

BCASA NEWSLETTER

Boston Chapter of the American Statistical Association
Serving Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont

Volume 29, No. 4, March 2011

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

Newsletter: BCASANews@verizon.net

Upcoming Events

Saturday, March 19	UMass Medical School, Worcester	Short Course: Intro to R (Tranbarger Freier)
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Tuesday, March 29	Emmanuel College, Boston	Lecture: Survival Analysis (Berry)
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Monday, May 2	UMass Medical School, Worcester	Lecture: Bioinformatics (Quackenbush)
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Monday, May 2	BB & N Upper School, Cambridge	Lecture: Endogenous Selection (Winship)
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Tuesday, May 17	Simmons College, Boston	Lecture: Confounding (Weisberg)
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ANNOUNCEMENTS

Chapter Elections

The chapter holds elections for officers every spring. This year these positions are up for election for terms starting January 1, 2012:

- * Vice President (two-year term)
- * Secretary (two-year term)
- * Treasurer (two year term)
- * Council of Chapters Representative (three-year term)

For information on the duties of these officers see:

<http://amstat.org/chapters/boston/officerresp.html>

We also plan to add two new positions:

- * Newsletter Editor (two-year term)
- * Webmaster (two-year term)

Chapter members can nominate themselves or other chapter members. To do so, please contact Past President Dominique Haughton:

dhaughton@bentley.edu

Elections are held at the final event of the season. This year they will be held at the May 17 lecture at Simmons College.

Planning Committee

Chapter officers have traditionally been active members of the Planning Committee. If you would like to play an active role in the chapter, please come to one of our committee meetings. We provide dinner and we would be happy to have you join us. Just contact Chapter President Tom Lane (tlane@alum.mit.edu) or any other officer or committee member.

Statistician of the Year Banquet

The *Statistician of the Year* banquet was held at Simmons College on February 5, 2011. Before the main events (the award presentation and lecture), Professor Bob Goldman of Simmons College said a few words of recognition in honor of *Kathy Monti*, longtime active chapter member and former chapter president who is moving to the Chicago area. He also presented her with a farewell gift from the chapter.

This year's *Statistician of the Year* is *Xiao-Li Meng* of Harvard University. The award honors a statistician who has made exceptional contributions to the field of statistics and has shown outstanding service to the statistical community and to the Boston Chapter.

Prof. Xiao-Li Meng addressed this question: *Can terrorists be caught with a probability larger than one?* In the December issue of *Significance*, Press (2010) presented a "square-root sampling" scheme for picking out passengers for an enhanced airport screening (e.g., a pat-down), with the assertion that "Surprisingly, and bizarrely, this turns out to be the most efficient way of capturing the terrorist." The result was used as a pure mathematical argument to demonstrate the ineffectiveness of ethnic profiling. Whereas there are profound reasons that ethnic profiling is unethical and unacceptable, the "square-root sampling" reasoning turns out to be a distraction rather than a supporting argument. This is because it is a result of an incorrect optimization (allowing probabilities to exceed one) of an inappropriate criterion (permitting terrorists to be "sampled with replacement"). The appearance of such elementary oversights in a statistical publication reminds us vividly that the grand task Fred Mosteller devoted his entire career to, to raise general statistical literacy and to promote sound statistical and probabilistic reasoning in scientific investigations and policy making, is still very much in front of us.

Statistics Career Day

On March 12 at UMass Boston the BCASA held its *Statistics Career Day*. The aim was to give high school students and instructors involved with Advanced Placement Statistics courses a "live" opportunity to envision what a career in statistics might be like and how to pursue such a career. The event allowed participants to interact with statisticians in government, industry, and academia as well as with undergraduate and graduate students in the field.

