

BCASA NEWSLETTER

Boston Chapter of the American Statistical Association

Serving

Maine, Massachusetts, New Hampshire, and Vermont

Volume 22, No. 4, March 2004

Boston Chapter ASA, c/o Michael A. Posner, 313 Summit Avenue #3, Brighton, MA 02135

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

Overview of Scheduled Events

March 13, 2004	CT Chapter Mini-Conference	Wallingford, CT
March 25, 2004	BCASA Evening Lecture	Cambridge, MA
March 25, 2004	BCASA Evening Lecture	Northampton, MA
April 12, 2004	BCASA Afternoon Lecture	Plymouth, NH
April 24, 2004	New England Statistics Symposium	Cambridge, MA
May 10-11, 2004	BCASA Spring Conference	Boston, MA

Event schedule on the web: <http://www.amstat.org/chapters/boston/schedule.html>

Detailed announcements appear inside this issue. All events are announced to BCASA members by email providing sufficient advance notice to make plans to attend. We are currently planning events for the upcoming year. If you have suggestions please contact Program Chair Tom Lane at tlane@alum.mit.edu.

MINI - CONFERENCE

Data Mining Topics

Connecticut Chapter of the American Statistical Association

Date: Saturday, March 13, 2004, 10 AM to 4 PM
Location: Bristol-Myers Squibb, Wallingford, Connecticut
Website: <http://www.amstat.org/chapters/connecticut/>

EVENING LECTURE

Temporal Averaging and Nonstationarities in Financial Analysis

Andrew W. Lo
Harris & Harris Group Professor
MIT Sloan School of Management

Date: Thursday, March 25, 2004

- Time:** 6:30 PM Light dinner
7:00 PM Presentation
- Cost:** Dinner: \$8 members, \$10 non-members, \$5 students
Presentation: free
- Location:** MIT Sloan School of Management
Tang Center (Room E51-335)
Cambridge, Massachusetts
- RSVP:** By noon on March 22 to Sue Perry (sperry@rhoworld.com). Specify whether you will have dinner or only attend the presentation.
- Directions:** <http://whereis.mit.edu/map-jpg?selection=E51&Buildings=go>
This is a short walk from the Kendall/MIT MBTA station. We have informal word that after 5 p.m parking is permitted in MIT lots without a permit. The Hayward Lot is convenient to the Tang Center.
- Abstract:** A common practice among quantitative financial analysts for dealing with non-stationary time series is to apply an exponentially declining weighting scheme to the data so that more distant observations are given less weight than more recent observations. We show that this practice of temporal averaging is incorrect for all but linear estimators, implying that variances, covariances, betas, Sharpe ratios, Value-at-Risk, and many other common financial statistics are incorrectly estimated with exponentially weighted time series. We propose an alternative approach to temporal averaging that yields unbiased estimators under the null hypothesis of independently and identically distributed observations, and that has attractive asymptotic properties under several stationary and nonstationary alternative hypotheses. Using this approach, we derive temporally averaged estimators for all the usual financial statistics and apply them to recent historical stock market data to demonstrate their empirical properties. This is joint work with Whitney K. Newey.
- Program Chair note:** Professor Lo is also the director of the MIT Laboratory for Financial Engineering. He was featured in the recent "Great Teaching" issue of MIT's *Spectrum* magazine, and will be a keynote speaker at this year's New England Statistics Symposium.
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EVENING LECTURE

Health Surveillance and Bioterrorism

Marcello Pagano
Department of Biostatistics
Harvard School of Public Health

- Date:** Thursday, March 25, 2004
- Time:** 6:15-7:00 PM Light refreshments
7:00-8:00 PM Presentation
- Cost:** Free
- Location:** Smith College
McConnell B15
Northampton, MA
- Directions:** http://www.smith.edu/about_visit_directions.php
- Maps:** <http://www.smith.edu/map/>
- Parking:** Metered parking is available on Green Street (intersects with West Street, near the Forbes Library and Elm Street). McConnell Hall is part of the Clark Science Center complex, approximately 150 yards from Green Street.
- RSVP:** By Monday, March 22 to Sue Perry (sperry@rhoworld.com).

