



# The American Statistical Association

## San Francisco Bay Area Chapter

Since 1928

March, 1996

### Joint Biostatistics and General Applications Program

#### "Methods for Longitudinal Data: PROC MIXED, lme, and Beyond"

**David Giltinan**

Biostatistics Department  
Genentech, Inc.

Methods for the analysis of longitudinal and clustered data based on the mixed effects model formulation described by Laird and Ware have been used with increasing frequency within the last decade. In particular, the availability of software such as PROC MIXED in SAS or the lme functions in S-Plus to implement mixed effects methodology has led to its widespread adoption by practicing biostatisticians. This seminar will examine critically the usual assumptions underlying the linear mixed effects model. Detecting and dealing with violations of these assumptions will be discussed, with particular reference to the issue of identifying potentially influential observations, both at the subject and within-subject level.

**Date:** Tuesday, March 26, 1996

**Time:** 3:30 - 4:00 Refreshments  
4:00 - 5:00 Discussion

**Place:** Medical School Classroom M106  
Stanford University Medical Center

**Reception:** Professor Bill Brown will host a reception at his house following the meeting. Maps to Professor Brown's house will be available at the meeting.

**Directions:** See the other side of this page for a map of the Stanford University Medical Center and the surrounding area.

### Job Postings Popular with ASA Web Surfers

Job listings have proven to be the most popular item on the San Francisco ASA Chapter's world wide web home page garnering more than twice the number of "hits" or visits than any other topic on the page. One reason for the listing's popularity is that jobs are often posted at the site weeks before they are announced through other outlets. For example, some of jobs listed in this issue of the newsletter were first posted on the web more than a month ago.

While the Chapter's web site focuses mainly on listing jobs available in the San Francisco Bay Area, the page also contains links to other resources for statistical job hunters. In particular, there is a link to the extensive list of mostly academic jobs throughout the nation maintained by the University of Florida Statistics Department.

The chapter's home page can be found on the world wide web at <http://www.sfsasa.org>. Job announcements are posted for free on the page and should be submitted by e-mail to [webmaster@sfsasa.org](mailto:webmaster@sfsasa.org), or by mail to Michael Lock; Becton Dickinson; 2350 Qume Drive; San Jose, CA 95131-1807; fax: (408) 435-7346. Announcements will also be run in the chapter newsletter for two consecutive issues, if space permits.

### Institute on Research and Statistics in Sacramento

The 17th Annual Institute on Research and Statistics, jointly sponsored by the Sacramento Chapter of the ASA and the Mathematics Department of California State University Sacramento, will be held April 3. As usual, the meeting will be all day on the California State University campus in the University Union building.

