

JSM2019 CONFERENCE REGISTRATION GUIDE

JOINT STATISTICAL MEETINGS

The largest annual
gathering of
statisticians and
data scientists
in the world!



DENVER, COLORADO

STATISTICS: MAKING AN IMPACT

July 27–August 1, 2019 • Colorado Convention Center

JOIN US!

12 national and international
statistical societies

More than 6,000 attendees
from 50+ countries

1,000+ student attendees

More than 600 technical sessions

75+ employers hiring for more
than 200 positions

80+ exhibitors

40+ continuing education
short courses and workshops

Register today at
www.amstat.org/jsmregistration





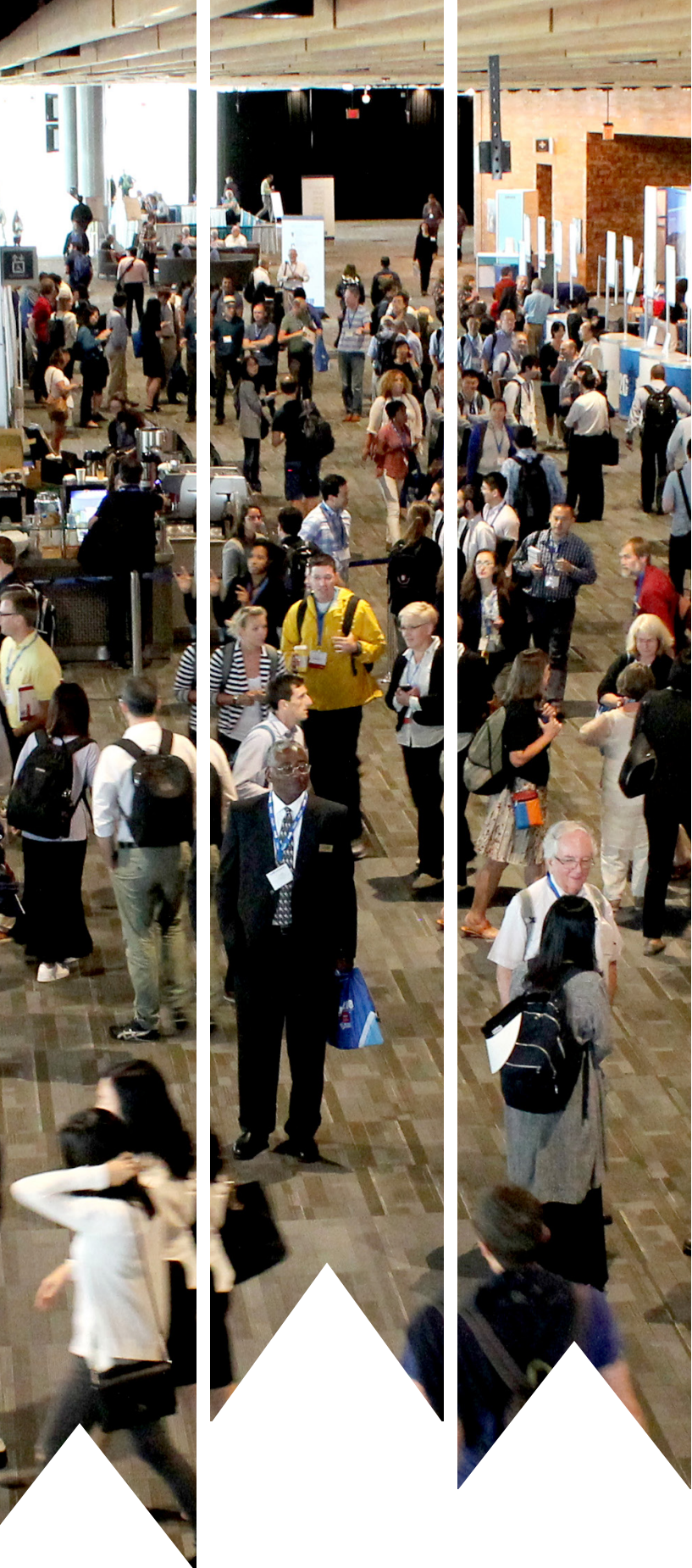
WELCOME

With more than 3,000 individual presentations arranged into approximately **200 invited sessions, 300 contributed sessions, and 900 poster and speed presentations**, the 2019 Joint Statistical Meetings will be one of the largest statistical events in the world. It will also be one of the broadest, with topics ranging from statistical applications in numerous industries to new developments in statistical methodology and theory. Additionally, it will include presentations about some of the newer and expanding boundaries of statistics, such as analytics and data science.

JSM offers a unique opportunity for **statisticians** in **academia, industry, and government** to exchange ideas and explore opportunities for collaboration, as well as for beginning statisticians (including current students) to learn from and interact with senior members of the profession.

◀ The 2019 Joint Statistical Meetings will be held at the Colorado Convention Center, 700 14th St., Denver, CO 80202.

Photo courtesy of VISIT DENVER. Photo by Scott Dressel-Martin



Meet, mingle with, and listen to such well-known statisticians as:

Jim Berger, Duke University

Lynne Billard, University of Georgia

Alicia Carriquiry, Iowa State University

Noel Cressie, University of Wollongong

Mitchell Gail, National Cancer Institute

Nancy Geller, National Institutes of Health

Trevor Hastie, Stanford University

Nick Horton, Amherst College

Xiao-Li Meng, Harvard University

David Morganstein, Westat

Sally Morton, Virginia Tech

Hal Stern, University of California, Irvine

Rob Tibshirani, Stanford University

Hadley Wickham, RStudio

Linda Young, USDA National Agricultural
Statistics Service



BACK BY POPULAR DEMAND!

Explore the “art” in data art in the JSM gallery featuring data artists. Located inside the exhibit hall, this feature will explore the relationship between data and art.

SPECIAL EVENTS

SUNDAY JULY 28

First-Time Attendee Orientation and Reception

12:30 p.m.–2:00 p.m.

JSM Opening Mixer and Invited Poster Session

Sponsored by Eli Lilly & Company
8:30 p.m. –10:30 p.m.

MONDAY JULY 29

JSM Student Mixer

Sponsored by Two Sigma
6:00 p.m.–8:00 p.m.

Korean International Statistical Society Annual Meeting

6:00 p.m.–7:30 p.m.

International Indian Statistical Association General Body Meeting and Reception

6:00 p.m.–8:00 p.m.

IMS Reception Following the IMS Presidential Address and Awards Ceremony

9:30 p.m.–11:00 p.m.

TUESDAY JULY 30

Statistical Society of Canada Reception

5:30 p.m.–7:00 p.m.

JSM Dance Party

9:30 p.m.–Midnight

WEDNESDAY JULY 31

International Chinese Statistical Association Annual Members Meeting

6:00 p.m.–9:00 p.m.



STUDENTS!

BENEFITS AND OPPORTUNITIES

Reduced JSM Registration Fees

Reduced Professional Development Fees

Free Student Mixer

Reduced Career Service Fee

State-of-the-Art Exhibit Hall

Networking with Renowned Statisticians

Technical Presentations

Membership in the ASA for \$25

Student Mixer: Lucy Gao, Jean Feng, Brian Williamson, Arjun Sondhi, and Brendan McVeigh
Photo by Eric Sampson

Speed Sessions

Be sure to catch a speed session! Each will consist of 20 oral presentations of approximately five minutes, followed by a poster session. All poster presentations will include the use of electronic poster boards.



Julia Soualakova from the University of Central Florida participates in the contributed speed session during JSM 2018. Photo by Olivia Brown

SPEED SESSION TOPICS FOR 2019 INCLUDE THE FOLLOWING:



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Data Challenge	Statistical Learning and Data Science	Statistical Methods for GWAS, Genetics, Genomics, and other Omics Studies	Bayesian Methods
Statistics in Sports	New Methods in Statistical Genomics and Genetics	Environment and Health	Methodological Advances in Time Series
Physical Activity/ Sleep Studies	Biometrics and Biostatistics	Governmental Policies	Business and Economics
Nonparametrics	Biopharmaceutical Methods and Application	Population Surveys	Infectious Diseases
Causal Inference and Related Methodology	Improving Survey Data Quality	Biomedical Imaging	Spatial Modeling and Environmental Exposures
Survey Methods	Missing Data and Causal Inference Methods	Physical System Visualization/Learning	Real-World Applications of Survey Methods
Transportation Studies	Environmental Statistics Methods and Applications	Developments in Social Statistics	Statistical Computing: Methods, Implementation, and Application
Socioeconomics		Biostatistical Methods	
General Statistical Methods			

Introductory Overview Lectures

The popular Introductory Overview Lectures (IOLs) will return in 2019, with the following six sessions scheduled:

Forensic Statistics, given by Hal Stern, University of California, Irvine

ABC, given by Christian Robert, Ceremade - Université Paris-Dauphine

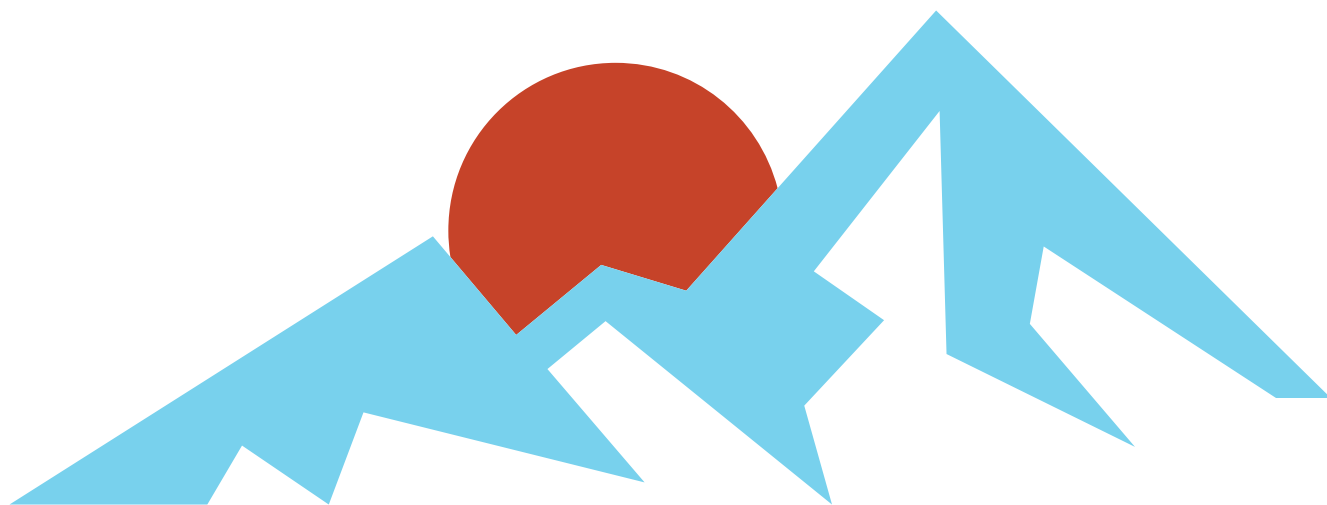
Likelihood Principle, given by Michael Lavine, University of Massachusetts, Amherst

Causal Inference in Modern Statistics, given by Jennifer L. Hill, New York University, and Avi Feller, University of California, Berkeley

Modern Risk Analysis, given by David Banks, SAMSI/Duke University, and Walter W. Piegorsch, University of Arizona

Pedagogy and Technology for Teaching Statistics, given by Beth Chance, Cal Poly San Luis Obispo; Bill Finzer, Concord Consortium; and Hollylynne S. Lee, North Carolina State University

It is impossible to do justice to the breadth and depth of the scientific program by highlighting just a few highly visible sessions. With **42 parallel sessions** taking place during most of the meetings, everyone is guaranteed to find presentations of interest.



