

Mar/Apr 2012

Special points of interest:

- Schedule of Student Division events for the 2012 ASEE Annual Conference
- A couple conference reports including a report from the first GEECS symposium
- Resignation of the Student Division Chair

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Schedule of Student Division Events for ASEE 2012

PAPER SESSIONS

Tricks of the Trade – 6/11-12:30 to 2:00pm

Henry B. Gonzalez Convention Center, Room 205

The session includes papers which address problems and experiences related to succeeding within undergraduate and graduate school and the tricks of the trade/lessons learned along the way. The papers are written by students from universities all across the United States and Canada.

Graduate Student Experience – 6/12 – 2:15 to 3:45pm

Grand Hyatt San Antonio – Room Bowie C

The purpose of this session is to highlight work on the graduate student experience. Papers from both the Graduate Studies Division and Student Division will illustrate the various intricacies of the pathways of students in graduate programs and provide recommendations for the future generations of graduate students.

STUDENT POSTER SESSION

6/12 – 12:30 to 2:00pm

Convention Center, Exhibit Hall C

Come interact with student authors of a diverse group of engineering education research projects!

BUSINESS MEETINGS

Student Division Business Mtg. - 6/11 – 4:30 to 6:00pm
Convention Center, 006C

Interested in learning more about the Student Division? This meeting of Student Division members, advisors, and officers will be an opportunity to discuss the events of the 2011-2012 year and plan for ASEE 2013. Co-sponsored by the College Industry Partnerships Division.

Student Chapter Officers - 6/12 – 8:45 to 10:15am

Convention Center, 006A

To further strengthen the community of students within ASEE, the Zone Liaison of the Student Division will be hosting the first annual forum for officers of active, dormant and future student chapters.

Co-sponsored by Pearson.

4TH ANNUAL ASEE STUDENT DIVISION DINNER

6/11 – 7:00 to 10:00pm

146 East Houston St.

The venue for our 2012 dinner is Ácenar (<http://acenar.com/mexican/>) located on San Antonio's River Walk!! The dinner is co-sponsored by John Wiley & Sons, Inc – a Platinum Level Sponsor.

The Student Division Dinner is free to attend, but is a ticketed event this year. All attendees will need to reserve their ticket on Monolith.

SPECIAL SESSIONS

Improving Engineering Education Locally and Globally:

An Action-Plan Session

6/11 – 2:15 to 3:45pm

Convention Center, 213A

The Student Platform for Engineering Education Development (SPEED) connects students around the world and empowers them to make a difference in their own engineering training. This interactive action plan session will provide space for discussion, feedback, and preparation for students, who will come out of the session with a concrete plan in hand for their next steps.

Completing the Cycle: Effectively Implementing Education Research

6/12 – 4:00 to 5:30pm

Convention Center, 213A

In this special session, the Graduate Engineering Education Consortium for Students (GEECS) will create a collaborative, hands-on environment to discuss how researchers and educators can translate research into practice. The session will provide a brief overview of the difficulties and promise of research-to-practice, and include break-out sessions in which participants will work with experts in the field on making plans for translating their research into practice.



Student Division Posters

Starting with the 2010 Annual Conference in Louisville, KY, the Student Division (Student Constituent Committee at that time) allowed students to submit a poster for review instead of a full paper.

Since these posters will not be included in the conference proceedings, we wanted to recognize these authors and their work in this month's newsletter. Be sure to check out these posters and our other posters at the Student Poster Session!

