Conferences

Each statistical society sponsors at least one conference. These conferences provide opportunities for its members and others to present their research. Other activities at these conferences include job interviewing, committee meetings, and continuing education courses.

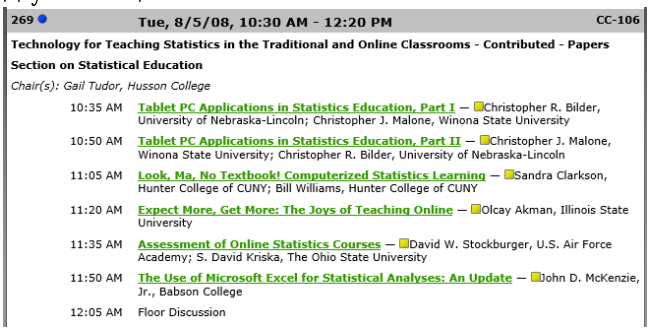
The largest statistical conference by far is the Joint Statistical Meetings (JSM) with over 6,000 people attending it. The conference is held each year in late July or early August. The main parts of the conference start on a Sunday afternoon and conclude mid-day on the following Thursday. The name of the conference comes from it being a "joint" conference for a number of statistical societies, including ASA, IBS (ENAR and WNAR regions), IMS, and SSC.

My focus in this section will be on JSM and then follow with shorter discussions of a few other important conferences. The JSM material is partially based on my *AMSTAT News* article entitled "How to get the most out your first Joint Statistical Meetings," which is available from the course website.

Before JSM

- Presenting research - The earliest that a student will typically have research to present is at the end of their MS program. Very often, students will not have research to present until toward the end of their PhD program. If you are going to present research, you have a number of choices:
  - Invited, contributed topic, or contributed:
    * Most students choose a contributed presentation. A title and abstract for the presentation needs to be submitted by an early February deadline. All submissions are accepted. The JSM program committee groups these

presentations into somewhat-like topics to form a "contributed session" during the conference. Below is an example contributed session that I presented in, and a recording of my presentation is available at `https://youtu.be/fnhUk-A2WtY`.



269 Tue, 8/5/08, 10:30 AM - 12:20 PM CC-106

Technology for Teaching Statistics in the Traditional and Online Classrooms - Contributed - Papers
Section on Statistical Education

Chair(s): Gail Tudor, Husson College

10:35 AM Tablet PC Applications in Statistics Education, Part I — Christopher R. Bilder, University of Nebraska-Lincoln; Christopher J. Malone, Winona State University

10:50 AM Tablet PC Applications in Statistics Education, Part II — Christopher J. Malone, Winona State University; Christopher R. Bilder, University of Nebraska-Lincoln

11:05 AM Look, Ma, No Textbook! Computerized Statistics Learning — Sandra Clarkson, Hunter College of CUNY; Bill Williams, Hunter College of CUNY

11:20 AM Expect More, Get More: The Joys of Teaching Online — Olcay Akman, Illinois State University

11:35 AM Assessment of Online Statistics Courses — David W. Stockburger, U.S. Air Force Academy; S. David Kriska, The Ohio State University

11:50 AM The Use of Microsoft Excel for Statistical Analyses: An Update — John D. McKenzie, Jr., Babson College

12:05 AM Floor Discussion

  * Invited sessions are groups of presentations submitted together by an "organizer" and competitively chosen by the JSM program committee to include in the conference.
  * Contributed topic sessions are groups of presentations submitted together as well and chosen through a competitive process, although not as competitive as for invited sessions. Below is an example contributed topic session that I organized.

63 * ! Sun, 8/4/2013, 4:00 PM - 5:50 PM CC-512f

Modern Pooled Testing Methods – Topic Contributed Papers
Biometrics Section, Statistical Learning and Data Mining Section
Organizer(s): Christopher R. Bilder, University of Nebraska-Lincoln
Chair(s): Christopher R. Bilder, University of Nebraska-Lincoln

4:05 PM Group Testing for Multiple Infections with Application to the Infertility Prevention Project – **Joshua Tebbs, University of South Carolina**; Christopher S. McMahan, Clemson University; Christopher R. Bilder, University of Nebraska-Lincoln

4:25 PM Dorfman Testing with Correlated Responses – **Elena Bordonali**; Michael G. Hudgens, The University of North Carolina at Chapel Hill; Bahjat Qaqish, UNCCH