► Featured Speakers



**ASA President's
Invited Address**
TERESA A. SULLIVAN,
President Emerita of the
University of Virginia
Monday, July 29, 4:00 p.m.



Deming Lecture
NICHOLAS FISHER,
University of Sydney
"Walking with Giants: A
Research Odyssey"
Tuesday, July 30, 4:00 p.m.



**ASA President's
Address and Awards**
KAREN KAFADAR,
University of Virginia
Tuesday, July 30, 8:00 p.m.



**COPSS Awards and
Fisher Lecture**
PAUL ROSENBAUM,
University of Pennsylvania
"An Observational Study
Used to Illustrate Methodol-
ogy for Such Studies"
Wednesday, July 31, 4:00 p.m.

► Featured Lectures



Medallion Lecture I
YEE WHYE TEH,
University of Oxford
"On Statistical Thinking in
Deep Learning"
Sunday, July 28, 4:00 p.m.



Medallion Lecture II
DAVID DUNSON,
Duke University
"Learning and Exploiting
Low-Dimensional Structure
in High-Dimensional Data"
Monday, July 29, 8:30 a.m.



Medallion Lecture III
HELEN ZHANG,
University of Arizona
"Breaking Curse of Dimen-
sionality in Nonparametrics"
Monday, July 29, 2:00 p.m.



**IMS Presidential
Address and Awards
Ceremony**
XIAO-LI MENG,
Harvard University
"011, 010111, &
011111100100"
Monday, July 29, 8:00 p.m.



FREE PUBLIC LECTURE

MARK GLICKMAN,
Harvard University
Sunday, July 28, 6:00 – 7:00 p.m.

"Tripper: Distinguishing Authorship of
Beatles Songs through Data Science"

Join us as Mark Glickman, senior
lecturer on statistics at Harvard Uni-
versity, discusses his work in statis-
tics and music. To demonstrate his
methods and findings, Glickman
will demonstrate musical con-
structs on his guitar.

Free and open to the public.
No JSM registration
required.



Rietz Lecture
YOAV BENJAMINI,
Tel Aviv University
"Selective Inference: The
Silent Killer of Replicability"
Tuesday, July 30, 10:30 a.m.



Medallion Lecture IV
ELIZAVETA LEVINA,
University of Michigan
"Hierarchical Communities
in Networks: Theory and
Practice"
Wednesday, July 31, 8:30 a.m.



Wald Lectures
TREVOR J. HASTIE,
Stanford University
"Statistical Learning
with Sparsity"

Wald Lecture I
Monday, July 29, 10:30 a.m.

Wald Lecture II
Tuesday, July 30, 2:00 p.m.

Wald Lecture III
Wednesday, July 31, 10:30 a.m.

2019

Exhibitors

Check out the companies already planning to join us in Denver:

84.51°	Prosoft Clinical
American Statistical Association	QI Macros
ASA Store	RStudio
Bayesic Technologies LLC	SAS EDU Practice
Berry Consultants	SAS PUBS
Brightech	SAS R&D
Bureau of Economic Analysis	SIAM
Cytel	Springer Nature
DiDi	StataCorp LLC
Frontline Systems, Inc.	Statgraphics Technologies, Inc.
Green Key Resources	STAT-HAWKERS
Hawkes Learning	Statistical Society of Canada (SSC)
IBM	Taylor & Francis Group
Institute of Mathematical Statistics (IMS)	The Lotus Group LLC
JMP software from SAS	US Census Bureau
JSM 2020 - Philadelphia, PA	University of Florida Department of Biostatistics
K3-Innovations	University of Kansas Department of Biostatistics
Minitab	University of Utah
National Science Foundation	VTex
National Security Agency	Wiley
NCSS	XLSTAT
Netflix	
nQuery	
Penfield Search Partners	
PRA Health Sciences	
Project Euclid	

JSM exhibitors provide the opportunity for you to observe and learn about state-of-the-art products and services related to the statistical industry.

EXPO HOURS

SUNDAY, JULY 28
1:00 p.m. – 6:00 p.m.

OPENING MIXER!
8:30 p.m. – 10:30 p.m.

MONDAY, JULY 29
9:00 a.m. – 5:30 p.m.

TUESDAY, JULY 30
9:00 a.m. – 5:30 p.m.

WEDNESDAY, JULY 31
9:00 a.m. – 2:30 p.m.



REGISTER EARLY

(May 1–31 for discounted rates)
Use the form in the back of this guide or register online at www.amstat.org/jsmregistration.



Spotlight Denver

Want to explore Denver, but don't want to miss any exciting JSM sessions? Luckily, JSM attendees don't need to venture out to get a taste of the city. Check out the schedule and join us for featured events throughout the week in the Spotlight, located in the EXPO.

Sunday, July 28

1:00 P.M. SPOTLIGHT DENVER KICK-OFF

Swing by and kick off JSM with a Colorado chili bar. Sample Colorado Buffalo and Bean Chili, Colorado Pork Green Chili, and White Bean Vegetable Chili—all with an assortment of toppings. Enjoy while it lasts!



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3:30 P.M. SPECIALTY HOUSE-MADE DONUTS

Sweet tooth? Come taste fresh, warm donut holes made to order by pastry chefs along with a selection of signature sauces and toppings. Grab one or two (while supplies last) and mingle with other attendees.

Monday, July 29

9:00 A.M. DENVER INSIDER TIPS

Whether you seek information about activities and food nearby or the variety of options surrounding dynamic Denver; whether you have been to Denver before or need a rundown for your first time in the city, Visit Denver will be here to guide you.

10:00 A.M. JSM COFFEE HOUSE

Refresh with freshly brewed coffee or a selection of Celestial Seasonings teas.



11:00 A.M. – 3:00 P.M. JSM PHOTO BOOTH

Create memories with your friends using fun props.

1:30 P.M. POPCORN BREAK

Sponsored by XLSTAT
Enjoy an afternoon pick-me-up with popcorn!

3:30 P.M. DENVER MICROBREW TASTING

Sponsored by RTI
Stop by to taste a variety of local Denver microbrews such as Colorado Native, Boulder Beer Hazed and Infused, and Colorado Cider (while supplies last).

Tuesday, July 30

10:00 A.M. GET YOUR JSM ENERGY FIX

Come check out this alternative to a coffee break. Power up with fresh smoothies and energy bars.

1:30 P.M. POPCORN BREAK

Enjoy an afternoon pick-me-up with popcorn!

3:30 P.M. SAMPLE DENVER WINES

Sponsored by Biogen
Denver has wine? Who knew? Don't miss this chance to taste area wines (while supplies last).

Wednesday, July 31

10:00 A.M. JSM COFFEE HOUSE

Refresh with a cup of freshly brewed coffee or a selection of Celestial Seasonings teas.





JSM ADD-ONS ►

In addition to the 42 parallel sessions taking place during most of the meetings, there are other activities you can add to your program for a fee: **Professional Development courses** and **workshops, round-table discussions**, and the **Career Service**. In short, we expect you to be very busy. See you in Denver!

Are You a Candidate for the Career Service?

The JSM Career Service is *not* a typical career fair; instead, we offer a recruiting and interviewing center. The JSM Career Service gets your profile and résumé online and in front of top statistical employers from industry, government, and academia.

WANT TO PARTICIPATE?

Add your Career Service applicant registration when you register for JSM.

INTERESTED IN RECRUITING AT JSM?

Join the organizations hiring in Denver. Check out the Recruit tab at www.amstat.org/jmsponsors!

Career Service

Proactively search positions and contact employers of interest to you through our online messaging service. Employers will arrange interviews with you directly. All interviews take place in our onsite Career Service center.

To participate, include Career Service registration when you register for JSM. If you have already registered for JSM, you can easily add Career Service registration through our online system or by filling out the form in the back of this guide.

Career Service Candidate access includes the following:

- The **Online Employer Search**, including hundreds of job postings from top statistical employers
- The online **Career Service Message Center**, which allows you to contact employers of interest in advance, onsite, and even after JSM concludes
- The onsite **JSM Career Service**, where you can interview with employers who have contacted you and set up an interview

FEES

ASA Student Member	\$75
Student Nonmember	\$100
ASA Member	\$150
Nonmember	\$225

PAST EMPLOYERS

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AMGEN[®]

NETFLIX

STATA[®]

sas[®]



Lilly



A.M. Roundtable sessions at JSM 2018 in Vancouver, British Columbia, Canada.
Photo by Olivia Brown

Speakers with Lunch and A.M. and P.M. Roundtable Discussions

SPEAKERS WITH LUNCH

If listening to a fascinating talk while having lunch with friends and colleagues sounds good to you, sign up for one of the speakers with lunch events. These lunches also offer great discussion and networking opportunities.

A.M. AND P.M. ROUNDTABLE DISCUSSIONS

For interesting discussion and a networking event that doesn't bust your wallet, register for an A.M. roundtable discussion, offered Monday through Wednesday from 7:00 a.m. – 8:15 a.m. Tickets are just \$25.

If early morning isn't your style, P.M. roundtables also offer great discussion and networking opportunities and are held Sunday through Wednesday from 12:30 p.m. – 1:50 p.m. Tickets are \$45.

Don't forget to sign up for one (or more) of these opportunities when you fill out the registration form in the back of this guide.

The Speakers with Lunch events and roundtables offer both regular and vegetarian meals. Please be sure to mark your preference on the form when you register.

Tickets for these events will be sold onsite until 2 p.m. the day before the occasion is scheduled, if the events are not already sold out.



REGISTER EARLY

(May 1–31 for discounted rates)
Use the form in the back of this guide or register online at www.amstat.org/jsmregistration.

P.M. ROUNDTABLE DISCUSSION

SUNDAY, JULY 28, 2019 | 12:30 P.M. – 1:50 P.M.

Fee: \$45 (includes meal)



SUNDAY'S LUNCH:

Entrée salad with rolls, butter, and dessert. Choice of coffee, decaffeinated coffee, or hot tea. Chef's choice of vegetarian menu.



REGISTER EARLY

(May 1–31 for discounted rates)
Use the form in the back of this guide or register online at www.amstat.org/jsmregistration.

