

BCASA NEWSLETTER

Boston Chapter of the American Statistical Association

Serving

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

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Homepage: <http://www.amstat.org/chapters/boston>

E-Mail: BostonChapterASA@gmail.com

SCHEDULED EVENTS & MEETINGS		
Wednesday, January 15, 2014	Evening Lecture Series	Boston, MA
Saturday, January 25, 2014	Annual Winter Potluck Dinner and Party	Cambridge, MA
Wednesday, February 26, 2014	Mosteller Statistician of the Year Banquet	Boston, MA
03/29/2014 – 03/30/2014	Five College DataFest	Amherst, MA
04/25/2014 – 04/26/2014	New England Statistics Symposium	Boston, MA
08/02/2014 – 08/07/2014	Joint Statistical Meetings	Boston, MA

Event schedule at the chapter website: <http://www.amstat.org/chapters/boston>

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 John McKenzie, mckenzie@babson.edu.

EVENING LECTURE SERIES

A Model for Scaling Healthcare Systems Engineering Nationally: The Medicare/Medicaid Innovation Center Demonstration Project

James C. Benneyan
Executive Director, Healthcare Systems Engineering Institute
College of Engineering and Bouvé College of Health Sciences
Northeastern University

Date: Wednesday, January 15, 2014 (rescheduled from December 17, 2013)

Time: Informal Reception with Snacks: 6:30 pm; Presentation: 7:00 pm

Location: 140 The Fenway, Room 378, Northeastern University, Boston, MA

Directions: http://www.hxms.neu.edu/pdfs/MAPS_140TF.pdf

Transportation: “Northeastern University Station”, MBTA Green Line or “Ruggles Station”, MTBA Orange Line

Public Parking: Renaissance Garage, 835 Columbus Avenue, Boston, MA

Site Map: http://www.northeastern.edu/parking/images/NU_ParkingLotMap.pdf

Cost: Informal Reception and Presentation: free

Co-Sponsor: BOSTON INFORMS: <http://boston.chapter.informs.org>

Abstract:

The pace of healthcare improvement and innovation is frustratingly slow, at a time when improvement needs are increasingly urgent. Among other approaches, there recently has been renewed interest in greater application of industrial and systems engineering (ISyE), as used to improve efficiency, quality, and outcomes in other complex industries. While some health systems, funding organizations, and national academies are increasingly exploring ISyE, it remains largely unclear how to most effectively apply, expand, and sustain healthcare systems engineering for maximal impact nationally, at scale and near immediately. As one approach, this presentation will summarize the Centers for Medicare and Medicaid Services (CMS) \$8 million demonstration project led by Northeastern University to develop a system of scalable healthcare systems engineering regional extension centers across the U.S. that significantly improves the triple aim of better health, better care, and lower costs. We will provide an overview of the project's motivation, operations, example projects, results-to-date, and criteria for additional health systems to participate.

Speaker Biography:

Dr. James Benneyan is the director and principle investigator of the Healthcare Systems Engineering Institute at Northeastern University, including undergraduate through doctoral programs and three centers funded by the National Science Foundation, Centers for Medicare and Medicaid, and Veterans Health Administration. Prior to Northeastern, Jim was senior systems engineer at Harvard Community Health Plan, an industrial engineer at IBM, and senior scientist in an academic consulting company. He also serves or has served as a faculty and fellow at the Institute for Healthcare Improvement, technical advisor to CMS's Innovation center, vice president of the Institute for Industrial Engineers, and on numerous editorial and advisory boards. Benneyan has received 12 research, teaching, and service awards; is a fellow of the Society for Health Systems, Institute of Industrial Engineers, and Healthcare Information and Management Systems Society; and has been principal investigator or co-director of seven research centers and laboratories totaling over \$32 million in funding.

Registration:

Please register for the meeting at

<https://events.r20.constantcontact.com/register/eventReg?llr=saawyonab&oeidk=a07e8qbw6rv50737612&oseq=a01lchpac3ppf>

Annual Winter Potluck Dinner and Party

Date: Saturday, January 25, 2014

Time: 7:00 p.m. - 9:00 p.m.

Location: The Muddy Charles Pub, Walker Memorial (Building 50), MIT, 142 Memorial Drive, Cambridge, MA

Site map: <http://web.mit.edu/muddy/location.html>

Registration: Information and sign-up by Thursday January 23 at <http://www.luckypotluck.com/potluck/BCASAJanuary2014WinterParty>

This is a wonderful opportunity to renew contact with some members of the BCASA statistical community and meet other members for the first time. Please provide your name, how many people will be in your party, and what you would like to bring (appetizer, entrée, side dish, salad, or dessert). Because there will be a cash bar available, attendees must be 21 or over and will be required to present valid government-issued photo identification at the door. Also, leave either phone or email contact information so that you can be reached in case of weather problems, though the plan is to hold the party, snow or shine. The sign-up web page also includes an area where you can leave messages, including offers of a ride or requests for a ride.

