

BCASA NEWSLETTER

Boston Chapter of the American Statistical Association

Proudly serving

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

Volume 39, No. 2, November 2020

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

E-Mail: BostonChapterASA@gmail.com

SCHEDULED EVENTS & MEETINGS

November 2, 13, 20	New England Rare Disease Statistics (NERDS) Workshop	Virtual
November 7th	Virtual Student Research Symposium in Statistics and Data Science	Virtual
Early Spring 2021	Mosteller Statistician of the Year Awards Event	Virtual
March 26, 2021	Analytics Without Borders	Virtual
Spring 2021	Pharmaceutical Symposium	TBD

*Events in bolded letters are sponsored by BCASA

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 on our website and through emails to our members. We are currently planning events for the coming year. If you have suggestions, please contact Program Chair Olga Vitek at o.vitek@northeastern.edu.

UPCOMING FALL EVENTS

New England Rare Disease Statistics (NERDS) Workshop

Date and Time: November 2nd, 13th and 20th from 1-3pm

Location: Virtual

Website: <https://nerds.nestat.org/index.html>

The 2020 NERDS Organizing Committee is pleased to announce that we will be hosting a series of virtual webinars (Nov-Dec) focused on the current state of statistical and clinical research in rare disease drug development. We had a very successful NERDS 2019 event last year on Oct 11, where we had over 160 participants get together in Boston. This year we aim to keep the conversation going with several webinars that are aimed to keep our rare disease community connected and informed of recent advances and research.

Registration

Registration is now open at <https://nerds.nestat.org/index.html>. Once you register, you will receive notifications and invitations to future webinars, as well as all NERDS announcements.

- **Webinar Session #1:** Introductory NERDS session. **Time:** Nov 2, 1-3 PM EST. **Confirmed Speakers:** Sandeep Menon (Pfizer), L. J. Wei (Harvard), and Ying Yuan (MD Anderson).
- **Webinar Session #2:** CID program update. **Time:** Nov 13, 1-3 PM EST. **Confirmed Speakers:** Steve Lake (Wave Life Sciences) and Dionne Price (FDA).
- **Webinar Session #3:** Gene therapy in rare disease development. **Time:** Nov 20, 1-3 PM EST. **Confirmed Speakers:** Michelle Casey (Pfizer) and John Zhong (Regenxbio).

Webinar Highlights

- FDA CID program experiences
- Statistical issues related to gene therapy development
- Natural history disease progression modelling
- Borrowing information from historical data

Virtual Student Research Symposium in Statistics and Data Science on November 7th

Date and Time: November 7, 2020

Location: Virtual

Registration and Abstract Submission: <https://www.eventbrite.com/e/virtual-student-research-symposium-in-statistics-and-data-science-tickets-117442296069>

The Boston Chapter of the ASA, in collaboration with the ASA Student Chapters at Boston University, Bentley, and Tufts University, is organizing a virtual Student Research Symposium in Statistics and Data Science on November 7th. The goal of the event is to create a venue for students in New England to present their research and network with peers from other institutions. Whether you are a current student interested in presenting your research, or a prospective student curious about graduate programs, please consider joining us for a day of presentations on the exciting work being conducted by students in our region! Further details about the program will be posted at <https://community.amstat.org/bostonchapter/upcoming-events/bostonsrs2020> as they become available. For general inquiries, please contact bostonSRS2020@gmail.com.

Keynote Presentation

Speaker: Francesca Dominici, Clarence James Gamble Professor of Biostatistics, Population and Data Science, Co-Director of Data Science Initiative, Harvard University.

Title: “A Particulate Solution: Data Science in the Fight to Stop Air Pollution and Climate Change”

Abstract: What if I told you I had evidence of a serious threat to American national security – a terrorist attack in which a jumbo jet will be hijacked and crashed every 12 days. Thousands will continue to die unless we act now. This is the question before us today – but the threat doesn’t come from terrorists. The threat comes from climate change and air pollution.

