Spring 2011
ASEE Students Newsletter

A Message from the SCC Chair

Dan Bumblauskas Ph.D.
Assistant Teaching Professor, University of Missouri – Columbia
ALM Candidate, Harvard University
bumblauskasd@missouri.edu

Dear Student Constituent Committee Members:

Welcome to our spring newsletter! I can't believe the 2010-11 academic year already is rapidly coming to a close. I hope it was a productive year for everyone and that you are all invigorated for the ASEE annual conference which will be upon us before we know it! Hopefully you received an invitation to our 3rd annual SCC dinner scheduled for Monday, June 27. We are still finalizing the venue and working with our sponsors, but we expect that this year's dinner will once again be a free event for students. If you have not already done so, please RSVP to our program chair, Brian Schertz (schertz2@illinois.edu). Brian can also answer questions you may have about the SCC 2011 conference program.

We are also pleased to report that we now have over 230 SCC members across the world. This membership total is the final criteria four our transition from an ASEE constituent committee to a division – we needed to have at least 200 members and we are well above that now. I can't thank our membership chair, Alexandra Coso, enough for her work in reaching this critical SCC goal for 2010-11. Thanks, Alex!

We continue to also grow the number of ASEE campus chapters as well. It seems like every month we have a dormant chapter being resurrected or a new chapter being started somewhere. Thanks to Adam Carberry for his diligent service to the SCC over the past two terms!

The newsletters continue to be a great benefit of SCC membership and Geoffrey Herman has been a great information chair for the organization. In addition, the work of Geoffrey and Ana Torres-Ayala has led to many accolades from ASEE for our website. It is one of the best and thanks go to both Geoffrey and Ana for that! Anna Pereira has been keeping our funding in order this year as treasurer/secretary. If you are interested in an officer position for 2011-12, please send nominations to me at bumblauskasd@missouri.edu.

Please make sure to introduce yourself to the officers at the 2011 ASEE Annual Conference in Vancouver!

Daniel P. Bumblauskas, Ph.D.

Updates from the Officers

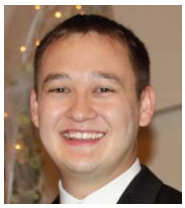
Brian Schertz, Program Chair
Graduate Student
University of Illinois at Urbana-Champaign

It is hard to believe that April is already upon us; another academic year is quickly drawing to a close. As program chair, I've been busy over the last few weeks working to finalize details for our upcoming SCC program at the National Conference in Vancouver in June. We are excited to have a full plate of SCC events in the works to continue and build on the foundations that have been laid by the previous SCC officer teams. As is

becoming an annual tradition, we will again have an industry-sponsored SCC dinner on the Monday of the conference. We are currently working to finalize the venue and should have that all ready to go within the month. If you are interested in attending the dinner, please RSVP to me (schertz2@illinois.edu) so that we can have reliable numbers for space and catering.

We are also pleased this year to have a new special panel session devoted to Engineering Education Research. We will have engineering education researchers from a wide variety of backgrounds discuss their experiences and thoughts with respect to the engineering education field. We are also excited to bring back the popular joint roundtable panel between the SCC and the New Engineering Educators Division. In other program news, we at the SCC have been collaborating with a working group discussing and planning a new engineering education Ph.D. student consortium. We are pleased and excited to be able to co-host a workshop with the consortium workgroup on the Sunday before the conference begins to continue to develop and define the consortium's role and future within the engineering education student community.

I look forward to seeing all of you in Vancouver in June, we have a great program planned and I am excited as always to get to see and catch up with everyone and hear about all the great research, programs, and activities that the SCC membership and local chapters have engaged in over the academic year!



Geoffrey Herman, Ph.D. Information Chair
Electrical and Computer Engineering Department
University of Illinois at Urbana-Champaign

For the Summer newsletter, I hope to continue the faculty spotlight and graduation celebrations. If you are graduating this semester and plan to stay involved with engineering education (in any capacity) after you graduate, we would love to hear about your plans. I hope that the faculty spotlight and graduation celebrations will help us all learn about the possible career options for those who are interested in engineering education. Send me an e-mail (glherman@illinois.edu) if you have proof that there is life after grad school or if you would like to nominate a faculty member for future faculty spotlights.

In other exciting communication news, I hope to create a Twitter feed for the ASEE Annual Conference and Exposition. If you are going to the annual conference, please consider helping us tweet about what you are learning while at the conference. If you are interested in being an SCC Tweeter, please send me an e-mail.

