

# BCASA NEWSLETTER

## Boston Chapter of the American Statistical Association

Serving

Maine, Massachusetts, New Hampshire, and Vermont

Volume 25, No. 4, March 2007

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

Newsletter: [bcasa\\_news@yahoo.com](mailto:bcasa_news@yahoo.com)

### SCHEDULED EVENTS

|                |                                     |               |
|----------------|-------------------------------------|---------------|
| March 29, 2007 | Evening Lecture                     | Boston, MA    |
| March 31, 2007 | Connecticut Chapter Mini-conference | New Haven, CT |
| April 21, 2007 | NE Statistics Symposium             | Storrs, CT    |
| May 4, 2007    | Earl Bowen Memorial Service         | Wellesley, MA |
| May 5, 2007    | Short Course                        | Boston, MA    |

An online event schedule is available at: <http://www.amstat.org/chapters/boston/schedule.html>. Detailed announcements are below. 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 Matt Tom ([tomma@emmanuel.edu](mailto:tomma@emmanuel.edu)).

### **EVENING LECTURE**

#### **Should Physicians Have More Statistical Training?**

Nicholas J. Horton, Department of Mathematics and Statistics  
Smith College Northampton, MA

**Date:** Thursday, March 29, 2007

**Time:** Light dinner: 6:30 PM  
Presentation: 7:00 PM

**Cost:** Dinner: \$9 members, \$11 non-members, \$5 students  
Presentation: free

**Location:** Room 224E (2nd floor conference room)  
Department of Health Care Policy  
Harvard Medical School  
180 Longwood Avenue  
Boston, MA 02115

**Directions:** Enter from Longwood Ave. by the entryway closest to Huntington Ave. Press the button marked "02" to be allowed into the building.

**RSVP:** Required by Monday March 26, 2007 to Sue Perry at [sperry@rhoworld.com](mailto:sperry@rhoworld.com). Indicate whether you will attend the light dinner or just the talk.

**Abstract:** This is a discussion of what your physician should know about statistics (but perhaps doesn't), or the implications of the *New England Journal of Medicine* publishing articles with increasingly sophisticated statistical methods. A recent survey of original articles published in *The New England Journal of Medicine* revealed increasing use of statistical methods over time, compared with (Emerson and Colditz) surveys conducted in 1979 and 1989. Of 311 articles published in 2004-2005, a substantial fraction of articles utilized relatively sophisticated statistical methodologies such as survival analysis (61%), multiple regression (51%) or power calculations (39%). Only 13% of the articles used just simple descriptive statistics (e.g., percentages, means, and confidence intervals). When adding the knowledge of material typically included in an introductory statistics course to the simple descriptive statistics, this percentage increased to 21%. The statistical training required prior to entry into as well as that provided during medical school is minimal, and this increasing sophistication complicates the interpretation and dissemination of new results, particularly for clinicians who have not received additional training in the conduct of research. We discuss the implications of this increased use of sophisticated statistical methods in journal publications on the required statistics training of a medical school education.

**Details:** For those who can't make it in person, there may be an internet-based remote access system in place. Announcements regarding this media will be made on the chapter website.

## **CONNECTICUT CHAPTER MINI-CONFERENCE**

### **Statistics for Spatial and Time-Evolving Data**

**Date:** Saturday, March 31, 2007

**Time:** 9:00 AM-4:30 PM

**Cost:** Lunch and Refreshment included:  
CT chapter members \$40; Non-members \$50; Student \$10  
Make checks payable to ASA Connecticut Chapter.

**Keynotes:** *Spatial Statistics:*  
Yongtao, Yale University,  
Terrence Murphy, Yale University  
*Temporal Statistics:*  
Ofer Harel, University of Connecticut  
Zhezhen Jin, Columbia University  
Joseph Cappelleri, Biostatistics Director, Pfizer Inc., *Correlation Structures.*  
Others are invited to submit abstracts to the registration address below.

