The 2017 United States Conference on Teaching Statistics (USCOTS) will be held at the Penn Stater Hotel and Conference Center May 18-20, 2017. The conference theme of “Show Me the DATA!” is intended to encompass many aspects of teaching statistics, including helping students to recognize that data beat anecdotes and are essential for evidence-based decision-making, emphasizing data visualization in statistics courses, embracing ideas of data science in teaching statistics, and using data as educators to make informed decisions related to effective teaching and learning.

Chis Wild of the University of Auckland will kick off the conference in the opening session on Thursday evening with his presentation titled “Oh Say, Can You See?” Plenary speakers for the conference are:

- Deb Nolan, University of California – Berkeley, “Show Me the RAW Data: Integrating Computational and Statistical Thinking”
- Mine Çetinkaya-Rundel, Duke University, “Teaching Data Science and Statistical Computation to Undergraduates”
- Jay Lehmann, College of San Mateo, “Prestatistics: Acceleration and New Hope for Non-STEM Majors”
Breakout sessions interspersed among the plenary talks are designed to promote active engagement of participants. These breakout sessions will feature a variety of topics, from data science and data visualization to teacher preparation and activity-based learning. Another highlight of the conference is the “posters and beyond” sessions in which participants present ideas for effective teaching and learning that they have developed and investigated in their own classrooms.

Fifteen pre-conference workshops provide even more opportunities for statistics teachers and education researchers to learn and exchange ideas about topics ranging from researching student attitudes to data visualization to TA training to statistics songs and much more.

Another highlight of the conference is the banquet dinner on Friday evening, featuring the presentation of the CAUSE Lifetime Achievement Award.

The USCOTS Social Media Challenge is returning with designated tasks for onsite participants to be documented through social media.

Much more information about the conference program and a registration form can be found at: www.CAUSEweb.org/uscots/. I hope to see you at Penn State in May!

Allan Rossman, 2017 USCOTS Program Chair, arossman@calpoly.edu
2016 Speed Session Awards!

March 13, 2017  |  Kay Endriss

Winner: Kelly McConville, Swarthmore College, "Are Volcanic Eruptions Increasing? An Example of Teaching Data Wrangling and Visualization in Stat 2"

Honorable Mention: Phyllis Curtiss, Grand Valley State University, "Investigating How the Wording of a Survey Question Can Change the Results"

Honorable Mention: Kevin Ross, Cal Poly, "Classroom Investigations of Recent Research Concerning the Gamblers' Fallacy"

Congratulations to all the award winners for their excellent presentations! The awards were first announced at the Statistical Education Section's business meeting held during JSM 2016.
Advanced Placement Statistics: Opportunities for Fun and Professional Development!

March 13, 2017  |  Jessica Utts

If you teach introductory statistics and have never attended the Advanced Placement Statistics Reading, you may be missing out on one of the best and most enjoyable professional development opportunities available. The AP Statistics program is now in its 21st year, and it is predicted that almost 220,000 students will take the exam in May. In 1997, the first year the exam was offered, 7,667 students from 752 high schools took the exam and reported scores to 748 colleges. Last June, 206,563 students from 8,759 schools took the exam and scores were reported to 2,768 colleges. With six questions per exam, that’s over 1.2 million questions that needed to be graded!

Fortunately, there are hundreds of teachers who are willing to help grade these questions. Last June, over 850 high school teachers and college faculty spent a week in Kansas City grading the free response questions on the 2016 exam. The Reading takes place over a seven-day period in mid-June each year, currently in Kansas City, but previously in Lincoln, Nebraska, Louisville, Kentucky and Daytona Beach, Florida. Participants receive a stipend in addition to all expenses.

Why would anyone want to finish their school year and then almost immediately sign up to grade more exams? It may not sound like much fun to grade exams for seven days straight from 8am to 5pm, but participants find that the experience is so much more than that. College faculty and high school teachers learn new ideas from each other. Most people find that the experience helps them learn how to assess their own students more effectively as well. I asked a few people who have
"The AP Statistics reading is the best professional development opportunity for those that teach Introductory Statistics. The AP reading allows me networking opportunities with other college faculty but my greatest take away is the educational pedagogy I learn from the high school teachers. I have been attending the reading for 11 years, every year I bring home something that I immediately implement in my classroom." Ellen Breazel, Clemson University, Clemson, SC