SUNDAY – SPEAKER WITH LUNCH

SPAIG COMMITTEE



SL01

Considerations in Bayesian Framework Implementation and Impact on Small-Population Clinical Development

Freda Cooner, Amgen

Clinical development has traditionally relied on large sample central limit theory in a frequentist framework. In fact, almost all the operational characteristics health regulatory agencies evaluate in a clinical trial design are the direct results of the framework. Recently, more genetically specific rare diseases have been discovered and more specific treatments have been developed. With an increasing number of regulatory incentive programs, many sponsors have started to invest in such treatments' research. The landscape of drug development has been forced to adapt accordingly with smaller and more specific patient population. Bayesian framework, which has been modernized with technology advancement over the last few decades, has a natural mechanism to leverage external data and built-in simulation infrastructure to handle more complicated models. Hence, it has been brought to the center stage in small-population clinical development. We will use case studies to illustrate how Bayesian statistics can be introduced to evaluate efficacy in a clinical trial. Advantage of the framework and caveats in trial designing will be discussed.

A.M. ROUNDTABLE DISCUSSIONS

MONDAY, JULY 29, 2019 | 7:00 A.M. – 8:15 A.M.

Fee: \$25 each (includes Continental Breakfast)



BIOPHARMACEUTICAL SECTION

ML01

Clinical Trial Design in Alzheimer's Disease: Innovation, Collaboration, and Bayesian Statistics

Barbara Wendelberger,
Berry Consultants, LLC

We will discuss the features and collaborative process of the European Prevention of Alzheimer's Dementia and Dominantly Inherited Alzheimer's Network.

ML02

Role of Bayesian Methods in Active Control Trial

Samiran Ghosh, Wayne
State University

This roundtable will provide a great opportunity to explore active control trials.

GOVERNMENT STATISTICS SECTION

ML03

GSS Mentoring Session

Elizabeth Mannshardt,
US Environmental Protection
Agency

This session will provide an opportunity for an informal "meet and greet" between GSS mentors and mentees, as well as organized mentor/mentee activities.

HEALTH POLICY STATISTICS SECTION

ML04

Leveraging Large Publicly Available Data Resources to Address Critical Questions in Health Services and Health Policy Research

Ruth Etzioni, Fred Hutchinson
Cancer Research Center

Let's talk about the universe of large health data resources for health services and health outcomes research. What is your favorite dataset? How do you deal with its limitations? What methods do you find most useful? And what data do you wish you had at your fingertips?

SECTION ON PHYSICAL AND ENGINEERING SCIENCES

ML05

Balancing Objectives in Multi-Faceted Decision-Making

Lu Lu, University of
South Florida

We will discuss tools and strategies to eliminate noncontending solutions and evaluate trade-offs between objectives and robustness to different priorities.

SECTION ON STATISTICS IN DEFENSE AND NATIONAL SECURITY

ML06

Benefits and Challenges of Statistics/Data Science Careers for Women at National Laboratories

Lisa Bramer, Pacific North-
west National Laboratory

We will discuss working at a national laboratory as a woman in statistics/data science, along with tips for navigating unique situations that can arise when working on predominantly male teams.

SURVEY RESEARCH METHODS SECTION

ML07

Using Behavioral Insights to Increase Response Rates

Victoria A. Velkoff,
US Census Bureau

I will highlight work the Census Bureau has done to integrate lessons learned from behavioral science research to communicate with respondents and motivate their response to Census Bureau surveys.



MONDAY BREAKFAST:

House-made pastries; seasonal fruit; assorted yogurts; and a cup of coffee, tea, or juice



ROUNDTABLES

To view complete roundtable descriptions, visit www.amstat.org/meetings/jsm/2019.

P.M. ROUNDTABLE DISCUSSION

MONDAY, JULY 29, 2019 | 12:30 P.M. – 1:50 P.M.

Fee: \$45 (includes meal)



MONDAY – SPEAKER WITH LUNCH

SECTION ON STATISTICS IN SPORTS



ML08

Imagining the Future of Sports Analytics
Ben Baumer, Smith College

Benjamin S. Baumer is an assistant professor in the statistical and data sciences program at Smith College. He has been a practicing data scientist since 2004, when he became the first full-time statistical analyst for the New York Mets. Ben is a co-author of *The Sabermetric Revolution* and *Modern Data Science with R* and won the 2016 Contemporary Baseball Analysis Award from the Society for American Baseball Research. He earned his PhD in mathematics from the City University of New York in 2012 and is accredited as a professional statistician by the American Statistical Association. His research interests include sports analytics, network science, statistics and data science education, and statistical computing.

BIOPHARMACEUTICAL SECTION

ML09

Prediction Models and Data Visualization in Electronic Health Records

Jagadish Gogate, Johnson & Johnson-Janssen R&D

We will discuss prediction models where electronic patient-level records are collected using digital health technology and associated graphical techniques relevant to visualization of short- and long-term trends and patterns in the underlying data.

GOVERNMENT STATISTICS SECTION

ML10

Combining Probability and Nonprobability Samples for Estimation

Michael Yang, NORC at the University of Chicago

Discussions will focus on successes, challenges, client communications, and future research agenda.

MENTAL HEALTH STATISTICS SECTION

ML11

Big Data Poses Bigger Questions in Mental Health Research

Samprit Banerjee, Cornell University

We will discuss mental health research and “big” data (primarily electronic health records), as well as challenging issues surrounding diagnostic complexity and irregularity of psychiatric disorders.

SECTION FOR STATISTICAL PROGRAMMERS AND ANALYSTS

ML12

Collaboration with Your Data Monitoring Committee Vendor: Anticipating What Is Needed from the Sponsor Statistician

Emily Woolley, Axio Research

This roundtable will focus on how statisticians at pharmaceutical companies can anticipate requests from their statistical data analysis center vendors.



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SECTION ON PHYSICAL AND ENGINEERING SCIENCES

ML13

Advancing the State-of-the-Art for Statistical Tolerance Regions: Addressing Methods and Computing for Researchers and Practitioners
Derek Young,
University of Kentucky

This roundtable will aim to strengthen communication between researchers and practitioners who use statistical tolerance regions to address important practical problems.

SECTION ON STATISTICAL CONSULTING

ML14

Strategies for Leading Successful Collaborative Biostatistics Units in Academic Medicine
Manisha Desai,
Stanford University

Discussion will focus on variation in consultative- vs. collaborative-driven philosophies, funding strategies, career trajectories, development of research agendas, and training the next generation.

SECTION ON STATISTICS IN EPIDEMIOLOGY

ML15

Statistical Leadership in Team Science
Sarah Ratcliffe,
University of Virginia

We will discuss strategies and skills for building strong team collaborations and how to be an effective leader.

SECTION ON STATISTICS IN GENOMICS AND GENETICS

ML16

Omics Data Integration: Why and How?
Ali Shojaie,
University of Washington

We will discuss modes of omics data integration and statistical methods for integrative analysis of multiple types of omics measurements.

SECTION ON TEACHING OF STATISTICS IN THE HEALTH SCIENCES

ML17

Engaging Health Science Students in a Statistics and Epidemiology Curriculum
Todd Coffey, Idaho College of Osteopathic Medicine

We'll talk about how to engage health science students in statistical and epidemiological concepts, make the topics relevant, and determine the concepts they need to know.

SOCIAL STATISTICS SECTION

ML18

Creating a Home for Social Scientists Within ASA
Stephanie Eckman,
RTI International

This roundtable will focus on the Social Statistics Section and how we can help the section raise its profile and better serve social scientists.

SURVEY RESEARCH METHODS SECTION

ML19

Constructing Better Coverage Intervals for Parameters Estimated from a Complex Sample Survey
Phil Kott, RTI International

We will discuss how skewness-adjusted coverage intervals can be computed in common situations and why it is inappropriate to call them "confidence intervals."



MONDAY'S LUNCH:

Entrée salad with rolls, butter, and dessert. Choice of coffee, decaffeinated coffee, or hot tea. Chef's choice of vegetarian menu.

A.M. ROUNDTABLE DISCUSSIONS

TUESDAY, JULY 30, 2019 | 7:00 A.M. – 8:15 A.M.

Fee: \$25 each (includes continental breakfast)



TUESDAY BREAKFAST:

House-made pastries;
seasonal fruit; assorted
yogurts; and a cup of
coffee, tea, or juice

BIOPHARMACEUTICAL SECTION

TL01

*How to Mitigate Bias in
Single-Arm Trials in Oncology
Drug Development?*

Xuejing Wang

We will discuss sources of bias, statistical methods to adjust for bias, when to do the adjusted analyses, and practical considerations to make when conducting single-arm trials.

TL02

*Statistical Considerations in
HIV PrEP Trial Design*

Jiejun Du, Merck & Co., Inc.

We will discuss statistical challenges and considerations in pre-exposure prophylaxis (PrEP) trial design, including sample size determination, choice between noninferiority versus superiority, open label versus blinded study, method to assess futility, and framework of the interim analyses.

GOVERNMENT STATISTICS SECTION

TL03

Synthetic Data as an Alternative to PUMS: Challenges, Successes, and Issues

*Katherine J. Thompson,
US Census Bureau*

This will be an open discussion about synthetic data development methods and metrics, focusing on challenges, successes, innovations, and specific aspects that interest participants.

HEALTH POLICY STATISTICS SECTION

TL04

*Psychometric Models
Making an Impact in
Health Policy*

*Samantha Robinson,
University of Arkansas*

Discussion will focus on how existing psychometric models, DIF and RS detection techniques, and test construction methods can be used and improved in health policy research.



A.M. Roundtable session at
JSM 2018 in Vancouver,
British Columbia, Canada.
Photo by Olivia Brown

SECTION ON STATISTICAL CONSULTING

TL05

How Do We Move Toward an 'Analytical Culture'?

Michiko I. Wolcott, Msight Analytics

We will address what it means to have a culture that embraces data and analytics, critical factors for the development of such a culture, and our roles and responsibilities in the change.

SECTION ON STATISTICS IN GENOMICS AND GENETICS

TL06

Estimation and Inference of Heteroskedasticity Models with Latent Semiparametric Factors for Multivariate Time Series

Liyuu Zhang

We will consider estimation and inference of a flexible heteroskedasticity model for multivariate time series.



A.M. Roundtable session at JSM 2018 in Vancouver, British Columbia, Canada. Photo by Olivia Brown

P.M. ROUNDTABLE DISCUSSIONS

TUESDAY, JULY 30, 2019 | 12:30 P.M. – 1:50 P.M.

Fee: \$45 each (includes meal)



ECONOMIC OUTLOOK LUNCHEON

BUSINESS AND ECONOMIC STATISTICS SECTION



TL07

Productivity and Intangible Capital in a World of Disruptive Technologies

Carol Corrado, The Conference Board

Why has US and global productivity growth slowed? Some say the IT revolution is over, while others believe the latest wave of digital transformation is merely taking its time. Still others think GDP is mismeasured (or irrelevant), causing productivity change to be mis-stated (or unmeasurable). Alongside these arguments are nontechnological forces such as secular stagnation and demographic/structural headwinds. This talk will assess these disparate forces and review in depth (a) how digitization is affecting the US economy and its measurement and (b) how the growth in importance of intangible assets (e.g., R&D, software, databases and AI, brand, firm-specific human capital, and organizational capital) change the picture and prospects for investment and productivity growth in the United States and elsewhere.