4:45 PM Optimal Retesting Configurations for Hierarchical Group Testing – **Michael Black, University of Nebraska Lincoln**; Christopher R. Bilder, University of Nebraska-Lincoln; Joshua Tebbs, University of South Carolina

5:05 PM Bayesian Regression Models for Group Testing Data – **Christopher S. McMahan, Clemson University**; Joshua Tebbs, University of South Carolina; Timothy Hanson, University of South Carolina; Christopher R. Bilder, University of Nebraska-Lincoln

5:25 PM A Semi-Local Likelihood Regression Method for Group Testing Data – Dewei Wang, Clemson University; **Haiming Zhou, University of South Carolina**; Karunarathna B. Kulasekera, University of Louisville

5:45 PM **Floor Discussion**

A key difference between these three types of sessions is the time allotted for each speaker for an oral presentation: 15 minutes for contributed, 20 minutes for contributed topic, and at least 25 minutes for invited. Sessions in total last for 1 hour and 50 minutes.

  - Oral or poster: An oral presentation involves standing behind a lectern to discuss a research topic with the help of a laptop (provided by the conference) and corresponding electronic slides. Below is a small room with an oral presentation (larger rooms are used too):

There are two types of poster presentations: traditional and electronic. The traditional format involves standing next to a large paper or fabric-based poster attached to a 4'×8' board. There is a designated 1 hour and 50 minute

session when a poster presentation is given. During that time, the presenter stands by their poster to explain the research to those individuals who stop by. Below is a poster that I presented in 2019 that won the ASA's Statistical Significance Poster Award.

Electronic posters include both an oral and poster component. These presentations begin with a "speed session," where five-minute oral presentations are given by each speaker in an oral presentation room. Later that day, electronic posters are made available for these same presentations. Speakers stand by their poster for 50 minutes. Below is a picture taken from where my traditional poster was located in 2019.

- Preliminary program - This is a list of all presentations and other activities scheduled during JSM. The program is usually available online by April. Because there may be more than 40 concurrent presentations at any time, it is best to arrive at JSM with an idea of which to attend. This can be done by examining session titles and performing keyword searches in the program prior to JSM.
- Cost - Attending JSM is expensive! For example, my costs lately have been approximately $2,000. Here are suggestions on how to obtain funding and save money:
  - Ask your advisor for funding. If your advisor does not have funding available, the department generally has been able to provide some funding to students if they are presenting research.
  - UNL ARD's Larrick/Whitmore Graduate Student Travel Grant[1]
  - Work with the Statistics Graduate Student Association to obtain funding from ASUN Student Government

[1] http://ard.unl.edu/funding-students/larrickwhitmore-graduate-student-travel-grants

  - Many ASA sections sponsor student paper competitions. For example, the Biometrics Section sponsors the David P. Byar Young Investigators Award, with $2,000 awarded to the winner and separate $1,000 awards given to authors of other outstanding papers.
  - Funding is available for TAs funded by a GAANN grant
  - Share a hotel room
  - Reduce your stay at JSM by one night. The Thursday of JSM is usually lightly attended.
- Important dates
  - Title/abstract submission - Early February deadline
  - Conference hotel reservations - Begins in early May; expect to pay > $200 per night
  - Abstract editing - Early April
  - Preliminary program - April
  - Proof of progress with research (provide a draft of slides or a paper) - mid-May deadline
  - Early registration - Early June deadline; students receive a significantly discounted rate

At JSM

JSM sessions begin on a Sunday afternoon, although some continuing education courses start on the previous day. Business casual clothing is the most prevalent attire, but some attendees wear suits and others wear T-shirts and shorts. Below is a description of important parts to the conference:

- Arrival: When you arrive at JSM, go to the registration counter at the convention center. Present your name badge, which is mailed to all pre-registered attendees, to obtain a conference bag which contains information about the conference

(this includes as a "Quick Guide" that has a convention center map). Note that some meetings and other activities will be at conference hotels rather than the convention center.