We have developed an artificial neural network model that uses on-the-ground air-monitoring data and satellite-based measurements to estimate daily pollution levels across the continental U.S., breaking the country up into 1-square-kilometer zones. We have paired that information with health data contained in Medicare claims records from the last 12 years, and for 97% of the population ages 65 or older. We have developed statistical methods and computationally efficient algorithms for the analysis of over 460 million health records.

Our research shows that exposure to air pollution is killing thousands of senior citizens each year. This data science platform is telling us that federal limits on the nation’s most widespread air pollutants are not stringent enough.

This type of data is the sign of a new era for the role of data science in public health, and also for the associated methodological challenges. For example, with enormous amounts of data, the threat of unmeasured confounding bias is amplified, and causality is even harder to assess with observational studies. These and other challenges will be discussed.



Call for submissions: The 6th Analytics Without Borders Conference

Hosted by **Bentley University** on March 26th (tentatively), 2021 in partnership with Bryant University, Tufts University and UMass at Lowell.

You are invited to submit your presentation to the 6th Analytics without Borders conference. Due to the pandemic of COVID19, the conference will be a virtual conference this year.

This conference is a forum for individuals from all areas of analytics to present and discuss their work, be it from corporate institutions, academia, government organizations, etc. All groups will be able to interact with each other and thus build bridges between the different analytics constituencies.

Topics are broad in analytics, including applied statistics, optimization, data science, etc. Anyone who does anything with data is warmly invited to present their work. Sessions will include a blend of corporate, academic and government researchers and practitioners.

Both undergraduate and graduate students are encouraged to submit their research or side research projects.

Submission due date is **March 1st, 2021**. Please visit our online [submission page](#).

Please visit our conference website for more details at [the 6th Analytics Without Borders Conference](#).

The 25th New England Isolated Statisticians Meeting (NEISM25) – Postponed until November 2021

Under normal circumstances, the 25th New England Isolated Statistics Meeting (NEISM25) would be held this November. However, due to the pandemic, the organizers have decided to postpone this anniversary meeting until November 2021. The tentative date is Saturday, November 6, 2021. We hope that by then we can hold a special, in person, event.

It is too early to ask you to hold the date but do keep it in the back of your mind. We will send out a notice as soon as we have more definite information. Please do not hesitate to contact one of us if you have questions.

Stay safe and well.

Regards,
The NEISM25 Organizing Committee
John McKenzie (mckenzie@babson.edu)
Bob Goldman (robert.goldman@simmons.edu)
Rob Carver (rhcarver5@gmail.com)
Michael Sale (msale@stonehill.edu)

OTHER LOCAL AND REGIONAL EVENTS

Virtual Fall Seminars offered by the IDSS Institute at MIT

The Institute for Data, Systems, and Society (IDSS) at MIT has announced the following dates and speakers for its Fall virtual presentations in the Distinguished Seminar Series:

- November 2, 2020; 4:00 pm-5:00 pm; “An Introduction to Proximal Causal Learning”; Online
Eric J. Tchetgen Tchetgen – Luddy Family President’s Professor, University of Pennsylvania
- December 7, 2020; 4:00 pm – 5:00 pm; Online
Bruce Western – Bryce Professor of Sociology and Social Justice, Columbia University

Please see <https://idss.mit.edu/calendars/category/idss-distinguished-seminar-series/> for registration and Zoom login information

PAST EVENTS

2020 UConn Statistics Virtual Biopharmaceutical Summer Academy

2020 UCONN Statistics Virtual Biopharmaceutical Summary Academy occurred on August 10 - August 21, 2020. This two-week online summer academy was an immersive and collaborative experience for students who are planning to pursue a career as a statistician/programmer in pharmaceutical and health analytics. This virtual academy was open to both UCONN students and students outside UCONN. The academy included various presentations made by statisticians coming from Boehringer-Ingelheim, Pfizer, Vertex, Biogen, and Servier, and the topics covered different phases of drug development. The academy also featured exercises to work on mock clinical trials, interactions with professionals, and learning about interview tricks and resume writing. For more information, please visit <https://events.stat.uconn.edu/BI-UConn/#about>

