



American Society for Engineering Education

Southeastern Section Newsletter

Spring 2003 Edition

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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://cee.citadel.edu/asee-se/>

Auburn University to Host 2004 Conference

Auburn University's Samuel Ginn College of Engineering will host the 2004 annual meeting of the American Society for Engineering Education (ASEE) – Southeastern section – on April 4-6, 2004, at the Auburn University Hotel and Dixon Conference Center.



ter, which boasts state-of-the-art facilities.

Auburn University, located in Auburn, Ala., is the largest university in the state, with an enrollment of approximately 22,000. Students hail from all 50

states and nearly 100 foreign countries. The Samuel Ginn College of Engineering is Alabama's largest engineering program and is ranked 35th nationally among the nation's public universities.

According to the latest survey by Black Issues in Higher Education, the college is ranked 13th nationally among colleges and universities in graduating African-Americans with bachelor's degrees in engineering. It ranks 17th in the number of women graduates. The college offers a

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President Fallon's Message

Fellow Engineering Educators:

The task of being an engineering educator is becoming more complex yearly. Over twenty years ago when I first started in this business, it was *relatively* simple compared to the present. I had to prepare class lectures, keep up with my technical competence usually by performing and publishing research, and serve on departmental as well as college

committees.

Things have dramatically changed especially over the past decade. We still have all the above as part of our responsibilities; but, in addition, an engineering educator is also concerned with pedagogical issues such as the



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Educating Engineers for the Information Age ASEE SE Section Annual Conference

April 4-6, 2004
Auburn University Hotel and
Dixon Conference Center
(www.auhcc.com)

Call for Peer Reviewed Papers and Presentation Abstracts

Authors are invited to submit full-length manuscripts for presentation at the conference and inclusion in the conference proceedings. Papers addressing the conference theme "*Educating Engineers for the Information Age*" will have first priority, but authors may address topics dealing with instructional methodology, curricula issues, outcomes assessment, research and graduate programs, retention issues, ethics, technology in the classroom, accreditation, capstone design courses and projects, distance education, virtual classroom, use of multimedia and computers in the classroom, continuing engineering education and other topics of interest to the engineering education community. Guidelines for preparing the manuscripts are available at: cee.citadel.edu/asee-se/. This is a peer-reviewed conference. Papers will be accepted on the basis of peer review of the complete manuscript. All accepted papers would 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 at the conference. These abstracts will be published in a book of abstracts, but will neither be peer reviewed nor included in the reviewed proceedings. We anticipate having a session on the latest trends in the use of information technology in teaching and learning along with a student paper session.

The schedule for submission of papers and abstracts is:

5 September 2003 - Abstracts submitted for consideration
3 October 2003 - Authors notified regarding acceptance
14 November 2003 - Manuscript due from authors for review
9 January 2004 - Reviewed manuscripts returned to authors
6 February 2004 - Final manuscript and extended abstract due from authors

Authors should electronically submit a 250-300 word abstract by 5 September 2003 to:

Dr. Tulio Sulbaran, Technical Program Chair
Construction Engineering Technology
The University of Southern Mississippi
Box 5137
Hattiesburg, MS 39406-6419
E-mail: Tulio.Sulbaran@usm.edu
Phone: (601) 266-6419
Fax: (601) 266-5717

For further information about the conference, please contact:

Dr. P.K. Raju, Conference Chair
E-mail: pkraju@eng.auburn.edu
Website: www.eng.auburn.edu/conference/asee

Section Awards for Excellence

At the 2003 Annual Meeting in Macon, several awards were given for excellence in engineering education. The list of recipients and the awards are:

Richard Denning, University of Central Florida.....	Section Outstanding Teaching Award
Ali Rahrooh, University of Central Florida	Section Outstanding Mid-Career Teaching Award
David Dampier, Mississippi State University.....	Section Outstanding New Teacher Award
Scott Husson, Clemson University	Section New Faculty Research Award
Donald Visco, Tennessee Tech University	Section New Faculty Research Award Second Place
Laura W. Lackey, Mercer Univ./W. Jack Lackey, Georgia Tech	Thomas Evans Instructional Paper Award
Richard O. Mines, Mercer University	Outstanding Campus Representative Award
Kenneth P. Brannan, The Citadel.....	Tony Tilmans Service Award