Questions: Contact Nicholas Horton (413-585-3688, nhorton@smith.edu)

Abstract: With the very real threat of bioterrorism, the critical need for timely detection of an outbreak has accelerated the time-frame for major enhancements to the public health infrastructure. One of the earliest developments produced by these efforts has been the syndromic surveillance system. Healthcare utilization patterns are monitored with the assumption that the first signs of a covert germ warfare attack may be clusters of victims seeking health care. By detecting a surge in visits of patients a public health authority may get an early warning of an attack enabling prompt case identification, treatment, containment, and prophylaxis. This talk focuses on the use of statistics to increase the power of a surveillance system designed to detect an outbreak.

AFTERNOON LECTURE

What do Biostatisticians do?

Scott Evans
Harvard University

Date: Monday, April 12, 2004

Time: 4:00 PM

Cost: Free

Location: Hyde Hall, room 327
Plymouth State University
Plymouth, New Hampshire

Directions: <http://www.plymouth.edu/admit/directions.htm>

Maps, Parking: http://www.plymouth.edu/hub/campus_maps.htm

Abstract: The importance of and demand for biostatistics expertise in public health and medical research has increased over the last several years. This talk will introduce students to the field of Biostatistics and describe what biostatisticians do. Examples from recent clinical trials and other public health studies including studies in HIV/AIDS, AIDS-neurology, oncology, biosurveillance, and ecology will be discussed.

NEW ENGLAND STATISTICS SYMPOSIUM

Hosted by the Harvard University Department of Statistics

Date: Saturday, April 24, 2004

Location: Science Center
1 Oxford Street
Cambridge, MA

Website: <http://www.fas.harvard.edu/~stats/ness2004.html>

SPRING CONFERENCE

International Conference on Analysis of Genomic Data

**Sponsored by the Boston Chapter of the American Statistical Association
and Channing Laboratory, Brigham and Women's Hospital, Harvard Medical School**

Dates: May 10-11, 2004

Synopsis: The conference will cover current research on statistical models and bioinformatic methods for microarray data, proteomic data, and population genetics.

Website: <http://www.amstat.org/chapters/boston/genomic/Main.htm>

ANNOUNCEMENTS

Chapter Elections

The Boston Chapter of the ASA has elections in the spring for terms of office that start the following January 1. This year the elections will be held at the March 25th meetings. Terms generally run for two years, however the Chapter Representative to the ASA has a 3-year term. Officers are elected in a staggered manner, and elections for the offices of President and Program Chair will be held this year. We are fortunate to have the following candidates who have agreed to run for re-election: Scott Evans for President and Tom Lane for Program Chair. Other nominations will be accepted by the Past-President, Robert B. Smith at RSmithPhd@aol.com, until March 24. Self-nominations are welcome. As always, the Planning Committee invites new members. Candidates for officers are generally selected from active, contributing members of the Planning Committee. The Committee meets about once every six weeks during the academic year. Anyone interested in joining the Planning Committee may contact Scott Evans at evans@sdac.harvard.edu.

Chapter Dues

The BCASA newsletter is emailed to current members. Please be sure your membership is current by using your annual ASA membership renewal form and sending your BCASA dues to ASA, or by sending your BCASA dues directly to the BCASA. The BCASA membership fee is only \$9 (it's only \$3 for students) and BCASA members get discounts for events. Instructions are on our web site at <http://www.amstat.org/chapters/boston/join.html>. See the ASA web site for more information, including ASA membership discounts: <http://www.amstat.org/membership/join.html>.

Traveling Statistician Outreach Program

In this program, professional statisticians will travel to colleges and universities to give statistical talks and to discuss statistics as a profession. The targeted colleges and universities are those that may not have many statisticians because of geographic isolation or simply no statistics departments. Interested schools and volunteer speakers should contact Scott Evans at evans@sdac.harvard.edu or Kerstin Allen at kallen@rhoworld.com.