Finally, I also hope to start blogging about non-faculty career paths in engineering education on the SCC website (http://students.asee.org). If you know of anyone who is involved with engineering education who is not a professor, please let me know!

Graduation Celebrations!

Kate Mobrand
University of Washington
Dept. of Human Centered Design and Engineering

How did Kate become interested in engineering education?

Kate began her doctoral studies at the University of Washington (in the Department of Human Centered Design & Engineering) in 2005. For the first two years of her program, she taught advanced technical writing and oral presentation, which is a service course for engineering undergraduates. She fell in love with teaching and enjoyed working with engineering students.

After teaching, she spent one year as a research assistant developing the curriculum for a pilot course that could link the course she taught with senior capstone design courses from multiple engineering departments. She subsequently became the Director of the Engineering Communication Program (ECP), the program is which she had taught. In this capacity, she enhanced the curriculum for the two courses in the ECP and trained and mentored a wonderful group of graduate teaching assistants. She found this position to be fascinating, challenging, and extremely rewarding. After this two-year appointment ended, she was excited to accept a research assistant position to work with Dr. Jennifer Turns to research issues surrounding engineering undergraduates' preparedness for professional practice, bringing her focus on communication to the project.

What was Kate's dissertation about?

Kate described her dissertation, "my dissertation looks at the ways in which engineering undergraduates conceptualize the communication that they will be called upon to engage in as practicing engineers. I am particularly interested in student understandings of the situated nature of communication, empowerment (or agency) through communicating, and what 'counts' as communication (i.e., how broadly they think about professional communication). I am also investigating students' self-efficacy and motivation regarding this communication. In addition, I'm looking at the impact of the studio intervention that Dr. Turns has developed on students' conceptions, self-efficacy, and motivation."

For her dissertation research, Kate conducted a portfolio studio series and follow-up interviews with the students. She is currently analyzing the students' portfolios, survey responses, and interview transcripts. She plans to present some of her findings at the ASEE annual conference and exposition in June and plans to graduate in August 2011.

What's next for Kate?

Kate wants to find a position in academia that provides opportunities for both teaching and research. While both are important to her and make her happy, she would choose teaching

over research if she had to choose. She recently submitted a proposal to NSF as a follow-up to her dissertation. She hopes that this grant will allow her to continue researching in this area.

Kate's advice on how to succeed in engineering education

- Find a "home" in which to "do engineering education." Look for schools where things are happening or tap into folks at your current institution who have active research agendas that allow you to get right into the thick of things.
- Get involved in some outreach efforts that target different age groups.
- Join professional associations (regular and student chapters).
- Read JEE and some of the other emerging journals in the field.
- Find good general education courses to take.
- Develop skills in both qualitative and quantitative research
- Get involved in projects where you can participate in analysis and writing.

Faculty Spotlight

Robin Adams, Assistant Professor
Purdue University
School of Engineering Education

Robin "accidentally" discovered engineering education while intending to complete her Masters degree in materials science. She met Gretchen Kalonji who was working on a project (ECSEL) to develop hands-on laboratory experiences for introductory materials science courses. While working with ECSEL for almost 10 years, Robin had a lot of freedom to pursue (and sometimes create) opportunities in curriculum design, assessment, summer programs, working with K-12 educators, running workshops, and designing small research studies.

During these years, She became interested in education questions like "why would early design experiences play a role in encouraging more young men and women to consider engineering?" and "how can you measure the impact of large projects?" Eventually she began to conceive of pursuing a PhD in engineering education. At that time, her options were limited and many engineering faculty were leery of her career options in engineering education. Through the advice of her friends, though, she eventually pursued a degree in higher education. Her advisor in education, Steve Olswang, was encouraging and helped her explore research questions in recruitment and retention from historical, philosophical, psychological, and policy perspectives.

Leaving ECSEL was difficult as she left a rich community to become a "community of one" in education. Despite being the only engineer amongst her education classmates, Robin learned how to apply her engineering skills to education and became known as the "synthesizer."

> "I found myself constantly asking "how does this relate?" I was also very interested in design and creativity and these are also research areas in education. These are at the core of my identity as an engineer (and artist) and education gave me an opportunity to delve into these in new and unimagined ways (i.e., research!)."