Highlights of Meeting at Macon



The keynote address by Dr. John M. Samuels, Senior Vice President of Operations, Planning, and Support for Norfolk Southern Corporation was entitled "Reality and the Engineering Graduate." Samuels was the winner of the Dow Outstanding Young Faculty Award from the Middle Atlantic Section in 1976. Over 110 engineering educators attended the conference, which included over 90 papers.



The scenes above are not from breakfast, but were part of "egg" activities for building student interest from a workshop entitled "A Student-centered Approach to Effective Teaching in Engineering Courses" (Keith Schimmel, NC A&T). Other workshops offered were "The Art and Technology of Teaching Technology" (Robert Herrick and Michael Jacob, Purdue) and Using Case Histories for Teaching Design (P. K. Raju and Chetan Sankar, Auburn).



On Sunday evening, a welcome reception was held at the Georgia Sports Hall of Fame. Guests arrived by trolley and enjoyed food and networking with colleagues in a historic setting that included many interesting sports exhibits.



Father-daughter team Laura W. Lackey (Mercer University) and W. Jack Lackey (Georgia Tech) received the Thomas Evans Instructional Paper Award for the most outstanding paper pertaining to engineering education. In keeping with conference tradition, conference attendees were treated to a presentation of the award-winning paper at the Monday luncheon.



ASEE executive director Frank Huband was the featured speaker at the Awards Banquet, held at the Mercer University Religious Life Center. Huband's address was entitled "Future Directions in Engineering Education." During the banquet, guests were also delighted by outstanding performances from Mercer College of Liberal Arts Music students.

Section Selects New Officers

The new officers for the 2003-2004 year are:

President	Dennis Fallon	The Citadel	843-953-6588
President-elect	Beth Todd	University of Alabama	205-348-1623
Secretary-treasurer	Shelton Houston	University of Southern Mississippi	601-266-4896
Past President	Richard Mines	Mercer University	478-301-2347
Vice Presidents			
Instructional Unit	Tulio Sulbaran	University of Southern Mississippi	601-266-6419
Administrative Unit	Ken Brannan	The Citadel	843-953-5083
Research Unit	Clair McCullough	University of Tennessee at Chattanooga	423-425-4100
Division Chairs			
Bioengineering	William Lee	University of South Florida	813-974-2136
Chemical Engineering	Donald Visco	Tennessee Technological University	931-372-3606
Civil Engineering	Joseph Owino	University of Tennessee at Chattanooga	423-425-4010
Computer Engineering and Technology	Dan Kohn	University of Southern Mississippi	601-266-4900
Electrical Engineering	Randy Buchanan	University of Southern Mississippi	601-266-5628
Engineering Design Graphics	Alice Scales	North Carolina State University	919-515-1754
Engineering Technology	John Lipscomb	University of Southern Mississippi	601-266-4902
Industrial Engineering	Shelia Barnett	Mercer University	478-405-9245
Mechanical Engineering	Robert LeMaster	University of Tennessee at Martin	731-587-7382
Software Engineering	David Dampier	Mississippi State University	662-325-8923
Campus Rep. Coordinator	Thomas Dion	The Citadel	843-953-7676
Proceedings Editor	Barbara B. Thomas	Southern Polytechnic State University	770-528-4283
Newsletter Editor	Ken Brannan	The Citadel	843-953-5083

Teaching Tips for Engineering Educators*



“*Thinking Outside the Textbook*” - Phillip Wankat and Frank Oreovicz, March 2003 *Prism*.

“. . . why do we wait until the open-ended problems of the senior capstone design course to *encourage creativity in our students?*”. . . Here are some ways we’ve found to nudge the creative process along.”