Our return to the Muddy Charles Pub in the 175th Anniversary Year of the American Statistical Association is most appropriate because Building 50 honors Francis Amasa Walker, an influential president of the American Statistical Association (ASA). He was also president of the MIT and the American Economic Association at the same time he led the ASA.

Mosteller Statistician of the Year Banquet

What do Twinkies and the Mosteller Statistician of the Year Have in Common?

Katherine Monti

Principal Statistical Scientist, Rho, Inc.

Date: Wednesday, February 26, 2014

Time: Social 6:00 pm, Dinner 6:30 pm, Presentation 7:00 pm

Location: Kotzen Room, Beatley Library and Lefavour Hall, Simmons College, 300 The Fenway, Boston, MA

Site Map: <http://www.simmons.edu/overview/directions/maps/?map=academic>

Registration: <http://bcasa2014mar.eventbrite.com> by February 19

Cost: Dinner: \$20 for chapter members; \$25 for non-members; students free. Presentation: free.

Abstract:

This talk will cover some of the memorable projects that I've encountered over the years as I've zigzagging around the discipline and around the country. I'll briefly describe my journey as I've moved from a brief stint in academe to "non-pharma" industry to medical devices to pharma. Then I'll describe applications in the diverse content areas that I have encountered, including the design and analysis of a study to optimize the springiness of Twinkies. I'll emphasize the role of graphical displays for each of these projects, review the lessons from each project, and note some common themes.

Award history:

Every year the Boston Chapter presents the Statistician of the Year award to a distinguished statistician who has made exceptional contributions to the field of statistics and has shown outstanding service to the statistical community. In 1997, this award was renamed the Mosteller Statistician of the Year award in honor of the 80th birthday of its first recipient, Fred Mosteller. Individuals from academia, industry, and government who have contributed to the Boston Chapter are considered for the award. For a list of past award winners, see <http://amstat.org/chapters/boston/awards.html>.

LOCAL EVENTS & MEETINGS

2014 Five College DataFest Saturday, March 29, 2014 to Sunday, March 30, 2014 University of Massachusetts Amherst

The Five College DataFest (<http://www.science.smith.edu/departments/math/datafest/>), sponsored in part by the Five College Statistics Program, will be held the weekend of March 29th and 30th at the University of Massachusetts in Amherst. DataFest is a nationally-coordinated competition that challenges undergraduates working in teams of up to five to extract meaningful insights from a rich and complex data set. A number of prizes will be awarded, including: "Best in Show", "Best Visualization", and "Best Use of External Data". Previous DataFests held at UCLA and Duke University have drawn large numbers of students, and we are hoping for a great turnout from the Five Colleges: Amherst, Hampshire, Mount Holyoke, and Smith Colleges, as well as UMass. Sponsorships opportunities are available -- please contact Ben Baumer (bbaumer@smith.edu) or Andrew Bray (abrav@smith.edu) for more information.

2014 Joint Statistical Meetings and ASA's 175th Anniversary Saturday, August 2, 2014 to Thursday, August 7, 2014 Boston, Massachusetts, USA

The Joint Statistical Meetings is the largest gathering of statisticians held in North America. It is held jointly with the American Statistical Association, the International Biometric Society (ENAR and WNAR), the Institute of Mathematical Statistics, and the Statistical Society of Canada. Attended by over 5500 people, activities of the meeting include oral presentations, panel sessions, poster presentations, continuing education courses, exhibit hall (with state-of-the-art statistical products and opportunities), placement service, society and section business meetings, committee meetings, social activities, and networking opportunities. Boston is the host city for JSM 2014 and offers a wide range of possibilities for sharing time with friends and colleagues. This will also be ASA's 175th Anniversary and a celebration will be planned. For information, contact jsm@amstat.org or phone toll-free (888) 231-3473.

New England Statistics Symposium (NESS)

Short Courses: Friday, April 25, 2014

Symposium: Saturday, April 26, 2014

The 2014 New England Statistics Symposium (NESS) will be hosted by the Department of Biostatistics at HSPH on Saturday, April 26, 2014 (~9:00 a.m. – 5:30 p.m.).

