

# BCASA NEWSLETTER

**Boston Chapter of the American Statistical Association**

*Proudly serving*

Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont

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## SCHEDULED EVENTS & MEETINGS

|                    |   |                |
|--------------------|---|----------------|
| November 4, 2017   | Fall Social and Mini-Conference at UNH                            | Durham, NH     |
| November 4, 2017   | 22 <sup>nd</sup> Annual Isolated Statisticians Meeting (NEISM)    | Easton, MA     |
| November 8, 2017   | Statistical Webinar Series on Pharmaceutical Applications         | Online webinar |
| November 9, 2017   | Healthy Disruption for Diagnostic Studies through AWA             | Online webinar |
| December 5, 2017   | Undergraduate Teaching Award Lecture                              | Cambridge, MA  |
| January 2018, TBD  | BCASA Annual Winter Potluck Dinner and Party                      | TBD            |
| February 2018, TBD | Mosteller Statistician of the Year Awards Dinner and Lecture      | TBD            |
| April 13-14, 2018  | 2018 New England Statistics Symposium                             | Amherst, MA    |
| April 27, 2018     | Second Annual Pharmaceutical Symposium                            | Cambridge, MA  |
| May 4, 2018        | Symposium in Honor of Herman Chernoff's 95 <sup>th</sup> Birthday | Cambridge, MA  |
| May, 2018, TBD     | BCASA Annual Meeting, Elections, and Presentation                 | TBD            |

Event schedule at the Chapter website:

<http://community.amstat.org/bostonchapter/home>.

Detailed announcements appear later in this newsletter. All events are announced in advance to members on our email list. We are currently planning events for the coming year. If you have suggestions please contact Program Chair Fotios Kokkotos, [fkokkotos@hotmail.com](mailto:fkokkotos@hotmail.com).

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# UPCOMING EVENTS & MEETINGS

## Fall Social and Mini-Conference at the University of New Hampshire

**Date and time:** Saturday November 4, 2017; 9:15 a.m. to 2:00 p.m.

**Location:** DeMeritt Hall, Room 240, University of New Hampshire (UNH), Durham NH

**Co-Sponsors:** Boston Chapter of the ASA and Department of Mathematics & Statistics at UNH

**Local Organizer:** Professor Ernst Linder, UNH

**Parking Information:** The Edgewood Visitor Lot is a for-pay parking area which is a 5-minute walk away from DeMeritt Hall. If you drive to the back of the lot, there is an entrance to the “Faculty Staff Permit Parking “H Lot” (Monday – Friday 7 am – 6 pm) which is available free of charge on weekends. There are several other Faculty/Staff parking lots in the vicinity (“N Lot” and “F Lot” off College Road, “D Lot” off Edgewood Road) which are also available free of charge on weekends. These are marked in yellow on UNH’s parking map:

<https://www.unh.edu/transportation/sites/www.unh.edu.transportation/files/media/PDFs/Parking/map.pdf>

Please read the signs carefully and make sure to park in a “legal” spot.

**Registration:** <http://bcasa2017linder.eventbrite.com>. Registration requested by November 1, 2017

**Cost (including lunch and refreshments):**

- *BCASA Members: \$10*
- *Non-members: \$15*
- *Students free (however, registration is required)*

### **Description:**

Please join us for a Fall Social and mini-conference at the University of New Hampshire in Durham New Hampshire on Saturday November 4. The location will be in beautiful DeMeritt Hall in the center of the UNH campus. This will be an excellent opportunity to meet old and new friends, to get to know fellow statisticians in this region of our chapter, to hear about their latest research, and last, but not least, to enjoy the beautiful Northern New England coastal region and celebrate the season. So please join us, it will be fun!

Doors will be open for sign-in and continental breakfast at 9:15 a.m. The formal part of the rather informal program will begin at 10:00 a.m. and will include the following presentations:

- **Tevfik Aktekin**, University of New Hampshire  
Bayesian analysis of a general class of dynamic multivariate non-Gaussian family of models
- **Zhigang Li**, Dartmouth College  
A multivariate zero-inflated logistic model for human microbiome data
- **Ernst Linder**, University of New Hampshire  
Statistical downscaling of climate model output in the context of stochastic weather generators

- **Philip Ramsey**, University of New Hampshire  
Potential use of weighted Bootstrapping to simulate validation error in small scale experiments where the goal is prediction
- **Mia Stephens**, JMP  
Text Mining with JMP Pro 13: A Case Study
- **Beth Ziniti**, Applied Geosolutions  
Spatial and temporal variability of water quality estimated via remote sensing with case study investigation of cyanobacteria and its relationship to Lou Gehrig's disease in Northern New England

A catered lunch will be served at 12:00 p.m. The meeting will adjourn around 2 p.m. We look forward to seeing you all at UNH!

## **22nd New England Isolated Statisticians Meeting (NEISM22)**

The 22<sup>nd</sup> New England Isolated Statisticians Meeting (NEISM22) will be held on Saturday, November 4, 2017. The meeting will take place at Stonehill College in Easton, Massachusetts. This annual event is a wonderful opportunity for isolated statisticians (usually, but not always, in mathematics departments) to learn and discuss best practices in teaching statistics and to network with fellow faculty.

For the first time, we have to include a modest charge for attending NEISM. Our usual sponsor, the BCASA, has had to reduce the amount they provide in support of the event. The cost is \$20, though Boston Chapter members and first-time attendees receive a \$5 discount.

We firmly believe that NEISM22 will be more than worth the cost. Our keynote speaker is Christine Franklin, the ASA K-12 Ambassador. The tentative agenda for the day includes sessions on visualizing data, on the proper role of computer science in statistics, on innovative ways of presenting statistics, and a lunch-time discussion of ethics in statistics.

To register, go to: <https://neism22.eventbrite.com>.

The NEISM22 Organizing Committee is always interested in hearing from people interested in helping to organize future NEISMs and suggestions for future sites for the event.

If you have any questions or comments, please don't hesitate to contact any one of the NEISM22 Organizing Committee.

Rob Carver ([rcarver@stonehill.edu](mailto:rcarver@stonehill.edu))

Bob Goldman ([robert.goldman@simmons.edu](mailto:robert.goldman@simmons.edu))

John McKenzie ([mckenzie@babson.edu](mailto:mckenzie@babson.edu))

Michael Salé ([msale@stonehill.edu](mailto:msale@stonehill.edu))

## November 8: Fifth Webinar in the Statistical Webinar Series on Pharmaceutical Applications

You are invited to attend the following webinar co-sponsored by Boehringer Ingelheim Pharmaceuticals, Inc. (Biostatistics and Data Sciences Department), the Boston Chapter, and the Connecticut Chapter of the ASA.

### **Title: “Blinded Ongoing Aggregate Safety Evaluation (Blinded-OASE)”**

**Date and Time:** Wednesday November 8, 9-10 a.m. EST

**Speakers:** Greg Ball, Principal Statistician at Merck and William Wang, Executive Director, Merck

**Webinar registration:** Please email the organizers at [medecc.US@boehringer-ingelheim.com](mailto:medecc.US@boehringer-ingelheim.com) with the subject heading “Want to attend webinar by Greg Ball and William Wang”. You will then receive a formal invitation and the skype link with further instructions. Registration is free.

### **Abstract**

In order to identify potential safety issues earlier in the development process, more interest and attention have been paid to Ongoing Aggregate Safety Evaluation (OASE). The FDA IND Safety Reporting Final Rule requires a safety report whenever aggregate analysis indicates that events occur more frequently in the drug treatment group than in a concurrent or historic control group. We have designed Blinded-OASE using a Bayesian method with a dynamic, cross-disciplinary process that allows for continual safety monitoring with blinded data and that is ideal for learning and making decisions. At any time during the study, we can make easily interpretable posterior probability statements about arm-specific rates of specified events using the observed pooled numbers of events and patients (or exposure times). Simulation studies of our approach demonstrate good operating characteristics when some relevant prior information is available. We have evaluated this procedure in a pilot project and are currently working to implement it in several Phase 3 clinical trial programs.

### **Speaker Bios**

**Dr. Greg Ball**’s current research on blinded safety monitoring procedures emerged from his early work at academic medical centers and CROs, developed into his college dissertation and continues to be developed in collaboration with statistical and clinical scientists from several pharmaceutical companies. He is a co-lead for the ASA Safety Monitoring working group, focusing on safety regulations and cross-disciplinary scientific engagement.

**Dr. William Wang** is an executive director, clinical safety Statistics, at Merck. He has supported regulatory filings in multiple therapeutic areas and established the biostatistics Asia Pacific operation. He serves on DIA’s China Regional Advisory Board and Global Community Leadership Council (CLC), chairs an ASA safety monitoring working group, and is a deputy topics-leader in the ICH E17 working group on multiregional clinical trials.

## November 9: Webinar on Healthy Disruption for Diagnostic Studies through Pragmatic Benefit-Risk Evaluation

You are invited to attend the following webinar sponsored by the ASA section on Medical Devices and Diagnostics (MDD). Feel free to forward this invitation to your colleagues or others who may be interested.