“The AP readings are the most valuable professional experience I have each year. Each day I have stimulating conversations with college professors and high school teachers about statistics and pedagogy. Even after attending 18 years of readings, I continue to learn every day. Most importantly, I have made life long friends from around the country.” Laura Marshall, Phillips Exeter Academy, Exeter, NH

"The AP reading is the most significant professional development that I do each year. Besides the process of learning and following the rubric there are numerous evening activities such as an evening with a professional speaker and a best practices night. However, for me, as a high school teacher, the greatest value is the casual conversations that I have with college and university faculty. Over the course of the week, I gain a deeper understanding of the math and practice of statistics.” David Spohn, Hudson High School, Hudson, OH

You can see the common themes in these quotes. The experience includes professional development, but it also includes social activities and impromptu discussions that help forge life-long friendships and professional connections. One person described it by saying “it’s like a huge family reunion except that you actually like all the people there.” As a college professor I have learned a great deal from the high school teachers about what goes on in their classrooms and have benefitted from numerous discussions about the interactive methods they use to help students understand statistics.

If you are a college teacher currently teaching and have taught an introductory statistics course similar to the AP course within the past three years, you are eligible to be an AP Statistics Reader. You can read more about the exam at the first link below, and you can apply online to be a Reader at the second website, but make sure you click the link for “onsite scoring” and not “online scoring” because AP Statistics currently does not use online scoring.

http://apcentral.collegeboard.com/apc/members/exam/exam_information/8357.html


Don’t put it off because you need to apply by the end of summer to be considered for the Reading the following June. Please send any questions to me, jutts@uci.edu.
CAUSE competitions are a great way to get your students (and yourself) involved in thinking about statistical issues in a fun way:

- The monthly cartoon caption contest continues each month with a new cartoon by British cartoonist John Landers posted on the 2nd of the month and with caption submissions due the first of the next month. Winners have a choice of a mug or a t-shirt with their cartoon imprinted on it.
- The biennial A-mu-sing competition collected entries for jokes, poems, songs, and videos that help teach a statistical lesson. Prizes totaling $1000 will be announced on April 1st.

To support growing the statistics education community, and to stimulate building the digital library at CAUSEweb.org, we are starting a Rewards Program that will go live this spring. Points will be rewarded for such things as registering for CAUSEweb and adding your name to the Statistics Education map, giving star ratings or leaving comments about a resource for teaching statistics, attending CAUSE events like webinars, workshops, USCOTS or eCOTS, or entering CAUSE competitions. Points will then be exchangeable for a variety of statistical prizes. Thanks to the Rewards Program committee for working out the details (Christine Frankin, Robin Lock, Mvududu Nyaradzo, and Rebecca Pierce).

In order to make the quote collection on CAUSEweb more inclusive, we are adding one or two quotes by female authors per day for the next month. This will allow the collection to have at least 30% of its entries by female authors. The quotes in our collection are fully referenced and annotated with suggestions for use in teaching and include a picture of the author. Suggestions for quotes should be sent to Dennis Pearl at dkp13@psu.edu.

CAUSE professional development events like webinars and workshops are ongoing. Sign up for the CAUSE eNEWS to stay informed.
Welcome to a new year in the Section on Statistical Education. It’s an honor to be chairing the section in 2017 – the energy and passion for statistical education among section members is quite humbling and inspiring. I hope, like me, you are excited to engage in statistical education in an era where the value of data and of individuals who can answer questions with that data has never been higher. Determining the most important ideas to teach and how to teach them seem to be fast-moving targets.

I am fortunate to be on sabbatical for the 2016-17 academic year. I’ve taken this opportunity to (a) do some project work and teach short courses at a “real world” organization that engages in considerable data analysis, and (b) try to bring my own data science skills up to speed and figure out how to incorporate additional computing into our curriculum (an old dog learning new tricks). I’m excited to return to the classroom this fall with new ideas, renewed enthusiasm, and a clearer picture of the preparation that our students need to succeed in a world thirsty for those who can harness the power of data.