BIOPHARMACEUTICAL SECTION

TL08

Lunch with the Incoming 2020 Chair of the ASA Biopharmaceutical Section

Bruce Binkowitz, Shionogi & Co., Ltd.

Let's discuss how I and the section's executive committee can make your section experience more rewarding.

HEALTH POLICY STATISTICS SECTION

TL09

APHA Applied Public Health Statistics Section: Calling for Collaborations

Wenjun Li, University of Massachusetts

We will discuss collaborative opportunities in various settings and career opportunities in applied public health research and practice.

MENTAL HEALTH STATISTICS SECTION

TL10

Statistical Challenges in Assessing and Modeling Marijuana Use and Other Substance Use

Susan Mikulich, University of Colorado AMC

We will identify problems and possible solutions for accurately capturing characteristics of substance use with the goal of improving the characterization of addiction.

SECTION FOR STATISTICAL PROGRAMMERS AND ANALYSTS

TL11

The Social Statistician: Navigating Social Media in 2019

Jessica Lavery, Memorial Sloan Kettering Cancer Center

We will discuss navigating social media outlets to best manage your online professional presence.

SECTION ON RISK ANALYSIS

TL12

The Statistical Footprints in the Path from Real-World Data to Evidence

Qian Li

We will discuss the risk of seemingly promising types of real-world data and strategies to mitigate risk for scientific discovery, evaluation, and validation.

SECTION ON STATISTICAL EDUCATION

TL13

Stats for Data Science

Daniel Kaplan, Macalester College

We will discuss important and substantial ways a statistics course that genuinely engages data science differs from traditional statistics.

SECTION ON STATISTICS IN EPIDEMIOLOGY

TL14

Principles of Electronic Health Record 101 for Statisticians

Debashis Ghosh, University of Colorado Anschutz Medical Campus

This discussion will be geared toward statisticians who are making the transition into electronic health records.

SECTION ON STATISTICS IN IMAGING

TL15

Deep Learning and Reinforcement Learning for Statistical Neuroimaging Data Analysis

Hongtu Zhu, The University of North Carolina at Chapel Hill

We will discuss popular neuroimaging applications of deep learning and reinforcement learning, analyze their strengths, and point out issues for potential improvement.

SECTION ON TEACHING OF STATISTICS IN THE HEALTH SCIENCES

TL16

Strategies for Teaching and Promoting Statistical Literacy in Health Sciences

Terrie Vasilopoulos, University of Florida College of Medicine

We will discuss different approaches to teaching statistical literacy and how we may improve upon them to increase their effectiveness.

SURVEY RESEARCH METHODS SECTION

TL17

Two Americas Now? What Polling Tells Us About Where We Stand

Mark Schulman, SSRS Research

We will discuss recent polling, the 2018 election results, and electoral history to provide a portrait of where we stand.



TUESDAY'S LUNCH:

Entrée salad with rolls, butter, and dessert. Choice of coffee, decaffeinated coffee, or hot tea. Chef's choice of vegetarian menu.

A.M. ROUNDTABLE DISCUSSIONS

WEDNESDAY, JULY 31, 2019 | 7:00 A.M. – 8:15 A.M.

Fee: \$25 each (includes Continental Breakfast)



WEDNESDAY BREAKFAST:

House-made pastries; seasonal fruit; assorted yogurts; and a cup of coffee, tea, or juice

BIOPHARMACEUTICAL SECTION

WL01

Information Borrowing in Pediatric and Small Population Drug Development

Ziliang Li, Vertex Pharmaceuticals

We will review case studies and share up-to-date statistical methodologies and good practice.

WL02

Success Recipe for a CRO Biostatistician: Building a Collaborative Environment
Sourav Santra, Cytel

We will discuss case studies and share experiences of successful (and not so successful) partnerships between the CRO and the sponsor biostatisticians.

HEALTH POLICY STATISTICS SECTION

WL03

Electronic Health Data Quality Impacts on Policy-Relevant Research

Lisa M. Lix, University of Manitoba

We will discuss methods to assess the accuracy, completeness, and comparability of electronic health data; new opportunities; and best practices for describing and documenting quality of electronic health databases.



P.M. Roundtable session at JSM 2018 in Vancouver, British Columbia, Canada.
Photo by Olivia Brown

SECTION ON BAYESIAN STATISTICAL SCIENCE

WL04

Mixture Prior for Sparse Signals with Dependent Covariance Structure

Ling Wang, Michigan State University

We will discuss an estimation method for the normal mean problem that can adapt to the sparsity of the signals and take correlation among the signals into consideration.

SECTION ON STATISTICAL EDUCATION

WL05

Reforming the Teaching and Conception of Quantitative Methods in Applied Research Using Evidence-Based Teaching
Brian Sloboda, University of Phoenix

We will discuss the kinds of quantitative evidence a researcher should seek to feel confident and what a quantitative methods course should look like.

SURVEY RESEARCH METHODS SECTION

WL06

Planning and Developing Methods for the Proliferation of Nonprobability Data Sources

Kennon Copeland, NORC at the University of Chicago

We will discuss the current state of, examples of, and possible direction of the trend toward greater use of nonprobability survey data, administrative data, and organic data.

ROUNDTABLES

To view complete roundtable descriptions, visit www.amstat.org/meetings/jsm/2019.



A.M. Roundtable session at JSM 2018 in Vancouver, British Columbia, Canada.
Photo by Olivia Brown

P.M. ROUNDTABLE DISCUSSIONS

WEDNESDAY, JULY 31, 2019 | 12:30 P.M. – 1:50 P.M.

Fee: \$45 each (includes meal)



WEDNESDAY – SPEAKER WITH LUNCH

HEALTH POLICY STATISTICS SECTION



WL07

The Rise of Patient-Oriented Research: What Implications for Health Services and Policy Research?
Stirling Bryan

Stirling Bryan will provide an overview of Canada's Strategy for Patient-Oriented Research and parallel developments in other jurisdictions, including the work of the Patient-Centered Outcomes Research Institute in the United States. Drawing on patient-oriented research case studies, he will reflect upon the opportunities offered by this direction and the challenges posed for health policy research teams.

HEALTH POLICY STATISTICS SECTION

WL09

Collecting Patient-Reported Outcomes in Clinical Registries
Olawale Fatai Ayilara,
University of Manitoba

We will discuss strategies to successfully collect patient-reported outcomes in clinical settings and examine state-of-the-art analytic approaches to address missing data in clinical registries.

BIOPHARMACEUTICAL SECTION

WL08

Statistical and Regulatory Issues in Combining Potency Estimates from Multiple Bioassay Runs

Areti Manola, Janssen R&D

Come share your experiences in applying methods of combining potency estimates and assessing the relative pros and cons of the methods from a statistical and regulatory perspective.

WL10

Mixture Wait-Time Models
Jimmy Efird, Cooperative
Studies Program
Epidemiology (VA)

We will discuss the mixture of two exponentiated Weibull distributions to obtain the probability that a patient will need to wait more than (z) minutes from arrival at the post-anaesthesia care unit until completion of surgery.

MENTAL HEALTH STATISTICS SECTION

WL11

Stepping Up to the Stepped-Wedge Design: The What, Why, and How

Donna Spiegelman, Yale School of Public Health

We will discuss the pros and cons of a stepped-wedge design versus a cluster randomized trial.

SECTION ON BAYESIAN STATISTICAL SCIENCE

WL12

Modern Bayesian Software: Current Capability and Usage

Fang Chen, SAS Institute

We will consider the full range of general Bayesian software, from open-source programs such as BUGS, JAGS, Stan, and NIMBLE to commercial software packages from SAS and Stata.

SECTION ON STATISTICAL COMPUTING

WL13

Wearables, Digital Medicine, and Data Science

Dandan Wang, University of Macau

We will discuss what digital medicine is, emerging wearables, and related data science.

SECTION ON STATISTICS IN EPIDEMIOLOGY

WL14

Building an Academic Online Presence

Sherri Rose, Harvard Medical School

We will discuss general considerations for creating and growing an academic online presence.

SECTION ON TEACHING OF STATISTICS IN THE HEALTH SCIENCES

WL15

Data Ethics for Health Sciences

Travis Loux, Saint Louis University

We will discuss approaches for teaching students in biostatistics and the health sciences so they are prepared for ethical data issues in an increasingly data-aware society.

SURVEY RESEARCH METHODS SECTION

WL16

What Do We Know About the Value of High-Quality Statistical Information? How Can We Learn More?

John L. Eltinge, US Census Bureau

Participants will be encouraged to discuss specific statistical information products for which they need to explore practical connections between data quality measures and stakeholder value.



WEDNESDAY'S LUNCH:

Entrée salad with rolls, butter, and dessert. Choice of coffee, decaffeinated coffee, or hot tea. Chef's choice of vegetarian menu.



ROUNDTABLES

To view complete roundtable descriptions, visit www.amstat.org/meetings/jsm/2019.

PROFESSIONAL DEVELOPMENT



Professional Development (PD) is a fundamental component of the professional life of statisticians, increasing the value of their contributions to society. It is the process of improving and broadening the knowledge, skill, and personal qualities needed to be successful in the practice of statistics.

To complement the ASA's current continuing education program, a professional skills development program of courses, workshops, and other training has been developed to meet the needs of members under the ASA Professional Development umbrella.

Continuing education offerings consist of courses and computer technology workshops in statistical methodology and practice. Courses are offered in two-day, one-day, and half-day formats Saturday

through Tuesday. The ASA provides beverages for mid-morning and mid-afternoon breaks. Computer technology workshops are offered in two-hour intervals on Wednesday.

Professional skills development consists of courses, workshops, and panel discussions about topics such as effective communication, collaboration, leadership, and influence.

REGISTRATION

To participate in Professional Development offerings, you must register for JSM. Lower rates are given to those adding courses and workshops to their registration from May 1 to July 1. After July 1, late registration rates apply. Registration depends on seat availability and is handled on a first-come, first-served basis.

COURSE PARTICIPATION CERTIFICATES

The ASA provides course participation certificates upon request to those who attend the entire course (certificates are not available

for computer technology workshop attendees). Certificates are available to pick up from the course monitor at the conclusion of the course.

EXCELLENCE-IN-CE AWARD

Courses that exceed expectations in quality, content, and presentation are recognized with the Excellence-in-CE Award from the Advisory Committee on Continuing Education. The course that won the award at JSM 2018 was Garrett Grolemond's introduction to the "Tidyverse" collection of R packages for data science. An updated version of this course is the featured two-day course this year.

DISCOUNT

PStat-, GStat-, and A.Stat-accredited members in good standing with the ASA or SSC will receive a 20% discount on Professional Development courses and workshops.

Saturday, July 27

CE_01C (two-day course) 8:30 a.m. – 5:00 p.m.

*Welcome to the Tidyverse:
Reproducible Data Science
with R**

*Instructor(s): Garrett
Grolemund*

This hands-on workshop will teach you an efficient workflow for doing end-to-end data science with the R programming language.

