United States Conference on Teaching Statistics (USCOTS)
May 15-18, 2013
By Ben Baumer

From May 15th until May 18th, I was in Raleigh, NC for the 2013 United States Conference on Teaching Statistics. During this time I participated in two workshops, co-led a breakout session, attended numerous talks, and met and interacted with numerous colleagues from all over the country. As a junior faculty member, it was enormously helpful to be exposed to new ideas in the field of statistical education.

On Wednesday and Thursday morning, I participated in a workshop led by Beth Chance, Allan Rossman, and others entitled “Teaching the Statistical Investigation Process with Randomization-Based Inference.” The goal of the workshop was to encourage instructors to consider focusing on randomization-based methods for teaching statistical inference, as opposed to the traditional methods, which are rooted more heavily in theory. I chose to attend this workshop in part because I had previously been exposed to such ideas by my senior colleague, Nick Horton. In fact, Nick and I introduced the bootstrap technique, which is not traditionally part of an introductory statistics curriculum, in MTH241 this semester for exactly these reasons. Particularly illuminating was George Cobb’s historical account of randomization-based methods, which helped provide additional motivation for this material. My understanding of randomization-based methods, and their place in the curriculum, was enhanced by this workshop and I definitely plan to work towards incorporating more randomization-based methods when I teach MTH241 again in the spring of 2014.

On Thursday afternoon, I participated in related workshop “How to Implement a Randomization-based Introductory Statistics Course: The CATALST Curriculum.” Although the goal of this workshop was similar, the approach was predicated on using a piece of proprietary software called TinkerPlots. Due to the proprietary nature of this software, and a variety of other reasons, I will not be implementing the lessons offered in this workshop. Nevertheless, it was instructive to see what others are doing.

On Saturday morning, I co-led a breakout session entitled "Changing to R in an Introductory Statistics Course" with Michael Bulmer of the University of Queensland and Randall Prium of Calvin College. Our goal was to provide other instructors with motivation and tools to help switch to using R, the premier open-source statistical package, in their intro stats courses. The focus of my particular contribution was an explanation of R Markdown, a markup syntax that Nick and I have been using this past academic year. This technology is very much bleeding-edge, but we’ve found it to be helpful for students to prepare their homework assignments and even longer projects. We received very positive feedback from this breakout session, and it helped me to introduce myself to several people I might not have otherwise had the opportunity to meet.

Attending USCOTS 2013 has helped me to see the larger field of statistics education in greater depth. In particular, I have a deeper appreciation for the depth of thought that goes into teaching statistics well. At the same time, I am comforted to know that I’m already working at or near the top of the curve in terms of incorporating technology into our courses here at Smith.