- “**Break out of the one-and-only answer rut.** . . . encourage them to generate a large number of creative or novel solutions, evaluate them critically, and discard the bad ones.”
- “**Use creative thinking techniques and games.** . . . Brainstorming. . . asking ‘what if’ questions. . . Use games and puzzles, particularly mathematical puzzles, so that students have fun while they learn.”
- “**Be careful not to punish creativity.** A creative solution probably won’t be as polished as a standard, regurgitated one. . . Use Edward deBono’s **PMI** method to point out flaws without rejecting creative ideas. Discuss **Positive** aspects, **Minuses**, and **Interesting** features that can be adapted to other designs.”

“It is the supreme art of the teacher to awaken joy in creative expression and knowledge.” – Albert Einstein



“*Staging your Classes*” - Alice Daniel, November 2002 *Prism*.

“One graduate of ExCEED, Elliot Douglas, says the workshop gave him a framework to understand and evaluate his teaching. . . he says that professors will sometimes complain to him about having to ‘entertain’ students. But Douglas tells them that drama in the classroom isn’t primarily for entertainment purposes. ‘College teachers need to stimulate emotion,’ he says. ‘They need to *transfer to the student their passion in the subject.* . . . In the classroom, *drama is a means to stimulate interest, to show that you care about the subject and that the students should care about it.*”

- **COL Allen Estes (West Point) uses a hot dog** to teach how hoop stress can lead to failure of cylindrical pressure vessels. “he heads to the trash can and pulls out a wiener whose bun has been doused with green food coloring to make it look moldy. He takes a bite in front of a sea of shocked faces, then continues his explanation of hoop stress before handing out hotdogs and mustard to everyone.”
- **Elliot Douglas (U. of Fla.) “begins every class by playing music** that is the thematic to the topic he is covering. For instance, a discussion of chemical bonds might begin with music from a James Bond movie. He also brings his materials to class in a little red wagon. But the gimmicks are not what he relies on to make his classroom tick. . . ‘can be effective dramatically without any of those gimmicks. . . it’s more in the way you present material.’”



“Tell me and I forget. Show me and I remember. Involve me and I understand.” – Chinese Proverb

*The full text for these topics may be found in the referenced *Prism* articles. In addition, many excellent ideas for enhancing your teaching may be found in each issue of *ASEE Prism*, one of the benefits of membership in ASEE.

**Italics added for emphasis.

Upcoming Events

- **Southeastern Section Officers:** The Conference Planning and Executive Board meetings will be held November 13 and 14 in Atlanta. Officers will receive details about the meetings in the fall, but please go ahead and mark your calendars.
- The national 2004 Annual Conference will be held in Salt Lake City, Utah on June 20—23, 2004.

Campus Rep Corner

Now that graduation activities are over, I join you in taking a moment to relax and hopefully a chance to unwind from a busy year. In my case, I was involved with our Institution's ABET re-accreditation visit this past fall in addition to my normally assigned duties, and I do not know where the school year vanished. I thought I would, however, take a moment to share some thoughts with you in this Newsletter. For those Campus Rep's who were not able to attend the Southeastern Section Campus Rep's breakfast held in conjunction with the SE Section Conference at Mercer University in Macon, several ideas were discussed.

One of the items focused on improving the lines of communication among Campus Rep's. As a first step, it was suggested that this column be included in the Section Newsletter, with a standing invitation for you to submit items of interest, suggestions, and special announcements that would be of interest. Another initiative was for the Campus Reps to establish a webpage that is part of the SE Section's Website. *This webpage would have information posted that is pertinent to the Southeastern Section not available on the national website*, and also have representative contact in-

formation, including your name, institution, e-mail address, and postal address. This Campus Rep's webpage would be congruent in helping the Section achieve its organizational re-alignment approved through Constitution and Bylaw changes in Macon, as one of the goals of the organizational re-alignment is to encourage Campus Reps to become more involved in the Section's activities. To assist in this undertaking, I would be most appreciative of you e-mailing me your most recent contact information to the following address: Diont@citadel.edu.

