkins' Message

Over the years, the Southeastern Section has had a succession of excellent conferences—I especially like the ones that are held on the campus of the host institution. Thanks to Dennis Fallon and all those at The Citadel—the faculty, staff, and cadets—who assisted him in staging an incredible 2011 conference. What an impressive group!



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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 Annual Conference

April 1-3, 2012

James Worth Bagley College of Engineering
Mississippi State University

The Global Reach of Engineering

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 have first priority and may include topics such as:

- What Is “Global Engineering”?
- Learning Styles Around the World
- Service Learning on a Global Scale
- Effect of Trans-cultural Issues on Engineering Education
- Study Abroad Experiences
- Going Global While Staying Home
- Educating Engineers for Nontraditional Engineering Careers
- Recruiting and Educating Veterans in Engineering
- Integration of Design throughout the Curriculum
- Capstone and Multi-disciplinary Design
- ABET Accreditation Projects
- K-12 Initiatives
- Engineering Communication Issues and Innovations
- Learning Communities
- Distance Education
- Diversity Recruitment and Retention
- Outcomes Assessment Programs
- Preparation for Engineering Practice
- Engagement and Retention Efforts
- Professional Development
- Fostering Undergraduate Research
- Freshman Engineering Programs
- Two-year / Four-year Partnerships
- Industrial Partnerships
- Virtual Classrooms and Laboratories
- Lifelong Learning

Authors may address other topics of interest to the engineering education community as well. Guidelines for preparing the manuscripts are available at <http://www.asee-se.org/Conference/Author%20Instr%20-%20general.htm>.

This is a peer reviewed conference. Papers will be accepted on the basis of peer review of the complete manuscript. All accepted papers will be included in the conference proceedings. Authors of accepted papers are expected to present their papers at the conference to facilitate the transfer of knowledge through discussion and debate.

In addition to full manuscripts, 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 reviewed proceedings.

We also anticipate a poster session in which students will discuss their experiences in engineering education (design projects, research, etc.). Information about this session will be available in the fall.

Schedule for Submission of Papers and Abstracts

October 7, 2011 – Abstracts submitted for consideration
October 14, 2011 – Authors notified regarding acceptance
December 2, 2011 – Manuscripts due from authors for review
January 6, 2012 – Reviewed manuscripts returned to authors
February 3, 2012 – Final manuscript and extended abstract due from authors
March 2, 2012 - Deadline for presentation author to register for conference

Submit a 250–300 word abstract in doc, docx, or pdf file format by October 7, 2011 to <http://asee.spsu.edu/asee/index.html>.

Contacts: Tyson Hall, Technical Program Chair, tyson@southern.edu
John Brocato, Conference Site Chair, brocato@bagley.msstate.edu

Highlights of 2011 Conference at Charleston

The 2011 Southeastern Section Meeting was hosted by The Citadel in Charleston, South Carolina on April 10-12. It is estimated that over 150 people participated in one or more conference events, including authors, students, family members, and guests. There were approximately 77 technical papers and 22 student posters on the conference program, which had as its theme, "Creating the Academic Culture to Educate Engineering Leaders." Approximately 100 registered for the technical program and some 34 students took part in the student poster competition.

On Sunday, three workshops were available for those attending the conference. *High Performance Learning Environments (Hi-PeLE)* was presented by Pedro E. Arce and Jennifer A. Pascal of Tennessee Tech University. Another workshop, *Introduction to BioMEMS on a Shoestring*, was conducted by Kevin Seale from Vanderbilt University. The third workshop was *Robert E. Noyce Program*, presented by Sheryl Sorby of Michigan Tech University.



BioMEMS Workshop

Sunday evening, The Citadel School of Engineering hosted a 2-1/2 hour dinner cruise. The weather cooperated, and everyone enjoyed the relaxing tour of Charleston Harbor.

Monday's Keynote Address was delivered by J. P. Mohsen, Immediate Past President of ASEE and Chair of the Civil and Environmental Engineering Department at the University

of Louisville. Dr. Mohsen's address focused on the conference theme of "Creating the Academic Culture."

The Thomas C. Evans Instructional Paper Award for the most outstanding paper pertaining to engineering education was delivered by Melissa Dagley-Falls of the University of Central Florida during the Monday luncheon. The title of her paper was "*Influencing Sense of Community in a STEM Living-Learning Community*," coauthored with Michael Georgiopoulos and Cynthia Young.

The Citadel Color Guard and Rifle Legion Drill Team were on hand for the opening ceremonies of the Awards Banquet. Entertainment following the presentation of awards was provided by the Citadel Chorale.



