BCASA NEWSLETTER

Boston Chapter of the American Statistical Association

Serving

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

Volume 31, No. 4, March 2013

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

E-Mail: BostonChapterASA@gmail.com

SCHEDULED EVENTS		
Saturday, April 27, 2013	27th New England Statistics Symposium	Storrs, CT
Saturday, April 27, 2013	Statistics Career Day	Boston, MA
Friday, June 28, 2013	Boston Chapter: ASA Traveling Course	Boston, MA
Saturday, September 14, 2013	New England Symposium on Statistics in Sports	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.

The 27th New England Statistics Symposium (NESS)

Saturday, April 27, 2013

University of Connecticut, Storrs, CT

The Department of Statistics of the University of Connecticut is proud to host the 27th New England Statistics Symposium on Saturday, April 27, 2013. The purpose, as usual, is to bring together statisticians from all over New England to a central location to share research, discuss emerging issues in the field, and network with colleagues. The Symposium local hosts and organizers from the University of Connecticut are Ming-Hui Chen (Chair), Ofer Harel, and Jun Yan.

 Richard Bass of University of Connecticut and Mike West of Duke University will deliver keynote presentations, and there will be invited, contributed, and poster sessions. The Symposium will be held in the AUST (CLAS) buildings at the University of Connecticut. There will be three full day short courses presented by Professor Mike West of Duke University; Professor Ofer Harel of University of Connecticut and Research Fellow Gregory J. Matthews of University of Massachusetts; and Jun Yan of University of Connecticut and Professor Marcos O. Prates of Universidade Federal de Minas Gerais on Friday, April 26, 2013 (8:30am-5:00pm). There will be a mixer in the evening of Friday, April 26, 2013 (5:30pm-7:00pm, Student Union).

Program

	Friday, April 26, 2013
8:30am-5:30pm	NESS short courses
5:30pm-7:00pm	NESS mixer (Student Union)
	Saturday, April 27, 2013
9:00 am	Registration & Coffee
9:30 am	Welcoming Remarks
9:45 am	Keynote Presentation: Professor Mike West, Duke University
11:00 am	Parallel Paper Sessions
12:30pm-2:10pm	Poster Session
1:00 pm	Lunch, AUST 326
2:15 pm	Keynote Presentation: Professor Richard Bass, University of Connecticut
3:15 pm	Coffee Break
3:45 pm	Parallel Paper Sessions
5:15 pm	Student Paper Awards, Closing Reception
6:30 pm	Dinner at Chang's Garden Restaurant

Registration

Please register the symposium using the online registration form available on the symposium website listed below. There is a registration fee of $20 for students and $30 for non-students to help defray the cost of refreshments, lunch and accommodations for keynote speakers. The registration fee for students who present a paper will be waived through the sponsorship of IBM, T.J. Watson Research Center. There is a separate short course fee of $50 for students and $250 for non-students.

Call for Papers and Submissions for IBM Student Awards

We invite talks on all aspects of Statistics and Probability. Please submit an abstract as soon as possible to insure a place on the program by following the instructions on the Call for Papers section of the symposium website. Students are encouraged to submit papers for consideration of three awards that will be given at the symposium. Students must submit an application for consideration of award **no later than Monday, April 8, 2013.** Visit the symposium website for additional information, or contact Ming-Hui Chen by email at ming-hui.chen@uconn.edu.

http://www.stat.uconn.edu/ness13

Three One-Day Short-Courses at the 27th NESS

Time: 8:30 am – 5:00 pm, Friday, April 26, 2013
Location: Student Union Room 304A, 304C, and 316/317, University of Connecticut

To register, please visit http://www.stat.uconn.edu/ness13/?info=reg.
To know more, please visit http://www.stat.uconn.edu/ness13/?info=shortcourse.

Course 1: Bayesian Dynamic Models, Time Series Analysis & Forecasting

Instructor: Mike West. Dr. West is the Arts & Sciences Professor of Statistical Science, Department of Statistical Science, Duke University.

The short-course overviews basic principles, models and methods of Bayesian dynamic modelling in time series analysis and forecasting. Course participants will gain:
- exposure to the basic ideas and approaches of Bayesian model-based time series analysis using key classes of dynamic models;
- an appreciation of the roles of computation analytic- as well as simulation-based methods for time series analysis in dynamic models, including filtering, parameter learning and smoothing;
- awareness of texts and software that will enable follow-on explorations and analysis;
- an appreciation of some of the breadth of application Bayesian dynamic modelling has had, and can have, in various applied fields.