FEES: M - \$675 (\$920)
NM - \$825 (\$1,120)
S - \$390 (\$530)

CE_02C 8:30 a.m. – 5:00 p.m.

Reproducible Computing

Instructor(s): Colin Rundel

Sponsor: Biometrics Section

This workshop will cover recognizing the problems reproducible research helps address; identifying pain points; the role of documentation, sharing, version control, automation, and

organization; tools; and strategies for scaling tools and methods.

FEES: M - \$390 (\$530)
NM - \$520 (\$700)
S - \$235 (\$320)

CE_03C 8:30 a.m. – 5:00 p.m.

*Big Data, Data Science,
and Deep Learning for
Statisticians*

Instructor(s): Ming Li

Sponsors: Quality and Productivity Section and Section on Physical and Engineering Sciences

Participants will develop a clear understanding of the big data cloud platform, technical skills in data sciences and machine learning, and motivation and use cases of deep learning through hands-on exercises.

FEES: M - \$390 (\$530)
NM - \$520 (\$700)
S - \$235 (\$320)

CE_04C 8:30 a.m. – 5:00 p.m.

Bayesian Thinking: Fundamentals, Computation, and Multilevel Modeling

Instructor(s): Jim Albert

The basic tenets of Bayesian thinking will be introduced, including construction of priors, summarization of the posterior to perform inferences, and the use of prediction distributions for prediction and model checking.

FEES: M - \$390 (\$530)
NM - \$520 (\$700)
S - \$235 (\$320)

CE_05C 8:30 a.m. – 5:00 p.m.

Advanced Topics in Propensity Score Methods

*Instructor(s): Wei Pan and
Haiyan Bai*

This course will build upon the fundamental principle and concept of propensity score methods to tackle in-depth methodological challenges, along with relevant R packages such as hdPS, twang, Zelig, and rbound.

FEES: M - \$390 (\$530)
NM - \$520 (\$700)
S - \$235 (\$320)

M=MEMBER

NM=NONMEMBER

S=STUDENT

(Prices in parentheses are for after July 1)



PROFESSIONAL DEVELOPMENT

To view complete Professional Development course descriptions, visit www.amstat.org/meetings/jsm/2019.

* 2017 and 2018
Excellence-in-CE Award
winner

M=MEMBER

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S=STUDENT

(Prices in parentheses
are for after July 1)

CE_06C

8:30 a.m. – 5:00 p.m.

Bootstrap Learning Python with R

Instructor(s): Michael Kane

This course provides a working knowledge of the Python language, along with its package. Students should have an intermediate-level knowledge of R.

FEES: M - \$390 (\$530)
NM - \$520 (\$700)
S - \$235 (\$320)

CE_07C

8:00 a.m. – 12:00 p.m.

Statistical and Computational Methods for Microbiome and Metagenomics Data Analysis

Instructor(s): Curtis Huttenhower and Hongzhe Lee

Sponsor: Biometrics Section

We will give detailed presentations on the statistical and computational methods for measuring various important features of the microbiome based on 16S rRNA and shotgun metagenomic sequencing data and discuss how these features are used as an outcome of an intervention, mediator of a treatment, and covariate to be controlled for when studying disease/exposure associations.

FEES: M - \$245 (\$335)
NM - \$320 (\$430)
S - \$150 (\$200)

Sponsor: Section on Bayesian Statistical Science

This one-day short course will introduce various adaptive methods for phase I to phase III clinical trials using both frequentist and Bayesian methods. Adaptive designs will be introduced and practical considerations will be illustrated with case studies.

FEES: M - \$390 (\$530)
NM - \$520 (\$700)
S - \$235 (\$320)

CE_09C

8:30 a.m. – 5:00 p.m.

Regression Modeling Strategies

Instructor(s): Frank Harrell

Sponsor: Biometrics Section

This course provides methods for estimating the shape of the relationship between predictors and response by augmenting the design matrix using restricted cubic splines.

FEES: M - \$390 (\$530)
NM - \$520 (\$700)
S - \$235 (\$320)

Sunday,
July 28

CE_01C (two-day course)

8:30 a.m. – 5:00 p.m.

*Welcome to the Tidyverse: Reproducible Data Science with R**

Instructor(s): Garrett Grolemund

CE_08C

8:30 a.m. – 5:00 p.m.

Practical Considerations for Bayesian and Frequentist Adaptive Clinical Trials

*Instructor(s): Peter Müller,
Byron Jones, and Frank Bretz*

* 2017 and 2018
Excellence-in-CE Award
winner



Trevor Butterworth from Sense About Science USA teaches the Professional Development course Scientific Communication: How to Write an Op-Ed at JSM 2018.
Photo by Meg Ruyle

CE_10C

8:30 a.m. – 5:00 p.m.

Teaching Data Science

Instructor(s): Mine Cetinkaya-Rundel

Sponsors: Section on Statistical Computing and Section on Statistical Education

This workshop will equip educators with concrete information about content and infrastructure for painlessly introducing modern computation into a data science and/or statistics curriculum. A basic knowledge of R is assumed and familiarity with Git is preferred.

FEES: M - \$390 (\$530)
NM - \$520 (\$700)
S - \$235 (\$320)

CE_11C

8:30 a.m. – 5:00 p.m.

Statistical Network Analysis and Applications in Biology

Instructor(s): Ali Shojaie and George Michailidis

Sponsor: Section on Statistical Learning and Data Science

This course will provide a practical introduction to statistical network analysis methods for biological application.

FEES: M - \$390 (\$530)
NM - \$520 (\$700)
S - \$235 (\$320)

CE_12C

1:00 p.m. – 5:00 p.m.

Functional Data Analysis for Wearables: Methods and Applications

Instructor(s): Vadim Zipunikov and Jeff Goldsmith

Sponsor: Biometrics Section

We will present an overview of the functional data analysis methods for modeling physical activity data, review their strengths and limitations, and demonstrate their implementation in R packages *refund* and *mgcv*.

FEES: M - \$245 (\$335)
NM - \$320 (\$430)
S - \$150 (\$200)

M=MEMBER

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S=STUDENT

(Prices in parentheses
are for after July 1)

Monday, July 29

CE_13C

8:00 a.m. – 12:00 p.m.

*Artificial Intelligence in
Drug Development:
Analyzing Electronic
Medical Records Using
Deep Learning*

Instructor(s): Qi Tang

I will introduce the concept of artificial intelligence (AI) and review breakthroughs of AI in drug development. Then, I will give a tutorial on deep learning methods and illustrate the utility of deep learning in analyzing electronic medical records to predict patient and clinical trial outcomes for clinical trial optimization.

FEES: M - \$245 (\$335)
NM - \$320 (\$430)
S - \$150 (\$200)

CE_14C

8:30 a.m. – 5:00 p.m.

*Bayesian Time Series
Analysis and Forecasting*

*Instructor(s): Raquel Prado,
Marco Ferreria, and Mike
West*

Sponsor: Section on Bayesian Statistical Science

This short-course covers basic principles and methods of Bayesian dynamic modeling in time series analysis and forecasting, with methodological details of central model classes explored in a range of examples.

FEES: M - \$390 (\$530)
NM - \$520 (\$700)
S - \$235 (\$320)

CE_15C

8:30 a.m. – 5:00 p.m.

*Analysis of Clinical Trials:
Theory and Applications*

*Instructor(s): Devan
Mehrotra, Alex Dmitrienko,
and Jeff Maca*

Sponsor: Biopharmaceutical Section

The course covers seven important topics that commonly face statisticians and research scientists conducting clinical research: stratified trials; longitudinal trials with dropouts; time-to-event trials with small sample sizes; crossover trials; pharmacogenomics studies for personalized medicine; multiple comparisons; and interim decision-making with adaptive designs.

This course was taught at JSM 2005–2018 and

received the Excellence in Continuing Education Award in 2005.

FEES: M - \$390 (\$530)
NM - \$520 (\$700)
S - \$235 (\$320)

CE_16C

8:30 a.m. – 5:00 p.m.

*A First Step into Deep
Learning for Computer
Vision*

*Instructor(s): Brett Wujek and
Sarah Kalacin*

Sponsor: Section on Statistical Learning and Data Science

In this workshop, you will learn the fundamentals of deep learning from the ground up, with a focus on computer vision applications. Familiarity with SAS and/or Python programming and predictive modeling is recommended.

FEES: M - \$390 (\$530)
NM - \$520 (\$700)
S - \$235 (\$320)

CE_17C

8:30 a.m. – 5:00 p.m.

*Essential Bayes:
Paradigm, Techniques,
and Applications*

*Instructor(s): Fang Chen and
Amy Shi*

Sponsor: Section for Statistical Programmers and Analysts

This course reviews the fundamentals of Bayesian methods (e.g., prior distributions, inferences, multilevel modeling), introduces computational techniques (e.g., algorithms, convergence), and emphasizes the practical aspect of performing Bayesian analysis. Attendees should have a background equivalent to an MS in applied statistics.

FEES: M - \$390 (\$530)
NM - \$520 (\$700)
S - \$235 (\$320)

CE_18C

8:30 a.m. – 5:00 p.m.

Categorical Data Analysis

Instructor(s): Alan Agresti and Bernhard Klingenberg

We will survey common methods for analyzing categorical data, including contingency table analysis, logistic regression for binary data, logistic model building, loglinear models, logistic models for multcategory ordinal and nominal responses, and clustered data using generalized estimating equations and random effects.

FEES: M - \$390 (\$530)
NM - \$520 (\$700)
S - \$235 (\$320)

CE_19C

1:00 p.m. – 5:00 p.m.

Futility Analyses in Confirmatory Clinical Trials: Methods and Procedures

Instructor(s): Satrajit Roychoudhury and Paul Gallo

Sponsor: Biopharmaceutical Section

We will describe what futility analyses are, why they are conducted, where and when they should be considered, and how they should be methodologically and operationally performed.

FEES: M - \$245 (\$335)
NM - \$320 (\$430)
S - \$150 (\$200)

Participants listen to Garrett Grolemond of RStudio Inc. teach Master the Tidyverse: An Introduction to R for Data Science at JSM 2018.
Photo by Eric Sampson



M=MEMBER

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S=STUDENT

(Prices in parentheses
are for after July 1)

Tuesday, July 30

CE_20C

8:00 a.m. – 12:00 p.m.

*Making Sense of Noisy
Data with Measurement
Error or/and Missing
Observations*

Instructor(s): Grace Yi

The impact of measurement error and missing data will be demonstrated and different types of measurement error models and missing data mechanisms discussed. Basic statistics knowledge is needed.

FEES: M - \$245 (\$335)
NM - \$320 (\$430)
S - \$150 (\$200)

CE_21C

8:00 a.m. – 12:00 p.m.

*Measuring the Impact of
Nonignorable Missing Data*

*Instructor(s): Daniel Heitjan
and Hui Xie*

Sponsor: Biometrics Section

We will describe a suite of statistical methods for a sensitivity analysis we call the index of local sensitivity to nonignorability and train users

to apply the methods to inform evaluations of the reliability of empirical findings when data are incomplete.