**Title:** Healthy Disruption for Diagnostic Studies through Pragmatic Benefit-Risk Evaluation: Average Weighted Accuracy (AWA)

**Presenter:** Scott Evans (Harvard University)

**Date and Time:** Thursday, November 9, 2017, 1:30 p.m. – 2:30 p.m. Eastern time

**Sponsor:** Section on Medical Devices and Diagnostics

**Registration Deadline:** Tuesday, November 7, at 12:00 p.m. Eastern time

**Register:** <https://www.amstat.org/EventDetail?Eventkey=WS201722>

### **Description:**

Standard evaluation of diagnostic studies consists of estimating sensitivity, specificity, positive/negative predictive values and likelihood ratios, and overall accuracy. Although useful, these statistics have limited utility for guiding clinical decision-making and do not convey the impact of clinical application. Sensitivity, specificity, PPV and NPV focus on subpopulations. Accuracy targets the entire population but is insufficient for clinical decision-making since sensitivity and specificity are rarely equally important in practice.

Evaluation of diagnostic utility depends on prevalence and the relative importance of potential errors (false positive vs. false negative).

Benefit-Risk Evaluation of Diagnostics: A Framework (BED-FRAME) is a strategy for pragmatic evaluation of diagnostics. BED-FRAME introduces weighted accuracy and diagnostic yield, addressing 2 key issues: (1) that diagnostic yield depends on prevalence, and (2) that different diagnostic errors carry different clinical consequences, providing a tool for communicating the expected clinical impact of diagnostic application and the expected tradeoffs of diagnostic alternatives.

We propose the average weighted accuracy (AWA) that targets the entire population and allows differential weighing of sensitivity and specificity for the pragmatic design and analyses of diagnostic studies. It accounts for the potential heterogeneity of the prevalence within subpopulations. The pragmatic design and analyses of studies using AWA will be illustrated with two examples. We will discuss the design of a the RADICAL study, a prospective, single-visit multi-site investigation designed to evaluate the performance of a host response-based diagnostic test (TEST) that will categorize acute respiratory tract illness into bacterial, viral, or neither etiologies. We will also discuss the PRIMERS Study that evaluated the performance of four rapid molecular diagnostic (RMD) platforms for discriminating between resistance vs. susceptibility to  $\beta$ -lactam antibiotics.

### **Registration Fees:**

Member of the Section for Medical Devices and Diagnostics (MDD): \$40

ASA Member: \$65

Nonmember: \$85

Each registration is allowed one web connection and one audio connection. Multiple persons are encouraged to view each registered connection (for example, by projecting the webinar in a conference room).

### **Access Information**

Registered persons will be sent an email with the access information to join the webinar and the link to download and print a copy of the presentation slides.

# **Power and Sample Size for Multilevel and Longitudinal Study Designs**

**A three-day Short Course for Researchers**

**Website: [ctsi.ufl.edu/SampleSizeCourse](http://ctsi.ufl.edu/SampleSizeCourse)**

**Date and Time:** November 28-30, 9 a.m. – 5 p.m.

**Location:** Ballard Room at Countway Library (HMS), 10 Shattuck St. Boston, MA 02115

## **OVERVIEW**

The Harvard Catalyst, the Harvard Medical School Office for Diversity Inclusion and Community Partnership and the Disparities Research Unit at the Massachusetts General Hospital are delighted to sponsor and support a three-day power and sample size workshop Tues., Nov. 28 - Thur., Nov. 30 (9 a.m.- 5 p.m.). The short course is offered in cooperation with Margarita Alegría, Ph.D., chief of the Disparities Research Unit at the Massachusetts General Hospital and professor in the departments of medicine and psychiatry at Harvard. The short course, taught by Keith E. Muller, Ph.D., professor in the University of Florida College of Medicine, and Deborah H. Glueck, Ph.D., associate professor in the University of Colorado School of Public Health, will give scientists training for selecting a valid sample size for balanced longitudinal and multilevel study designs with normally distributed outcomes. The workshop is accessible to all, from graduate students to senior researchers. Enrollees must have had introductory statistical training and be comfortable with basic hypothesis testing. For course costs and registration information, please see the website [ctsi.ufl.edu/SampleSizeCourse](http://ctsi.ufl.edu/SampleSizeCourse).

## BCASA Award for Outstanding Undergraduate Teaching of Statistics Dinner and Presentation

**Speaker:** Joe Blitzstein, Professor, Department of Statistics, Harvard University

**Presentation Title:** Storytelling in Statistics

**Date:** Tuesday, December 5, 2017

**Time:** Reception: 5:45 p.m., Dinner: 6:15 p.m., Presentation: 7:00 p.m.

**Location:** Science Center, Room 705, Harvard University, 1 Oxford Street

**Directions, Transportation, and Site Map:**

<http://www.harvard.edu/on-campus/visit-harvard/directions>



**Parking:** Use of public transportation is recommended since we do not offer parking for this event. However, you may be able to find on-street parking. There are also some public garages nearby.

**Cost:** Dinner: \$15 for chapter members; \$20 for non-members; students \$5.

**Presentation:** free.

**Registration:** <http://bcasa2017blitzstein.eventbrite.com>. Registration requested by December 1.

### Abstract:

For thousands of years, humans have shared, enjoyed, and learned from stories. We will share stories about the central role of stories in teaching probability, statistics, and data science. Several kinds of stories will be featured, including mathematical, empirical, and animated.

### Speaker Biography:

Joe Blitzstein is Professor of the Practice in Statistics at Harvard University, where he has taught since 2006, after completing his Ph.D. in Mathematics (with an M.S. in Statistics) from Stanford University, advised by Persi Diaconis. At Harvard, he has taught a wide range of undergraduate and graduate probability and statistics courses, including the popular statistics class Stat 110, which provides a comprehensive introduction to probability as a medium to understand statistics, science, risk, and randomness. It has grown to over 450 students per year at Harvard and over 200,000 subscribers on iTunes U. With Hanspeter Pfister from the Computer Science department, Joe also launched Harvard's first course in data science. His main research interests are in inference and sampling in networks and other complex data structures. Blitzstein is also a chess expert, and serves as faculty adviser to the Harvard Chess Club.

To learn more about Joe, please read: <http://www.thecrimson.com/article/2013/12/11/big-data-joe-blitzstein/>.

Or listen to this: <https://www.youtube.com/watch?v=dzFf3r1yph8>



## **New England Statistics Symposium (NESS) to be held April 13-14, 2018**

The 32nd New England Statistics Symposium will be held on April 13–14, 2018 at the University of Massachusetts in Amherst, MA.

The symposium will be hosted by the Department of Mathematics & Statistics and the Department of Biostatistics & Epidemiology, University of Massachusetts

- Dates: Friday, April 13 – Saturday, April 14
- Location: University of Massachusetts, Amherst
- Contact:
  - Nicholas G. Reich, [nick@schoolph.umass.edu](mailto:nick@schoolph.umass.edu)
  - Anna Liu, [anna@math.umass.edu](mailto:anna@math.umass.edu)

The New England Statistics Symposium is an annual conference that moves throughout the region. In odd-years the conference is held at the University of Connecticut. Short courses, break-out groups, poster sessions and keynote addresses are spread over two days. In recent years there has been a student paper competition and various other sponsored awards. For information about past symposiums, please check <https://nestat.org/history/symposium/>. More details regarding the 2018 symposium will be posted soon.

## **Second Annual Boston Pharma Symposium to be Held on April 27, 2018. Please Save the Date!**

In May of 2017, the Boston Chapter organized a one-day workshop on the "Design and Monitoring of Adaptive Clinical Trials". The workshop was given by Cyrus Mehta and his team at Cytel Inc. and held at Takeda Pharmaceuticals in Cambridge. The workshop gave an overview of recent developments and best practices in clinical trials and included hands-on training for East, the industry standard clinical trial design software tool. The program was of great value to the many participants, as was the opportunity to network with industry colleagues. A decision was made to continue holding similar events on an annual basis in the Boston area.

Building on the success of the 2017 event, the Boston Chapter will hold its second annual pharmaceutical symposium in Cambridge on Friday April 27, 2018. This will be a full-day event hosted by Takeda Pharmaceuticals. Details of the program are still being developed and will be posted along with registration information as they become available.

## **Statistics Symposium to Celebrate the 95<sup>th</sup> Birthday of Herman Chernoff to be Held on Friday May 4, 2018**

Our dear friend and colleague Herman Chernoff became 94 years old on July 1 of this year. Herman has been a regular attendee at Chapter events and served as Co-Chair of our Program Committee over a period of time. His influence as a researcher and teacher extends to areas such as design and sequential analysis, optimization and control, nonparametrics, large sample theory, and statistical graphics. To celebrate his 95<sup>th</sup> birthday in 2018 and to honor his many professional contributions, a symposium will be held in his honor at Harvard University on Friday May 4. The symposium will be co-sponsored by the Harvard Statistics Department, the Boston Chapter of the ASA, and the newly formed New England Statistics Society (NESS), which originates from the New England Statistical Symposium championed by Herman in 1987. The program will include presentations by former students, colleagues, and friends of Herman.