Global Engineering Education Collaboratory (GEEC): Who we are, what we do, and how we do it

Tiago R Forin with Julia D Thompson, Brent K Jesiek, Joe J.J. Lin, and James Huff
Purdue University, West Lafayette

Learning to Juggle: The Unique Challenges and Benefits of Being an Engineering Graduate Student and a Collegiate Athlete

Adam Neale with Manoj Sachdev
University of Waterloo

Investigating the Relationship between Graduate Student TA's and Undergraduates

Chirag Variawa
University of Toronto

Doing Engineering Education Research Outside of Your Research Group: A Graduate Student's Experience and Tips

Austin Talley with Kimberly Grau Talley
University of Texas, Austin and Texas State University – San Marcos

Challenges in Designing an Ultrasonic based Inspection Trolley for Use on Indian Railways

Jourdan Beaumont with Chetan Sankar and P.K. Raju
Auburn University and Laboratory for Innovative Technology & Engineering Education

Organizing Principles for Launching a New Chapter: Experiences at Our University

Chelsey Simmons
Stanford University

Updates from the Officers



Alexandra Coso
Cognitive Engineering
Georgia Institute of Technology

Message from the Program Chair and Incoming Division Chair

Hello everyone!

We are Two Months Away!!! Excited yet?

First off, I want to let you know that all the Student Division sessions have been finalized within the Online Session Locator. Check out the full schedule later in this newsletter.

Second, thanks to all the authors, reviewers, and moderators! We will be hosting in two

amazing paper sessions this year and we will have several student posters at the ASEE Poster Session. Be sure to check them out at the conference.

Don't forget to finalize all your travel plans in the coming months and sign up for the 4th Annual Student Division Dinner.

Good luck with the end of your semesters!

See you in San Antonio!

Message from the Secretary/Treasurer

Secretary Notes

The officers look forward to seeing you at the 2012 Annual conference Student Division activities. Remember to sign up for the dinner on Monolith. The Annual dinner is free of charge but you must have a ticket as the seats are limited. We were fortunate to arrange dinner at a great restaurant and it should be a great time. Wiley & Sons, a major sponsor, will be speaking at the dinner. Finally, please feel free to contact the officers if you have any questions or concerns.

Treasurer Notes

With significant sponsor support, the student division will have a full schedule at the 2012 Annual conference. Hopefully, you can join us for the Division business meeting. One of our corporate sponsors, CIPD, will be speaking at the business meeting. Please check Monolith for any outstanding invoices and contact one of the officers with questions.

Have a great spring and see you in San Antonio!



Kelly Cross
Engineering Education
Purdue University

Message from the Zone Liaison

As the end of the Spring semester draws near, please don't forget that Student Chapter Spring Reports will be due! Please send by May 18. End of semester reports are now a requirement of all student chapters - please contact me (jlwiles95@gmail.com) for more details.

I am looking forward to meeting some of the Student Chapter officers at the Student Chapter Officer Meeting at the ASEE Annual

Meeting in San Antonio on Tuesday, June 12 at 8:45am - snacks and drinks provided! I am asking that each chapter send one officer or representative to the meeting. You can sign up when you register for the conference, and in addition, please send me the name of who is attending for your chapter via email so we have an accurate head and chapter count. As always - if I can be of any help to your chapter - please let me know!



Julie Little-Wiles
College of Technology
Purdue University



Geoffrey Herman
Engineering Education
Purdue University



Mary McCormick
Math, Science, Technology, and
Engineering Education
Tufts University



**Shane Brown, Devlin Montfort,
and Nadia Frye**
Civil and Environmental Engi-
neering
Washington State University

Message from the Information Chair

In honor of our new Student Division logo, I have updated the look and feel of the Student Division Newsletter. I hope that this new design will reflect the pride and professionalism that our division has towards engaging students in improving engineering education. Please let me know if you have any concerns or recommendations for this new design (gberman@purdue.edu)!

Officer elections for next year are also coming up soon. If you are interested in of the leadership positions with the Student Division, send me your name, affiliation, and a brief bio, and I will add you to the ballot. Be on the lookout for an online ballot during the 2012 ASEE Annual Conference. Hope you all can attend!

Message from the Membership Chair

As a newly formed division, the Student Division continues to grow! We are looking forward to meeting new students at the ASEE Annual Conference who are interested in be-

coming members. Please come visit the ASEE booth, meet our officers, and learn more about opportunities as ASEE Student Division members!