FEES: M - \$245 (\$335)
NM - \$320 (\$430)
S - \$150 (\$200)

CE_22C

8:00 a.m. – 12:00 p.m.

*An Introduction to
Differential Privacy*

*Instructor(s): Robert Ashmead,
Philip Leclerc, and William
Sexton*

The goal of this class is to introduce participants to the motivations, basic principles, interpretations, and analysis of differential privacy and differentially private methods. Some background in mathematical statistics, including Bayesian statistics, and a basic understanding of R will be helpful.

FEES: M - \$245 (\$335)
NM - \$320 (\$430)
S - \$150 (\$200)

CE_23C

8:30 a.m. – 5:00 p.m.

*An Introduction to R for
Nonprogrammers*

*Instructor(s): William
Lamberti*

Participants will be introduced to the basics of R, including basic data manipulation, cleaning, and data visualization. Participants are encouraged to bring their laptops.

FEES: M - \$390 (\$530)
NM - \$520 (\$700)
S - \$235 (\$320)

CE_24C

8:30 a.m. – 5:00 p.m.

*An Introduction to the Joint
Modeling of Longitudinal
and Survival Data, with
Applications in R*

*Instructor(s): Dimitris
Rizopoulos*

Sponsor: Biometrics Section

This course will provide a comprehensive introduction to joint models for longitudinal and time-to-event data. We will explain when these models should be used in practice, which are the key assumptions behind them, and how they can be used to extract relevant information from data.

FEES: M - \$390 (\$530)
NM - \$520 (\$700)
S - \$235 (\$320)

CE_25C**8:30 a.m. – 5:00 p.m.***Design and Analysis of Experiments That Incorporate Simulator Platforms**Instructor(s): Thomas Santner and Brian Williams***Sponsor: Section on Physical and Engineering Sciences**

This course will provide statistical tools to design and analyze experiments using simulators to identify the important factors controlling a given system, determine the manner in which the factors affect the system, and optimize the system.

FEES: M - \$390 (\$530)
 NM - \$520 (\$700)
 S - \$235 (\$320)

CE_27C**1:00 p.m. – 5:00 p.m.***Causal Effect Estimation with Observational Data: Planning and Practice**Instructor(s): Michael Lamm and Clay Thompson***Sponsor: Section for Statistical Programmers and Analysts**

This course introduces commonly used methods for estimating dichotomous treatment effects from observational data and tools for evaluating the conditions under which the effect estimate has a valid causal interpretation.

FEES: M - \$245 (\$335)
 NM - \$320 (\$430)
 S - \$150 (\$200)

CE_28C**1:00 p.m. – 5:00 p.m.***Understanding and Tackling Measurement Error: A Whistle Stop Tour of Modern Practical Methods**Instructor(s): Pamela Shaw and Ruth Keogh***Sponsor: Statistics in Epidemiology Section**

We will discuss the issues raised by measurement error and practical approaches for analysis that mitigate its effects. The emphasis will be on practical application, and worked examples will be used throughout.

FEES: M - \$245 (\$335)
 NM - \$320 (\$430)
 S - \$150 (\$200)

M=MEMBER**NM=NONMEMBER****S=STUDENT***(Prices in parentheses are for after July 1)***CE_26C****1:00 p.m. – 5:00 p.m.***Adaptive Treatment Strategies: An Introduction to Statistical Approaches for Estimation**Instructor(s): Erica Moodie***Sponsor: Biometrics Section**

This course will provide an overview of precision medicine from the statistical perspective.

FEES: M - \$245 (\$335)
 NM - \$320 (\$430)
 S - \$150 (\$200)

Garrett Grolemond, RStudio Inc., presents Master the Tidyverse: An Introduction to R for Data Science.
 Photo by Eric Sampson



COMPUTER TECHNOLOGY WORKSHOPS

Prices in parentheses are for after July 1

Daniel Heitjan of Southern Methodist University presents the Professional Development course Prediction in Event-Based Clinical Trials.
Photo by Olivia Brown

Wednesday, July 31

CE_29T

8:00 a.m. – 9:45 a.m.

Visual Interaction, Statistical Analysis, and Machine Learning to Advance Life Science Research with JMP Software

Instructor(s): Kelci Miclaus and Ruth Hummel

We will demonstrate using the JMP family of products (JMP, JMP Pro, JMP Genomics, and JMP Clinical) to establish pipelines for data quality assessment, exploratory statistical analysis, and machine learning methods for end-to-end analysis with biological data.

FEES: \$60 (\$75)

CE_30T

8:00 a.m. – 9:45 a.m.

Introducing the SAS BGLIMM Procedure for Bayesian Generalized Linear Mixed Models

Instructor(s): Amy Shi

SAS/STAT 15.1 includes PROC BGLIMM, a new high-performance, sampling-based procedure that provides full Bayesian inference for generalized linear

mixed models (GLMMs). This workshop starts with a general discussion of Bayesian GLMM, and then presents the important features of PROC BGLMM.

FEES: \$60 (\$75)

CE_31T

8:00 a.m. – 9:45 a.m.

Causal Inference and Treatment Effects Using Stata

Instructor(s): Charles Lindsey

We will provide an overview of causal inference methods and demonstrate how to implement them in Stata. We will also introduce methods for estimating treatment effects when observational data complications are present and show how to estimate the effect of changing levels of a continuous predictor under these complications.

FEES: \$60 (\$75)

CE_32T

8:00 a.m. – 9:45 a.m.

Interfacing R with Microsoft Excel

Instructor(s): Jean Paul Maalouf and Efthalia Anagnostou

This workshop shows how to make the neural network R function available in an

Excel dialog box and develop a customized R-based dashboard in an Excel sheet. Basic coding skills are required (preferably R).

FEES: \$60 (\$75)

CE_33T

10:00 a.m. – 11:45 a.m.

Flexible, Interactive (Generalized Regression) Modeling with JMP Pro

Instructor(s): Ruth Hummel and Clay Barker

You will learn about generalized regression as a conceptual topic and about how to implement these ideas in JMP Pro during this workshop.

FEES: \$60 (\$75)

CE_34T

10:00 a.m. – 11:45 a.m.

Practical Causal Mediation Analysis with PROC CAUSALMED in SAS/STAT

Instructor(s): Yiu-Fai Yung

This talk introduces the CAUSALMED procedure, new in SAS/STAT 15.1, for estimating causal mediation effects by the regression approach.

FEES: \$60 (\$75)

CE_35T

10:00 a.m. – 11:45 a.m.

Bayesian Multilevel Modeling Using Stata

Instructor(s): Yulia Marchenko

This workshop will provide a brief overview of Bayesian analysis and classical multilevel models and concentrate on multilevel modeling from the Bayesian perspective. It will demonstrate the use of Bayesian multilevel models in various applications and how to fit them using Stata.

FEES: \$60 (\$75)

CE_36T

10:00 a.m. – 11:45 a.m.

Introduction to Deep Learning with IBM Watson Studio

Instructor(s): David Nichols

I will provide an introduction to the theory of traditional neural networks, and then discuss convolutional and recurrent networks and their applications. Participants should be familiar with fundamentals of statistical modeling. They will gain a basic understanding of popular deep learning methods, including possible applications and available tools.

FEES: \$60 (\$75)



Prices in parentheses are for after July 1

CE_37T

1:00 p.m. – 2:45 p.m.

*Multivariate Analysis,
Saddle Point Approximation,
and Other New Exact Tests*

Instructor(s): Ashwini Joshi

We will discuss how StatXact and LogXact can be used in multivariate analysis, saddle point approximation, and other new exact tests.

FEES: \$60 (\$75)

CE_38T

1:00 p.m. – 2:45 p.m.

*Analysis of Restricted Mean
Survival Time Using SAS/
STAT*

Instructor(s): Changbin Guo

SAS/STAT software now includes methods for analyzing the RMST. The RMSTREG procedure directly models the relationship between the RMST and covariates and the RMST option in the LIFETEST procedure estimates the RMST and makes comparisons between groups. This tutorial demonstrates these methods through examples.

FEES: \$60 (\$75)

CE_39T

1:00 p.m. – 2:45 p.m.

*Survey Data Analysis
with Stata*

Instructor(s): Bill Rising

This workshop will cover using Stata for survey data analysis (i.e., data arising from designed samples from a fixed population). Basic statistical knowledge is assumed.

FEES: \$60 (\$75)

CE_40T

1:00 p.m. – 2:45 p.m.

*Teaching and Exploring
Analyses of Non-IID
and/or Non-Normally
Distributed Data with IBM
SPSS Statistics*

*Instructor(s): Vladimir
Shklover and Yingda Jiang*

This workshop aims to present theory and share hands-on experiences with IBM SPSS Statistics to perform appropriate statistical analyses on data with errors that exhibit unequal variances, correlations, and/or non-normal distributions.

FEES: \$60 (\$75)

CE_41T

3:00 p.m. – 4:45 p.m.

*Geospatial Analysis Using
SAS Software*

Instructor(s): Pradeep Mohan

This workshop will show you how to use SAS procedures for geospatial analysis to perform geospatial process modeling. It will also discuss facilities such as diagnostics and tests that enable you to make informed modeling decisions.

FEES: \$60 (\$75)

PROFESSIONAL SKILLS DEVELOPMENT

CE_42P

(spans two days)

Part I:

Saturday, July 27

8:00 a.m. – 12:00 p.m.

Part II:

Sunday, July 28

8:00 a.m. – 12:00 p.m.

Essential Collaboration Skills

Instructor(s): Eric A. Vance and Heather Smith

Participants will learn and practice essential skills that will enable them to improve their collaborations with domain experts and add more value to their projects, customers, and organizations.

FEES: M - \$390 (\$530)
NM - \$520 (\$700)
S - \$235 (\$320)

CE_43P (spans two days)

Part I:

Saturday, July 27

1:00 p.m. – 5:15 p.m.

Part II:

Sunday, July 28

1:00 p.m. – 5:00 p.m.

Preparing Statisticians and Data Scientists for Leadership: How to See the Big Picture and Have More Influence

Instructor(s): Gary Sullivan and Fang Chen

Participants will come away with a plan for developing their own leadership and connect with a network of statisticians who can help them move forward on their leadership journey.

FEES: M - \$390 (\$530)
NM - \$520 (\$700)
S - \$235 (\$320)

CE_44P

Sunday, July 28

10:30 a.m. – 12:30 p.m.

JSM Presentation Skills Workshop

Organizer(s): Brian Wiens

A panel of experienced and award-winning presenters will

share advice about speaking at JSM. Topics will include the following: Engaging the audience, Effective practice techniques, organizing your talk, visual aids, answering audience questions, and speaking in a language other than your native tongue. All presenters are welcome, though first-time speakers at JSM are especially encouraged to attend. Also, anyone who is considering a future JSM presentation, or just wants to hear more about the art of scientific speaking, is welcome.

FREE EVENT

CE_45P

Sunday, July 28

2:00 p.m. – 4:00 p.m.