Weather Cancellations

The members of the Planning Committee do not remember ever having any weather cancellations! Nevertheless, if the weather causes an event to be cancelled, the people who provided emails when they RSVP'ed will receive an email notification. The cancellation will also be posted on the BCASA website.

Congratulations

Cyrus Mehta, co-founder and president of Cytel Software Corporation, was presented with the Zoroastrian Entrepreneur of the Year Award from the World Zoroastrian Chamber of Commerce. Congratulations, Cyrus!

Party Note and Thanks

There was plenty of food and frolic at the annual winter potluck dinner and party hosted by Judy and Tom Lane of Carlisle on Sunday February 8. Thanks again to Tom and Judy for hosting this enjoyable and elegant evening.

Boston Chapter Career Day Planned for 2005

Local statisticians of all levels will be invited to attend Career Day 2005. We hope to feature a keynote speaker, speakers from a variety of fields in statistics, and opportunities for statisticians to exchange resumes with potential employers. In addition, attendees may also have the opportunity to obtain application packets for graduate programs in statistics across the US. Currently we are considering dates in late February 2005. In order to make it all happen, we need the following:

- People to help plan the event.
- Statisticians who represent companies in the New England area (whether or not you are hiring).
- Statisticians to represent graduate programs across the US.
- A location that would hold ~300 people – preferably with access to 1 or 2 additional rooms.
- Financial contributions to subsidize snacks and lunch.

Please e-mail Education Committee Chairperson Kerstin Allen at kallen@rhoworld.com if you can offer any of the above.

Job Opportunities

POST-DOCTORAL LEVEL STATISTICIAN POSITION: Channing Laboratory, Brigham and Women's Hospital, Harvard Medical School. The postdoctoral fellow will participate in collaborative research involving statistical analysis of genomic data, computational biology, epidemiology, and development of statistical methods. A doctoral degree in statistics/biostatistics is required. Send letter of research interest, CV and names of three references to Dr. Mei-Ling Ting Lee, Channing Laboratory, 181 Longwood Avenue, Boston, MA 02115. Email: meiling@channing.harvard.edu Brigham and Women's Hospital is an equal opportunity/affirmative action employer. Women and minorities are encouraged to apply.

MATHEMATICAL STATISTICIAN: The Office of Biostatistics in the Center for Drug Evaluation and Research, FDA invites applications from Mathematical Statisticians with a background in biomedical, biological or pharmacological sciences with strong methodological, computational and communicative skills. You will work with multidisciplinary teams of review scientists in a dynamic, highly challenging and innovative atmosphere of drug and therapeutic biological development, evaluation and research. You will have the opportunity to employ a broad variety of statistical procedures relevant to the pre-market regulatory, scientific pre-clinical, clinical evaluation decision process and the emerging fields of quantitative risk assessment and pharmacogenomics. As a statistician in the Office of Biostatistics you will apply your skills to address unique and precedent setting problems while refining your consulting, communication and presentation skills. You will evaluate and advise on protocols for clinical studies and assess the evidence for safety and efficacy from clinical studies submitted in drug and biologics applications. We have an active regulatory research program which allows you to advance your skills and professional development. In addition, you will have the opportunity to interact with national, international, public and private organizations on statistical issues and help develop guidance for the pharmaceutical industry and clinical investigators. Candidates should possess an advanced degree and specific coursework in an appropriate field of study and professional experience. This should include 24 semester hours of mathematics and statistics, of which at least 12 semester hours are in mathematics and 6 semester hours are in statistics or a combination of education and experience with at least 24 semester hours of mathematics and statistics, including at least 12 hours in mathematics and 6 hours in statistics, plus appropriate experience or additional education. Candidates with Ph.D.s, or Master degrees and associated experience are highly desirable. In addition to a background in statistics and analysis, applicants should have an interest in clinical trials and excellent communication skills, both oral and written. Since work is conducted in interdisciplinary groups, the ability to communicate statistical issues to non-statisticians is important. Candidates for civil service or U.S. Commissioned Corps must be U.S. citizens. Permanent U.S. residents may apply for staff fellowship appointments. Civil Service Salary GS-12, \$60,093 to \$75,546; GS-13, \$71,461 to \$89,839. The FDA is a family friendly workplace with flexible work hours and location, and excellent benefits. CDER's Office of Biostatistics is located in Montgomery County, Maryland, just outside of the Washington, D.C. metropolitan area. The FDA is an Equal Opportunity Employer and has a smoke free environment and particularly welcomes applications from woman and minority candidates. If you are interested in considering employment with CDER's Office of Biostatistics, please submit your resume with cover letter to: Dr. Mohammed Huque, Director, Division of Biostatistics III, CDER, 9201 Corporate Blvd., Room S123, HFD-725, Rockville, MD 20850, Telephone: (301) 827-2110, email: Huque@cderr.fda.gov and Dr. Aloka Chakravarty, Director, Biologic Therapeutics Mathematical Statistics Staff, CDER, 1451 Rockville Pike, Woodmont II, Room 3016, Rockville, Maryland 20857, Telephone: (301) 594-5671, email: Chakravarty@cber.fda.gov. For more information, please visit the Office of Biostatistics website: www.cdernet.cder.fda.gov/OB/INDEX.htm.