Work in Progress

Exploring the Conceptual Knowledge of Students and Practicing Engineers

We are currently working on a longitudinal project investigating the conceptual and epistemological changes of engineering students and early-career practicing engineers. There are many established theories of how students experience conceptual change in STEM fields drawing from cognitive science, as well as what students' changing personal epistemologies may look like, but there is relatively little data concerning direct, qualitative tracking of students' conceptual and epistemological changes and the life experiences that may affect them. There is even less information within the conceptual change frameworks examining how young engineers change when they begin to experience a workplace environment. In order to fill this gap, we will conduct

weekly interviews with two cohorts of students, one group of sophomore level civil engineering students and one group of recent civil engineering graduates beginning their first engineering jobs. The weekly interviews are based around a context-appropriate engineering problem with questions designed to extrapolate participants' personal epistemologies. The work will continue for the next two-and-a-half academic years in order to form a picture of how young engineers and students may experience conceptual and epistemological change over time. We presented preliminary results at the NSF Awardees Conference and engineering education conferences.

Student Chapter News



Mary Katherine Watson
School of Civil and Environmental Engineering
Georgia Institute of Technology

New Student Chapter at Georgia Tech!

A new student chapter of ASEE has started at Georgia Tech! GT-ASEE is working to create a community of engineering education researchers and practitioners on campus. With support from the College of Engineering, GT-ASEE is planning an engineering education workshop for graduate students and faculty

to highlight how educational research can be applied in the classroom. In Fall 2012, GT-ASEE will host an engineering education research symposium to showcase innovative engineering education research being conducted at GT.

Conference Reports

Highlights from the 1st GEECS Symposium at the 2012 NSF Awardees Conference



Matt Miller, Public Relations
Department of Engineering and Science Education
Clemson University

March began with an important event in the engineering education community, years in the making: the 1st Graduate Engineering Education Consortium for Students (GEECS) Symposium! Approximately 40 graduate students who are involved in engineering education research and come from a variety of education, engineering education, and technical engineering departments in the U.S. gathered in Arlington, VA on March 3-4 to discuss engineering education research, network, engage in discussions, and form potential research collaborations with each other. Fellows also had the opportunity to interact with engineering education faculty and NSF program officers. Five experts from the field were invited to facilitate sessions related to developing strong research programs and grants, collaborations, and funding: Dr. Jennifer Karlin (South Dakota School of Mines and Technology), Dr. Jo Walther (University of Georgia), Dr. Maura Borrego (NSF & Virginia Tech), Dr. Jennifer Turns (University of Washington), and Dr. Robin Adams (Purdue University). Sessions included topics such as how to position your

research for success, how to situate your work within engineering education, research methods and evaluation plans, and NSF grant criteria.

GEECS fellows, under NSF support, also attended the NSF Engineering Education and Centers Awardees Conference on March 5-6, immediately following the GEECS Symposium, where sessions provided opportunities to interact with grant-winning faculty members and NSF staff. GEECS fellows met up once again on the last day of the conference to reflect on their experiences at the symposium and exchange feedback about research ideas. Fellows will keep in touch following the symposium and NSF conference through their peer mentoring groups and events at upcoming conferences, including ASEE this June.

For more information about GEECS and upcoming events (including links to our pages on Facebook, CLEARhub, and Academia.edu) please visit <http://geecs.info>.



Katherine Nelson
Arizona State University

Engineering Education is Getting into the AERA Annual Conference!

I wanted to start this article a little differently – but, when I randomly met with Dr. Karl Smith at AERA this weekend, I felt like I should take it in a new direction.

As most of you know, AERA's annual conference is the supreme being of educational research conferences and up until now, our field has had a hard time finding its place there. Oh sure, there have been a few articles sprinkled here and there in various divisions and sigs. And the undertones of our work are commonplace enough. But, we haven't been well-accepted by educational researchers for many reasons. Some of these reasons may be heard to bear, but even still – they are true. Have we, engineering education, found our educational research identity? Do we have our own theories and language? Do we do 'research'? Dr. Smith – the grandfather of engineering education – started us on a path in the 70s and 80s that we now have the opportunity to take to a whole new level. But, again I say – what does it mean to be in engineering education?