Through the Section on Statistical Education, I hope that you can similarly experience new ideas, contagious enthusiasm, and a clearer picture of how to get your message across to students or colleagues. The executive committee is an awesome collection of individuals committed to our section's mission. We are coordinating many activities both within our section and with others throughout the wider statistical education community, including many featured in this newsletter. A “random” sampling of highlights includes:

- Conferences like USCOTS (May 18-20) and JSM (July 29 – Aug 3)
- Guidelines and resources for teaching data science
- Guidelines and resources for preK-12 statistical education
- Incorporating ethics into a single course or a curriculum
- A brand new mentoring program
- A social media presence for the Stat Ed Section

Look for details on these and other initiatives in this newsletter or in periodic email updates or Twitter!

We also want to make your ideas for improving and promoting statistical education come alive. Please contact me (roback@stolaf.edu) or any officer with ideas you have for advancing the mission of our section that could benefit from
At last count, our section is 1154 members strong, but the more, the merrier! Please continue to encourage interested individuals to join our section and participate in our activities. Check out the bullet points on our section's website that were crafted last year to both characterize our section and entice those who may want to join.

Thanks to you for your membership in the Section on Statistical Education and your support for our activities. We hope this year is a fulfilling one in your statistical education pursuits, and I look forward to interacting with many of you in the months ahead.

Sincerely,

Paul Roback
Chair, ASA Section on Statistical Education
The first quarterly Roundtable on Data Science Education, hosted by the National Academies of Sciences, Engineering, and Medicine, took place on December 14, 2016, in Washington, D.C. 50 people participated in person, and over 100 people joined via webcast. Members of the statistics, mathematics, engineering, and computer science communities discussed their fields' contributions to the foundations of data science at the undergraduate and graduate levels, and representatives from the National Institutes of Health, Amazon, and the U.S. Census Bureau discussed the ever-expanding role of data science in their organizations. Videos of the speakers' presentations are available at www.nas.edu/data-science-education-roundtable-1. ASA members who participated include: Brian Caffo, Michelle Dunn, Constantine Gatsonis, Nicholas Horton, Deb Nolan, Rebecca Nugent, Victoria Stodden, and Jessica Utts. The next meeting of the Roundtable is scheduled for March 20, 2017, in Irvine, C.A. The National Academies also hosted a related event, Envisioning the Data Science Discipline: The Undergraduate Perspective, on December 12-13, 2016, in Washington, D.C. Participants discussed the role data science plays in society, how data science should evolve, the skillsets data science students need to be successful in the workforce, and how diversity could be improved in data science programs. Presentations from this meeting can be found at http://sites.nationalacademies.org/CSTB/CSTB_177038, and participants will meet again for a workshop in May 2017 to continue this important discussion.
JSM2017 Program Chair Report

March 13, 2017 | Dalene Stangl (Chair), Kelly McConville (Roundtables)

The 2017 JSM program will include nearly 100 speakers sponsored by the Statistics Education Section. These speakers will appear throughout 15 sessions including 3 invited, 5 topic contributed, and 5 contributed sessions along with 24 speed/posters, and 11 roundtables.

Three Invited Sessions:
1. Modernizing the undergraduate statistics curriculum (Speakers: Nick Horton, Hilary Parker, Jo Hardin, and Colin Rundel)
2. Novel approaches to first statistics / data science course (Speakers: Ben Baumer, Mine Çetinkaya-Rundel, Rebecca Nugent, and Daniel Kaplan)
3. Training Statisticians to be Effective Instructors (Panelists: Adam Loy, Jennifer Kaplan, Meghan Short, Patricia Buchanan, and Paul Stephenson)

Five Topic Contributed Sessions (Three are Panels)
1. Being Research Active in Teaching-Focused Colleges
2. The Essential Connections between Industry and Statistics Education: Innovation, Technology, and Partnerships
3. Design, Implementation, and Impact of Different Approaches to Professional Development for Teachers of Statistics
4. Teaching Introductory Statistics using Simulation-Based Inference Methods
5. Modernizing the Statistical Collaboration Course

Five Contributed Sessions each with 7 speakers
1. Advances in Pedagogy
2. Technologies in the Classroom
3. Teaching Special Groups and Undergraduate Research
4. Teaching Introductory Statistics and Biostatistics
5. Topics in Math/Stat and Advanced Courses

Roundtables for JSM 2017  Kelly McConville

We have a great slate of roundtables this year. Roundtables are an informal, themed discussion over breakfast or lunch and they are a great way to meet educators from other institutions. Registration for roundtables opens with general registration on May 1st.