**PRESIDENT**  
Loren Schoof  
(510) 823-9020

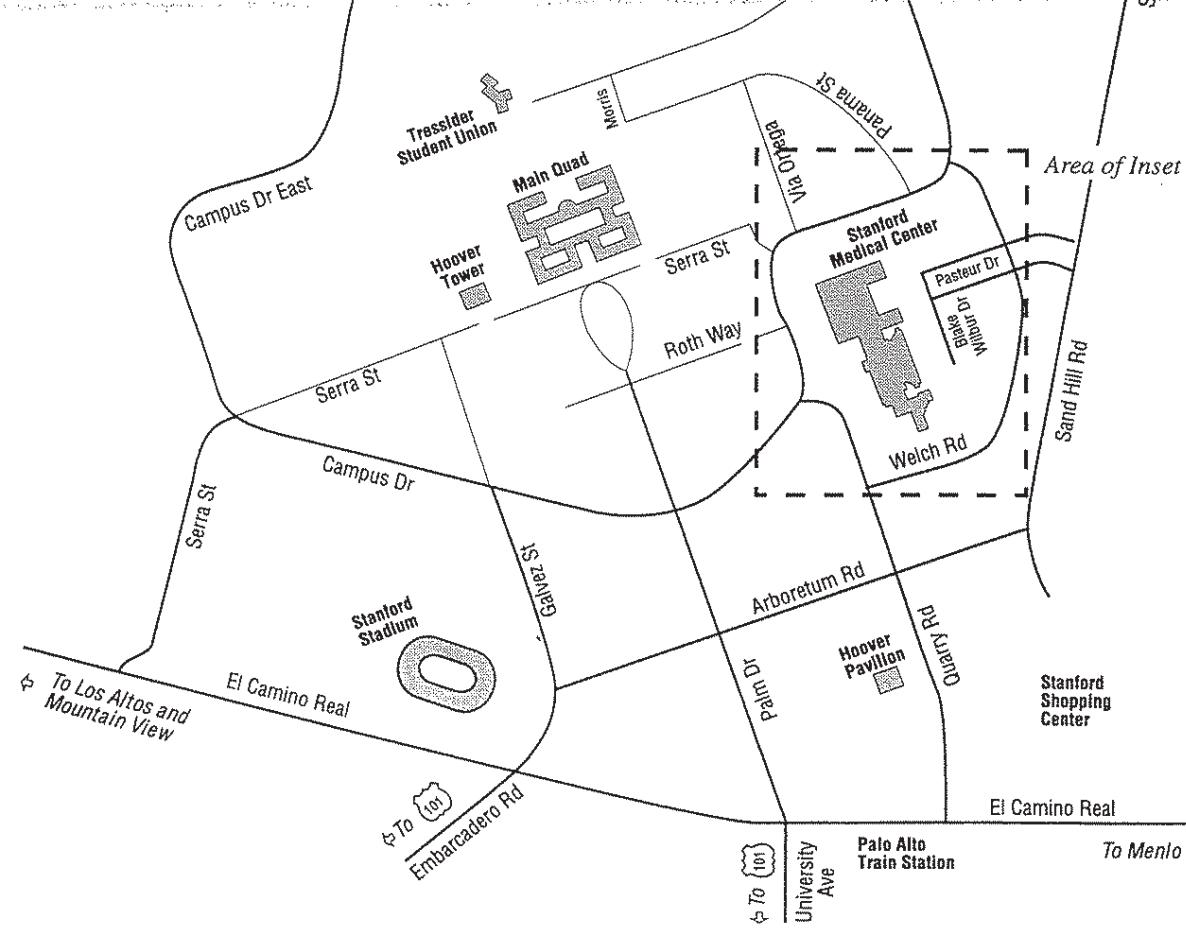
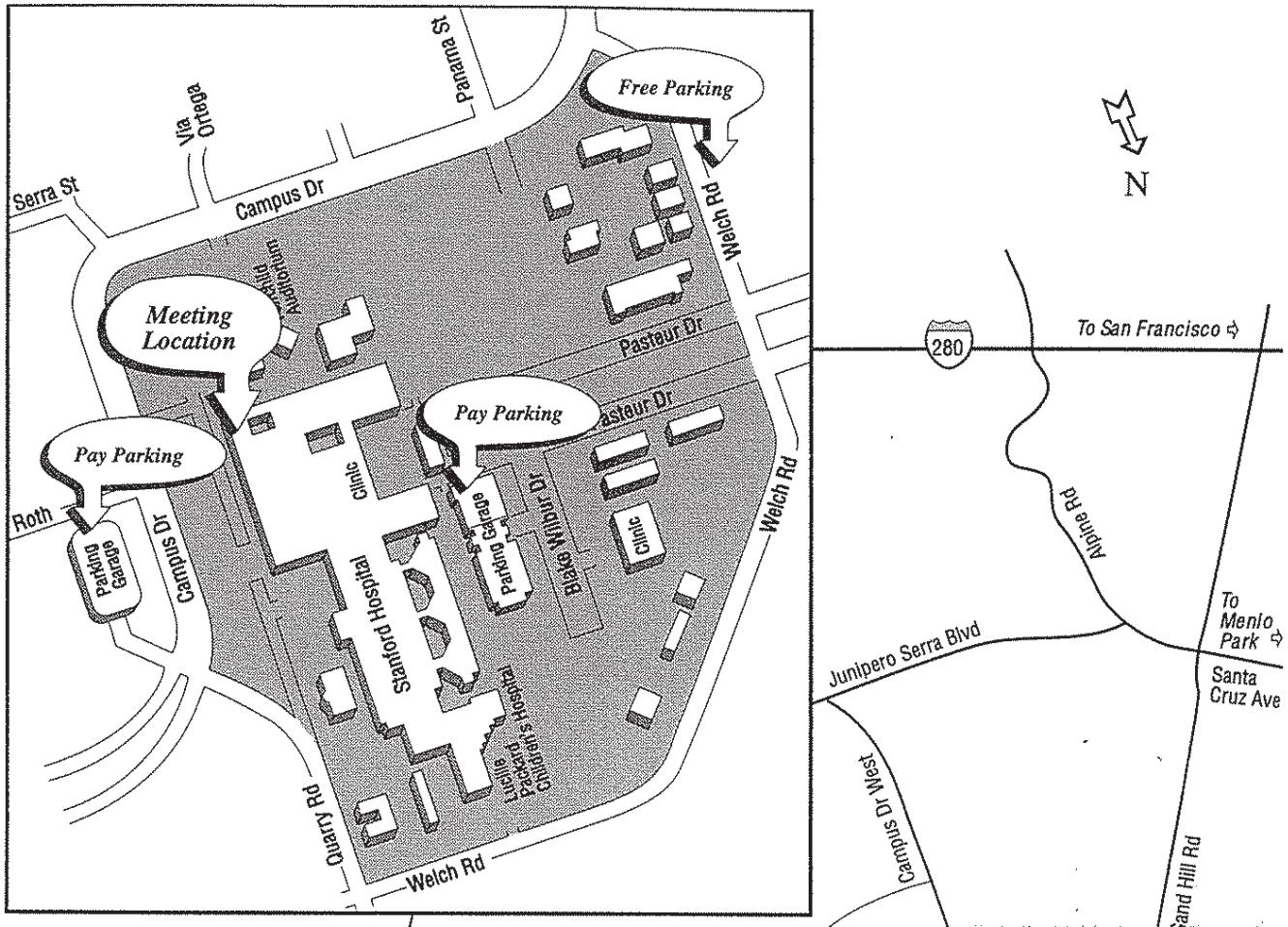
**PRESIDENT-ELECT**  
Kathleen Lamborn  
(415) 476-8863