**Register:** Postmark deadline for early registration is March 20, 2007. Mail name, affiliation, and registration fee to:  
Haiqun Lin, CT ASA Program Chair  
Yale University  
60 College Street  
New Haven, Connecticut 06520  
Phone: (203) 785-4707 email: [haiqun.lin@yale.edu](mailto:haiqun.lin@yale.edu)

**Abstracts:** Postmark deadline for abstract submissions is March 20, 2007.

**Location:** Omni Hotel, O155 Temple Street, New Haven, CT 06510

**Parking:** Several public parking lots nearby available at daily rate of less than \$10.

## **21<sup>st</sup> NEW ENGLAND STATISTICS SYMPOSIUM**

**Date:** Saturday, April 21, 2007

**Time:** 9:30 AM - 7:30 PM

**Location:** University of Connecticut, Storrs, Connecticut.

**Theme:** The themes of the symposium will be Applied Statistics, Bioinformatics, and Genetics

**Website:** <http://www.conferences.uconn.edu/ness07/index.html>.

## **EARL BOWEN MEMORIAL SERVICE**

**Date:** Friday, May 4, 2007

**Time:** TBA

**Location:** Babson University, Wellesley, MA (<http://www3.babson.edu/>)

**Description:** Earl Bowen, a former BCASA president died in Wellesley Hills Massachusetts on November 16, 2006. For details of the planned memorial service please refer to his obituary in the Member News section of this newsletter.

# SHORT COURSE

## Applied Longitudinal Analysis

Garrett M. Fitzmaurice  
Department of Biostatistics  
Harvard University School of Public Health

**Date:** Saturday, May 5, 2007

**Details:** To be announced in a follow up email and on our chapter website <http://www.amstat.org/chapters/boston>.

**Description:** The past 25 years have seen considerable progress in the development of statistical methods for the analysis of longitudinal data. Despite these important advances, methods for the analysis of longitudinal data have been somewhat slow to move into the mainstream. The goal of this course is to provide an introduction to statistical methods for analyzing longitudinal data. The main emphasis is on the practical rather than the theoretical aspects of longitudinal analysis. The course begins with a review of established methods for analyzing longitudinal data when the response of interest is continuous. A general introduction to linear mixed effects models for continuous responses is presented. When the response of interest is categorical (e.g., binary or count data), a number of extensions of generalized linear models to longitudinal data have been proposed. We present a broad overview of two main types of models: "marginal models" and "generalized linear mixed models". While both classes of models account for the within-subject correlation among the repeated measures, they differ in approach. Moreover, these two classes of models have regression coefficients with quite distinct interpretations and address somewhat different questions regarding longitudinal change in the response. In this course we highlight the main distinctions between these two types of models and discuss the types of scientific questions addressed by each.

**Prerequisite:** Attendees should have a strong background in linear regression and some minimal exposure to generalized linear models (e.g., logistic regression).

**Biography:** Garrett Fitzmaurice (<http://www.hsph.harvard.edu/faculty/GarrettFitzmaurice.html>), holds a joint appointment as an Associate Professor in the Department of Biostatistics in the School of Public Health and in the Department of Psychiatry (Biostatistics) at the Harvard Medical School. He also is a Biostatistician in the Division of General Medicine of Brigham and Women's Hospital and a Foreign Adjunct Professor of Biostatistics at the Karolinska Institutet in Sweden. With his colleagues Nan Laird and Jim Ware, Dr. Fitzmaurice recently completed a book on [Applied Longitudinal Analysis](#). He has provided statistical contributions to many applications, including methods for analyzing discrete longitudinal data, models for mixed discrete and continuous outcomes, general missing data problems, methods for detecting and adjusting for over dispersion, and statistical problems in psychiatric epidemiology.

**Registration:** Register by April 21, 2007 to take advantage of the early bird discount. If you have any question please contact Scott Evans at [evans@sdac.harvard.edu](mailto:evans@sdac.harvard.edu). Enrollment is limited and seats are reserved upon receipt of payment. We accept cash or checks payable to the Boston Chapter of the American Statistical Association. Sorry, no credit cards. Send payment to Rui Wang, Department of Biostatistics, Harvard School of Public Health, 655 Huntington Avenue, SPH2, 4th Floor, Boston, Massachusetts 02115. Cancellations received on/before 4/28/07 are fully refundable however cancellations received after are subject to a \$15 processing fee. Be sure to include contact information with your registration so that we can contact you in the event of any unplanned changes.

# **ANNOUNCEMENTS**

## **Annual Award Banquet**

Frontier Science hosted this year's Mosteller Statistician of the Year Award Banquet with a delicious feast, evening lecture, and award presentation, in celebration of our most recent recipient LJ Wei. Dr. Wei spoke of the ways that a statistician will be able to uniquely contribute in an evolving world of complex data. A highly accomplished and well regarded statistician, Dr. Wei added humorous descriptions and historical notes of encounters with statistics and statisticians to his talk, touching the lives of many in the Harvard community. Many statisticians can certainly make use of LJ's example on how to distinguish a good husband using prediction models. Dr. Wei discussed descriptive and inferential statistics, encouraged statisticians to contribute using prediction and interval estimation, and to educate others to the importance of supplying quality measures along with point estimates. He contributed many amusing stories and acknowledged his gratitude to many of his former and present colleagues. Many of his friends and colleagues were present to honor his contributions to the field of statistics; in particular clinical trials, statistical methodology, and to statistical education.