AWARDS AND RECOGNITIONS

Congratulations to **Dr. Xihong Lin** of Harvard University for being named to the University of Washington School of Public Health's list of 50 Changemakers of Public Health for "*creating high-impact statistical methods for genomic data.*" Her citation reads as follows:

"Xihong is a leader in the development and application of widely used statistical methods for the analysis of massive genomic and health data. Her analytic methods are used for studies of whole-genome sequencing data, gene-environment interactions, biobanks and complex epidemiological and observational study data. Xihong's research has advanced methods for testing a large number of complex hypotheses, causal inference, cloud-based statistical computing and epidemiological studies. She leads studies to identify genes underlying inherited diseases as a recipient of the Outstanding Investigator Award from the National Cancer Institute and principal investigator for an analysis center of the Genome Sequencing Program at the National Human Genome Research Institute.

Xihong also directs Harvard's Program in Quantitative Genomics, which works to improve health through interdisciplinary training and study of genetics, behavior, environment and medicine. Recently, she has made influential contributions to research in COVID-19 public health interventions. A native of Beijing, China, Xihong was recognized early in her career by the Committee of Presidents of Statistical Societies with the Presidents' Award, the statistical analog of the Fields Medal for mathematics, and the American Public Health Association's Spiegelman Award. She has also received high honors from the American Statistical Association, and in 2018 she was elected a member of the National Academy of Medicine."

Further details about Xihong's work can be found on the Harvard Biostatistics website at <https://www.hsph.harvard.edu/xihong-lin/>.

JOURNAL NEWS AND ANNOUNCEMENTS

Statistics in Biopharmaceutical Research

[Statistics in Biopharmaceutical Research](#) (SBR), an Official Journal of the American Statistical Association, has published a special issue on “**Statistical Challenges in the Conduct and Management of Ongoing Clinical Trials During the COVID-19 Pandemic**” ([Volume 12 Issue 4](#)). This special issue highlights and discusses critically important topics, including the impact on trial integrity and interpretability, issues around trial management and operations, estimands and missing data handling as well as the application of novel trial designs and analysis approaches. This special issue consists of 11 peer-reviewed articles and 2 commentaries, reflecting the vibrancy of ideas and discussions around the COVID-19 pandemic. All COVID-19 related content in this special issue are free to access and available for anyone to read.

The SBR Editorial Board thanks all those who contributed their papers to this special issue, as well as Dr. Frank Bretz, Dr. Freda Cooner, Professor Lisa LaVange, and Professor Martin Posch, the editorial team members of the special issue for their effort to put these excellent papers together in one place.

BOSTON CHAPTER NEWS AND ANNOUNCEMENTS

The Boston Chapter Welcomes New Officers

The Boston Chapter welcomes the following new Chapter Officers for two-year terms beginning January 1, 2021:

- **President:** Olga Vitek, Professor, Director - MS in Data Science Program, Khoury College of Computer Sciences, Northeastern University; Ph.D., Statistics, Purdue University, 2005
- **Program Chair:** Kristin Baltrusaitis, Research Associate, Center for Biostatistics in AIDS Research, Harvard T.H Chan School of Public Health; Ph.D., Biostatistics, Boston University, 2019
- **Webmaster:** Piaomu Liu, Assistant Professor, Mathematical Sciences, Bentley University; Ph.D., University of South Carolina, 2016
- **Newsletter Editor:** Elizabeth Kane, Director, Analytical Services, Avania; Ph.D., Biostatistics, Boston University, 2016

Also, it is not too early to start planning the 2021 Spring elections when the following positions will be filled: **Vice President, Secretary, Treasurer, and Representative to ASA's Council of Chapters.** Below is a brief list of some of their responsibilities:

- **Vice President** – Serves as President in his or her absence; Serves as a member of the Newsletter Committee and the Membership Committee; Assists the President with designated tasks and undertakes special projects as needed.
- **Secretary** – Keeps minutes of Chapter meetings; Handles correspondence; Maintains Chapter records and documents;
- **Treasurer** – Handles the Chapter's finances; Maintains bank accounts and performs bookkeeping; Files tax returns and prepares reports to ASA headquarters.
- **Council of Chapters Representative** – Serves as the communications link between the local chapter and the ASA; Attends annual Council of Chapter meetings; Prepares material and writes columns for national publication.