Opening Ceremonies at Awards Banquet



Awards Banquet Entertainment

From the 2011 Conference Scrapbook



Student Poster Competition Winners

2011 ASEE-SE Conference

First and Second Year Engineering and/or Engineering Technology Design

First place – Ryley Jones, Kaitlyn Haynes, and Matthew Carroll (“Design of an Environmentally Responsible Off-Road Bicycle using SolidWorks”) - Armstrong Atlantic State University

Second Place – Katie Mason (“Testing of K’Nex Motors used in a Freshman Engineering Design Competition”) - Mercer University

Third Place – Alfred Kamczyc and Patrick Lune (“Biochemical Properties of Laundry Detergent”) - Mercer University

Junior/Senior Engineering and/or Engineering Technology Design Teams

First place – Arneshia Fair, Timothy Poole, and Cassie Smith (“Design and Analysis of Biosand Filtration with Added Copper as a Disinfectant”) - Mercer University

Second Place – Russell Snyder, Brandon Breuil, and Benjamin O’Brian (“Airport Threat Mitigation System”) - Embry-Riddle Aeronautical University

Third Place – Michael Bernico, Matthew Luby, Matthew Rentz, and Nathan Sinclair (“Robots Taking Risks”) - The Citadel

Undergraduate Research Individual

First place – Kevin Eck (“Novel Drive System for Spherical Robots”) - Mercer University

Second place – Daniel Oldham (“Use of Recycled Roofing Shingles in Hot Mix Asphalt Pavements”) - North Carolina Agricultural and Technical University

Third Place – Julie Shell (“Imaging of Polymer Microcapsule Morphology in Pesticide Product”) - Tennessee Tech University

Third Place – Kristen Wyckoff (“The Impact of Metallic Biocide and User Compliance on the Effectiveness of Biological Sand Filtration”) - Mercer University

Honorable Mention – Alan Westbay (“Bench-scale Demonstration of Flywheel Energy Storage and Release via a Continuously Variable Transmission”) - Mercer University

Honorable Mention – Jessica Pippard (“Effect of Liquid Conductivity on Time Domain Reflectometry based Water Level Measurement in Porous Media”) - Mercer University

MSU to Host 2012 Conference

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trends in engineering education.

The host institution, Mississippi State University (MSU), was founded in February 1878. Currently the grounds of the University comprise about 4,200 acres, including the farms, pastures, and woodlands of the Mississippi Agricultural and Forestry Experiment Station (MAFES).

Composed of eight academic departments, the Bagley College of Engineering is MSU’s third-largest college. It currently ranks 34th among all engineering colleges nationally in research and development expenditures according to the National Science Foundation. The Bagley College is home to several nationally recognized research centers, including the Center for Advanced Vehicular Systems (CAVS), High Voltage Lab, and the Raspet Flight Research Lab, which will be the site of the 2012 conference’s Sunday-night event.

MSU is part of a cohesive town-north-central part of the state. The mented by a variety of intellectual, including the Starkville Community exhibits, and professional musical, sponsored by the university; and the way and Noxubee National Wildlife spending time on the historic Drill around Old Main Plaza, or cooling off the MSU Cheese Store.



university community located in the small-town atmosphere is complementary, and recreational opportunities Theater; a variety of lectures, art dramatic and artistic performances nearby Tennessee-Tombigbee Water-Refuge. On-campus visitors can enjoy Field at the heart of campus, strolling with some campus-made ice cream at



Richard Mines receives Tony Tilmans Award

Section Awards for Excellence



Melissa Dagley-Falls receives Evans Instructional Paper Award

At the 2011 Annual Meeting in Charleston, a number of awards were given for excellence in engineering education. The list of recipients and the awards are:

| | | |
|---|-----------------------|---------------------------------|
| Section Outstanding Teaching Award | David Silverstein | University of Kentucky |
| Section Outstanding New Teacher Award | Joseph DeCarolis | North Carolina State University |
| Section Outstanding Mid-Career Teaching Award | Oge Marques | Florida Atlantic University |
| Section New Faculty Research Award | Qiong Zhang | University of South Florida |
| Outstanding Campus Representative Award | J. P. Mohsen | University of Louisville |
| Tony Tilmans Service Award | Richard O. Mines, Jr. | Mercer University |
| Thomas Evans Instructional Paper Award: Melissa Dagley-Falls, Michael Georgiopoulos, and Cynthia Young of the University of Central Florida for their paper " <i>Influencing Sense of Community in a STEM Living-Learning Community</i> ." | | |
| Outstanding Paper Award for 2011 ASEE-SE Conference: Elizabeth Hyde, Laura Lackey, Richard O. Mines, Loren Sumner, and Kristen Wyckoff; Mercer University; for their paper " <i>Providing Sub-Saharan Africans with Potable Water through Service Learning</i> ." | | |