Dr. Wei is a Professor of Biostatistics in the Department of Biostatistics at the Harvard School of Public Health (HSPH), a fellow of the American Statistical Association, and a senior statistician at the Statistical and Data Analysis Center. Professor Wei received his Ph.D. in statistics from the University of Wisconsin at Madison and has served on the faculty of several universities before coming to Harvard in 1991. LJ works closely with the medical investigators in Adult and Pediatrics AIDS clinical trials for evaluating new treatments for HIV patients. LJ Wei has developed numerous innovative statistical methods for the design, monitoring, and analysis of clinical trials. Dr. Wei often makes himself available evenings and weekends to consult with students and to assist colleagues and fellow faculty members.

Often working with multidimensional data, multiple event times, and repeated measurements, Dr. Wei is currently working on methods of model verification and adequacy (goodness-of-fit). Dr. Wei has also made contributions in resampling methods for quantile regression, rank regression, and regression models for censored data. LJ has contributed as a Special Government Employee for the FDA and has served as an expert witness in judicial matters. Scott Evans, a colleague at HSPH, provided an entertaining and jovial introduction to the Dr. Wei and the discussion. Dominique Haughton, our Chapter President presented the award plaque. Event photos are available on our chapter website <http://www.amstat.org/chapters/boston/photos.html>.

## **ASA Joint Meetings**

This year's joint statistical meetings are to be held in Salt Lake City, Utah on July 29 - August 2, 2007. See the website <http://www.amstat.org/meetings/JSM/2007/>. The 2006 JSM was the best attended ever. The ASA Council of Chapters invited session this year is "Effective Leadership for Statistical Thinking and Impact" at 10:30 a.m. on Tuesday.

## **Traveling Course and Learn Stat**

The ASA Council of Chapters (COC) reminds members of the statistical education opportunities through the Traveling Course and Learn Stat.

Traveling courses are awarded by the COC Traveling Course Committee and provide low cost local educational opportunities. Each course is typically given at three chapters on successive days. The COC covers speaker travel expenses, honorarium, and course materials. The chapter covers advertising, local arrangements (including hotel and local travel) and registration. Three traveling courses were offered in 2006:

1. Regression Modeling Strategies by Frank Harrell,
2. Sample-size Analysis for Study Planning and Permutation by Ralph O'Brien, and
3. Parametric and Bootstrap Tests of Hypotheses by Philip Good.

Members may consider developing or attending offered courses. If interested in developing a course please contact Nick Horton ([nhorton@smith.edu](mailto:nhorton@smith.edu)), our Council of Chapters representative.

Chapter members are also encouraged to develop and attend ASA's Learn Stat courses. This initiative offers continuing education opportunities to statisticians beyond those offered at the Joint Statistical Meetings. These courses, primarily for professional statisticians, are intended to enhance the understanding of statistical theory, methodology and applications. For upcoming courses or if you have a topic that you would like to develop into a course see <http://www.amstat.org/education/index.cfm?fuseaction=learnstat>.

## **Consulting Newsgroup**

The chapter has established an email list known as BCASA Consultants. Anyone looking for a statistical consultant can request help by sending an email to the list. Statisticians wishing to provide consulting services are welcome to join the list to receive consulting requests. This can be a good resource for headhunters as well. List membership is currently around 100 and the posting rate has been around two per month. Visit [www.amstat.org/chapters/boston/consult.html](http://www.amstat.org/chapters/boston/consult.html) for more information.

## Summer Internships

If your company would like to offer summer internships to students studying statistics or mathematics, the BCASA can help. We can announce the internship on our website, through our email list, and in the newsletter. Contact Katherine Monti ([kmonti@rhoworld.com](mailto:kmonti@rhoworld.com)) for details.

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## MEMBER NEWS

### Obituary for Earl Bowen The 30th President of the BCASA

Earl Kenneth Bowen, of Norwood, MA, Mathematics Professor Emeritus at Babson College and author of several college textbooks, died on November 18, 2006, of complications from a stroke. Earl was an active member of the Boston Chapter of the American Statistical Association (BCASA) and served as president from 1967 to 1968.

Earl Bowen was born in Colonie, NY, on November 13, 1918. He was graduated from West Springfield High School in 1936. Earl met his future wife, Dorothy Ethel Holmes, in high school. They were married in 1942 and celebrated their 64th wedding anniversary last June.