The course material will be accessible to advanced students and/or professionals with strong statistical modelling backgrounds and prior exposure to at least the essentials of Bayesian analysis. Familiarity with and working facility in multivariate distribution theory and statistical inference are prerequisites. Prior exposure to some areas of time series analysis will be useful though is not necessary. Prospective participants can get a focused flavour of the level and nature of the material from the sections of the main support text "Time Series: Modeling, Computation, and Inference", by Raquel Prado & Mike West, 2010, Chapman Hall/CRC Press Taylor & Francis Group.

Course attendees may bring laptops to explore modelling examples (Matlab code). The course will be based on the instructor working through slide presentation material and interactively exploring several examples during the sessions throughout the day. Attendees will benefit most by exploring code and working through examples, so prior experience with Matlab will be most beneficial. Detailed information on code (including R code as well as Matlab) will be provided in advance of the course.

Course 2: An Introduction to the Analysis of Incomplete Data

Instructors: Ofer Harel and Gregory Matthews. Dr. Harel is Associate Professor, Department of Statistics, University of Connecticut. Dr. Matthews is Postdoctoral Research Fellow, Division of Biostatistics, School of Public Health, University of Massachusetts.

Missing data is a common complication in applied research. Although most practitioners are still ignoring the missing data problem, numerous research articles and books demonstrate that dealing with it correctly is very important. Biased results and inefficient estimates are just some of the risks of incorrectly dealing with missing data. In this workshop, we will introduce incomplete data vocabulary and present problems and solutions to the missing data issue. We will emphasize practical implementation of the proposed strategies including discussion of software to implement procedures for incomplete data.

This one-day course introduces incomplete data vocabulary, assumptions, methods, computing, and software. We include descriptions of how the methods can be implemented in R and the stand alone software NORM. In particular, we will illustrate different missing data methodologies and the advantages and disadvantages of their use. We will concentrate on multiple imputation (MI), but introduce many other techniques as well.

Participants are invited to bring their own laptop computers to the session and to have the latest versions of R, RStudio and NORM already installed on these computers. The programs are freely available from R project web site, RStudio and Software for multiple imputation web site respectively. The participants will have the opportunity to go through real data examples during the afternoon lab session.

The content of the course: Motivation for the importance of incomplete data techniques; Ad-hoc techniques such as case deletion, weighting, and single imputation techniques; Principled techniques such as maximum likelihood, Bayesian and semi-parametric techniques; Multiple imputation; Missing data assumptions; Data exploration; Data examples using R and NORM; Step-by-step recommendations to the treatment of incomplete data; Strategies for data analysis with two-types of missing values

Lectures (2 morning sessions and 1 afternoon session) will be followed by instructors-assisted computer practice (1 afternoon session).

Course 3: Statistical Analysis of Spatial Data and Visualization with Google Map
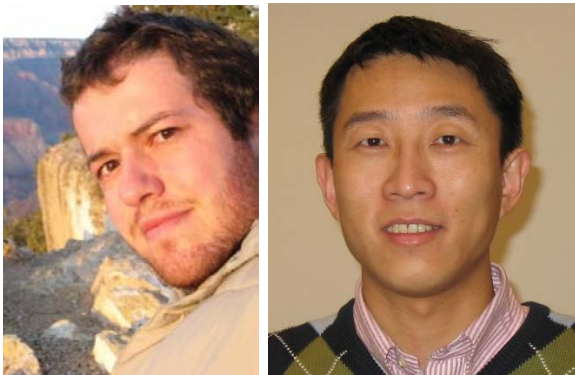
Instructors: Marcos Prates and Jun Yan. Dr. Prates is Assistant Professor, Department of Statistics, Universidade Federal de Minas Gerais, Brazil. Dr. Yan is Associate Professor, Department of Statistics, University of Connecticut.

Spatial data are commonly seen in many fields such as environmental science, public health, and social science. Spatial data can be point-referenced, areal, or point pattern. The spatial dependence among the observed data presents a challenge to spatial data analysis, since the usual statistical methods for independent data do not apply. Any valid statistical analysis of spatial data should account for the spatial dependence appropriately. As with any analysis, efficient visualization of spatial data, sometimes with satellite maps, helps to understand the data and analysis.