Next year's AERA will be the first to include an engineering education component (Division C, Section 1E – Engineering and Computer Science) WOOHOOO! That means, for the first time, we will have an opportunity to have a voice with the educational research community. Math and science education went through the same process – and now are highly regarded educational research fields. We can do the same.

While my conversation with Dr. Smith only focused on next year's engineering education presence at AERA for a short time – it was during that time that I began to realize what we need to do as a field (as a graduate student population in the field). We need to get

in and get involved! We hold our seminal two engineering education conferences dear to our hearts, but we can do more to showcase our research in other arenas so as to continue to build the identity of engineering education research for ourselves, the field, and the greater educational community.

There are many opportunities to take engineering education to the next level – if not for making a name for the field in the eyes of educational researcher world-wide – but for doing for our field what we all set out to do – to provide engineering students with the opportunity to find a niche in engineering, to learn the material in an innovative, creative, cognitively and motivationally engaging way, to become the future problem solvers of the world, and to allow this field to grow outside of its first generation immigrant white male status to a field as diverse as the world we live in.

I implore you to consider AERA in your future. Submit a paper to AERA on your research under the new engineering and computer science section – show them that we do good work. Don't tout about cool gimmick-y type things you're doing. Instead, give them the story of your work – the theoretical underpinnings and philosophical perspective you took in setting up your study, developing your hypotheses, interpreting your results, and what this means for the field of engineering education, and educational research at large!

As we continue to formulate our identity – which is almost there thanks to the blood, sweat, and tears of our mentors, faculty, and fore-engineering education fathers (and mothers) – remember that we have to carry on what they have started and make a statement to the educational research community that we are a field, and we have a place!



Brian Schertz
University of Illinois at Urbana-
Champaign

A Message From the Former Division Chair

Fellow Student Division Members:

Of all of the newsletter columns I've written over the last two years, this is perhaps the most difficult one I've written. No, it is not because of any crisis within the Division – the officers, especially our tireless Program Chair, Alex, have continued to go above and beyond to dramatically improve our Division Conference Program – hats off to Alex and her committee! We are all incredibly excited to bring you this enhanced conference program for our first full conference as a division. Also Alex has worked incredibly diligently to pull together allied student groups to have our first-ever student booth in the exhibit hall. Bringing together the Student Platform for Engineering Education Development (SPEED) and the Graduate Engineering Education Consortium for Students (GEECS) with the Student Division will allow student attendees to see the wide variety of opportunities

available to all students within ASEE. In short, the Student Division has never been in stronger shape – all this is easy for me to write, thanks to all the hard work of our officer team and committee members.

What makes these comments challenging is that they are the last set of comments that I will be making as a Student Division officer. Over the course of the last several months, my career plans have changed dramatically and at the same time I have found myself over-committed to a whole host of organizations. As such, it became clear that I could no longer devote ample time to continue to lead the Student Division. After extensive discussions with Alex, Dan (past-chair), and the Advisory Board, I have submitted my resignation to the Officer Team effective 16 April 2012. It is with a heavy heart that I submitted my resignation – I believe in and love the Student Division. Working

with the officers to ensure a speedy and complete transition has become my top priority, and I have utmost faith in both Alex as she assumes the position of SD Chair and our officers as they take up the slack caused by my departure. Beyond that, Alex has three years of experience on the executive board and is more than prepared to take the reins of the Division only two months earlier than the planned transition time.

I have thoroughly relished my time working for the Student Division and regret the necessity of stepping down from this great organization mid-term. However, I am confident that the transition will only serve to further strengthen the SD. In closing, thank you everyone for their time and effort during my time of service. Have a great rest of the semester and see you in San Antonio!

With best regards,
Brian Schertz
Former Division Chair