For more information contact:

Miriam Chernoff: mchernoff@sdac.harvard.edu

Lijuan Deng: ldeng@sdac.harvard.edu

Connecticut Chapter Mini-Conference

The Connecticut Chapter of ASA held its 9th annual mini-conference on Tuesday, March 8, 2011. The theme was *Analysis of Time-to-Event Data*. For details see:

http://www.amstat.org/chapters/Connecticut/home/MiniConference/conf_packet.pdf

Winner of PROSE Award

The Professional and Scholarly Publishing Division of the Association of American Publishers has announced the winners of its 2010 Awards for Professional and Scholarly Excellence (The PROSE Awards), presented at a luncheon in Washington, D.C. on February 3, 2011. The award for Mathematics was presented to John Wiley & Sons, Inc. for its book *Bias and Causation: Models and Judgment for Valid Comparisons* by chapter member Herb Weisberg. For details see:

<http://www.proseawards.com/news.html>

FUTURE EVENTS

New England Statistics Symposium

The 25th annual New England Statistics Symposium returns to its home site at the University of Connecticut on *Saturday, April 16, 2011*. The purpose of the symposium is to bring together statisticians from all over New England to share research, discuss emerging issues in the field, and network with colleagues.

Brad Carlin of the University of Minnesota and *Jun Liu* of Harvard University will give the keynote talks. There will also be several special invited theme sessions.

Students who present papers at the symposium will receive a waiver of the registration fee. Any student may submit a paper for consideration for one of three student awards sponsored by the IBM T.J. Watson Research Center and Smith Hanley Associates LLC.

On Friday, April 15 (the day before the symposium), there will be two full-day short courses:

Bayesian Adaptive Methods for Clinical Trials, Brad Carlin, University of Minnesota

Introduction to the Theory and Practice of Copulas, Ivan Kojadinovic, Universite de Pau et des Pays de l'Adour, and Jun Yan, University of Connecticut

For more details see:

<http://www.stat.uconn.edu/ness11/>, or

<http://www.stat.uconn.edu/www/events/EventsWeb/NESS/index.html>

New England Symposium on Statistics in Sports

The symposium will be held at Harvard University in Cambridge, Massachusetts on Saturday, *September 24, 2011*. For more information contact one of the symposium organizers: Mark Glickman, Scott Evans, or Jason Rosenfeld. Or see:

<http://amstat.org/chapters/boston/nessis11.html>

Decision Sciences Institute

The Decision Sciences Institute will hold its annual meeting on November 19 to 22, 2011 at the Boston Marriott Copley Place Hotel in Boston, MA. For more information:

<http://www.decisionsciences.org/>

Applied Statistics Symposium

The 2012 International Chinese Statistical Association (ICSA) Applied Statistics Symposium will be held from June 23 to June 26, 2012 at the Westin Waterfront, Boston, MA. See:

<http://www.icsa.org/>

AFTERNOON LECTURE

Statistics in Bioinformatics

John Quackenbush
Department of Biostatistics
Harvard School of Public Health

Date Monday, May 2, 2011

Time 12:00 pm

Location Access Building, 7th floor Conference Room,
University of Massachusetts Medical School, 55 Lake
Ave, Worcester, MA

Directions <http://www.umassmed.edu/Content.aspx?id=113324>

Registration By April 22, 2011 <http://quackenbush.eventbrite.com/>.
Space is limited.

Cost Free (including lunch).

Abstract

Will be posted later on chapter website.

EVENING LECTURES

Applying Survival Analysis to Forecasting Subscriber Levels

Michael J. A. Berry
Data Miners, Inc.

Date	Tuesday, March 29, 2011
Time	6:15 pm: Light dinner. 7:00 pm: Lecture.
Location	Maureen Murphy Wilkens Science Center, Emmanuel College, 400 The Fenway, Boston, MA 02115.
Directions	http://www.emmanuel.edu/About_Emmanuel/Campus/Wilkens_Science_Center/FAQs.html
Registration	By Monday, March 21 http://mberry.eventbrite.com/
Cost	Dinner: \$8 for chapter members, \$12 for others. Talk: free.

Michael Berry is author of *Data Mining Techniques: For Marketing, Sales, and Customer Relationship Management* (2004, 2011).