In closing, I look forward to working with you this coming year, and would like to remind you to mark your October calendar for submitting your institution's Campus Rep's Activity Report. I hope you enjoy the rest of the summer, and look forward to hearing from you if you need assistance.

Best Regards,

Thomas R. Dion
SE Section Campus Rep's Coordinator

Auburn University to Host 2004 Conference

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wide range of degrees, and is the first university in the Southeast to offer a bachelor of software engineering degree and the first in the nation to offer a degree in wireless engineering.

The centrally located Auburn Hotel and Conference center is within easy walking distance to downtown Auburn, which offers a variety of interesting stores, restaurants and attractions -- including the Tiger Trail which pays tribute to Auburn's greatest athletes, coaches and administrators. Neighboring historic downtown Opelika provides additional opportunities for shoppers and antique buffs.

A golfer's paradise, the Auburn-Opelika area is home to seven golf courses, including two 18-hole courses and a par three at the Grand National Golf Course in Opelika, which is part of the Robert Trent Jones Golf Trail.

Nature lovers can enjoy picnicking, swimming, fishing,

boating, hiking and biking at nearby 696-acre Chewacla state park. The Donald E. Davis Arboretum, home to 150 tree species native to the Southeast, and the AU Forest Ecology Preserve are both great places for a leisurely stroll to observe wildlife and wildflowers.

An hour north in Pine Mountain, Ga., is Callaway Gardens, an award-winning, 14,000-acre garden, resort and preserve nestled in the southernmost foothills of the Appalachians. Activities include the Virginia Hand Callaway Discovery Center, Birds of Prey shows, Cecil B. Day Butterfly Center, John A. Sibley Horticultural Center, Mr. Cason's Vegetable Garden, Callaway Brothers Azalea Bowl, Overlook Garden, and miles of bicycle and nature trails. Callaway also features a world-class golf course.

Hurry and make plans to experience the "Trail of the Tiger" at the 2004 ASEE Southeastern Section conference in Auburn, Alabama.

President's Message

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learning styles of our students, multimedia presentations, cooperative learning, virtual reality, student centered learning, Problem Based Learning, scholarship of teaching, distance education, etc.

In addition, the past ten years have shown a considerable increase in accountability in the education process. Many states, universities, regional accreditation agencies and, more specifically, ABET have gone to an outcome assessment process. *This is yet another significant learning opportunity.*

So the question becomes not whether we have a lot to learn; but, more to the point, how do we effectively and efficiently improve our knowledge of these areas. I would argue that there is one organization that is dealing with all the above issues—the ASEE. For example, the upcoming Annual Meeting of the Southeastern Section of ASEE (theme: **Educating Engineers for the Information Age**) at Auburn University on April 4-6, 2004 will have papers in all the above areas. Specifically, there will be papers and workshops devoted to demonstrating new and exciting teaching techniques to improve classroom performance as well as developing new methodologies to provide assessments of not only teaching but importantly program outcomes. Papers

will be presented from faculty members who have undergone recent ABET evaluation providing us with important insight on how we should prepare for our inevitable visit.

I am also sure that many of you are doing some exciting things in your classroom that the rest of us should know. *Let me encourage you to consider submitting a peer-reviewed paper to the conference or preparing a presentation so that you can share your experience with us.* I have found from my experiences with this conference that the networking opportunities are invaluable.

In closing, I would like to thank Dr. Richard Mines of Mercer University for his outstanding leadership as President this past year. I also wish to thank the 2002-2003 officers and the many reviewers who ensured that the Annual Meeting in Macon, Georgia was a success by all measures. **Finally, please consider coming to the conference this spring. We need you to help us all to be better educators.**

See you in Auburn.

Dennis Fallon

Constitution Update:

The Constitution and Bylaws were amended at the annual business meeting of the Section held in conjunction with the 2003 Conference in Macon and were subsequently approved by the ASEE Board of Directors with some editorial changes. Transition to the amended Constitution and Bylaws, including filling new officers positions, will take place by the 2004 Conference in Auburn. The new bylaws may be viewed on the conference web site (<http://cee.citadel.edu/asee-se/>).