The main objective of this short-course is to provide for researchers from all fields facing spatial data a jump start on statistical analysis of spatial data with R and its packages. The second objective is to demonstrate visualization with Google maps in two directions: 1) importing Google maps to R for further processing and display; and 2) exporting code from R to display data in a web browser on top of Google maps. Prerequisites of the short-course are basic statistics (regression level), basic R skills, and interest in spatial data analysis and visualization. The one-day short-course presents different types of spatial data, exploratory data analysis, selected statistical methods for each type, and interaction between R and Google maps. This course should provide a starting point for scientists to perform their own spatial analysis and improve their R skills. Since this is an introductory level course, an extensive methodological review on advanced spatial statistical methods will not be covered.

The lecture will be divided into teaching sessions and lab sessions. The participants are expected to practice with their laptops during lab sessions.

Boston Chapter: ASA Traveling Course
Bayesian Adaptive Methods for Clinical Trials

Presenter: Brad Carlin, University of Minnesota
Date: Friday, June 28th, 2013
Location/Time: Boston area (location and time TBD)
Registration: More details on registration information will be put on the chapter web site and distributed to the BCASA e-mail list when they become available.

Abstract

Thanks in large part to the rapid development of Markov chain Monte Carlo (MCMC) methods and software for their implementation, Bayesian methods have become ubiquitous in modern biostatistical analysis. In submissions to regulatory agencies where data on new drugs or medical devices are often scanty but researchers have access to large historical databases, Bayesian methods have emerged as particularly helpful in combining the disparate sources of information while maintaining traditional frequentist protections regarding Type I error and power. Biostatisticians in earlier phases (especially Phase I oncology trials) have long appreciated Bayes' ability to get good answers quickly. Finally, an increasing desire for adaptability in clinical trials (to react to trial knowledge as it accumulates) has also led to heightened interest in Bayesian methods. This lecture series introduces Bayesian methods, computing, and software, and then (time permitting) goes on to elucidate their use in Phase I and II clinical trials. We include descriptions and live demonstrations of how the methods can be implemented in BUGS, R, and versions of the BUGS package callable from within R.

Core Bayesian topics:
- Introduction to Bayesian inference: point and interval estimation, model choice
- Bayesian computing: MCMC methods; Gibbs sampler; Metropolis-Hastings algorithm, recent developments (including non-MCMC methods such as INLA)
- Hierarchical modeling and metaanalysis
- Adaptive borrowing of strength from historical data
- Principles of Bayesian clinical trial design: predictive probability, indifference zone, Bayesian and frequentist operating characteristics (power, Type I error)

Adaptive clinical trial design topics:
- Rule-based designs for determining the MTD (e.g., 3+3)
- Model-based designs for determining the MTD (CRM, EWOC, TITE monitoring)
- Efficacy and toxicity
- Standard designs: Phase IIA (single-arm) vs. Phase IIB (multi-arm)
- Predictive probability-based methods
- Sequential stopping: for futility, efficacy
- Multi-arm designs with adaptive randomization
- Applications in medical device trials

Presenter

Brad Carlin is Mayo Professor in Public Health and Professor and Head of the Division of Biostatistics at the University of Minnesota. He has published more than 135 papers in refereed books and journals, and has co-authored three popular textbooks: "Bayesian Methods for Data Analysis" with Tom Louis, "Hierarchical Modeling and Analysis for Spatial Data" with Sudipto Banerjee and Alan Gelfand, and "Bayesian Adaptive Methods for Clinical Trials" with Scott Berry, Peter Muller, and J. Jack Lee. He is a winner of the Mortimer Spiegelman Award from the APHA, and from 2006-2009 served as editor-in-chief of Bayesian Analysis, the official journal of the International Society for Bayesian Analysis (ISBA). Prof. Carlin has extensive experience teaching short courses and tutorials, and has won both teaching and mentoring awards from the University of Minnesota. During his spare time, Brad is a musician and bandleader, providing keyboards and vocals in a variety of venues, some of the more interesting of which are visible by typing the phrase "Bayesian cabaret" into the search window at YouTube.

Moneyball Revisited: Assessing the Sabermetric Revolution in Baseball

Date: Friday, March 22, 2013
Time: Presentation 3:15 pm
Location: Cheray Science Hall, Room 101, Saint Michael's College, One Winooski Park, Colchester, VT 05439
Directions and Parking: http://www.smcvt.edu/About-SMC/Vermont-Location/Getting-Here.aspx
Cost: Presentation and refreshments: free.