- Sunday welcomes:
  - JSM First-Time Attendee Orientation and Reception - This reception is held early in the afternoon. Docents are present (identified with a special ribbon on their name badge) to answer any questions that you may have about the meetings. These docents will be available throughout the conference as well.
  - Opening Mixer - This is held during the evening in the exhibit hall with drinks and hors d'oeuvres served.
- ASA Awards Celebration and Editor Appreciation session: On Sunday between the reception and the mixer, this session is held. Many first-time attendees are honored during it due to being awarded a scholarship or winning a student-paper competition.

- Social media: The JSM app contains all the information found in the program book and more. Up-to-date news about JSM is posted by the ASA through its Twitter @AmstatNews account. Attendees at JSM can use #JSMyear (replace "year" with actual year!) to tag JSM-related posts.
- Sessions:
  - Many of the research presentations are difficult to understand completely! My goal is to have 1 to 2 presentations from a session in which I learn something relevant to my teaching or research interests.
  - There is variability in the quality of the sessions. Generally, the quality ranges as follows

    invited > topic contributed > contributed

    However, please note that invited sessions can be very poor and some contributed presentations within a session can be quite good.
  - ASA Section on Statistical Education sponsors sessions that are often the easiest to understand. Many of these sessions share innovative ideas about how to teach particular topics.

- Introductory overview lectures are another type of session that has easier-to-understand topics. Recent lectures have included introductions to big data, bioinformatics, and complex survey sampling.
- There are many continuing education courses and workshops available for an additional large fee. To attend a course for free, one can volunteer prior to JSM to be a monitor. Monitors perform duties such as distributing and picking up materials during the course. As an added benefit, monitors can attend one additional course for free without any duties. Those who are interested should contact Rick Peterson (Continuing Education & Chapters and Sections Manager) at rick@amstat.org.

  Below is a title/abstract for a course that I have taught:

CE_09C **Sun, 8/9/2015, 8:30 AM - 5:00 PM** **S-Grand Ballroom B**

Analysis of Categorical Data (ADDED FEE) — Professional Development Continuing Education Course

ASA , Biometrics Section

We live in a categorical world! From a positive or negative disease diagnosis to choosing all items that apply in a survey, outcomes are frequently organized into categories so people can more easily make sense of them. In this course, participants will learn how to analyze the most common types of categorical data. The course is divided into four main sections. The first three sections are organized by response type: 1) binary/binomial, 2) multicategory, and 3) count. Within each section, we will examine how to estimate and interpret appropriate models while giving practical advice on their use. The fourth section applies model selection and evaluation methods to those models discussed in the first three. Focus will be on variable selection, evaluation of model fit, and solutions to overdispersion. The ideal background for participants is experience with multiple linear regression and the application of likelihood-based methods (particularly Wald and likelihood-ratio methods). All computations will be performed using R. Familiarity with the basics of R, including object types and the use of functions, is recommended. In addition to handouts and R programs to perform every computation, a recording of the course will be available to participants after JSM.

Instructor(s): Christopher Bilder, University of Nebraska - Lincoln, Thomas Loughin, Simon Fraser University

- Featured presentations at JSM are usually scheduled for late afternoon on Monday through Wednesday and few, if any, other research presentations will be scheduled at this time. These presentations are often in very large conference ballrooms:

- The ASA presidential address is given on Tuesday evening and followed by award presentations and an introduction of the new ASA fellows. The fellows introduction is especially interesting because these individuals are recognized for their contributions to the statistics profession and only about 60 ASA members (<0.33% of all members) are recognized each year. Below are the fellows from 2016 standing on risers at the conclusion of the ceremony.

- Exhibit hall

  * More than 90 companies and organizations exhibit their products and services. Some exhibitors also use their booths to recruit for new employees. At the booths, exhibitors tend to give away many free items, such as candy, pens, and other "junk". All the major statistics textbook publishers and software companies are there. Textbook publishers usually offer a discount on their books during JSM and often for a short time after.

  * Charging stations
  * Tables that can be used for meetings
  * Poster presentations

- The JSM Career Service provides a way for job seekers and employers to meet. Pre-registration is required, and the fee is discounted if you register before mid-July. The service works by providing an online message center for job seekers and employers to indicate their interest in each other. Once a common interest is established, an interview can be arranged for during the meetings. There are typically more than 75 employers present.
- The ASA Store provides statistics-themed t-shirts and other items.