Three short courses (1 full day) will also be offered on Friday, April 25, 2014 including:

Adaptive Design for Confirmatory Clinical Trials

Cyrus Mehta and Charles Liu, Cytel Inc.

This workshop will focus on strategies for efficient decision making via interim analyses of ongoing clinical trials using state-of-the-art methods for group sequential and adaptive designs. Topics covered will include group sequential design and monitoring with sample size re estimation, preserving type-1 error, computing power, obtaining point estimates and computing confidence intervals in the adaptive setting. Case studies in oncology and cardiology are used to reinforce the main points. The workshop includes a hands-on session with the EAST® 6.2 software.

Analysis of Big Data

Han Liu, Princeton University

The amount of data in our world is exploding and analyzing large datasets is becoming central in science, technology, and our society. This course introduces new statistical methods and computational tools for analyzing Big Data. This course covers the following topics:

1. Statistical challenges of Big Data Analysis
2. Handling massive data: divide-and-conquer statistical inference
3. Handling high dimensional data: regularization method
4. Handling complex and noisy data: robust semiparametric method
5. Large-scale statistical optimization: model-based optimization

The main focus of this course is to introduce new methodology and explain theoretical justification of these methods at an intuitive level.

Introduction to Measurement Error

John Buonaccorsi, Professor Emeritus, University of Massachusetts-Amherst

Measurement error is ubiquitous and it is well known that the inability to exactly measure either outcomes or predictors often leads to biased estimators and invalid inferences. This problem has received considerable attention of late across many areas, especially in epidemiology. This course will present an introductory and relatively applied look at measurement error with a focus on models used for measurement error, the impacts on naive analyses that ignore it, and an overview of techniques to correct for it. Emphasis is on misclassification in basic categorical models (estimating proportions and in two-way tables) and measurement error in predictors in linear and non-linear regression (including logistic regression). In the regression contexts we describe a variety of correction methods that are used with either replication or validation data. A number of illustrative examples from various disciplines will be presented and an overview of software options will be provided. While we present a little of the basic theory, the course focus is primarily applied so it is accessible to a broad audience and allows us to cover more topics in a limited amount of time. Students should have at least some prior exposure to basic categorical methods (single proportions and two-way tables) and linear and logistic regression and be familiar with seeing models and methods expressed in matrix-vector form.

No book is required although the lecture notes come mainly from Buonaccorsi (2010), *Measurement Error: Models, Methods and Applications*, Chapman & Hall.

Further details regarding registration, submission of abstracts, short courses, and the student paper competition will be forthcoming.

NEWS & ANNOUNCEMENTS

Marvin Zelen Leadership Award

Xiao-Li Meng is the recipient of the 2014 Marvin Zelen Leadership Award. The most important criterion for this accolade is the awardee's contribution to the creation of an environment in which statistical science and its applications have flourished. The Harvard Graduate School Dean of Arts and Sciences and Whipple V. N. Jones Professor of Statistics will deliver a public lecture on statistical science at the Harvard School of Public Health this spring. Congratulations XLM!

The 12th Annual Connecticut Chapter Mini-Conference

The 12th Annual Connecticut Chapter Mini-Conference: Statistics in Evidence Synthesis – Comparative Effectiveness Research and Personalized Medicine will be held Wednesday, March 26, 2014 on the Boehringer-Ingelheim, Ridgefield, CT. The invited speakers for the 2014 conference are Demissie Alemayehu, Pfizer Inc. and Columbia University, Jason Hsu, The Ohio State University, Eric Laber, North Carolina State University, Christopher Schmid, Brown University, and Lei Shen, Eli Lilly & Company. A contributed poster session will be held as part of the conference.

Harvard Statistics Conference to Celebrate Don Rubin's 70th Birthday

The Harvard Statistics Department will host a statistics conference to celebrate the 70th birthday of Don Rubin on Saturday afternoon of March 29, 2014. More details on this forthcoming conference may be found at <http://www.stat.harvard.edu/DonRubin70/>.

Nominations for Chapter Officers

Several BCASA officer terms are up for election this year for terms starting on January 1, 2015. These are President, Program Chair, Webmaster, and Newsletter Editor (two-year terms).

We typically hold elections at the final event of the academic year. If you are interested in nominating yourself or anyone else for these positions, please contact current President Tom Lane (tlane@alum.mit.edu) or Past President Dominique Haughton (dhaughton@bentley.edu). New volunteers are always welcome and greatly needed.