Speaker: Dr. Ben Baumer, Visiting Professor, Smith College

Dr. Baumer earned his undergraduate degree from Wesleyan University and his graduate degrees from University of California, San Diego, and the Graduate Center of the City University of New York. He worked for the New York Mets, doing statistical analysis from 2004 to 2012.

Abstract:
Moneyball, the best-selling book and award-winning movie, described a world in which Oakland A's general manager Billy Beane was able to use statistical analysis to help a team with a very low payroll win very many games. In the years that have transpired since the publication of the book, the baseball industry has changed remarkably, as have the A's fortunes. We examine, in the context of market inefficiencies, this conventional interpretation. Moreover, we turn sabermetrics on itself, and examine the evidence about whether sabermetrics has actually worked.

Sponsors:
The talk and Dr. Baumer's visit is sponsored by the St. Michael's Mathematics Department, Pi Mu Epsilon Honor Society, and a S-STEM grant, with support from the Boston Chapter of the American Statistical Association.

Statistics Career Day

The Boston Chapter of the American Statistical Association is organizing a Statistics Career Day for Saturday, April 27 at Simmons College in Boston. The event is aimed at undergraduates in New England who may be considering a career in statistics. The keynote speaker will be Richard Deveaux from Williams College. As you probably know, Dick is a well-known, engaging, and enthusiastic promoter of Statistics. The day will also feature a panel of professional statisticians from a variety of fields talking about their education and their work and a panel of graduate students from local programs in Statistics and Biostatistics who will describe the life and work of a graduate student.

There will be plenty of time for participants to question the panelists and talk with them informally. We will be serving refreshments and lunch. We expect the event to conclude at around 1:30.

We would be grateful if you would bring this event to the attention of undergraduates who might be interested. Indeed, we would be delighted if you would consider bringing a group to the event. Parking at Simmons is free.

For registration, please visit http://bcasa2013career.eventbrite.com/. For further information about this event, please contact Bob Goldman (robert.goldman@simmons.edu) and Lisa Mukherjee (lisamuk@hotmail.com).

2013 NEW ENGLAND SYMPOSIUM ON STATISTICS IN SPORTS

Date: Saturday, September 14, 2013
Location: Harvard University (Science Center) - Cambridge, Massachusetts

The **2013 New England Symposium on Statistics in Sports** will be a meeting of statisticians and quantitative analysts connected with sports teams, sports media, and universities to discuss common problems of interest in statistical modeling and analysis of sports data. The symposium format will be a mixture of invited talks, a poster session, and a panel discussion. Students in particular are encouraged to submit abstracts; a prize will be awarded to the best student poster as decided by a panel of judges.

 ABSTRACTS FOR TALKS AND POSTERS ARE NOW REQUESTED, AND SHOULD BE SUBMITTED ON THE ONLINE <u>ABSTRACT SUBMISSION FORM</u>

THE SUBMISSION DEADLINE FOR ABSTRACTS IS JUNE 15, 2013.

Decisions for accepting abstracts will be made by June 30, 2013.

 OpenSDH – Analytics Research Contest

 [Sports Data Hub](#) is sponsoring a contest involving the analysis of [Australian Football League](#) GPS position and team possession data. The winner of the contest will have a half-hour invited talk at NESSIS in addition to receiving a US$500 cash prize and paid travel expenses to the conference. Data for the contest will be made available in early March, but background information and contest instructions are now posted. Complete details appear at the [contest site](#).

Further details of the 2013 NESSIS, including registration information, are forthcoming. Complete up-to-date information will be posted at the 2013 NESSIS web site: www.nessis.org.

 Please contact Mark Glickman (mg@bu.edu) or Scott Evans (evans@sdac.harvard.edu), the co-organizers of the symposium, with any questions.

 We would appreciate your forwarding this announcement to anyone who might be interested.

Annual Meetings in Boston

The following two annual meetings will take place in Boston during 2013:

- 34th Annual Meeting of the Society for Clinical Trials, May 19-22. For more information, please visit http://www.sctweb.org/public/meetings/2013/home.cfm.
- 49th Annual Meeting of the Drug Information Association, June 23-27. For more information, please visit http://www.diahome.org/en/Meetings-and-Training/Find-Meetings-and-Training/Meeting-Details.aspx?ProductID=30075&EventType=Annual%20Meeting

NEWS AND ANNOUNCEMENTS

Letter to the Editor Defending Statisticians

Please read a very interesting letter to the Editor by BCASA valued member and former officer Nicholas Horton:
http://www.masslive.com/opinion/index.ssf/2013/01/letters_to_the_editor_dont_dis.html.