Please mark your calendars for this important and exciting event!

## *Upcoming National Conferences*

### **2018 International Conference on Health Policy Statistics**

The 2018 International Conference on Health Policy Statistics (ICHPS) will be held on January 10-12 in Reston, South Carolina. Throughout the past 20 years, this conference, which is organized by the Health Policy Statistics Section of the American Statistical Association, has played a vital role in the dissemination process of health policy and health services statistics. ICHPS provides a unique forum for discussing research needs and solutions to the methodological challenges in the design of studies and analysis of data for health policy research. The conference is held bi-annually and the 2018 conference will be the 12<sup>th</sup> in the history of ICHPS.

The aim of the conference is to create interfaces between practitioners; methodologists; and health service researchers, health economists, and policy analysts so they can exchange and build on ideas they will disseminate to the broader health policy community.

The theme for the 12th International Conference on Health Policy Statistics is:

Health  
Statistical Science  
Care | Policy | Outcomes

The early registration is now open and will continue through November 30, 2017 at <http://ww2.amstat.org/meetings/ichps/2018/registration.cfm>

## 2018 ASA Conference on Statistical Practice

The 2018 American Statistical Association Conference on Statistical Practice (CSP) will be held on in Portland, Oregon. This conference aims to bring together hundreds of statistical practitioners and data scientists—including data analysts, researchers, and scientists—who engage in the application of statistics to solve real-world problems.

The goal of the conference is to provide participants with opportunities to learn new statistical methodologies and best practices in statistical analysis, design, consulting, and programming. The conference also provides opportunities for attendees to further their career development and strengthen relationships in the statistics community.

CSP 2018 will offer courses, tutorials, a keynote session, concurrent sessions, poster sessions, a closing session, exhibits, and more. The themes of the 2018 conference are:

- Theme 1: Communication, Collaboration, and Career Development
- Theme 2: Data Modeling and Analysis
- Theme 3: Big Data and Data Science
- Theme 4: Software, Programming, and Data Visualization

The intended audience includes those statisticians, data analysts, researchers, and scientists who engage in statistical analysis, design, and consulting as a major component of their jobs. They may teach, engage in research, and perform administrative duties, but their main role is the practice of statistics.

A sizable portion of the audience will have graduate degrees in statistics or a related area. Others will have no statistics degree, but will have mastered their skills through coursework as part of another discipline or self-study.

The early registration is now open and will continue through January 10, 2018. For further details, please see <https://ww2.amstat.org/meetings/csp/2018/registration.cfm>

## **2018 Symposium on Data Science and Statistics Beyond Big Data: Leading the Way**

The 2018 Symposium on Data Science and Statistics (SDSS) will be held on May 16-18 in Reston, VA. The symposium will honor Ed Wegman, who has done seminal work in many areas within the interface of statistics and computing science—as well as data visualization—and has been a driving force in creating the SDSS and its predecessors.

SDSS is a continuation of the Symposium on the Interface of Computing Science and Statistics (“The Interface”). In 1967, a partnership between the Southern California Chapter of the American Statistical Association (ASA) and the Association for Computing Machinery (ACM) culminated in the first of 45 Interface symposia.

The previous symposia brought together computer scientists, statisticians, and mathematicians in addition to both established leaders and rising stars in transdisciplinary research. Illustrious keynote speakers have included Grace Wahba, John Tukey, John Nash, Sir David Cox, Bradley Efron, and Bill Cleveland, while the rich history and quality of the symposia are in large part due to the contributions of past program chairs such as Lynne Billard, David Scott, and Ed Wegman.

The new annual SDSS combines data science and statistical machine learning with the Interface Foundation of North America’s (IFNA’s) historical strengths in computational statistics, computing science, and data visualization. It stands on the shoulders of the above-mentioned giants and many others, and will continue the tradition of excellence by providing an opportunity for researchers and practitioners to share knowledge and establish new collaborations. SDSS is a partnership of the IFNA and ASA. IFNA is responsible for the program, and the ASA is responsible for operations.

Ed Wegman was a driving force behind early Interface symposia, spearheaded efforts to establish IFNA in 1987—which assumed responsibility for planning the symposia and publishing the proceedings—and drove the new partnership and expansion.

For further information about the 2018 conference, please see <http://ww2.amstat.org/meetings/sdss/2018/>.

# ***OTHER NEWS & ANNOUNCEMENTS***

## **Highlights from the 2017 JSM Meetings in Baltimore**

From the October 2017 Amstat News

A program packed with intriguing talks and fun social events in a convention center set up for networking ... how could JSM 2017 be anything less than exceptional?

Held at the Baltimore Convention Center and the Hilton Baltimore, JSM brought more than 6,500 people to the city. Many sessions focused on the JSM 2017 theme, “Statistics: It’s Essential,” on which ASA President Barry Nussbaum also presented his address.

This year’s program included 671 sessions, including the President’s Invited speaker, Jo Craven McGinty of *The Wall Street Journal*; Deming Lecturer, Fritz Scheuren of NORC-University of Chicago; and Fisher Lecturer, Robert E. Kass of Carnegie Mellon University. In addition, the Late-Breaking sessions—“National Governments, Coerced Narratives, Creative Language, and Alternative Facts” and “Hindsight Is 20/20 and for 2020: Lessons from 2016 Elections”—highlighted current issues in our profession.

For those interested in sessions with a broad scope, the introductory overview lectures did not disappoint. Sessions about computer-age statistical inference, data science, network data, and quantile regression proved an excellent place for JSM newcomers to begin.

There were a number of named lectures and memorial sessions, including the following:

- IMS Medallion Lecture I – Edoardo M. Airoldi, Harvard University
- IMS Blackwell Lecture – Martin J. Wainwright, University of California, Berkeley
- IMS Medallion Lecture II – Emery N. Brown, Massachusetts Institute of Technology
- IMS Medallion Lecture III – Subhashis Ghoshal, North Carolina State University
- IMS Medallion Lecture IV – Mark Girolami, Imperial College London
- Wald Lecture – Emmanuel J. Candes, Stanford University
- IMS Medallion Lecture V – Judith N. Rousseau, Université Paris Dauphine
- Memorial Session for Ted Anderson
- Memorial Session for Norman E. Breslow
- Memorial Session for Emanuel Parzen
- Memorial Session for John A. Cornell

Members of the program committee had worked hard to develop these special sessions, along with preparing a diverse program with topics of interest for everyone. They continued the expansion of the speed sessions with a record of 315 speed presentations in 18 sessions. This new format continues to be popular with speakers and attendees, and we look forward to its continued growth.

A webcast of the plenary sessions including the ASA President’s Address, the ASA President’s Invited Address, the ASA Deming Lecture, and the COPSS Awards and Fisher Lecture is available here:

**<http://ww2.amstat.org/meetings/jsm/2017/webcasts/index.cfm>**

## Workshop on R and Rstudio Held on September 9

Our kick-off event for Fall 2017 was a one-day workshop on “Teaching Statistics Using R and RStudio” that was held at College of Holy Cross in Worcester on Saturday September 9. The event was co-sponsored by the Department of Mathematics and Computer Science at Holy Cross and the Boston Chapter of the ASA. The support provided by Holy Cross is gratefully acknowledged.

The Chapter also thanks Professor Nick Horton from Amherst College for teaching the course. Nick is a Professor of Statistics at Amherst College, with methodologic research interests in longitudinal regression modeling and missing data. He has co-authored more than 150 papers in statistical methodology, behavioral science, and health services research, as well as a series of books on statistical computing and data science in R.

The workshop introduced participants to pedagogical approaches that can be used to integrate computing in introductory and applied statistics courses. Professor Horton, who has been using R and RStudio to teach statistics to undergraduates at all levels for the last decade, discussed common workflows in the RStudio environment such as simple data wrangling, data visualization, and statistical inference. His approach captures the "Less Volume, More Creativity" philosophy, which emphasizes the importance of introducing students to statistical programming in an accessible manner through the use of the *Mosaic* R package described at <https://journal.r-project.org/archive/2017/RJ-2017-024/index.html>. The *Mosaic* package provides consistent syntax for creating numerical and graphical summaries of data, allowing students to perform basic analyses without being overwhelmed by voluminous technical content. The workshop was designed to be accessible to those with little or no experience with R and provided participants with examples and resources that they can use in their own teaching.

Many thanks to Nick for a wonderful presentation. Thanks also to Shannon Stock and other volunteers for making it all happen.



## The 2017 New England Symposium on Statistics in Sports (NESSIS) held on September 23

The 2017 New England Symposium on Statistics in Sports (NESSIS) was held on September 23, 2017, at the Harvard University Science Center. The symposium format was a mixture of invited talks, a poster session, and a panel discussion.



NESSIS was established by Mark Glickman and Scott Evans to enhance the communication and collaboration between statisticians and quantitative analysts connected with sports teams, sports media, and universities. The first NESSIS was held in 2007 with 110 attendees primarily from the New England area. Continued enthusiasm inspired NESSIS to be held biannually. The 2017 NESSIS drew a diverse crowd of 245 registrants including attendees from at least seven countries and 33 states.