ASEE-SE Selects New Officers

The new officers for the 2011-2012 year are:

| | | | |
|--|----------------------|--|--------------|
| President | Brent Jenkins | Southern Polytechnic State University | 678-915-7433 |
| President Elect | Tyson Hall | Southern Adventist University | 423-236-2916 |
| Secretary-Treasurer | Tulio Sulbaran | University of Southern Mississippi | 601-266-6419 |
| Immediate Past President | Claire McCullough | University of Tennessee at Chattanooga | 423-425-4352 |
| Vice Presidents | | | |
| Programs Unit | Scott Schultz | Mercer University | 478-301-2840 |
| Awards and Recognition Unit | Cecilia Wigal | University of Tennessee at Chattanooga | 423-425-4015 |
| Publications and Promotion Unit | Sally Pardue | Tennessee Tech University | 931-372-3792 |
| Division Chairs | | | |
| Administrative Division | Pedro E. Arce | Tennessee Tech University | 931-372-3189 |
| Bioengineering Division | Jorge Bohorquez | The University of Miami | 305-284-1639 |
| Chemical Engineering Division | Sirena Hargrove-Leak | Elon University | 336-278-6224 |
| Civil Engineering Division | Paul Palazolo | University of Memphis | 901-678-3275 |
| Computer Engineering and Technology Division | Claire McCullough | University of Tennessee at Chattanooga | 423-425-4352 |
| Electrical Engineering Division | Tim Wilson | Embry-Riddle Aeronautical University | 386-226-6994 |
| Engineering Graphics Division | Petros Katsioloudis | Old Dominion University | 757-683-4305 |
| Engineering Technology Division | Jerry Newman | University of Memphis | 901-678-3303 |
| Industrial Engineering Division | George Ford | Western Carolina | 828-227-2519 |
| Instructional Division | Michael Woo | The Citadel | 843-953-7679 |
| K-12 Division | Daniel Kohn | University of Memphis | 901-347-0382 |
| Mechanical Engineering Division | John Abbitt | University of Florida | 352-215-8905 |
| Professional Skills Division | Cindy K Waters | North Carolina A&T State University | 336-334-7620 |
| Research Division | David Domermuth | Appalachian State University | 828-262-6359 |
| Software Engineering Division | Donna Reese | Mississippi State University | 662-325-2270 |
| Campus Representative Coordinator | Thomas Dion | The Citadel | 843-953-7676 |
| 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>

President's Message

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Many people contribute their time and talents each year to making our Section a great place to be. Thanks to each of you who served as authors, reviewers, and division chairs. Thanks especially to Barbara Bernal—Proceedings Editor, Tyson Hall—V.P. of Awards and Recognition, Claire McCullough—President, Scott Schultz—Technical Program Chair, and Tulio Sulbaran—Secretary/Treasurer.

The April 2012 conference at Mississippi State is in very good hands: John Brocato is the Host Site Coordinator and Tyson Hall is the Technical Program Chair. The faculty at State is excited to be serving as our hosts, and we have a great slate of officers in place to coordinate the reviews and prepare for the sessions. Thanks in advance to each of you who will be assisting John and Tyson to make the upcoming conference a memorable and productive experience for all.

If you are not currently active in the Section, please give serious thought to attending (and perhaps presenting a paper in) the 2012 conference:

- Our conferences provide excellent forums in which to make and attend presentations about teaching-related activities and findings. Presentations are typically organized into 4-5 concurrent sessions, an approach that provides session choices without excessive overlap. All papers are peer reviewed; accepted papers are archived on both the conference CD and the ASEE website.

- Our conferences frequently offer constructive comments and discussion during the Q&A portion of the technical sessions; networking opportunities are available during meals and breaks.
- Our conferences are cost-effective—the cost of meals is included in the registration fee, which typically runs in the low \$200's.
- Our conferences include numerous opportunities to serve as a reviewer and/or an officer.
- Our conferences offer several workshops on the preceding Sunday afternoon.
- Our conferences offer a student poster competition in which students or student teams share their projects or present their research.

The ASEE Southeastern Section Conference is a very cost-effective way to share ideas and learn what others are doing. Please join us!

Campus Rep Corner

As another academic year comes to a close, it is time for me to extend my gratitude and appreciation to all Campus Representatives for your service and willingness to help advance ASEE. You serve in a unique position, appointed by your Dean, that is key in maintaining the lines of communication between National, the Section, and your institution.

As you know, ASEE National instituted a few years ago an electronic filing format for Institutional Campus Representative Annual Reports. These end of year reports are the primary means by which the Section and National have feed-back for assessment and improvement. This year the response was dramatic, as we received a record number of reports from you. I would like to thank each of you who took the time to prepare and submit your information on your institutional activities. Hopefully we will be able to have even more reports to work with.

Besides assessment and improvement, these Annual Reports are used to select the Southeastern Section's most outstanding Campus Representative for the year. This year's recipient was Dr. J.P. Mohsen from the University of Louisville. Amazingly, he not only carried out the usual duties required of a Campus Representative, he also served as Site Coordinator for the National ASEE meeting, as well as National President. It gave me a great deal of pleasure to present this award to JP at our recent Section Meeting in Charleston, SC. In closing, please join me in congratulating JP for extra ordinary service

Thomas R. Dion
ASEE SE Campus Reps Coordinator