AM Roundtables:
1. Infusing Data Science into the Statistics Curriculum
2. Turning a Tweet into a Lesson: Using Current Events as a Context
3. Introducing Bayesian Statistics at Courses of Various Levels
4. Why do students hate statistics?

PM Roundtables:
1. A Course in Business Analytics
2. Student Involvement in Community Projects
3. Discussing the Uses and Creation of R Shiny Applications
4. Incorporating Complex Survey Concepts into the Curriculum
5. Recruiting and Engaging Students
6. GAISEing at a Lecture Hall: Effective Pedagogy in Large-Enrollment Courses
7. What are the 25 Most Common Terms in Statistics from the Last 20 Years?

Tags: invited sessions topic contributed sessions contributed sessions speed/posters roundtables newsletter MAR2017 JSM 2017 ASA Statistical Education
Mentoring Program
March 13, 2017 | Tena Katsaounis, Nicholas Horton (Chair)

The Statistics Education Section has recently initiated a pilot mentoring program for its members. A new Mentoring Committee was formed last Fall and has been working on establishing a long-term mentorship program. The members of the newly formed committee (and their affiliations) are: Nicholas Horton, Chair (Amherst College), Beth Chance (Cal Poly), KB Boomer (Bucknell U; Chair of IsoStats), Nicola Justice (U of Minnesota), Tena Katsaounis (Ohio State U), and Matt Hayat (Georgia State U). The committee developed appropriate guidelines for the mentoring program of our Section, based on the "Mentoring in the Box" guidelines written by the Committee on Applied Statisticians of ASA. Currently, about 16 mentors and mentees (recruited from IsoStat and from our Section members) are participating in the pilot program. Many thanks to all who agreed to get actively involved in establishing this program.

We are seeking mentees and mentors for our long-term mentoring program. The purpose of the program is to help its members, and in particular young members in the profession of Statistics Education, to achieve their professional goals. Mentoring can enhance not only the practice of statistics education but also someone’s personal and professional life. A constructive mentorship relationship can take many forms and may occur at any stage of career with benefits for both mentor and a mentee. Mentees are individuals who wish to grow professionally through a one-on-one professional relationship with a senior Statistician as a mentor. An efficient mentor offers guidance, support, and encouragement to cultivate the mentee’s career development. We anticipate that the time commitment for the program would entail approximately one hour per month for both the mentor and the mentee.

Benefits to the Mentor
• Development and enhancement of communication and leadership skills.
• Satisfaction of passing on skills and knowledge that can enhance the career and personal growth of the mentee and contribute to maturity of the profession.

Benefits to the Mentee
• A role model, but more accurately a sounding board, for questions about methods and resources of teaching Statistics.
• A source of perspective, encouragement, and motivation leading to greater self-confidence and esteem in teaching Statistics. Help in establishing and achieving professional development plans and career goals.
• A source of professional/social contacts with other Statistics educators.

Are you interested in becoming a mentor? Are you a potential mentee, or you would like to nominate a member of the Statistics Education Section who may be looking for a mentorship program? Then please email your contact information to Nicholas Horton at nhorton@amherst.edu. You will be asked to fill out an application form and share your CV (optional) in order to help us match mentors and mentees.

Once you are enrolled in the program, more information related to the mentoring activities and additional resources for mentors and mentees will be available via our section’s website. To access the website called “Section on Statistical Education Mentoring Program” go to ASA Community and look under "My Communities."

Please contact nhorton@amherst.edu for any additional information or clarification related to this program.

Timeline for Mentor-Mentee Activities

June 1st
• Deadline for application.

July 1st
• Deadline for matching mentees/mentors.

July 30th
• Assignment of mentors to mentees complete.
• Welcome information sent to mentors and mentees with guidelines of the program, tips and ideas, and links to resources (available via the Section’s website).

August-September
• Mentors to meet with mentees by the end of JSM (optional).
• Mentors to meet with mentees (by phone or in person) in order to establish a schedule of future meetings and method(s) of communication.
• Mentee shares CV with her/his mentor prior to first meeting (optional).

August - ongoing
• Hands-on mentoring continues.
• Mentors communicate/meet with mentees for an hour (minimum) per month.
• The Statistics Education committee communicates quarterly with program participants in order to monitor progress by receiving and offering feedback.