NESSIS was highlighted by featured talks. First, David Firth of the University of Warwick and the Alan Turing Institute spoke on fair standings in soccer and other round-robin leagues through retrodictive modeling. The second featured talk was a presentation by Stephanie Kovalchik of Tennis Australia on a shot taxonomy in the era of tracking data in professional tennis. Another featured talk was delivered by co-presenters Michael Lopez of Skidmore College and Ben Baumer of Smith College, entitled “How often does the best team win? A unified approach to understanding randomness in North American sport”.

NESSIS also featured a panel discussion “Past, present and future of analytics in the NFL”, consisting of panelists Dennis Lock of the Miami Dolphins, Karim Kassam of the Pittsburgh Steelers, and Sandy Weil of the Los Angeles Rams, and moderator Aaron Schatz of Football Outsiders.

Abstract submissions to NESSIS included statistical applications to baseball, basketball, football, hockey, tennis, golf, soccer, cricket, volleyball, Australian football, and more. Abstracts were critically screened to keep content quality high. Peer-reviewed NESSIS proceedings will be published in two tracks. Methodologically-focused papers were invited for submission to the Journal of Quantitative Analysis in Sports while application-focused papers were invited for submission to the Journal of Sports Analytics. All presenters were invited to submit.

The motivation for a sports statistics symposium is predicated on the need for advanced analytic methods in games and sports. The



application of statistical methods in sports applications is rapidly growing. Sports teams use statistical analyses to evaluate players and game strategies, and sports associations develop ranking and ratings systems of players and teams. The evolution of the application of statistics to sports is enhanced with extensive collaboration and interaction between sports analysts and professional statisticians. Unfortunately, opportunities for this collaboration are still relatively uncommon, as academic statisticians often work in isolation developing statistical methods for sports applications, while sports organizations often have limited access to advanced statistical expertise and cutting edge statistical tools for the analysis of sports data. The main goal of NESSIS is to bridge this gap.

NESSIS was sponsored by the American Statistical Association (ASA), the Statistics in Sports Section of the ASA, the Boston Chapter of ASA, the Harvard University Department of Statistics, ESPN Analytics, DeGruyter, and IOS Press.



(Photo: Panelists at NESSIS)

The NESSIS founders hope that the enthusiasm generated from NESSIS will increase the collaboration between academic statisticians and analysts connected with sports teams and will improve the quality of statistical design and analysis in sports. Future NESSIS events will encourage the development of cutting edge statistical thinking in sports applications and adaptations to evolving data collection technologies. Technical talk videos, presentation slides, photographs, and additional information about the 2017 NESSIS (as well as the 2007, 2009, 2011, 2013, and 2015 NESSIS events) can be found at [www.nessis.org](http://www.nessis.org). Look for NESSIS VI in 2019!

Submitted by *Scott Evans* and *Mark Glickman*

## Short Course on Applied Longitudinal Analysis Held on October 13

Around seventy people attended the short course on Applied Longitudinal Analysis held at Boston University on October 13, 2017. The course was sponsored by the ASA's Council of Chapters Traveling under the Traveling Course program and was organized locally by the Boston Chapter and the BU Student Chapter of the ASA (BUSCASA). The chapter is grateful to the Biostatistics Department at BU for providing space for the course.

The course was taught by Dr. Garrett Fitzmaurice who is Professor of Psychiatry at Harvard Medical School and Professor in the Department of Biostatistics at the Harvard T.H. Chan School of Public Health. He is also Director of the Psychiatric Biostatistics Laboratory at McLean Hospital. The material was drawn from his bestselling textbook, *Applied Longitudinal Analysis*, which he co-authored with colleagues Nan Laird and Jim Ware. The book was published by Wiley in 2004 with the second edition appearing in 2011.

The goal of the course was to provide a broad introduction to statistical methods for analyzing longitudinal data with an emphasis on the practical aspects of the topic. The course began with a review of established methods for longitudinal data analysis when the response of interest is continuous. This included an excellent introduction to linear mixed effects models for continuous responses. Next, it was shown how smoothing and semiparametric regression allows greater flexibility for the form of the relationship between the mean response and covariates. It was demonstrated how the mixed model representation of penalized splines makes this extension straightforward. When the response of interest is categorical (e.g., binary or count data), two main extensions of generalized linear models to longitudinal data have been proposed: "marginal models" and "generalized linear mixed models." While both classes account for the within-subject correlation among the repeated measures, they differ in approach. The instructor highlighted the main distinctions between these two types of models and discussed the types of scientific questions addressed by each. Numerical examples were used for illustration throughout the course.

The Chapter extends its appreciation to Dr. Fitzmaurice for his insightful and well-prepared presentation. The Chapter also thanks the many volunteers who helped to make this event a success.

## StatFest 2018 Calls for Institutional Liaisons

Amherst College will be hosting StatFest 2018 on Saturday, September 22, 2018. StatFest is a one-day event aimed at encouraging undergraduate students from under-represented groups to consider graduate studies and careers in the statistical sciences. Ensuring that the statistics profession reflects the diversity of our society is one of the strategic planning goals of the American Statistical Association.

StatFest includes keynote addresses from noted statisticians that describe how statistics and data science are being used to extract meaning from data. The program also includes interactive panels on statistics careers in industry, government, and academia, along a discussion for students on the graduate student experience (facilitated by graduate students who provide unvarnished and helpful advice). Undergraduates can present posters on quantitative or computational research projects or related work. Multiple opportunities are built into the program to allow participants to meet each other, mingle, interact, and network.

The free conference is an ongoing initiative of the American Statistical Association through its Committee on Minorities in Statistics.

At this point in time, the organizing committee is looking to identify institutional liaisons at colleges and universities in the New England and Mid-Atlantic regions who would help to register and bring students from their institution.

Can you please fill out the short survey at <https://goo.gl/forms/LamUKFuhtHHfbuPR2> (or <http://tinyurl.com/statfestcontact>) with your contact information?

For more information please contact StatFest 2018 organizing committee chair Nicholas Horton ([nhorton@amherst.edu](mailto:nhorton@amherst.edu))

## *Awards and Recognitions*

### **Symposium Honoring Professor Constantine Gatsonis Held at Brown University on October 6, 2017**



A special symposium on *Scientific Inference in the Age of Data Science* was held at Brown University on October 6 to honor the fundamental and singular contributions of Professor Constantine Gatsonis to the development of Biostatistics at Brown University. The program featured talks by Professor Michael Daniels from the University of Florida, Professor Francesca Dominici from the Harvard Chan School of Public Health, and Professor Robert Kass from Carnegie Mellon University. Department Chair Joseph Hogan, Provost Rick Locke, Dean Fox Wetle, and Professor Vince Mor delivered the opening remarks.

In 1995, after being recruited from Harvard, Constantine launched the Center for Statistical Sciences at Brown and set forth a vision for biostatistical research and education at the University. Over the next 22 years, he served as the architect for both PhD and Master's graduate programs in biostatistics and an undergraduate concentration in statistics; oversaw recruitment of highly talented faculty members; and landed substantial external funding for research in a variety of areas critical to statistical science and public health -- most notably in the area of diagnostic screening and imaging for cancer.

Along with four other departments that would comprise the School of Public Health, the Department of Biostatistics was formed in 2011, with Constantine as Founding Chair. The Department has 15 faculty, 16 PhD students, 34 Master's students, and oversees a rapidly expanding Statistics concentration. Biostatistics is one of four core departments in the new Data Science Initiative.

Throughout this remarkable period, Constantine has been an influential leader and has provided generous service in a variety of external leadership roles, including most recently as Chair of the Committee on Applied and Theoretical Statistics at the National Academies of Science.

This symposium was organized to recognize Constantine's remarkable contributions, most particularly as Founding Chair of the Department of Biostatistics. Constantine remains an active member of the department, and is continuing his role as Director of the Center for Statistical Sciences.

## Nicholas Horton Receives the Lagakos Distinguished Alumni Award

Dr. Nicholas Horton was this year's recipient of the annual Lagakos Distinguished Alumni Award from Harvard Chan School of Public Health. The award was presented to Dr. Horton at Harvard on October 19 where he delivered a lecture on "Multivariate thinking and the introductory biostatistics course: preparing students to make sense of a world of observational data". The abstract for his lecture read: "We live in a world of ever expanding found (or what we might call observational) data. To make decisions and disentangle complex relationships in such a world, students need a background in design and confounding. The GAISE College Report enunciated the importance of multivariate thinking as a way to move beyond bivariate thinking. But how do such learning outcomes compete with other aspects of statistics knowledge (e.g., inference and p-values) in introductory courses that are already overfull. In this talk I will offer some reflections and guidance about how we might move forward, with specific implications for introductory biostatistics courses."