**VICE-PRESIDENT**  
**GENERAL APPLICATIONS PROGRAMS**  
Ann Kalinowski  
(415) 688-7203

**VICE-PRESIDENT**  
**BIOSTATISTICAL PROGRAMS**  
Ying Lu  
(415) 502-4596

**TREASURER**  
Jim Lenihan  
(415) 393-5213

**SECRETARY**  
Michael Lock  
(408) 954-2583



# Job Opportunities

## Product Design Consultant Irwin Research, Big Sur

Irwin Research of Big Sur, CA is now planning to design a new swim fin. The first phase will be to analyze the advantages and limitations of the 30-some brands currently on the market. We have arranged to work with the swim team and a professor of biomechanical engineering at a major university for this purpose. We need a statistician to help us to plan this first phase, analyze the results, and continue to work with us through the remainder of the design project. We anticipate needing the person's time for a few days per month over the course of several months. Please contact Peter Simon at 408/667-0267 (voice) or 408/667-0135 (fax).

## Statistical Programmer (SAS) VA Medical Center, Menlo Park

Statistical analysis of multicenter clinical trials. Masters degree in statistics, biostatistics, or epidemiology required. SAS experience essential; UNIX and/or S+ experience desirable. Starting salary \$35,000-40,000 DOE. Send letter and resume to Carol Kerner, VA Medical Center, 795 Willow Road, Bldg 205 (151-K), Menlo Park, CA 94025 or fax (415) 617-2667.

## Manager, Outcomes and Biostatistics Apria Healthcare, Costa Mesa

Apria Healthcare, the nation's leading, fully integrated provider of home health care products and services is seeking a clinical outcomes/biostatistics professional. The selected individual will manage Apria Healthcare's research processes. Requirements include a Master's degree; 2-5 years clinical outcomes and biostatistical experience; and an understanding and background in advanced statistical analysis. Clinical license/certification and familiarity with the home health care industry a plus.

Please submit your resume to Apria Healthcare, Professional Staffing Dept. RB, 3560 Hyland Avenue, Costa Mesa, CA 92626. Fax: (714) 957-8505.

## Application Analysts Genentech, South San Francisco

There are several openings for applications analysts within the Biostatistics department at Genentech, Inc. Interested candidates should have several years of SAS experience within the pharmaceutical or biotechnology industry relating to clinical analyses. Knowledge of S-Plus and UNIX desirable but not required. Statistical degree a plus but not essential.