BIostatistician/PRODUCT MANAGER: Cytel Software Corporation is currently seeking a talented biostatistician to lead our growing business in the area of analytical services for design and conduct of clinical pharmaceutical trials. If you have a Ph.D. in statistics or biostatistics with 3 to 5 years of clinical trials experience and possess an entrepreneurial spirit we want to talk to you. At Cytel you will have the opportunity to build and manage a training and consulting business around clinical trials as well as to participate in the development of breakthrough software that is helping leading companies, government agencies and research centers change the way clinical trials are designed and conducted. Cytel's software products, East™, StatXact™, and LogXact™, are unique, award winning design and analysis tools used by almost every major bio-pharmaceutical company, as well as academic research sites and the FDA. As a leader, you will be responsible for providing training to clients on the use of east, designing and monitoring clinical trials for clients using existing group sequential and adaptive methods, developing new group sequential and adaptive statistical methods where none currently exist for the client's problem, managing projects, managing client relationships, recruiting and developing talented staff. The right candidate will be an entrepreneur with excellent consulting instincts as well as technical and communication skills, who is excited by the statistical and managerial challenges of this position, and motivated to succeed through a reward structure that includes equity ownership, a competitive salary, and the opportunity to influence clinical practice by providing superior new software tools and services that speed up the entire process of drug development. Competitive salary + bonus and equity. To apply, please send a resume and cover letter to careers@cytel.com with subject line: Biostatistician. Email applications only, please.

Louise Ryan Honored as 2004 Mosteller Statistician of the Year

Dr. Louise Ryan was recognized as the 2004 Mosteller Statistician of the Year by the Boston Chapter of the American Statistical Association at a dinner in her honor on January 27th. The award was presented to Dr. Ryan in recognition of her contributions to environmental statistics and her service to the profession, especially in mentoring. Dr. Ryan is the fifteenth statistician recognized by the Chapter, and the eighth recipient since the award was renamed in honor of Dr. Frederick Mosteller. The award is given annually to a distinguished statistician who has made exceptional contributions to the field of statistics and has shown outstanding service to the statistical community. Individuals from academia, industry, and government who have been actively associated with the Boston Chapter are considered for the award.