Career Development Panel: Networking Like a Pro: A Guided Networking Session

Cosponsor: Committee on Career Development

The ASA Committee on Career Development is hosting a guided networking social for students and early-career statisticians to practice in a friendly environment.

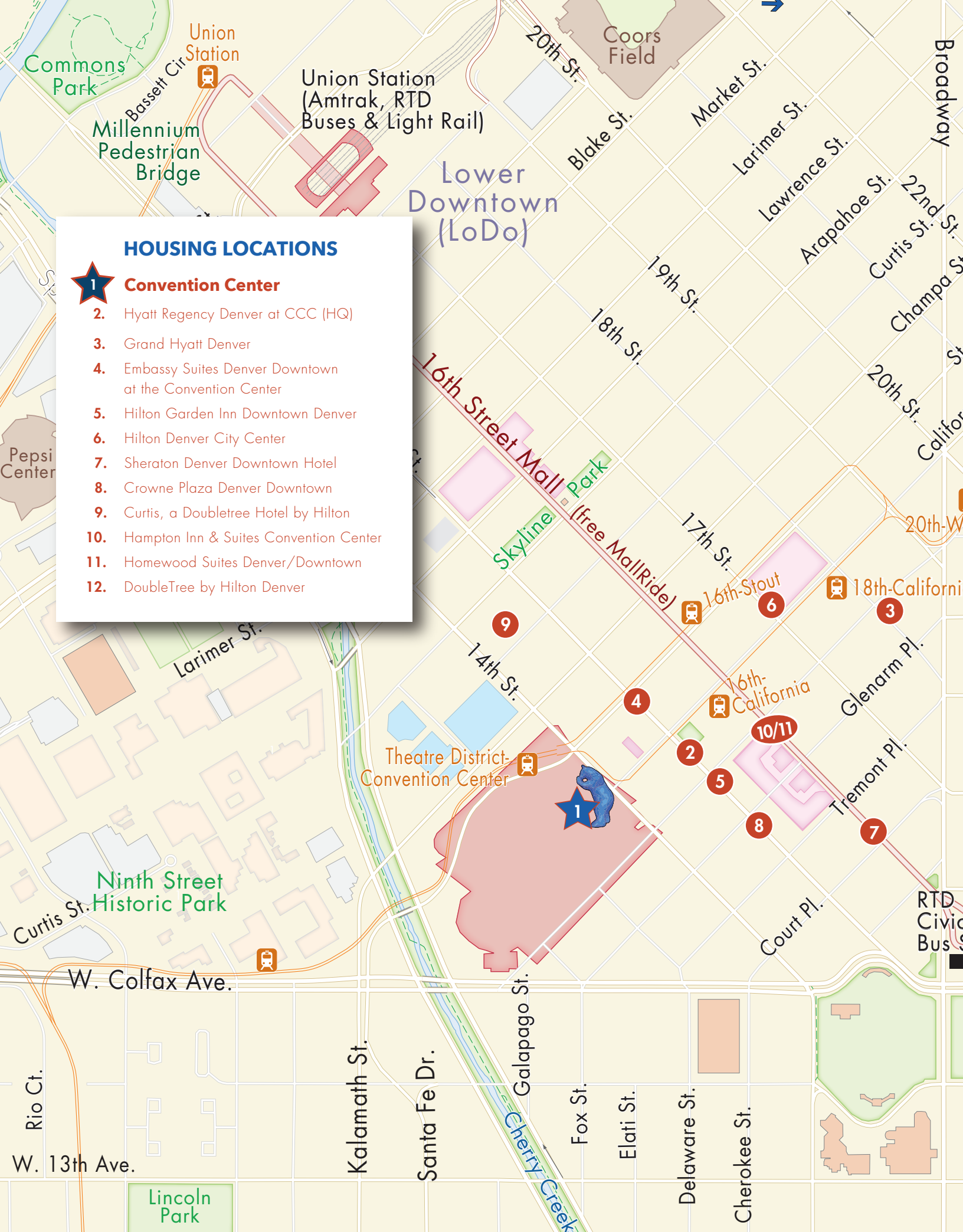
FREE EVENT

HOUSING LOCATIONS



Convention Center

2. Hyatt Regency Denver at CCC (HQ)
3. Grand Hyatt Denver
4. Embassy Suites Denver Downtown at the Convention Center
5. Hilton Garden Inn Downtown Denver
6. Hilton Denver City Center
7. Sheraton Denver Downtown Hotel
8. Crowne Plaza Denver Downtown
9. Curtis, a Doubletree Hotel by Hilton
10. Hampton Inn & Suites Convention Center
11. Homewood Suites Denver/Downtown
12. DoubleTree by Hilton Denver





General Housing Information

All hotel rooms are subject to applicable taxes (currently 15.75%, but subject to change)

Housing deadline is July 3, 2019 (or until sold out)

A valid government ID is required at check-in for all government-rate rooms.

Rates	Single/ Double	Triple/Quad	US Government Rate
Hyatt Regency Denver (HQ)	\$259	\$284/\$309	Yes
Crowne Plaza Denver	\$199	\$209/\$219	Yes
Curtis, a Doubletree Hotel	\$233	\$243/\$253	Yes
Doubletree by Hilton Denver	N/A	N/A	Yes
Embassy Suites Denver Downtown	\$260/\$275	\$290/\$305	Yes
Grand Hyatt Denver	\$249	\$274/\$299	Yes
Hampton Inn & Suites	\$235	\$245/\$255	Yes
Hilton Denver City Center	\$224	\$239	Yes
Hilton Garden Inn	\$240	\$250/\$260	Yes
Homewood Suites	\$245	\$255/\$265	Yes
Sheraton Denver Downtown	\$199	\$214/\$239	Yes

ECONOMY HOUSING INFORMATION

Don't need all the extras? If you just need a bed and don't mind sharing a room, there are a few hostels nearby. There is no group block for these options. Please research your options and reserve on your own.

Hostel Fish

1217 20th St., Denver, CO 80202

(303) 954-0962

stay@hostelfish.com

Online Reservations

www.hostelfish.com

Ember Hostel

857 Grant St., Denver, CO 80203

(303) 942-1633

info@emberhostels.com

Online Reservations

www.emberhostels.com

11th Avenue Hostel

1112 Broadway,
Denver, CO 80203

(303) 894-0529

[Reservations@](mailto:Reservations@11thAvenueHostel.com)

11thAvenueHostel.com

Online Reservations

www.11thavenuehostel.com

Three Ways to Register



ONLINE

[www.amstat.org/
jsmregistration](http://www.amstat.org/jsmregistration)



MAIL

JSM Registration
732 North Washington St.
Alexandria, VA 22314-1943



FAX

(703) 684-2037
(Please fax both
sides of form.)

What Can I Do with My Registration?	Conference Registrant	Guest
JSM Quick Guide and Conference Bag	x	
Technical Sessions	x	
Exhibit Hall	x	x
Sunday Opening Mixer	x	x
Tuesday Night Dance Party	x	x
JSM Proceedings (available online in early 2020)	x	
Printed Session Booklet	\$	
Professional Development Offerings	\$	
Roundtables & Speakers with Lunch	\$	
Career Service	\$	

Make sure to read
the Meetings
Conduct Policy at
[www.amstat.org/
jsmregistration](http://www.amstat.org/jsmregistration).

SESSION BOOKLET

JSM registration includes the printed JSM Quick Guide and access to the online program and JSM app. Printed booklets of the schedule of sessions are available for advance purchase by selecting this item with your registration. You will receive a voucher with your conference badge that may be redeemed onsite for the printed booklet. Extra booklets will not be printed, and onsite sales will not be available.

DISCLAIMER AND WAIVER

The American Statistical Association (ASA) intends to take photographs and video of this event for use in ASA news and promotional material in print, electronic, and other media, including the ASA website. By participating in this event, you grant the ASA the right to use any image, photograph, voice, or likeness, without limitation, in its promotional materials and publicity efforts without compensation. All media become the property of the ASA. Media may be displayed, distributed, or used by the ASA for any purpose.

PSTAT®, GSTAT, AND A.STAT. DISCOUNTS ON PROFESSIONAL DEVELOPMENT OFFERINGS

Accredited members in good standing with the ASA or SSC will receive a 20% discount on Professional Development (PD) courses and workshops. To take advantage of this discount when registering by fax or mail, check the appropriate box in the PD section indicating your accreditation and calculate your discount where asked. To take advantage of this discount when registering online, select the registration level that contains "PStat." Your discount will be calculated automatically.

PAYMENT

Payment via credit card, check, or money order must accompany registration. We are unable to accept purchase orders. Make your check or money order payable to American Statistical Association in US funds drawn on a US bank. The ASA Federal ID is 53-0204661.

REGISTRATION CONFIRMATIONS

Registration confirmations will be emailed to all preregistered attendees as soon as the registration and payment are processed. Be sure to provide a valid email address and set your spam-blocking filters to allow emails sent from addresses containing "@amstat.org."

CANCELLATIONS/ SUBSTITUTIONS/ REFUNDS

All cancellations and substitutions must be submitted in writing. Email: jsm@amstat.org; Fax: (703) 684-2037; Mail: JSM Registration, ASA, 732 N. Washington St., Alexandria, VA 22314-1943

Registration fees for participants (speakers/panelists/discussants/chairs/organizers/poster presenters) are nonrefundable. Substitutions may be made at no penalty.

For general registrations and add-on items:

Cancellations received by 5:00 p.m. EDT on May 31, 2019, incur a cancellation fee of 20% of each item canceled.

Cancellations received by 5:00 p.m. EDT on July 19, 2019, incur a cancellation fee of 40% of each item canceled.

Cancellations received after 5:00 p.m. EDT on July 19, 2019, will not be refunded.

JSM 2019 REGISTRATION FORM

Register by fax: (703) 684-2037 or mail: 732 N. Washington St., Alexandria, VA 22314-1943. Registrations are not accepted by telephone or email.

REGISTRATION INFORMATION

Individual ASA ID# (if known): _____

First Name _____ Middle Initial _____ Last/Family Name _____

Badge Name (if different from First Name) _____

Company/Organization _____

Address _____

City _____ State/Province _____ ZIP/Postal Code _____

Country (Non-U.S.) _____

Phone _____ Email _____

In case of emergency, list the name and phone number of the person we should contact (remains confidential).

Emergency Contact's Name _____ Phone _____

Membership(s): (check all that apply)

☐ ASA ☐ CAS ☐ ENAR ☐ ICSA ☐ IISA ☐ IMS ☐ ISBA ☐ ISI ☐ KISS ☐ RSS ☐ SSC ☐ WNAR

CHECK ALL THAT APPLY:

☐ I am a participant (speaker/panelist/discussant/chair/organizer/poster presenter).

☐ I am a first-time JSM attendee.

☐ I have a disability that requires special services (attach a statement of your needs).

We cannot guarantee an accommodation that is not made during early registration or regular registration.

☐ Update my ASA customer information with this contact information.

☐ Exclude my information from contact lists managed by the ASA for use by outside entities, including offers for onsite receptions or activities and booth giveaways.

☐ Exclude my name from the conference attendee roster that will appear on the conference website.