Statistician in the Globe News

Local statistician Matt Finkelman had good press in the Boston Globe. Check the link below for the full story: <http://www.bostonglobe.com/metro/2013/12/15/statistical-significance/5uR1c3UmgIOMs97kf059gJ/story.html>

Mu Sigma Rho

It's not too early to start thinking about your outstanding statistics students and considering nominating them for membership in Mu Sigma Rho. Both undergraduate and graduate students can be nominated. Information can be found at: <http://math.smith.edu/~nhorton/msr.html> or by contacting Liam O'Brien at lobrien@colby.edu. Although the deadline isn't until March 1st, 2014, nominations are accepted anytime.

Planning Committee Meeting

The BCASA Planning Committee is open to all interested members. We meet approximately every six weeks to plan upcoming events of the chapter. Please join us and have an impact on chapter events and activities. Dinner is provided. For more information contact Chapter President Tom Lane, tlane@alum.mit.edu.

BCASA ASA 175th Anniversary Steering Committee

Boston is the home city of the ASA (http://magazine.amstat.org/blog/2013/04/01/175_4_2013/). The American Statistical Association was founded on November 27, 1839 in Boston. The ASA Board of Directors has created the 175th Anniversary Steering Committee to plan for its bicentennial. The Boston Chapter of the ASA has created a similar committee to “Celebrate Our Past” and “Energize Our Future”, the themes of the 175th anniversary. It will consider local anniversary activities, including those associated with the 2014 Joint Statistical Meetings. Members interested in participating in the BCASA ASA 175th Anniversary Steering Committee should contact John McKenzie at mckenzie@babson.edu.

Call for Speakers for the Bentley University Virtual Analytics Symposium

The Bentley University Virtual Analytics Symposium is calling for speakers. The symposium is a premier event on Advanced Analytics and one of the first regular symposiums dedicated specifically to analytics. Prof Tom Davenport was the first speaker in 2009. Subsequent topics ranged from data mining, business analytics applications and practices to some of the more popular topics such as big data, social media analytics and sentiment analysis. A recent session (10/23/2013) on "How to apply text mining to predict sentiments on companies mentioned in Twitter messages" was very well attended both physically and remotely. Among the many attendees were key practitioners from companies such as EMC, Fidelity, Trinity Partners, Deluxe.com and many others. The event was co-sponsored with BCASA and INFORMS. If you (either academic researchers or industry practitioners) are interested to speak at future symposium events, please contact Nathaniel Lin at nlin@bentley.edu.

Meeting Within a Meeting (MWM) Report

The American Statistical Association (ASA) sponsored a one-day MWM workshop at Smith College on Saturday, November 16, 2013. Middle and high school mathematics and science teachers participated in the workshop. The primary goals of the MWM in Northampton program were to introduce middle and high school math and science teachers to the *Guidelines for Assessment and Instruction in Statistics Education (GAISE) Pre-K-12 Curriculum Framework*, to the statistics standards for practice in the Massachusetts Curriculum Framework for Mathematics, and to provide an opportunity for the teachers to discuss and apply these data analysis and statistical concepts. A secondary goal was to encourage cooperation between teachers in the teaching of statistics. A follow-up program will maintain contact between the teachers who attended MWM in Northampton through webinars and email contact.

The workshop day consisted of three sessions and a closing period used to reflect on the day's work and provide comments about the program to the organizers. The sessions were preceded by a brief overview of the GAISE report and the Massachusetts Curriculum Framework for Mathematics standards relevant to the audience. The three program sessions included discussions of statistical questions and study design, displaying and summarizing measures of center and spread for univariate quantitative data and for bivariate categorical data, and a randomization test for testing the significance of a difference between two groups. Teachers who apply may receive 0.5 semester credit hour, through Adams State College, for attending the workshop. MWM participants also received an opportunity to receive 10 PDPs through Smith College by completing a follow-up lesson plan using one of the hands-on activities introduced during the workshop. The MWM program schedule can be found at <https://www.amstat.org/education/mwm/nh/index.cfm>. The ASA will provide follow-up activities throughout the 2012-2013 school year, including webinars that will continue to be archived at www.amstat.org/education/webinars.

Katherine Halvorsen and Rachel Stavely Hale planned the MWM in Northampton program and managed the logistics of setting up and advertising the workshop. Rebecca Nichols, K-16 Director of Education, managed the website and the application and evaluation procedures. Members of the ASA/NCTM committee and the MWM speakers provided guidance. MWM in Northampton presenters included ASA/NCTM Joint Committee Chair Patrick Hopfensperger (University of Wisconsin) and MWM Program Chair Katherine Halvorsen (Smith College).