Earl was a diligent student. The motto he chose to accompany his high school yearbook was: "Genius is 1 % inspiration and 99% perspiration." In 1940, he graduated with honors in mathematics from the University of Massachusetts at Amherst (then known as Massachusetts State College in Amherst), where he earned letters in soccer and track. Upon graduation, Earl worked at Northeastern University as an instructor. He received his master's degree from Boston University in 1943 and completed the course work for a doctorate there. Earl also took graduate courses at the Massachusetts Institute of Technology.

During World War II, Earl worked for the United States Office of Scientific Research and Development, as a Scientific Consultant in mathematics in the Office of Field Services (OFS). Originally sent to the "Princeton Station" at Princeton University to receive military training, he and several others of his group were soon sent to Army Headquarters of the Pacific Area in Hawaii. While there, Earl engaged in activities such as scouting out locations for radar system installations, formulating procedures for disarming unexploded bombs, and summarizing, correlating, and analyzing bomb data. He was a collaborator in the creation of a series of graphic summary sheets that were organized to show in simplified fashion the major effects of various bombs and fuses. These sheets were distributed widely through the theater and were incorporated into the *7th Air Force Ordnance Officer's Handbook*.

After returning from overseas, in 1946 Earl was appointed Instructor in Statistics at Babson College (then known as Babson Institute) in Wellesley Hills, MA, where he worked for the next 35 years, until his retirement in 1981, with the exception of time taken out during the Korean conflict for service in Washington, DC., as a Senior Staff Member of the Army's Johns Hopkins Operation Research Office.

At Babson College, Earl had a distinguished and institutionally important career, teaching mathematics, statistics, and computer fundamentals to generations of undergraduate business students. He received tenure and was promoted to Full Professor in 1962, and served as Chairman of Department of Statistics (later renamed Department of Mathematics and Statistics) from 1964 to 1974. From 1962 through 1963, he also served as Director of Institutional Research. Among numerous honors that Earl received, he was named "Outstanding Professor at Babson" in 1971.

Professor Bowen authored several textbooks in mathematics and statistics, including *Mathematics with Applications in Management and Economics* which has been published for over 25 years. The Earl K. Bowen Award is presented to the graduating senior with the highest cumulative average in quantitative methods courses.

In addition to his wife, Professor Bowen leaves a son and daughter-in-law, a daughter, three grandsons, two great-grandchildren, and a sister. A memorial service will be held at Babson College on Friday, May 4th. For details on this event contact John D. McKenzie, Jr., Associate Professor in the Math/Science Division, at [mailto:mckenzie@babson.edu](mailto:mailto:mckenzie@babson.edu).

## TREASURER'S REPORT

As of February 16, 2006, when last treasurer's report was generated, the total assets were \$33,425.86.

### Events-related Income/Expenses (since January 2006):

| Net Revenues:                     |           |             |
|-----------------------------------|-----------|-------------|
| Statistician of the Year Banquet, | 2/23/06:  | -\$ 490.00  |
| Evening Lecture,                  | 4/10/06:  | -\$ 239.78  |
| High School Statistics Day,       | 5/17/06:  | -\$ 1747.20 |
| Daytime Lecture,                  | 5/30/06:  | -\$ 72.00   |
| Evening Lecture,                  | 10/09/06: | \$ 35.00    |
| Evening Lecture,                  | 11/14/06: | -\$ 45.60   |
| Short Course,                     | 12/02/06: | \$1466.50   |
| Mosteller Event (co-sponsor):     | 11/03/06: | -\$1500.00  |
| TOTAL:                            |           | -\$2593.08  |

### Other Income/Expenses (since January 2006):

| Income:     |           |
|-------------|-----------|
| Interest:   | \$ 739.73 |
| Membership: | \$3044.00 |
| TOTAL:      | \$3783.73 |

| Expenses:     |           |
|---------------|-----------|
| Stamps:       | \$ 7.80   |
| Mu Sigma Rho: | \$ 374.00 |
| Other:        | \$ 103.97 |
| TOTAL:        | \$ 985.37 |

| Assets (as of February 22, 2007): |             |
|-----------------------------------|-------------|
| Bank Account:                     | \$12,794.86 |
| CDs:                              | \$20,836.28 |
| TOTAL:                            | \$33,631.14 |