MEETING REGISTRATION FEES

All fees are in US dollars (mark the appropriate box).

	Early May 1–31	Regular June 1–July 1	Late July 2–July 19
Member ♦	<input type="checkbox"/> \$465	<input type="checkbox"/> \$515	<input type="checkbox"/> \$565
New ASA Member ♦♦	<input type="checkbox"/> \$600	<input type="checkbox"/> \$650	<input type="checkbox"/> \$700
Nonmember	<input type="checkbox"/> \$695	<input type="checkbox"/> \$770	<input type="checkbox"/> \$845
Student Member ♦	<input type="checkbox"/> \$130	<input type="checkbox"/> \$130	<input type="checkbox"/> \$130
K–12 Teacher	<input type="checkbox"/> \$80	<input type="checkbox"/> \$80	<input type="checkbox"/> \$80
Senior Member ♦	<input type="checkbox"/> \$210	<input type="checkbox"/> \$210	<input type="checkbox"/> \$210

♦ Must have an active membership in one of the sponsoring societies and indicate it on your registration where asked

♦♦ Includes discounted first-year ASA dues; not available to renewing or recently lapsed members

CREDIT CARD OR CHECK PAYMENT INFORMATION

(NOTE: We are unable to accept purchase orders as payment.)

☐ Check or money order enclosed payable to American Statistical Association (US funds on a US Bank)

Credit Card ☐ Amex ☐ Discover ☐ MasterCard ☐ VISA

Card Number _____ Expiration Date _____ / _____ Security Code _____

Name of Cardholder _____

Cardholder's Signature _____

SOCIAL EVENTS

For STUDENT MEMBER registrants only:

☐ YES! I will attend the Student Mixer on Monday, July 29, at 6:00 p.m.

For PSTAT®/GSTAT:

☐ YES! I will attend the ASA PStat®/GStat Reception on Wednesday, July 31, at 4:00 p.m.

MEETING

REGISTRATION FEE \$ _____

Printed Session

Booklet (\$10) \$ _____

ADD-ONS (see reverse side)

TOTAL Professional \$ _____

Development Cost

TOTAL Roundtable/ \$ _____

Speaker Cost

TOTAL Guest Cost \$ _____

TOTAL Career \$ _____

Service Cost

TOTAL REGISTRATION

+ ADD-ONS \$ _____

See Page 38 for cancellation policy.

PROFESSIONAL DEVELOPMENT
Prices are for May 1–July 1/July 2–19

CONTINUING EDUCATION
COURSES

	Member	Nonmember	Student
Saturday, July 27			
CE_01C	<input type="checkbox"/> \$675/920	<input type="checkbox"/> \$825/1,120	<input type="checkbox"/> \$390/530
CE_02C	<input type="checkbox"/> \$390/530	<input type="checkbox"/> \$520/700	<input type="checkbox"/> \$235/320
CE_03C	<input type="checkbox"/> \$390/530	<input type="checkbox"/> \$520/700	<input type="checkbox"/> \$235/320
CE_04C	<input type="checkbox"/> \$390/530	<input type="checkbox"/> \$520/700	<input type="checkbox"/> \$235/320
CE_05C	<input type="checkbox"/> \$390/530	<input type="checkbox"/> \$520/700	<input type="checkbox"/> \$235/320
CE_06C	<input type="checkbox"/> \$390/530	<input type="checkbox"/> \$520/700	<input type="checkbox"/> \$235/320

Sunday, July 28

CE_07C	<input type="checkbox"/> \$245/335	<input type="checkbox"/> \$320/430	<input type="checkbox"/> \$150/200
CE_08C	<input type="checkbox"/> \$390/530	<input type="checkbox"/> \$520/700	<input type="checkbox"/> \$235/320
CE_09C	<input type="checkbox"/> \$390/530	<input type="checkbox"/> \$520/700	<input type="checkbox"/> \$235/320
CE_10C	<input type="checkbox"/> \$390/530	<input type="checkbox"/> \$520/700	<input type="checkbox"/> \$235/320
CE_11C	<input type="checkbox"/> \$390/530	<input type="checkbox"/> \$520/700	<input type="checkbox"/> \$235/320
CE_12C	<input type="checkbox"/> \$245/335	<input type="checkbox"/> \$320/430	<input type="checkbox"/> \$150/200

Monday, July 29

CE_13C	<input type="checkbox"/> \$245/335	<input type="checkbox"/> \$320/430	<input type="checkbox"/> \$150/200
CE_14C	<input type="checkbox"/> \$390/530	<input type="checkbox"/> \$520/700	<input type="checkbox"/> \$235/320
CE_15C	<input type="checkbox"/> \$390/530	<input type="checkbox"/> \$520/700	<input type="checkbox"/> \$235/320
CE_16C	<input type="checkbox"/> \$390/530	<input type="checkbox"/> \$520/700	<input type="checkbox"/> \$235/320
CE_17C	<input type="checkbox"/> \$390/530	<input type="checkbox"/> \$520/700	<input type="checkbox"/> \$235/320
CE_18C	<input type="checkbox"/> \$390/530	<input type="checkbox"/> \$520/700	<input type="checkbox"/> \$235/320
CE_19C	<input type="checkbox"/> \$245/335	<input type="checkbox"/> \$320/430	<input type="checkbox"/> \$150/200

Tuesday, July 30

CE_20C	<input type="checkbox"/> \$245/335	<input type="checkbox"/> \$320/430	<input type="checkbox"/> \$150/200
CE_21C	<input type="checkbox"/> \$245/335	<input type="checkbox"/> \$320/430	<input type="checkbox"/> \$150/200
CE_22C	<input type="checkbox"/> \$245/335	<input type="checkbox"/> \$320/430	<input type="checkbox"/> \$150/200
CE_23C	<input type="checkbox"/> \$390/530	<input type="checkbox"/> \$520/700	<input type="checkbox"/> \$235/320
CE_24C	<input type="checkbox"/> \$390/530	<input type="checkbox"/> \$520/700	<input type="checkbox"/> \$235/320
CE_25C	<input type="checkbox"/> \$390/530	<input type="checkbox"/> \$520/700	<input type="checkbox"/> \$235/320
CE_26C	<input type="checkbox"/> \$245/335	<input type="checkbox"/> \$320/430	<input type="checkbox"/> \$150/200
CE_27C	<input type="checkbox"/> \$245/335	<input type="checkbox"/> \$320/430	<input type="checkbox"/> \$150/200
CE_28C	<input type="checkbox"/> \$245/335	<input type="checkbox"/> \$320/430	<input type="checkbox"/> \$150/200

TOTAL PROFESSIONAL DEVELOPMENT COST \$_____

CAREER SERVICE

Applicant Options—Includes online access to job postings. To interview onsite, you must register for JSM.

	ASA Member	Nonmember
Student	<input type="checkbox"/> \$75	<input type="checkbox"/> \$100
Nonstudent	<input type="checkbox"/> \$150	<input type="checkbox"/> \$225

**TOTAL CAREER
SERVICE COST** \$_____

COMPUTER TECHNOLOGY
WORKSHOPS
\$60 / 75 EACH

Wednesday, July 31

<input type="checkbox"/> CE_29T	<input type="checkbox"/> CE_30T	<input type="checkbox"/> CE_31T	<input type="checkbox"/> CE_32T
<input type="checkbox"/> CE_33T	<input type="checkbox"/> CE_34T	<input type="checkbox"/> CE_35T	<input type="checkbox"/> CE_36T
<input type="checkbox"/> CE_37T	<input type="checkbox"/> CE_38T	<input type="checkbox"/> CE_39T	<input type="checkbox"/> CE_40T
<input type="checkbox"/> CE_41T			

PROFESSIONAL SKILLS
DEVELOPMENT OFFERINGS

Member	Nonmember	Student
--------	-----------	---------

Saturday, July 27, and Sunday, July 28
(spans two days)

CE_42P	<input type="checkbox"/> \$390/530	<input type="checkbox"/> \$520/700	<input type="checkbox"/> \$235/320
CE_43P	<input type="checkbox"/> \$390/530	<input type="checkbox"/> \$520/700	<input type="checkbox"/> \$235/320

Sunday, July 28

CE_44P	Free event. No registration required.
CE_45P	Free event. No registration required.

Accreditation Discount

I am PStat®, GStat, or A.Stat. accredited by:

☐ ASA ☐ SSC

Accredited members of the ASA or SSC
(PStat®, GStat, A.Stat.) enjoy a 20% discount
on Professional Development offerings.

PROFESSIONAL
DEVELOPMENT SUBTOTAL \$_____

20% PStat®, GStat, or A.Stat. discount \$_____

GUEST BADGES \$75 per guest.

Enter names below. Fee includes Sunday Opening Mixer, Tuesday Night Dance Party, and entrance into exhibit hall. Session attendance is not included.

Guest Name _____

Guest Name _____

Guest Name _____

TOTAL GUEST COST \$_____

ROUNDTABLES

A.M. ROUNDTABLES

\$25 each; includes continental breakfast. Indicate your first and second choices by marking 1 and 2.

Monday July 29	Tuesday July 30	Wednesday July 31
---------------------------	----------------------------	------------------------------

ML01____ TL01____ WL01____

ML02____ TL02____ WL02____

ML03____ TL03____ WL03____

ML04____ TL04____ WL04____

ML05____ TL05____ WL05____

ML06____ TL06____ WL06____

ML07____

P.M. ROUNDTABLES

\$45 each; includes meal. Indicate your first and second choices by marking 1 and 2.

Sunday July 28	Monday July 29	Tuesday July 30	Wednesday July 31
---------------------------	---------------------------	----------------------------	------------------------------

SL01____ ML08____ TL07____ WL07____

ML09____ TL08____ WL08____

ML10____ TL09____ WL09____

ML11____ TL10____ WL10____

ML12____ TL11____ WL11____

ML13____ TL12____ WL12____

ML14____ TL13____ WL13____

ML15____ TL14____ WL14____

ML16____ TL15____ WL15____

ML17____ TL16____ WL16____

ML18____ TL17____

ML19____

MEAL CHOICE: ☐ Regular ☐ Vegetarian

**TOTAL
ROUNDTABLES/
SPEAKER COST** \$_____

REGISTER ONLINE at
www.amstat.org/jsmregistration

**Don't miss your chance to
participate in the
largest gathering of
statisticians and data
scientists held in
North America!**

ATTEND

May 1, 2019 11:00 a.m. ET
Registration and housing open

May 31, 2019
Early registration deadline

July 1, 2019
Regular registration deadline

July 3, 2019
Housing deadline

July 27, 2019–August 1, 2019
2019 Joint Statistical Meetings

Sponsored by:

*American Statistical Association

Casualty Actuarial Society

*International Biometric Society (ENAR and WNAR)

International Chinese Statistical Association

International Indian Statistical Association

*Institute of Mathematical Statistics

International Society for Bayesian Analysis

International Statistical Institute

Korean International Statistical Society

Royal Statistical Society

*Statistical Society of Canada

(*indicates a JSM founding society)

American Statistical Association
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Alexandria, VA 22314-1943 USA

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