Anyone interested in a permanent position should contact Lindley Frahm at (415) 225-2121 or Doug Brown at (415) 225-3104. Opportunities for contract SAS programmers are also available.

## Statistician/Quality Engineer Bay Area Medical Device Company

We have a statistician/QE/QA position open in the Medical Device / Instrumentation / Diagnostics / Equipment industry in the San Francisco Bay Area. The perfect candidate will have: 3-5 years industrial experience, at least a BS/MS in math or chemistry, with a MS or Ph.D. in math or statistics preferred, strong computer and statistics experience and background, good organizational skills, outstanding written and verbal communications skills, knowledge of GMP & ISO-9000.

If this position is yours, you will provide statistical support to and interface with all departments (manufacturing / R&D / electronics / biochemistry) and levels of staff; develop statistics based specifications and procedures; conduct training seminars in statistics and be the company "Guru"; develop and validate computer programs for data collection and analysis; coordinate company validation program; conduct internal and external quality audits; write documentation and justifications.

If you have an interest in this opportunity, please mail or FAX your CV/resume to RS&A to the attention of Gene Rathbun, Sr. Partner; P.O. Box 2337; Sedona, AZ 86339-2337. Phone: (520) 284-3360 Fax: (520) 284-3361 FAX E-mail: rathbun@sedona.net.

## Senior Biostatistician City of Hope National Medical Center, Duarte

The City of Hope National Medical Center has an opening available March 1 for a full-time Senior Biostatistician to consult on cancer clinical trials and basic science research. City of Hope is located in the San Gabriel foothills, 20 miles northeast of downtown Los Angeles. Requirements for the position include a Ph.D. in Biostatistics or Statistics and medical consulting experience. A background in genetics and molecular studies is highly desirable. There is also the opportunity for a joint appointment at a local university. Strong benefits package; salary level commensurate with experience. Send your CV & letters of reference to: Joyce Niland, Ph.D.; Director of Biostatistics; City of Hope National Medical Center; 1500 E. Duarte Road; Duarte, CA 91010.

## Test Analyst Quantum Corporation, Milpitas

Responsibilities: (1) As a member of an engineering team, provide analysis of test results and statistical expertise that will enable the team to successfully resolve issues more rapidly. The projects involve designing, testing, and improving our disk drive products. (2) Develop and support the database and analytical tools that are used by the Test Analysts and Engineers. Requirements: (1) BS or MS in an engineering discipline or Statistics; (2) strong data analysis skills; (3) ability to travel to Japan. Preferences: (1) knowledge of disk drive technology; (2) experience developing and using database and statistical software applications.

To apply contact Lee Gavens; Manager, Test Analysis; Quantum Corp.; 500 McCarthy Blvd.; Milpitas, CA 95035, (408) 894-4233, fax: (408) 894-5453, e-mail: LGAVENS@QNTM.COM.

## Joining the Bay Area ASA Chapter

To join, please send a check for \$9 (\$3 students) to Jim Lenihan, 15 Moonlight Ct., South San Francisco, CA 94080, payable to "ASA, Bay Area Chapter".

# Let us help you find the perfect fit.

“ Chastain always provides consulting support that is expert, professional, and efficient . . . their service is exemplary. ”

*-- Biotech Company Manager*

“ Chastain matches me with companies where I can use my consulting expertise to the fullest . . . and gives me the support I need to do my best work. ”

*-- Chastain Consultant*

What is the perfect fit? To the company manager, it is finding the right consultant; to the consultant, it is finding the right company. To us, finding the perfect fit is the bottom line.

Why are we so successful at making perfect fits? Because we know the biotech/pharmaceutical industries from the inside . . . as professionals, consultants, and managers. Led by founder Dr. Robert Chastain, our professionals have a wide experience in these industries . . . we know the people, the technologies, and the products.

If your work involves clinical data management, statistical analysis, or statistical programming . . . if you are a manager seeking professional expertise with exceptional service . . . if you are an expert consultant who wants the best support in the industry . . . you should call Chastain Research Group . . . today.



CHASTAIN RESEARCH GROUP, INC. □ 2220 Homestead Court, Suite 109, Los Altos, CA 94024 □ (408) 245-2024



San Francisco Bay Area Chapter  
**American Statistical Association**  
1096 Karen Way  
Mountain View, CA 94040