Please consider volunteering for one of these positions. Your participation is much appreciated and always needed! To nominate yourself or someone else, please contact Olga Vitek at o.vitek@northeastern.edu or Greta Ljung at greta.ljung@verizon.net. Thank you in advance!

Nominations Sought for the 2021 Excellence in Undergraduate Teaching of Statistics Award

The aim of this award is to honor someone who has made significant contributions to teaching statistics to undergraduate students. 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 responsibilities include 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 reconsidered automatically the following cycle.

For more information about the award contact Shannon Stock at sstock@holycross.edu.

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

The nomination deadline for the 2020-2021 award is February 15, 2021.

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 the recognition of outstanding achievement among the 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://community.amstat.org/bostonchapter/awards/musigmarho>. 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.

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 several times per year to plan upcoming activities for the chapter. The meetings are held in the evening and will be held on-line during the pandemic. For more information contact Olga Vitek (o.vitek@northeastern.edu).

Please Join the Boston Chapter

Membership in the Boston Chapter of the ASA offers many privileges. 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.

However, you can 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 \$10 (\$4 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>.

JOB OPPORTUNITIES

Note: Job opportunities sent to Elizabeth Kane, BCASA Newsletter Editor at kane1215@bu.edu will be included in a future BCASA newsletter.

Sr Biostatistician at Avania

To apply: <https://hrbrg.co/ruc03p>

Avania is currently looking for a Senior Biostatistician in the US (locations: Marlborough, MA; San Diego, CA; or fully remote).



Company Profile

Avania is specialized in and has over 30 years of experience in clinical investigations of medical devices, biologics and device-drug combinations. We organize patient studies across the globe and hold office in the US, The Netherlands and Australia. In the Analytical Services department, you will be working with a fast-growing team of approximately 30 Data Analysts and Biostatisticians that are mainly located in Boston, MA and Bilthoven, the Netherlands. At Avania, you'll be working in a closely connected, involved and dynamic team that has a lot of expertise and experience, providing ample opportunity for both personal and career development.

Job Profile

- Provide study design input and co-write study protocol statistical sections
- Perform sample size calculations
- Develop Statistical Analysis Plans
- Program and validate tables, listings and figures
- Interpret statistical results and lead client communication
- Provide statistical consultation to other Avania departments and external clients
- Defend analyses and interpretations at client meetings, FDA and other external reviews
- Standardize data structures
- Identify data trends and safety concerns

Function requirements

- Advanced degree in Biostatistics, Statistics, Bioinformatics or other relevant field (masters degree required, PhD preferred)
- 5 years relevant experience including:
 - Statistical data analysis and statistical programming (preferably in SAS)
 - Study design (including Bayesian adaptive designs)
 - CDISC standards and programming
- Ability to independently manage clients and mentor other Biostatisticians
- Accuracy with strong attention to detail
- GCP and/or ISO14155 knowledge
- Proficient in the use of computer and software systems
- Excellent communication skills
- Team player
- Stress resilient

We offer

- The possibility to be involved in all relevant aspects of a medical device clinical investigation and work with project teams with staff from various disciplines
- Well outlined training program for personal development
- The opportunity to work internationally thereby enhancing your experience
- Fast growing team with plenty of career opportunities
- An energetic and dynamic team
- Various international active team trips and other casual team activities

Director, Biostatistics at Agios

Agios (agios.com) is a biopharmaceutical company committed to applying our scientific leadership in cellular metabolism to transform the lives of patients with cancer and rare genetic diseases. We are growing rapidly with an active research and discovery pipeline across both therapeutic areas. Agios has two approved oncology precision medicine and multiple first-in-class investigational therapies in clinical and/or preclinical development.

Description:

We are seeking an experienced biostatistician who will be responsible for leading, developing and implementing statistical solutions to optimally support all phases of clinical trials, regulatory interactions and decision making.