Abstract

Survival analysis, also called time-to-event analysis, is an underutilized tool in the data miner's toolkit. Because many analytical practitioners in the business world are unfamiliar with survival analysis, they have become adept at reformulating questions that should properly be about "when" into questions about "whether." A typical attrition model asks "Will the customer still be active in six months?" This is a convenient question because it has the kind of yes or no answer that can easily be modeled using logistic regression, or decision trees, but a much more interesting question is "How long will the customer last?" The answer to that question has many uses from lifetime value calculations to optimizing acquisition channels. The particular application addressed in this talk is creating a long-range daily forecast for a subscriber population that is a constantly changing mix of customers segments, each with its own survival function. A bottom-up forecast of this sort is more useful as a planning tool than the typical aggregate forecast because the survival-based forecast is very sensitive to changes in assumptions about the characteristics of new customers. The analyst can study the effect of varying assumptions about credit scores, product preferences, rate plans, demographics, or whatever else is of interest by watching the effect of these assumptions on the forecast. The work described here is based on several successful forecasts developed for newspapers, telephone companies, and other subscription-based businesses.

Endogenous Selection

Christopher Winship

Department of Sociology
Harvard University

Date	Monday, May 2, 2011
Time	Dinner: 6:15 pm. Lecture: 7:00 pm.
Location	Auditorium, BB & N Upper School, 80 Gerry's Landing Road, Cambridge, MA 02138.
Directions	http://www.bbns.org/contact/directions
Registration	By April 19, 2011 http://winship.eventbrite.com/
Cost	Dinner \$8 for chapter members, \$12 for others. Talk: free.

The work reported in this talk was done in collaboration with Felix Elwert, University of Wisconsin.

Abstract

A wide variety of seemingly disparate sources of bias, from nonresponse in a respective study, conditioning on a post treatment outcome, ascertainment bias, to controlling on lagged outcome, can all be understood as resulting from conditioning on an endogenous variable. Using Pearl's graphical theory for causal structures, we provide a unified theory and show how in all these situations bias results from conditioning on what Pearl calls a "collider" variable. Multiple examples are presented and analyzed.

Confounding and Effect Modification

Herbert I. Weisberg
Correlation Research, Inc.

Date Tuesday, May 17, 2011

Time Dinner: 6:15 pm. Lecture: 7:00 pm.

Location Special Functions Room, Simmons College, 300 The Fenway, Boston, MA 02115.

Directions <http://www.simmons.edu/overview/directions/> Parking available on site at a discounted rate.

Registration By May 13, 2011

Cost <http://weisberg.eventbrite.com/>

Abstract

The concept of confounding has always been, well, ... confounding to statisticians, epidemiologists and social scientists. Everyone seems to have a general intuition about what confounding is and how it can distort a causal effect. However, defining confounding rigorously has been problematic. Confusion about "philosophical" issues often translates into fuzzy thinking in practical applications. My new book introduces a new causal framework for thinking about bias that helps to clarify the meaning and implications of confounding. An important insight derived from this approach is that confounding and effect modification are not really separate and distinct phenomena. In particular, there is a sense in which confounding always implies effect modification. The reason why will be explained through simple numerical examples, and practical implications will be discussed.

SHORT COURSE

An Introduction to R

Katherine Tranbarger Freier
United BioSource Corp.

Date	Saturday, March 19th, 2011
Time	Check in: 12:30 pm Course: 1:00 pm to 4:30 pm
Location	Access Building, 7 th floor Conference Room, University of Massachusetts Medical School, 55 Lake Ave, Worcester, MA
Directions	http://www.umassmed.edu/Content.aspx?id=113324
Registration	http://freier.eventbrite.com/ Limit: 30 on-site participants.
Cost	\$25 for chapter members; \$35 for others. Fee covers course materials and snacks.

Abstract

R is a free statistical software package that can run on Windows, Mac, Unix, and Linux. This half-day workshop is designed to help you master the basics of *R* using lab assignments that can be later used with your students. We will be walking through and we'll also discuss the creation of new undergraduate lab materials in *R* and share our experiences teaching statistical ideas and methods using computer software.

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The BCASA Newsletter is published four times during the academic year and is emailed to all chapter members. Please send suggestions and comments to the editor, Stan Morse, at BCASANews@verizon.net.