Dr. Horton graduated from the Department of Biostatistics of Harvard Chan School of Public Health in 1999 and is currently a Professor of Statistics at Amherst College. He has demonstrated leadership and service to the profession and has distinguished himself through his contributions to statistical methodology and computing, and his commitment to teaching and statistical education. He is an elected fellow of the ASA and has received numerous other awards because of his contributions to the profession. Nick is also a member of the BCASA Planning Committee and has served as chapter representative to ASA's Council of Chapters. Congratulations to Nick!

**About the Award:** The Annual Lagakos Distinguished Alumni Award has been established in memory of Dr. Stephen Lagakos, a faculty member and former chair of the Department of Biostatistics who passed away in a tragic automobile accident in 2009. Professor Lagakos was a leader in the Department, the School of Public Health, and more broadly, in the international community of quantitative biomedical researchers. Steve's qualities of commitment, passion, intellectual brilliance, and personal generosity had a direct personal impact on our lives; and his contributions to biostatistics and to AIDS research were fundamental. This award serves to honor Steve's distinguished career, and to recognize Department alumni whose research in statistical theory and application, leadership in biomedical research, and commitment to teaching have had a major impact on the theory and practice of statistical science. The award will be open to all who have an earned degree through the department, regardless of length of time since graduation or type of degree. The award recipient will be invited to the school to deliver a lecture on their career and life beyond the Department.

Nominations are welcome for the next award, to be given in Fall 2018. Please send nominations via email or by mail to:

Lagakos Alumni Award Committee  
Harvard T. H. Chan School of Public Health  
Department of Biostatistics  
Building 2, 4th Floor  
655 Huntington Avenue  
Boston, MA 02115



## **Sherri Rose of Harvard Receives NIH Director's New Innovator Award**

Harvard Medical School Associate Professor Sherri Rose has been recognized by the National Institutes of Health (NIH) with its prestigious Director's New Innovator Award. An associate professor of Health Care Policy (Biostatistics), Rose was recognized for work developing generalizability methods for health outcomes.

"I continually point to this program as an example of the creative and revolutionary research NIH supports," said NIH Director Francis S. Collins in a press release announcing the 2017 winners. "The quality of the investigators and the impact their research has on the biomedical field is extraordinary."



Rose's work is centered on developing and integrating innovative statistical approaches to advance human health. Her methodological research focuses on nonparametric machine learning for causal inference and prediction. Specifically within health policy, she focuses on risk adjustment, comparative effectiveness research, and health program impact evaluation. In addition to teaching and conducting research, Rose co-leads the Health Policy Data Science Lab, where she directs projects in computational health economics and health outcomes research.

Established in 2007, the NIH Director's New Innovator Award is part of the "High-Risk, High-Reward Research" program, which was created to accelerate the pace of biomedical discoveries by supporting exceptionally creative scientists with highly innovative research. It seeks to identify scientists with high-impact ideas that may be risky or at a stage too early to fare well in the traditional peer-review process and encourages creative, outside-the-box thinkers to pursue exciting and innovative ideas in any area of biomedical research relevant to NIH's mission.

## **Xiao-Li Meng Elected as President of the IMS**

Xiao-Li Meng, the Whipple V. N. Jones Professor of Statistics at Harvard University, has joined the Institute of Mathematical Statistics (IMS) as its President-Elect. He has been the Dean of the Harvard Graduate School of Arts and Sciences since 2012. For the previous eight years Xiao-Li was the Chair of the Department of Statistics at Harvard.

He was elected a fellow of the Institute of Mathematical Statistics in 1997 and of the American Statistical Association in 2004. In 2001 Xiao received the COPSS Presidents' Award in 2001.

Congratulations to Xiao-Li!

## **ASA Receives NSF Grant for Two-Year College Data Science Summit**

The National Science Foundation (NSF) has awarded the ASA a \$50,000 grant to conduct a symposium that will foster the establishment and growth of data science programs at two-year colleges. The symposium, tentatively scheduled for May 10–11, 2018, build on previous and concurrent efforts exploring the need and importance of data science curriculum at the undergraduate level.

As data science incorporates statistics, computer science, mathematics and engineering, two-year colleges may need to create new infrastructure to handle cross-departmental collaboration, career planning resources and course development. Additionally, there needs to be an understanding of the types of data science jobs that can be filled by students with two-year degrees for the benefit of the school, students and prospective employers.

Over the course of two days, administrators and educators from both two- and four-year colleges and universities, representatives from industry and members of relevant professional societies will collaborate to create a dialogue leading to the development of guidelines and resources for a two-year data science emphasis.

“Two-year colleges serve as a vital link in the nation’s post-secondary education system, whether preparing students to attend four-year degree programs or enter the workforce with an associate’s degree. As they continue to gain in popularity, a tremendous opportunity exists for them to help shape the future of data science by producing data-savvy and statistically-literate graduates,” said ASA President Barry D. Nussbaum.



## *News from Dartmouth College*

### **Health Data Science Master's Program at Dartmouth Welcomes Applications**

Dartmouth College's program in Quantitative Biomedical Sciences welcomes applications to its new master's degree in Health Data Science. The program will prepare students for data science careers in health-related industries. The first students begin in the fall of 2018 and will complete studies 15 months later, or 18 months if they choose to do a summer internship. More information can be found at <http://www.dartmouth.edu/~qbs/program/the-ms-curriculum.html>.

### **Award to Dartmouth from National Institute of Health (NIH)**

Dr. Zhigang Li, Assistant Professor in the Department of Biomedical Data Science at Dartmouth, is the recipient of a R01 from NIH entitled "Mediation Analysis Methods to Model Human Microbiome Mediating Disease-Leading Causal Pathways in Children". This goal of this project is to develop and apply mediation modeling approaches to investigate human microbiome as a complex mediator in disease-leading causal pathways in children's health to advance the understanding of pathogenesis mediated by the microbiome in children and facilitate the translation of microbiome research into medical practice. Researchers in this project include Drs. James O'Malley (biostatistician), Margaret Karagas, Brock Christensen, Anne Hoen (epidemiologists) and Juliette Madan (pediatrician) at Dartmouth, as well as Dr. Hongzhe Li (biostatistician) from Perelman School of Medicine at the University of Pennsylvania.

### **Post-Doc Opportunity at Dartmouth**

The research group led by Dr. Zhigang Li in the Department of Biomedical Data Science in Geisel School of Medicine at Dartmouth invites applications for a postdoctoral researcher in Biostatistics/Data Science. This position will be supported by an NIH R01 grant to advance the understanding of pathogenesis mediated by microbiome in children and help translate research findings to medical practice. The position will also provide wonderful research/training opportunities to develop novel statistical methods to solve cutting edge problems in microbiome research in children's health. The postdoctoral researcher will work under the mentorship of Dr. Li and collaborate with an established interdisciplinary research team consisting of statisticians, epidemiologists, pediatricians and bioinformaticians. S/he will be able to participate in exciting projects such as the New Hampshire Birth Cohort Study and Cystic Fibrosis related medical studies. Please contact Dr. Li for more information at [Zhigang.Li@dartmouth.edu](mailto:Zhigang.Li@dartmouth.edu).

# *Award Nominations*

## **Accepting Nominations for the L. Adrienne Cupples Award for Excellence in Teaching, Research and Service in Biostatistics**

### **Purpose of the Award**

This annual award recognizes a biostatistician whose academic achievements reflect the contributions to teaching, research, and service exemplified by Professor L. Adrienne Cupples. Dr. Cupples joined the faculty at the Boston University School of Public Health (BUSPH) in 1981 and later served as founding Chair of the Department of Biostatistics and Co-Executive Director of the Graduate Program in Biostatistics. During her tenure at BUSPH, she advanced the field of biostatistics through extensive publications in major journals and book chapters on collaborative and methodological research, development and effective teaching of a wide range of biostatistics courses, and mentorship of numerous graduate students and faculty.

### **Eligibility and Nominations**

To be eligible, the nominee must be an internationally recognized statistician/biostatistician who has made significant contributions to the statistical sciences through teaching, research, and service, and who will be willing to deliver a lecture at the award ceremony held in the Department of Biostatistics at Boston University on April 5, 2018.

Nominations should include the nominee's name and contact information, rationale for the nomination not exceeding 2 pages in length, and the nominee's curriculum vitae. Nominations may be made by faculty, collaborators, students, or staff working with or familiar with the work of the nominee.

Nominations will be accepted through November 17, 2017 and the winner will be notified by December 1, 2017. Please send nominations via e-mail to: Josée Dupuis, PhD Professor and Chair, Department of Biostatistics [dupuis@bu.edu](mailto:dupuis@bu.edu)

### **Selection Criteria**

Criteria for the award include, but are not limited to, excellence in the following areas:

- Biostatistics education (teaching, curriculum design, course development)
- Collaborative or methodological biostatistical research
- Service to the profession
- Student and faculty mentoring Award Selection Committee

The Award Selection Committee will be comprised of eight members, six members of the faculty of the Boston University Department of Biostatistics representing varying areas of expertise and faculty rank and two student members currently enrolled in the graduate program in Biostatistics at Boston University.