BCASA Planning Committee

The BCASA Planning Committee meets about once every six weeks. Please join us and have an impact on chapter events and activities. Dinner is provided. The chapter recently held a retreat that included planning committee members and others interested in the chapter. We intend to write a summary of that event and put it on the chapter web site. For more information contact Chapter President Tom Lane, tlane@alum.mit.edu.

Chapter Elections – Call for Nominations for BCASA Officers

The chapter holds elections for officers every spring. This year these positions are up for election for terms staring January 1, 2014:

- Vice President (two-year term)
- Secretary (two-year term)
- Treasurer (two-year term)

For information on the duties of these officers see: http://amstat.org/chapters/boston/officerresp.html

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 Dominque Houghton dhaughton@bentley.edu. New volunteers are always welcome and greatly needed.

Mu Sigma Rho

The BCASA encourages all faculty teaching statistics in Massachusetts, Rhode Island, Vermont, New Hampshire and Maine to consider nominating undergraduate and graduate statistics students for membership in Mu Sigma Rho, the national honorary society for statistics. Email Liam O'Brien (lobrien@colby.edu) with your intention to submit late nominations as soon as possible. Inductees will receive a free membership in the ASA and BCASA and a subscription to Chance magazine. This is a great way to encourage your top students to pursue a career in statistics and to introduce them to many useful resources and job opportunities. The process is straightforward for both the nominator and nominee. Nominators should fill out the online nomination form at http://www.colby.edu/academics_cs/mu_sigma_rho/msrnom.cfm. A transcript (unofficial is fine) and $5 induction fee for each nominee then need to be mailed to:

Liam O'Brien
Department of Mathematics and Statistics
Colby College
5838 Mayflower Hill
Waterville, ME 04901-8858

The nominee only needs to confirm his or her interest and to approve his or her transcripts being forwarded.

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).

Boston University School of Public Health
Department of Biostatistics Faculty Position

We are seeking qualified applicants for a clinical (teaching) assistant professor position in the Department of Biostatistics at the Boston University School of Public Health. The Department has 29 full-time faculty members, a robust program of funded research, and teaching programs leading to MPH, MA and PhD degrees in Biostatistics.

Candidates should have a doctorate in biostatistics, statistics or equivalent training, and demonstrated effective teaching experience. Successful applicants will be expected to teach four to six courses per year (including sections from our required introductory course in biostatistics and sections of our statistical computing courses using the statistical software packages R or SAS), assist with administrative and supervisory aspects of our academic programs, provide academic advising for students enrolled in the MPH program, and participate in school-wide committees. Interest and experience in research, or scholarship of teaching and learning a plus. This will be a 12-month appointment.

Applicants for the full-time clinical faculty position should send their curricula vitae, a description of their teaching philosophy and experience, evidence of successful teaching (e.g., student evaluations or feedback), and three letters of reference to: **Dr. Lisa Sullivan, Professor and Chair, Department of Biostatistics, BOSTON UNIVERSITY SCHOOL OF PUBLIC HEALTH, Crosstown Center, 3rd Floor, 801 Massachusetts Avenue, Boston, MA 02118 (_lsull@bu.edu_). Deadline for application: April 15, 2013 or until position is filled.** Salaries will be commensurate with qualifications and experience. *Boston University is an equal opportunity employer.*

TREASURER'S REPORT

2012 INCOME

Membership - ASA	$5,120.00
Short courses and events	$735.98

TOTAL INCOME	$5,855.98

2012 EXPENSES

Short courses and events	$5,216.24
Planning Committee	$805.85
TOTAL EXPENSES	$6,022.09

2012 NET GAIN	-$166.11

ASSETS*

Bank Accounts	$20,774.10
CDs	$23,117.27

TOTAL ASSETS	$43,891.37

* Reflects account as of March 5, 2013

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
Vice-President, 2012-13	Vanessa Xanthakis, Boston University
Secretary, 2012-13	Sachiko Miyahara, Harvard School of Public Health
Treasurer, 2012-13	Huichao Chen, Harvard School of Public Health
Council of Chapters Representative, 2013-15	James MacDougall, Ironwood Pharmaceuticals
Past President	Dominique Haughton, Bentley University
Webmaster, 2013-14	Ching-Ti Liu, Boston University
Newsletter Editor, 2013-14	Ming Yang, Harvard School of Public Health

BCASA COMMITTEE CHAIRPERSON	
Mu Sigma Rho	Liam O'Brien, Colby College