Event Funding: Request For Proposals (RFPs)

The Boston Chapter of ASA is accepting proposals for supplementary support funding to plan and conduct events with a statistical theme. Qualified events include short courses and other educational events but are not limited to these. The RFP is open until further notice.

Proposal requirements and additional information:

- Proposals should be no more than 3 pages in length with 2 pages being a description of the program, date and time, program sponsors, location and information on parking or public transportation, targeted audience/expected attendees, rationale for why the program is important and will be attractive to potential attendees, and people responsible for program planning and conduct. The last page is a budget plan.
- Funding for up to \$750 can be requested.
- The event must be open to all chapter members.
- The event must be advertised in the chapter newsletter.
- It is expected that the BCASA is not the only resource supporting the event (e.g., a department or other sponsor should be involved in organization or nominal fees to attendees should be charged).
- Any fees charged to attendees should be reasonable, with special discounts for students. The expectation is that the event will be affordable to statisticians.
- A report of the event must be submitted to BCASA upon completion of the event with possible publication of the event in the BCASA newsletter. The report should include an estimate on the number of attendees, attendee comments, an evaluation of the program, and a financial summary.
- Unused funds should be returned to the BCASA.
- Proposals will be reviewed by members of the Planning Committee of the BCASA. Applicants will be contacted shortly after the Planning Committee meeting that follows application submission.
- Questions should be directed to Scott Evans, Ph.D. (evans@sdac.harvard.edu).
- Proposals should be electronically submitted at least 6 weeks prior to the program to Scott Evans, Ph.D. (evans@sdac.harvard.edu).

JOB OPPORTUNITIES

University of Massachusetts Amherst

The School of Public Health and Health Sciences at the University of Massachusetts Amherst (www.umass.edu/sphhs/) is seeking applicants for a tenure track position in Biostatistics at the Assistant Professor level.

Position: The successful candidate will join the faculty in the Division of Biostatistics and Epidemiology, Department of Public Health. Responsibilities will include research and, especially, collaborative research; teaching, primarily at the graduate level but possibly also at the undergraduate level; and advising masters and doctoral students enrolled in our MS, MPH, and PhD programs. The candidate will be expected to develop his or her own research program, secure external funding, and engage in collaborative research with other faculty from programs and departments within the School and University. The Division of Biostatistics and Epidemiology has an active teaching/research faculty consisting of six biostatisticians and four epidemiologists. Program members collaborate extensively with faculty from the School of Public Health and Health Sciences, other departments on campus, the University's Medical School, and Baystate Medical Center. The University is located in the scenic Pioneer Valley of Western Massachusetts, which is home to five colleges (Amherst College, Hampshire College, Mount Holyoke College, Smith College and the University of Massachusetts) with easy access to several major metropolitan areas. The University of Massachusetts School of Public Health and Health Sciences is committed to increasing the number of minorities and women on its faculty and welcomes applications from such candidates.

Qualifications: Candidates for this position must meet the following minimum requirements:

- * Terminal degree (PhD, DrPH) in biostatistics or related field of study;
- * Evidence of independent and collaborative research potential; and
- * Demonstrated interest and ability in teaching at the graduate level.

First Review: The application review process will begin December 13, 2013 and will continue until the position is filled. Anticipated start date is September, 2014.

Salary/Benefits: The University offers competitive salaries with attractive benefits packages.

Applications: Interested candidates should submit their curriculum vitae, description of research and teaching interests, and three letters of references online at <http://umass.interviewexchange.com/jobofferdetails.jsp?JOBID=44175>.

The University of Massachusetts is an Affirmative Action/Equal Opportunity Employer. Women and members of minority groups are encouraged to apply. The University seeks to increase the diversity of its professoriate, workforce and undergraduate and graduate student populations because broad diversity is critical to achieving the University's mission of excellence in education, research, educational access and service in an increasingly diverse globalized society. Therefore, in holistically assessing many qualifications of each applicant of any race or gender we would factor favorably an individual's record of conduct that includes students or colleagues with broad, diverse perspectives, experiences and backgrounds in educational, research or other work activities. Among other qualifications, we would also factor favorably experience overcoming or helping others overcome barriers to an academic career or degree.

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.

BCASA OFFICERS	
President, 2013-14	Tom Lane, The MathWorks
Program Chair, 2013-14	John McKenzie, Babson College
Program Vice-Chair, 2013-14	Robert Goldman, Simmons College
Vice-President, 2014-15	Vanessa Xanthakis, Boston University
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Past President	Dominique Haughton, Bentley University
Webmaster, 2013-14	Ching-Ti Liu, Boston University
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<i>Mu Sigma Rho</i>	Liam O'Brien, Colby College