- Round-table discussions during breakfast or lunch provide a setting for individuals to discuss a topic of interest (for an additional fee)

After JSM

The first thing I do after JSM is prepare a short review of my activities. Using notes I took during sessions, I summarize items from presentations that I want to examine further. I also summarize meetings that I had with individuals about research or other important topics. Much of this review process starts at the airport while waiting for my return flight.

JSM presenters may submit a corresponding paper to be published in the conference proceedings. Presenters are encouraged to have others examine their paper before submission, but they are not formally peer-reviewed as done for a journal. The proceedings are published online around November. Authors retain the right to publish their research later in a peer-reviewed journal.

Below is part of a proceedings paper that I wrote corresponding to my earlier contributed presentation.

Section on Statistical Education – JSM 2008

Tablet PC Applications in Statistics Education, Part I

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[2]Department of Mathematics and Statistics, Winona State University, cmalone@winona.edu

Abstract
This paper presents ways to use Tablet PCs for statistics education when the instructor is primarily the only one with a Tablet PC. Basic applications of their use for lectures and grading are discussed. More advanced applications are given including their use in capturing classroom content when paired with recording software and transmitting classroom content through web conferencing software.

Key Words: Class capture; Computer; OneNote; Podcast; PowerPoint; Word

1. Introduction

Chalk and slate. Pencil and paper. These items have been the traditional tools used for the delivery and reception of information in a classroom for a long time. Over the years, there have been a number of delivery advances, including overhead projectors, visual presenters, and data projectors connected to laptops. Recent advances for reception include students typing notes directly on laptops in the classroom. Unfortunately, there are still a number of drawbacks with using these tools. For example, PowerPoint presentations used to deliver lectures are set in advance before class often resulting in static lectures and preventing modifications to respond to student needs. Instructors may use chalk and slate to augment this delivery method, but chalkboards frequently are hidden behind projection screens that are used for the presentation; thus, making difficult the simultaneous use of the chalkboard and presentation. Also, students who use pencil and paper for taking notes in class can not insert text easily between previously written lines and can not automatically search their notes like how one can with computer-based documents. Typing notes on a laptop removes these issues, but results in other problems. For example, it is difficult to type diagrams, arrows, and equations into a document, and type these items quickly during class.

A solution to these problems of delivery and reception is to use a Tablet PC. Tablet PCs were first introduced in 2002. They are like regular laptops, but include a digitizer pen that can interact with the screen in the same way as a mouse. Also, the pen can be used to write on the screen in the same way as how one can use a pencil to write on paper. Therefore, using a Tablet PC to deliver information in a classroom allows instructors to combine the freedom of chalk and slate with computerized presentation content. Using a Tablet PC for the reception of information in a classroom allows students to merge the flexibility of writing with the advantages of computer-based documents.

The two authors here have used Tablet PCs since 2003. Tablet PCs have been slowly catching on elsewhere in

Other conferences

Most conferences have presentations organized in a similar manner as JSM. There are invited and contributed sessions (usually excludes contributed topic) with all contributed presentation submissions accepted. Oral and poster presentation options are available. The variety of other conference activities, like job interviewing and exhibitors, is usually much less than at JSM.

For a thorough list of upcoming conferences, see *AMSTAT News*. Below is a description of regularly held conferences that are commonly attended by statisticians based in the US.

- ENAR Meetings
  - Size: This is largest annual conference in the US other than JSM with more than 1,000 individuals attending.
  - Location: Eastern portion of the US; the exception is that a few have been in Texas in recent years
  - Time frame: Title/abstract submissions for contributed presentations are due in October. The conference is typically held in mid-March with the main portion of the conference beginning on a Sunday morning and concluding on the following Wednesday around noon.
  - Available activities: Short courses, tutorials, and roundtable discussions; a career placement service is available to help job seekers interview with employers
  - Student paper competition: Students can submit a paper for the ENAR Distinguished Student Paper Award. Typically, over 100 papers are submitted and approximately 20 are selected as winning papers. Students receive $650 for travel expenses and a free short course. The paper needs to be of *Biometrics* quality. Paper submissions are due in mid-October.
  - Other comments: These are nicely organized meetings that are held in very nice hotels and use a professional management service. They serve good snacks between sessions! Some statisticians prefer this meeting to JSM because they prefer the "family atmosphere" and think "JSM is too big".