May 31st (2018)
• Deadline for program evaluation survey, completed by mentors and mentees. Mentor/mentee pairs are asked to share their impressions.
Participants are encouraged to continue meeting informally after the formal conclusion of the program.
Project TIER (Teaching Integrity in Empirical Research) aims to promote the integration of principles related to transparency and replicability in the research training of social scientists. The project’s mission is to promote a systemic change in the professional norms related to the transparency and reproducibility of empirical research in the social sciences. It is guided by the principle that providing comprehensive replication documentation for research involving data analysis should be as ubiquitous and routine as providing a list of references.

Statistical Education Section members Mine Çetinkaya-Rundel and Ben Baumer were project fellows in 2015-2016 and Amelia McNamara is a project fellow in 2016-2017. As part of the fellowship Mine worked on getting Project TIER on GitHub by creating template repositories organized according to the TIER Protocol (https://github.com/ProjectTIER). She also taught a workshop titled "Making your research reproducible with Project TIER, R, and GitHub" to Economics graduate students at Duke University and a Computing Bootcamp for incoming graduate students to the PhD and MS in Statistical Science programs at Duke University. Ben led a similar workshop for economics graduate students at Clark University last April. Amelia has been exploring the use of DigitalOcean as an alternative to campus-hosted RStudio servers. She will also be leading a workshop at the ENAR International Biometric Society conference in March on "Data Science for Statisticians," including elements of reproducible research. All three continue integrating reproducible workflows into their introductory statistics and data sciences courses.

Additionally, Ben and Mine co-organized a session on Reproducibility in Statistics and Data Science at JSM 2016 that Amelia chaired. More information on the session, as well as slides from talks from the session, can be found at http://citizen-statistician.org/2016/08/03/jsm-2016-session-on-reproducibility-in-statistics-and-data-science/. The JSM session led to a webinar sponsored by the ASA-MAA Joint Committee, the Statistical Education Section, and the Statistical Learning and Data Science Section titled "Teaching Reproducible Research: Inspiring New Researchers to Do..."
Project TIER hosts workshops for faculty and graduate students. The next Faculty Development Workshop will be held in Haverford College on March 31-April 1, 2017. The target deadline for applications is March 1. Additionally, contingent upon funding, a call for applications for 2017-2018 Fellowships will be posted in early 2017. More information on the project and opportunities to get involved can be found at [http://www.projecttier.org/](http://www.projecttier.org/).

Tags: TIER newsletter MAR2017 transparency replicability documentation reproducible research reproducible workflow introductory statistics data science ASA Statistical Education
Our officer candidates (taking office January 2018) are

Chair-Elect
- Mine Çetinkaya-Rundel, Duke
- Roger Woodard, NC State

Executive Committee at Large (2 openings)
- Leigh Johnson, Capital University
- Sharon Lane-Getaz, St. Olaf
- Weiwen Miao, Haverford
- Cassandra Pattanayak, Wellesley

Council of Sections Representative
- Matt Hayat, Georgia State
- Adam Sullivan, Brown

The 2017 ASA election opens March 15 at 12:01 a.m. ET and closes May 1 at 11:59 p.m. PT. Make sure you’re ready.

Tags: newsletter MAR2017 election officer candidates ASA Statistical Education
Time to start planning for JSM 2018!

March 13, 2017  |  Kelly McConville

July 28 - August 2, 2018, Vancouver, British Columbia, Canada

Although JSM 2017 is still months away, the planning for JSM 2018 is about to begin! The first item on the agenda is selecting Invited Sessions. If there’s a statistical education topic that you think should be presented at JSM, please consider putting together a proposal. Organizing a session is a great way to get involved and to give back to the section. If you have any questions or want to discuss ideas, feel free to send me an email at kmcconv1@swarthmore.edu.

Q & A about Invited Sessions

Q: I have an idea. What should I do next?
A: Talk to others about your idea. Find speakers. Share your idea with me. Submit a proposal on the JSM 2018 website.

Q: What is the structure of an invited session?
A: They are flexible. Based on what will work best for your topic, you can organize a set of 2-6 talks, a 3-6 person panel discussion, or an e-poster session with 20-30 presenters.

Q: What needs to be included in the proposal?
A: Session title, description of the session, list of participants, and tentative talk titles.

Q: When are invited session proposals due?

Q: What if my proposal is not selected for an invited session?
A: It can be re-submitted as a topic contributed session.