### **Winner**

The winner of the award will receive a \$1000 honorarium and all expenses to attend and present at the Boston University Department of Biostatistics at an Annual Award Day, generally held on the first Thursday in April. Faculty, staff and students interested in biostatistics from the Boston area will be invited to the presentation given by the Cupples' Award recipient.

## Accepting Nominations for Marvin Zelen Leadership Award

The Marvin Zelen Leadership Award in Statistical Science is an annual award supported by colleagues, friends and family, and was established to honor Dr. Marvin Zelen's long and distinguished career as a statistician and his major role in shaping the field of biostatistics.

The award recognizes an individual in government, industry, or academia, who by virtue of his/her outstanding leadership, has greatly impacted the theory and practice of statistical science. While individual accomplishments are considered, the most distinguishing criterion is the awardee's contribution to the creation of an environment in which statistical science and its applications have flourished. The award recipient will deliver a public lecture on statistical science at the Harvard T. H. Chan School of Public Health and will be presented with a citation and an honorarium.

*Nominations are welcome for next year's award, to be given in May 2018.*

Please send nominations via email (preferred)

or by mail to:

Marvin Zelen Leadership Award Committee  
Harvard T. H. Chan School of Public Health  
Department of Biostatistics  
Building 2, 4th Floor  
655 Huntington Avenue  
Boston, MA 02115

Nominations should include a letter describing the contributions of the candidate, specifically highlighting the criteria for the award, and a curriculum vita. Other supporting materials would be extremely helpful to the committee.

**All nominations must be received by Friday, December 1, 2017.**

Please see <https://www.hsph.harvard.edu/biostatistics/zelenaward/> for further information and for a list of previous award recipients.

## ***Boston Chapter Announcements***

### **Nominations for the 2017-18 Outstanding Undergraduate Statistics Teaching Award**

The criteria for the award are intentionally few and non-specific. The aim is to ultimately acknowledge as wide a variety of statistics education accomplishments as possible. For instance, the winner may have published widely on statistical pedagogy; may have created an exemplary undergraduate program in statistics; may have inspired several generations of undergraduates to pursue careers in statistics, and so on.

The awardee will:

- Be a faculty member at a two-year or-four-year college or university in MA, RI, NH, VT, or ME whose primary responsibility is teaching statistics to undergraduates. Those on approved leave during the academic year in which they are nominated qualify if they fulfilled the requirement the previous year.
- Hold membership in the ASA and the BCASA
- Have more than three years of experience in teaching statistics

Further, winners of the BCASA's Mosteller Award will not be eligible for this teaching award. Nominees unsuccessful in one year will be automatically reconsidered in the three succeeding years.

For more information about the award contact Robert Goldman at [robert.goldman@simmons.edu](mailto:robert.goldman@simmons.edu).

Nominations forms may be found on the BCASA website at <http://community.amstat.org/bostonchapter/awards/teachingaward>.

The deadline for nominations for the 2017-18 award is February 15, 2018.

### **Mu Sigma Rho Membership Nominations Sought**

Mu Sigma Rho is the national honorary society for statistics. Its purpose is to promote and encourage scholarly activity in statistics and to recognize outstanding achievements of students in eligible academic institutions.

Both undergraduate and graduate students can be nominated. Information about BCASA's chapter of Mu Sigma Rho is available at <http://ww2.amstat.org/chapters/boston/MuSigmaRho.html>. Instructions on how to nominate students can be found at <http://www.colby.edu/musigmarho/> or by contacting Liam O'Brien at [lobrien@colby.edu](mailto:lobrien@colby.edu).

Additional information about Mu Sigma Rho can be found at: <http://www.stat.sc.edu/msrnatl.html>.

## **Please Join the BCASA Planning Committee**

Chapter activities are planned and organized by a core group known as the Planning Committee. Please consider joining us. The committee is open to all interested chapter members, regardless of whether they are also members of the ASA. We meet approximately every six weeks to plan upcoming events. The meetings are held in the evening and dinner is provided. For more information contact Chapter President Greta Ljung, [greta.ljung@verizon.net](mailto:greta.ljung@verizon.net).

## **How Do I Join the Boston Chapter?**

You can join the Boston Chapter when you join the American Statistical Association (ASA) or renew your ASA membership. ASA members who wish to join the Boston Chapter at other times should complete the printed application form available at <http://community.amstat.org/bostonchapter/joinbcasa> and send it directly to the ASA.

You can however be a member of the Boston Chapter without being an ASA member. To join the Boston Chapter without joining the ASA, write a check for \$9 (\$3 for students) made payable to BCASA, and send it directly to our Treasurer at:

Boston Chapter of ASA  
c/o Lisa Mukherjee  
PO BOX 200766  
Boston, MA 02120

Provide your name, address, and email address. Members receive an electronic subscription to the chapter newsletter, discounts at some events, and an opportunity to join our e-mail list for other announcements. A membership application form is available at <http://community.amstat.org/bostonchapter/joinbcasa>. Please note that effective January 1, the fees will increase by a modest amount to \$10 for regular members and \$4 for students.

# ***JOB OPPORTUNITIES***

**Note:** Job opportunities sent to Yan Dong, BCASA Newsletter Editor at [yad509@mail.harvard.edu](mailto:yad509@mail.harvard.edu) will be included in a future BCASA newsletter. Please email your job posts in a Word attachment with “BCASA newsletter job post” in the subject line.

## **Business Analytics and Statistics, Tenure Track Position – Babson College**

### **Position Summary Information**

The Mathematics and Science Division of Babson College invites applications for a tenure-track appointment to begin fall semester 2018. Candidates should have a Ph.D. degree in an appropriate quantitative field, an active research program with an interest in interdisciplinary scholarship, and an outstanding teaching record in applied statistics, analytics or related mathematical topics. We are looking for colleagues with an enthusiasm for developing and delivering innovative quantitative courses for undergraduate and master’s level students in business disciplines. We encourage applications from faculty at all career stages as appointment at the Associate or Full Professor level is possible for experienced faculty.

The successful candidate will join our division which includes fourteen tenured or tenure track faculty, several full-time lecturers and a few part-time instructors. We encourage and support scholarship by providing reasonable teaching loads (four sections per year for new Assistant Professors), small class sizes, excellent technological support, and competitive travel funding. We value collaboration across disciplines and between institutions.

Our division provides opportunity for faculty to teach in a wide variety of traditional and innovative environments including:

- Our required two semester undergraduate quantitative methods sequence that includes statistical modeling along with topics from calculus, operations research and mathematics of finance.
- A popular undergraduate course in modern business analytics.
- Undergraduate electives open to all students who have completed the required sequence.
- Quantitative methods core courses for our graduate degrees, and elective courses in the MBA concentration in Business Analytics and our new Master of Science in Business Analytics.
- Face to face, blended or fully on-line graduate courses for graduate students on our Wellesley campus, and additional campuses in downtown Boston, San Francisco and (beginning in 2018) Miami.
- Non-degree courses in Executive Education or through BabsonX, the college’s partnership with EdX.

Electronic applications should be submitted through <https://babson.peopleadmin.com>. Paper applications will not be accepted. Please include: (1) a cover letter, (2) a current curriculum vitae, (3) a 1-2 page statement of teaching philosophy, (4) a 1-2 page statement of current and planned research and (5) names and contact information for three or more references that may be contacted later for letters of recommendation, at least one of which should address teaching. For full consideration materials should be submitted by December 1, 2017. We may continue to review materials submitted after this time until the position is filled.

## College Summary

Babson College, located 14 miles west of Boston, is an independent school of management that takes a unique approach to preparing undergraduates, graduate students, and working professionals for the challenges of the modern business world. Babson's dynamic curriculum focuses on developing skills that transcend business so that students gain multidimensional abilities and can make important contributions to business and society. Our students understand that economic and social value creation are not mutually exclusive, but instead are integral to each other. The fundamental business skills and entrepreneurial mindset they cultivate at Babson equip them to make a difference on campus and around the world.

Babson has nearly 2,000 full-time undergraduate students and more than 1,300 full and part-time graduate students. Our highly diverse student body hails from 45 U.S. states and 57 countries. Non-U.S. students comprise more than 20% of undergraduate students and more than 40% of our full-time graduate students. Babson offers a Bachelor of Science degree, MS and MBA programs, and executive education programs worldwide. We have an exciting collaboration with our near neighbors Olin College (Engineering) and Wellesley College (Liberal Arts) as described at <http://bow3colleges.org/>.

We seek faculty who are aligned with our values of teaching excellence, collaboration, diversity and inclusiveness, and those who embrace our mission to educate leaders who create great economic and social value everywhere. We seek candidates who are eager to engage as educators among a diverse student community.