- WNAR Meetings
  - Size: 100-300, but greatly depends on location
  - Location: Western US; sometimes the conference is held in areas much closer to Lincoln (e.g., Colorado) than the ENAR meetings
  - Time frame: June
  - Available activities: Same as ENAR, but on a much smaller scale and excludes a career placement service
  - Student paper competition: Yes, but the student needs to be part of the WNAR region
  - Other comments: These meetings are usually held on college campuses so the facilities are not necessarily as good as desired (e.g., it's like having a conference in the UNL East Campus Union). The conference facilities used at the University of Hawaii from a past WNAR are shown in the background of the picture below :).

- useR! conference
  - Size: 1100+ (sold out in recent years)
  - Location: US in even-numbered years, Europe in odd-numbered years
  - Time frame: June or July
  - Available activities: Presentations and short courses
  - Other comments: This conference is growing in popularity. The cost to attend is low and all short courses are free. Of course, this conference only focuses on R. A few of my students have presented R packages that they have constructed.

- Statistical Society of Canada meetings
  - Size: 300+?
  - Location: Canada; it's closest location to Nebraska is Winnipeg, MB.
  - Time frame: Late May and early June; main portion is Monday through Wednesday with short courses on Sunday
  - Available activities: Presentations and short courses
  - Other comments: These meetings are usually held on college campuses so the facilities are not necessarily as good as desired. Below are pictures from when Brock University in St. Catharines, ON hosted the conference.

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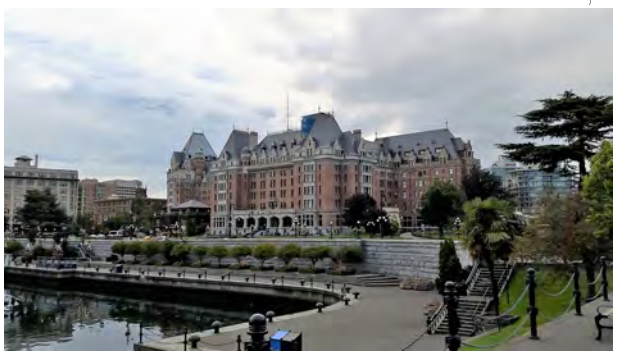
- International Biometric Conference
  - Size: 700-1,200
  - Location: All around the world with it rarely being in the US; it has been to Canada twice in recent years
  - Time frame: July or August (December if in the southern hemisphere) in even-numbered years; main portion is Monday through Friday with short courses on Sunday
  - Available activities: Presentations and short courses
  - Other comments: The conference is held in convention centers. There are no presentations during the Wednesday of the conference to allow for tourist activities! Below is the main conference hotel from the conference in Victoria, BC.



- World Statistics Congress (ISI meetings)
  - Size: 2,500
  - Location: All around the world with it rarely being in the US
  - Time frame: July or August in odd-numbered years; main portion is Monday through Friday; satellite conferences often occur before and/or after the regular conference

  - Available activities: Presentations and short courses
  - Other comments: A proceedings is published. The conference is held in convention centers. Below is the convention center for the conference in Dublin, Ireland.

- United States Conference on Teaching Statistics (USCOTS)
  - Size: 500+?
  - Location: US university campuses
  - Time frame: Late May in odd-numbered years; main portion is Thursday-Saturday with short courses on Tuesday and Wednesday
  - Available activities: Presentations and short courses
  - Other comments: This is may be the second-largest regular gathering of individuals interested in undergraduate teaching (JSM is the largest). During even-numbered years, the electronic Conference on Teaching Statistics (eCOTS) is held online with over 500 participants. Below is a picture of a "breakout session" (like a short workshop) that I gave during at a USCOTS held at Ohio State University.

- More on other conferences!
  - An international conference that some of our faculty have attended recently is the Conference on Computational and Methodological Statistics (`http://www.cmstatistics.org`). Recent versions of this conference had about 1500 attendees. This conference is held in Europe during December every year, where London is the location every other year. According to our faculty, this conference is geared more toward those in academics rather than industry or government.
  - The American Statistical Association recently started a few new conferences:
    * Conference on Statistical Practice held in February of each year – This conference is centered more on professional development with a limited number of contributed poster presentations. Attendance is about 600.
    * Symposium on Data Science & Statistics in June each year – Attendance is about 700.

– Other regularly held conferences held in the US include those organized by the International Indian Statistical Association and the International Chinese Statistical Association.