Eventually she reconnected with other like-minded engineering educators like Cindy Atman and Jennifer Turns as they worked to develop the Center for Learning and Teaching. To help other engineering educators who might feel isolated from community, she proposed and developed the Institute for Scholarship on Engineering Education (ISEE). She continues to be

involved with developing the engineering education community and has been instrumental in the recent creation of the Graduate Engineering Education Consortium for Students (GEECS).

Chapter News

University of Washington
Brook Sattler, President
Dept. of Human Centered Design and Engineering

Graduate students from the Department of Human Centered Design & Engineering, whose research interests include engineering education, have taken the initial steps to begin an ASEE student chapter at the University of Washington (UW). The efforts were initiated by Brook Sattler (president), Ashley Thompson (vice-president), Kate MacCorkle (treasurer), Robert Ricadio (secretary), and Kate Mobrand (public relations), and Dr. Jennifer Turns (advisor). Through an ASEE student chapter they desire to create and sustain a community of emerging engineering education researchers and practitioners. And this community will support students' professional development. To announce the organization to the university community, the UW ASEE student chapter is participating in the university's Scholarship on Teaching and Learning Symposium and hosting an open house. Through these initial events they hope to begin building bridges across campus, which will be the foundation for a strong community. As an organization, we look forward to actively participating with the SCC and their future endeavors!

Michigan Technological University
Kari L. Jordan, President (Dept. of Mechanical Engineering)
Renee Oats, Vice President (Dept. of Civil & Environmental Engineering)

Michigan Technological University's American Society for Engineering Education (ASEE) chapter is excited about living up to the ASEE mission in furthering education in engineering and engineering technology. At Michigan Tech, we are consistently looking to make people aware of ASEE's goals and promoting this organization to the campus as a whole with various events and fundraisers. We are thrilled about giving to the community and partaking in outreach efforts for the K-12 students. Recently, this spring the chapter co-organized the Western Upper Peninsula Science fair for the local middle school and high school students in the Upper Peninsula of Michigan. In this position, the ASEE chapter volunteered in various positions and engaged others to participate and help as well. We also are active in promoting teaching as we have held active meetings and presentations such as a theme meeting of "Why Teach? The Importance of K-12 Engineering Education". At this meeting, Dr. Charles Margraves, a leading lecturer in mechanical engineering, lead a discussion and presentation about teaching and discussed the attributes of a great teacher in engineering. Also, Dr. Shari Stockero, an assistant professor in Cognitive Sciences, highlighted the importance of teaching for our future generations and scholarship opportunities available in education such as the NOYCE program. We are concerned about the issues of education policy and recently displayed this through an ASEE conference proceedings submission in discussing engineering ethics and implications that may result in internet based learning. At Michigan Tech, we continually try to build up the ASEE chapter and strive to continue growing and living up to the mission and promoting excellence in the engineering practice, instruction, research, and public service.

Stanford University
Stephanie Claussen
VP of Records

The Stanford chapter of ASEE held an Engineering Education Colloquium on March 31, 2011 sponsored by the Vice Provost for Graduate Education and the Center for Teaching and Learning. The colloquium brought together over 70 students, faculty, and staff from Stanford and neighboring institutions with backgrounds in engineering, science, and education. It was a huge step forward in creating a community of excitement surrounding engineering education at Stanford.

The event began with a welcome from Stanford's Dean of Engineering, Jim Plummer. Professor Richard Felder from North Carolina State presented a thought-provoking keynote address in which he encouraged engineering educators to think about how students' learning will apply in the real world—and to tailor teaching accordingly. Professor Felder employed active learning techniques and answered audience questions about topics like how to fairly assess collaborative work and develop critical thinking.

The second portion of the event consisted of a panel made up of a computer science professor, Professor Scott Klemmer, a researcher of science education, Professor Jonathan Osborne, and an expert in engineering education, Professor Sheri Sheppard. Professor Klemmer proposed thinking of every educational experience as a prototype—you teach as you think is best at that moment, but are also constantly revising and gaining insight for the next time.

The colloquium included a poster session with posters on everything from outreach programs to finding better ways to teach the subject of design. The morning concluded with a luncheon for graduate students and postdocs where tables were organized around topics such as "Active Learning" and "Undergraduate and Graduate Research". These latter interactive periods allowed participants to share challenges encountered while teaching and trade ideas for overcoming them.

(left) Attendees at the Stanford Student Chapter's Engineering Education Colloquium on March 31, 2011. (right) Professor Rich Felder, the event's keynote speaker, discusses with students during the poster session.