## College-wide Faculty Requirements

We are looking for an accomplished scholar who:

- Is enthusiastic about teaching mathematics for an entrepreneurially-minded global multi-cultural student audience and who has a successful record of teaching excellence and innovative curriculum development.
- Brings depth in practical expertise with emerging businesses that will add to the classroom experience and intellectual community of the College.
- Will use new technologies and other innovative modes for course delivery.
- Is experienced in working/teaching in ways that will enhance the college's commitment to diversity and inclusion.
- Will contribute to campus life as an integrated full-time faculty member including scholarship and serving on committees.
- Is a team player, willing to lead and collaborate with faculty from multiple disciplines to design and teach courses in an integrated, cross-disciplinary context.
- Will be a fun, engaging, helpful colleague who is committed to the success of Babson College

## **Post-doctoral Fellow, Department of Biostatistics, Boston University School of Public Health**

The Department of Biostatistics is currently searching for a motivated individual to fill a two-year, renewable post-doctoral position to develop and implement advanced, innovative statistical methods for infectious diseases, specifically Tuberculosis (TB). The fellow will be mentored by Laura F. White and W. Evan Johnson. Opportunities exist to work with other faculty in the Biostatistics Department and Section on Infectious Diseases at Boston Medical Center, as well as throughout the School of Public Health.

The successful applicant is expected to have a strong quantitative background and good statistical computing skills. The applicant will have the opportunity to participate actively both in collaborative research projects and methodological research. The work will involve developing novel methods for understanding TB transmission, resistance, and epidemiology, as well as working with TB host and pathogen genomics data in a highly collaborative research setting. The position also has potential for teaching opportunities within the Department of Biostatistics for interested applicants. Successful applicants are highly motivated, dependable, and have excellent communication and writing skills.

The Department of Biostatistics is comprised of 29 full-time faculty, who are internationally recognized for their innovation in research and scholarship in various areas of biostatistics including clinical trials, surveillance, infectious disease modeling, longitudinal studies, statistical genetics, Bayesian statistics and risk prediction. Biostatistics faculty play leading roles in several large clinical trials and observational studies such as the renowned Framingham Heart Study, Long Life Family Study, and the Black Women's Health Study. Their work has contributed new knowledge on genetic and non-genetic factors for cardiovascular disease, dementia and Alzheimer's disease, osteoporosis and arthritis, nutritional epidemiology, healthy aging and extreme longevity. Many of these findings have been effectively translated into current clinical practice. The department has a rich collaborative environment. It hosts both seminars on broad statistical topics as well as more focused seminars in clinical trials and statistical genetics. BUSPH is ranked as a top 10 School of Public Health and Boston is in the top 10 Best Places to Live by US News.

Candidates should hold a PhD or equivalent doctoral degree in statistics, biostatistics, or mathematics. Applications will be considered until the position is filled. We offer competitive salary and benefits.

Interested applicants should send their curriculum vitae, a cover letter detailing research experience and potential mentors among the Biostatistics faculty, and contact information for three references to [bio-recruit@bu.edu](mailto:bio-recruit@bu.edu).

Boston University is an Equal Opportunity Employer.



## **Tenure-Track Faculty, Mathematics and Statistics at Simmons College**

The Department of Mathematics and Statistics at Simmons College is seeking applicants for a tenure track position in Statistics at the Assistant Professor level to begin Fall 2018.

Our Department and the whole College is a collegial, supportive environment in which to work, as well as being located in a city where there are much statistical activity and many resources. We are particularly proud of our record of being at the forefront of pedagogical innovation in our teaching of statistics, of encouraging our undergraduates to do research, and of the proportion of our students who are accepted in graduate programs in statistics and biostatistics and in prestigious summer programs for undergraduates.

Located in Boston, Simmons College is a private, non-sectarian college consisting of a four-year, undergraduate women's college and coeducational graduate schools Enrolling approximately 2,000 undergraduate women and 5,000 graduate women and men, Simmons is committed to providing high quality, personalized educational opportunities for all students. Simmons is recognized as one of the "Best Colleges" in a number of national rankings. Further information about Simmons College is at <http://simmons.edu> , and about our Biostatistics and Data Science and Analytics majors at <http://www.simmons.edu/academics/undergraduate-programs/biostatistics> and <http://www.simmons.edu/academics/undergraduate-programs/data-science-and-analytics>

### **Responsibilities:**

The Department of Mathematics and Statistics houses majors in Mathematics, Biostatistics, and Data Science (jointly with Computer Science), as well as several other inter-disciplinary majors. Approximately  $\frac{3}{4}$  of all undergraduates at Simmons take at least one course in statistics, and all of the undergraduate statistics courses at Simmons are taught in the Mathematics and Statistics Department. We also teach graduate level courses for several other programs. Accordingly, the candidate should be able to teach both undergraduate and applied graduate level courses, as well as serve as a statistical resource for students doing research at both levels.

### **Requirements:**

The successful candidate will have an earned doctorate in Statistics or Biostatistics and a strong commitment to teaching modern statistical methods at the undergraduate level. Candidates who are ABD and expect to complete their programs by Fall 2018 will also be considered.

**Salary and Benefits:** Salary is commensurate with experience and qualifications. Simmons College participates in TIAA/CREF and offers excellent benefits packages, including tuition reimbursement for dependents at Simmons and other institutions.

**Instructions to Applicants:** Candidates should be prepared to submit a cover letter, curriculum vitae, statement of teaching philosophy, relevant syllabi, publications or documentation related to professional scholarship, and contact information for three professional references electronically.

For further information, please contact the Search Committee Chair Robert Goldman at [robert.goldman@simmons.edu](mailto:robert.goldman@simmons.edu) .

As a College committed to diversity, Simmons encourages applications broadly. Simmons is an equal opportunity employer and is committed to continuing to develop a more diverse faculty, staff, student body and curriculum.

## Tenure-Track Position in Statistics at Connecticut College

The Department of Mathematics and Statistics at Connecticut College invites applications for a tenure-track position in Statistics to begin in the Fall of 2018 at the rank of Assistant Professor. Applicants must have a Ph.D. in statistics or a closely related field, or must have completed the requirements for such a degree by August 30, 2018. Candidates are expected to possess a strong commitment to excellence in undergraduate teaching, and the potential to carry on a successful research program in the setting of a small liberal arts college. The Mathematics and Statistics Department currently consists of seven permanent faculty members, including one statistician, all of whom are committed to providing a vibrant environment for students of mathematics and statistics at all levels, furthering their own research areas, and providing service to the college. The department currently offers a statistics concentration in the mathematics major and an interdisciplinary minor in applied statistics. The successful candidate will have the opportunity to shape the statistics curriculum both within the department and through participation in the college's new multidisciplinary general education program, Connections. Candidates who are interested in collaborating with faculty and students in other disciplines on applied research projects and supervising undergraduate students engaged in independent research are encouraged to apply.

Connecticut College is a private, highly selective institution with a demonstrated commitment to outstanding faculty teaching and research. Recognizing that intellectual vitality and diversity are inseparable, the College has embarked on a significantly successful initiative to diversify its faculty, student body and curriculum. The College seeks creative scholars excited about working in a liberal arts setting, with its strong focus on engaged teaching, participation in shared governance, and active involvement in an institution-wide advancement of diversity.

Tenure-track faculty members teach a 3-2 load. In addition to providing ongoing strong support for teaching and research, the College offers the following resources for pre-tenured faculty: a 2-2 teaching load in the first year, a supplementary research fund in the first three years and a semester's sabbatical at full salary after a successful third-year review. (For additional information on faculty resources, see <http://www.conncoll.edu/employment/faculty-resources/>) AA/EEO.

Review of applications will begin on December 4, 2017 and will continue until the position is filled. To apply, please submit a letter of application; curriculum vitae; copies of graduate transcripts; three letters of recommendation; and teaching and research statements. At least one of the letters of recommendation must directly address teaching.

More information about this position, the department, and the college may be found at <http://math.conncoll.edu>.

Applicants must apply at <https://www.mathjobs.org/jobs>.

## **Post-Doc and Research Scientist Opportunities at Dartmouth**

The Division of Biostatistics in the Department of Biomedical Data Science at the Geisel School of Medicine is seeking applications for post-doctoral fellows in their NCI training grant and a biostatistics research scientist in their statistical consulting core. For information, please contact <https://bmds.dartmouth.edu/contact-us>. See also *News from Dartmouth College* earlier in this newsletter.

### **Harvard Law School Senior Research Associate/Wertheim Fellow Looking for a Temporary SAS Programmer**

Immediate opening for work starting ASAP till the end of the year.

Looking for excellent SAS programmers who are familiar with the US government's CMS/medicare data to work for a professor of law and economics with the seat of CMS Virtual Research Data Center (VRDC).

Here's the brief version of the project:

- To quantify the effect of financial payments from pharmaceutical companies on physician prescribing behavior and patient outcomes.
- To examine whether disclosure rules surrounding financial conflicts of interest have influenced physician prescribing behavior and/or patient outcomes.
- The hourly rate is between \$70 and \$100

If you are interested, please contact Professor Chen's assistant [lecduet.harnured@gmail.com](mailto:lecduet.harnured@gmail.com)

Dr. Chen is a Professor at Toulouse School of Economics, a Senior Fellow at its Institute for Advanced Study and a Senior Research Associate / Wertheim Fellow of the Labor Worklife Program at Harvard Law School, and an advisor at NYU Courant Institute of Mathematics Center for Data Science. ([daniel.li.chen@gmail.com](mailto:daniel.li.chen@gmail.com))

## **Department of Mathematics & Statistics at UMass Amherst has two tenure-track openings:**

### **1) Assistant Professor in Mathematical Biology**

The Department of Mathematics and Statistics at the University of Massachusetts Amherst, invites applications for a full-time tenure track position in Mathematical Biology at the Assistant Professor level to begin in Fall 2018. We are seeking mathematicians and statisticians with expertise in mathematical, computational and/or statistical methods and a strong commitment to interactions with the life sciences. Applicants must present strong evidence of outstanding research accomplishments and promise in both research and teaching. Applicants are required to have a Ph.D. in Mathematics, Statistics or a related field by the time of appointment.