Louise Ryan is a Professor in the Department of Biostatistics of the Harvard School of Public Health and at the Dana-Farber Cancer Institute. She holds a BA from Macquarie University in Australia (1978) and a PhD in statistics from Harvard University (1983). Her interests are in the areas of statistical methods related to environmental risk assessment for cancer, developmental and reproductive toxicity, and other non-cancer endpoints such as respiratory disease. She also works on cancer clinical trials and epidemiological methods for the study of birth defects and adverse reproductive outcomes. A special interest is the analysis of multiple outcomes as they occur in these applied settings. Her interests include community based environmental health research development gained while serving as a technical advisor to a group on Cape Cod concerned with the high cancer rates of that community. A current project is to assess possible connections between chronic stress, particularly that associated with exposure to violence, and the onset and exacerbation of asthma. While excelling at research, she emphasizes the mentoring and training of underrepresented minority students in biostatistics and research methods. She has won the Outstanding Mentor Award (2000) from the Harvard School of Public Health, National Role Model Mentor Award (2001) from Minority Access Incorporated, and the Spiegelman Award from the American Public Health Association (1995). She is a fellow of the American Statistical Association and of the International Statistics Institute. Dr. Ryan has been a co-editor of *Biometrics* and President of the Eastern North American Region of the International Biometric Society. She has served on advisory boards for several government agencies, including the National Toxicology Program and the Environmental Protection Agency, as well as several committees of the National Academy of Science. Dr. Ryan is the author of numerous publications in the statistical literature.

Dr. Ryan's presentation at the award banquet was entitled "Optimal Design for Epidemiological Cohort Studies, with Application to the Planned National Children's Study." In her presentation she discussed design challenges motivated by the planned National Children's Study. This complex study will involve 100,000 United States children followed from birth throughout childhood. Asthma and autism are two diseases of interest in the study. Dr. Ryan discussed the sampling framework (population-based versus center-based designs) and the sampling strategy (two- and multi- phase or stage) selection. She dissected the sampling framework tradeoff of having more assured representation (population-based) versus improved likelihood of follow up (center-based). The design effect variance inflation was parameterized to show that when within center demographic variability is high, a dual frame sampling is preferred. The talk drew on work conducted with Warren Strauss from Battelle Labs and David Loecke, a doctoral student in the Harvard Biostatistics Department.

Previous recipients of the BCASA's Mosteller Statistician of the Year are Fred Mosteller, 1990; Herman Chernoff, 1991; Marvin Zelen, 1992; Ralph D'Agostino, 1993; William DuMouchel, 1994; Don Rubin, 1995; Nan Laird, 1996; David Hoaglin, 1997; Richard Goldstein, 1998; Arlene Ash, 1999; Cyrus Mehta, 2000; Alan Gelfand, 2001; Alan Zaslavsky, 2002; and John D. McKenzie, Jr., 2003. Anyone wishing to make suggestions regarding possible future recipients should contact Katherine Monti at kmonti@rhoworld.com.

Submitted by Maureen Mayer

TREASURER'S REPORT

2003 INCOME		ASSETS *	
Interest	\$ 112.89	Bank Accounts	\$5,999.38
Membership - ASA	\$3,615.00	CDs	\$5,526.79
Membership - Local	\$ 318.00		
TOTAL INCOME	\$4,045.89	TOTAL ASSETS	\$11,526.17

2003 EXPENSES	
Bank Fees	\$ 12.00
Newsletters	\$1,356.28
Program Committee	\$ 430.01
Other	\$ 932.96
TOTAL EXPENSES	\$2,731.25

2003 MEETINGS \$ 553.20

NET GAIN IN 2003 \$1,867.84

* Reflects accounts as of February, 2004 excluding income/expenses for Genomics Conference, May 2004

Submitted by Michael A. Posner

The BCASA Newsletter is published four times during the academic year and is emailed to current BCASA members. Send your comments to any officer or newsletter production committee member.

BCASA CHAPTER OFFICERS

<i>President, 2003-04</i>	Scott Evans, Harvard School of Public Health
<i>Program Chair, 2003-04</i>	Tom Lane, The MathWorks
<i>Vice-President, 2004-05</i>	Shelley Hurwitz, Harvard Medical School
<i>Secretary, 2004-05</i>	Maureen Mayer, Raytheon Company
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<i>Council of Chapters Representative, 2003-05</i>	Nick Horton, Smith College
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