The successful candidate:

- Will provide input and review statistical considerations for pharmacokinetic endpoints in protocols, provide guidance and review statistical analysis plans for pharmacokinetic endpoints, provide input and review specifications for ADAM data sets and outputs for pharmacokinetic endpoints across the entire Agios portfolio (oncology and RGD); Industry experience in early development studies with a PK component is required
- Will function as lead statistician within Oncology responsible for statistical design of trials, development of statistical analysis plans, authoring and/or review specifications for analyses, conducting just-in-time analyses, and authoring responses to questions from health authorities
- Will have the opportunity to take a leadership role in the Biostatistics function at Agios and must possess the desire and ability to work with study teams up through and including leadership responsibilities

Duties and Responsibilities:

- Manage outsources biostatistics and programming deliverables associated with pharmacokinetic endpoints and analyses; provide input and review analyses specifications, review summary documents and technical documents associated with pharmacokinetic analyses
- Support submission components associated with pharmacokinetic data across the Agios portfolio
- Ensure CRO timelines and objectives are met
- Serve as a lead statistician within Oncology
- Participate in the response to health authority inquiries associated with a regulatory submission
- Ensure that clinical development programs meet scientific, regulatory, and quality requirements
- Perform trial statistician responsibilities as needed, including attendance of study team meetings, contribute to study design and protocol development, author and review SAPs, review CRFs, develop and/or review analyses specifications, perform just-in-time analyses
- Apply innovative statistical approaches to study design and analysis
- Help establish and maintain Agios data standards, within and across programs
- Serve as a general clinical development and statistical resource at Agios; participate in non-clinical project activities.

Minimum Requirements

- PhD in Biostatistics or related discipline with 8+ years biopharmaceutical industry experience; MS in Biostatistics or related discipline with extensive industry and leadership experience will be considered
- Industry experience in early development studies with a PK component is required
- Prior experience in an early development program statistician role or lead statistician actively contributing to Summaries of Clinical Pharmacology or other Technical Documents associated with pharmacokinetic-response analyses (4 years minimum)
- Working knowledge of CDISC strongly preferred
- Experience with regulatory filings strongly preferred.
- Proven knowledge and expertise in statistics and its applications to clinical trials
- Fluent with statistical software such as SAS
- Ability to work independently
- Fluent in English (oral and written)
- Excellent communication and presentation skills
- Team player, with ability to work successfully across functions
- Ability to lead and inspire Biometrics teams
- Innovative, flexible mindset

Agios Competencies

- *Drives and Delivers*: Executes and Operates to a High Standard and Resourceful
- *Connect and Relate*: Collaborates and Stays in Touch
- *Build and Transform*: Improves Continuously and Builds Networks
- *Lead from Every Chairs*: Empowers Self and Others and Challenges Self and Others

[Apply via the Agios website](#) or email jill.donovan@agios.com

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 Shannon Stock (sstock@holycross.edu).

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

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

<http://www.math.unh.edu/>

<http://www.math.unh.edu/seminars>

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/>

<http://www.wpi.edu/academics/math/news.html>

The BCASA Newsletter is published four times during the academic year and is emailed to current BCASA members. Copies of past newsletters can be found on our website at <https://community.amstat.org/bostonchapter/newsletter>. Send comments or suggestions to any of the individuals listed below.

BCASA OFFICERS	
President, 2019-20	Joseph Blitzstein, Harvard University
Program Chair, 2019-20	Olga Vitek, Northeastern University
Past President, 2019-20	Greta Ljung, Consultant
Vice-President, 2020-21	Shannon Stock, College of the Holy Cross
Secretary, 2020-21	Wenting Cheng, Biogen Inc.
Treasurer, 2016-21	Lisa Mukherjee, Consultant
Council of Chapters Representative, 2019-2021	Mingfei Li, Bentley University
Webmaster, 2019-20	Jeremiah Perez, Avania
Newsletter Editor, 2019-20	Elizabeth Kane, Avania
BCASA COMMITTEE CHAIRPERSONS	
Education Committee	Shannon Stock, College of the Holy Cross
Mu Sigma Rho	Liam O'Brien, Colby College
Membership Committee	Committee Chair to be appointed