Review of applications will begin on November 3, 2017 and continue until a suitable candidate pool has been identified. To apply, please submit the following required documents electronically through <http://www.mathjobs.org/jobs>. Please submit: a cover letter, an AMS Standard Cover Sheet, a curriculum vitae, a publication list, a description of research, statement about teaching experience and interests. The applicant must also have at least four letters of recommendation submitted, of which one must address the applicant's effectiveness as a teacher.

Questions about the position should be directed to the chair of the Search Committee, Professor Nathaniel Whitaker at [whitaker@math.umass.edu](mailto:whitaker@math.umass.edu). For additional information about the application process, please contact Christine Mirabal at [christine@math.umass.edu](mailto:christine@math.umass.edu).

UMass Amherst, the flagship campus of the University of Massachusetts system, sits on nearly 1,450-acres in the scenic Pioneer Valley of Western Massachusetts, 90 miles from Boston and 175 miles from New York City. The campus provides a rich cultural environment in a rural setting close to major urban centers. The scenic Pioneer Valley of Western Massachusetts, is home to five colleges (Amherst College, Hampshire College, Mount Holyoke College, Smith College and the University of Massachusetts). More information about the Department may be found at <https://www.math.umass.edu>.

The university is committed to active recruitment of a diverse faculty and student body. The University of Massachusetts Amherst is an Affirmative Action/Equal Opportunity Employer of women, minorities, protected veterans, and individuals with disabilities and encourages applications from these and other protected group members. Because broad diversity is essential to an inclusive climate and critical to the University's goals of achieving excellence in all areas, we will holistically assess the many qualifications of each applicant and favorably consider an individual's record working with students and colleagues with broadly diverse perspectives, experiences, and backgrounds in educational, research or other work activities. We will also favorably consider experience overcoming or helping others overcome barriers to an academic degree and career.

We are seeking talented applicants qualified for an assistant professor position. Under exceptional circumstances, highly qualified candidates at other ranks may receive consideration.

## 2) Assistant Professor in Statistics

The Department of Mathematics and Statistics at the University of Massachusetts, Amherst, invites applications for a full-time tenure track position in Statistics at the Assistant Professor level to begin in the Fall semester of 2018. Candidates whose research interests complement the strengths of the Department's faculty in Statistics, Data Science, and Applied and Computational Mathematics are particularly encouraged to apply, but this search is not restricted to specific subfields within statistics. Our department is interested in hiring individuals who will excel at research in their particular areas of interest.

Applicants must present strong evidence of outstanding research accomplishments and promise in both research and teaching. Applicants are required to have a Ph.D. in Mathematics, Statistics or a related field by the time of appointment.

Review of applications will begin on November 3, 2017 and continue until a suitable candidate pool has been identified. To apply, please submit the following required documents electronically through <http://www.mathjobs.org/jobs>. Please submit: a cover letter, an AMS Standard Cover Sheet, a curriculum vitae, a publication list, a description of research, statement about teaching experience and interests. The applicant must also have at least four letters of recommendation submitted, of which one must address the applicant's effectiveness as a teacher.

Questions about the position should be directed to the chair of the Search Committee, Professor Anna Liu at [anna@math.umass.edu](mailto:anna@math.umass.edu). For additional information about the application process, please contact Christine Mirabal at [christine@math.umass.edu](mailto:christine@math.umass.edu).

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## Biostatistician at Corrona

**Title:** Biostatistician (I, II or III)

**Reports to:** Lead or Senior Biostatistician

### Summary of Position:

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The Biostatistician will work under the guidance of a Biostatistical team lead to complete statistical analysis plans (SAPs) involving complicated longitudinal registry data. The Biostatistician will help to compile appropriate analytic summaries and context for reports and publications. Based on the level of experience, the Biostatistician may serve as project lead to present SAPs and final reports to clients.

### Duties & Responsibilities:

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- Compiles, analyzes and reports statistical data for various projects
- Carries out complex statistical analyses with minimal supervision according to a statistical analysis plan
- Assists Biostatistical Lead in the development of new statistical methodology for measurement and analysis of data
- Applies advanced statistical methods, which may include simulation models and other statistical programming as needed
- Assesses relevant literature as well as existing data, evaluates the quality of data used in reports and assists with preparation and distribution of periodic reports
- Prepares written reports and summarizes data for investigators with minimal supervision.
- Based on level of experience, makes original contributions to research projects and takes initiative in professional activities
- Closely collaborates and participates in knowledge sharing with other statistical analysts
- Utilizes various database management systems as required

### Qualifications:

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- Master's degree in Biostatistics, Statistics, Bioinformatics, Mathematics or related field required
- Required three years of applied statistical experience (5 or more years preferred).
- Preference is given to applications with >2 years of experience with complicated longitudinal datasets and applied advanced statistical methods
- Extensive knowledge of at least one major statistical software package such as STATA, SAS or R is required, with preference given to those with STATA experience
- Ability to travel domestically and internationally; valid passport required
- Reliable transportation for local travel and a valid driver's license is required
- Must be highly organized and detail-oriented, with excellent time management skills and ability to multi-task
- Must possess strong English communication and writing skills and be able to work independently and as part of a team
- Requires a strong working knowledge of MS Office, Word, PowerPoint, Excel,
- Additional duties may be assigned, either temporary or permanent based upon company needs
- Completion of GCP training (provided by Corrona)

Corrona is a leading provider of real world observational data for autoimmune diseases ([www.corrona.org](http://www.corrona.org)). If interested, please submit resume to [hr@corrona.org](mailto:hr@corrona.org) for further consideration.

## ***BCASA REGION STATISTICS SEMINARS***

Below is a list of the regional statistics (& mathematics) and biostatistics departments that often offer statistics seminars, along with URLs for each department and its seminars. If your institution would like to appear on this list, please contact Greta Ljung at [greta.ljung@verizon.net](mailto:greta.ljung@verizon.net).

Boston University College of Arts & Sciences  
Department of Mathematics & Statistics  
<http://www.bu.edu/stat/>  
<http://www.bu.edu/stat/seminar/>

Boston University School of Public Health  
Department of Biostatistics  
<https://sph.bu.edu/Biostatistics/department-of-biostatistics/menu-id-617603.html>  
<https://sph.bu.edu/Biostatistics/seminars/menu-id-617654.html>

Brown University  
Division of Applied Mathematics  
<http://www.dam.brown.edu/>  
[http://www.dam.brown.edu/dam\\_seminars.shtml](http://www.dam.brown.edu/dam_seminars.shtml)

Brown University School of Public Health  
Department of Biostatistics  
<http://www.stat.brown.edu/>

Dartmouth College  
Department of Biomedical Data Science  
<https://bmds.dartmouth.edu>

Harvard University  
Department of Statistics  
<http://statistics.fas.harvard.edu/>  
<http://statistics.fas.harvard.edu/calendar>

Harvard University T. H. Chan School of Public Health  
Department of Biostatistics  
<http://www.hsph.harvard.edu/biostatistics/>  
<http://www.hsph.harvard.edu/biostatistics/seminars-events/>

Massachusetts Institute of Technology  
Institute of Data, Systems, and Science  
<http://idss.mit.edu/index.php/event/stochastics-and-statistics-seminar-series/>

University of Maine  
Department of Mathematics & Statistics  
<http://umaine.edu/mathematics/>  
<http://umaine.edu/mathematics/colloquium-schedule/>

University of Massachusetts Amherst School of Public Health and Health Sciences  
Department of Mathematics and Statistics  
<https://www.math.umass.edu/>  
<https://www.math.umass.edu/~gile/Seminar/>

University of Massachusetts Amherst School of Public Health and Health Sciences  
Department of Biostatistics  
<http://www.umass.edu/sphhs/biostatistics>

University of New Hampshire  
Department of Mathematics & Statistics  
<https://ceps.unh.edu/mathematics-statistics>

University of Rhode Island  
Department of Computer Science and Statistics  
<http://www.cs.uri.edu/>

University of Vermont College of Engineering and Mathematical Sciences  
Department of Mathematics & Statistics  
<http://www.uvm.edu/~cems/mathstat/>

Worcester Polytechnic Institute  
Department of Mathematical Sciences  
<http://www.wpi.edu/academics/math/>



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*The BCASA Newsletter is published four times during the academic year and is emailed to current BCASA members. Send comments or suggestions to any of the individuals listed below.*

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