*Submitted by Rui Wang.*

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## JOB OPPORTUNITIES

**SENIOR/ PRINCIPAL BIOSTATISTICIAN:** The Biometrics Unit of Altus Pharmaceuticals, Inc. (<http://www.altus.com/>) has an opening for a Senior / Principal Biostatistician in Cambridge, MA. The successful candidate will be responsible for handling the Biostatistics support for the company's lead product. Other responsibilities will include supporting the analysis and reporting responsibilities of the Clinical Development and Medical Affairs Department, specifically the Biometrics unit; provide inputs to the statistical sections of protocols, clinical study reports, IND/NDA submissions and briefing documents that will be sent to health authorities; provide biostatistical support to the clinical, regulatory and marketing departments; create statistical analysis plans, lead biostatistics activities and support clinical teams; provide oversight function on biostatistics activities for outsourced clinical studies; and help develop reporting standards and participate in process improvement activities. Altus Pharmaceuticals, Inc. is a Cambridge-based Biotech company. It is focused on developing and commercializing novel protein therapeutics for patients with chronic gastrointestinal and metabolic diseases. Altus' in-depth knowledge of protein crystallization has resulted in a proprietary pipeline of orally-delivered and injectable protein replacement products. As a company, it is committed to improving the quality of life of patients. The ideal candidate should have at least an MS (PhD preferred) in Biostatistics/Statistics or its equivalent and at least 3 (Senior)/6 (Principal) years of analysis experience in the pharmaceutical and biotechnology industry or contract research organization. The candidate should also have a working knowledge of SAS® programming, including the use of the core products which include but not limited to BASE SAS and its macro facility, SAS/STAT and SAS/GRAPH. He should have a working knowledge of pertinent regulatory guidelines and industry standards as they apply to analysis and reporting activities, study designs and statistical methods; good communication and problem solving skills; and willing and able to work in a team setting. Altus understands that its commitment to improving the lives of patients begins internally with its own family. For this reason, Altus offers a competitive and valuable benefits package in addition to its compensation packages. The application process will begin February 1 and will continue until suitable candidates are found and the position is filled. Interested candidates should send their resume to: Dr. Daniel Bonzo ([dbonzo@altus.com](mailto:dbonzo@altus.com)), Biometrics Head, Altus Pharmaceuticals, Inc., 125 Sidney St., Cambridge, MA 02139-4807, phone: (617) 299-2872, fax: (617) 299-2844.

DATA ANALYST: Boston University School of Public Health has the following opening for a Master's Level Data Analyst in the Department of Biostatistics in Boston MA. This is a regular full time (40 hours per week) position. Boston University is the 5th largest employer in Boston and offers very competitive benefits. The Boston University Biostatistics Department has 21 full-time and 6 part-time faculty members. The Biostatistics faculty has extensive experience collaborating on cardiovascular studies as well as a broad range of other medical research areas. The job responsibilities include providing database and SAS programming support for research projects, conducting data analyses using programming skills (e.g. SAS) in the evaluation of genetic data as well as data management and statistical analysis, and using specialized genetic analysis programs including SOLAR, SAGE, FBAT, HAPLO.Stats, MAPMAKER SIBS, PEDSYS, and ASPEX. The job also includes identifying new programs for use in analysis; making these programs available to other users working in genetic research, and assisting with training others in the use of genetic programs for statistical analyses and assisting with the design of analyses of data in the Framingham Heart Study. Candidate requirements include: Masters Degree in Biostatistics or Epidemiology with one to three years of relevant experience with SAS and genetic analysis programs required. Interested applicants please apply through the Boston University Medical Campus webpage at <http://www.-.bu.edu/hr>. Reference job number: 2026-DATA ANALYST-SPH - Grade -54.

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*The BCASA Newsletter is published four times during the academic year and is emailed to current BCASA members. Send comments or suggestions to Maureen Mayer [bcasa\\_news@yahoo.com](mailto:bcasa_news@yahoo.com) or to any of the individuals listed below.*

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BCASA OFFICERS

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|---|--|
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| Program Chair, 2007-08                      | Matt Tom, Emmanuel College                   |
| Vice-President, 2006-07                     | Shelley Hurwitz, Harvard Medical School      |
| Secretary, 2006-07                          | Maureen P. Mayer, Raytheon Company           |
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| Council of Chapters Representative, 2006-08 | Nicholas Horton, Smith College               |
| Past President, 2007-08                     | Scott Evans, Harvard School of Public Health |

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BCASA COMMITTEE CHAIRPERSONS

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|------------------------|-----------------|
| Education              | Kerstin Allen   |
| Email list and Website | Tom Lane        |
| Membership             | Maureen Mayer   |
| Publications           | Shelley Hurwitz |

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