The American Statistical Association

San Francisco Bay Area Chapter

Since 1928

November, 2001

Joint Biostatistics and General Applications Program

"Corporate Average Fuel Economy (CAFÉ): Statistical Risk Analysis of the Results of Downsizing Passenger Vehicles"

Rose M. Ray, Ph.D., Exponent Failure Analysis

Abstract

Senator Diane Feinstein has introduced a bill to increase average fuel economy for passenger vehicles to 27.5 mpg. Some increases in fuel economy can be obtained through increased efficiency. Meeting the goal of 27.5 mpg may require reduction in vehicle weight. Studies of traffic safety conducted by the National Highway Traffic Safety Administration and other have shown that vehicle mass is inversely related to the risk of fatality or injury to a passenger vehicle occupant involved in a traffic crash. John D. Graham, Harvard Center for Risk Analysis estimated that the reduction in passenger car size that occurred as a result of the 1975 -1985 Federal CAFÉ regulations resulted in 2,200 to 3,900 additional motorist fatalities per year[1]. Will a new round of fuel economy restrictions cost thousands of lives per year? How much will airbags and other occupant protection measures mitigate the effect of reducing vehicle mass?

General Motors Corporation (GM) contracted Exponent Failure Analysis Associates, Inc. to revisit the relationship between vehicle mass and collision fatality risk in conjunction with the National Academy of Sciences panel studying the U.S. Corporate Average Fuel Economy (CAFE) system. The Exponent study extends and updates prior work to assess the role of mass (weight) and safety that was performed by various researchers. The Exponent study is confined to modern vehicles with current level architectures and technology. The purpose of Exponent's study is to use existing data to build mathematical models of the motor vehicle collision experience in the United States, to use the models to assess the effects of a new technology (air bags) on the vehicle mass – fatality risk relationship, and to forecast the motor vehicle safety effects of various vehicle fleet mass reduction schemes that might be proposed to increase fleet wide fuel economy in pursuit of more stringent CAFE requirements. Dr. Ray will describe the statistical methods used to model the relationship between occupant injury and vehicle mass, vehicles size, and other factors related to the risk of injury. Seventy two models using traffic crash data from three states were developed. The results of these models and their relevance for the current debate on fuel economy will discussed.

[1] John D. Graham, Harvard Center for Risk Analysis. Letter to Senator John Ashcroft, Committee on Commerce, Science and Transportation. June 13, 2000.

Date: November 8, 2001

Time: 3:30 - 4:00 PM
Refreshments
4:00 - 5:30 PM
Discussion, Q & A

Place: Suite 714C, University Hall, University of California, Berkeley CA

Directions:

See attached campus map or go the UC Berkeley website: http://www.Berkeley.edu/map. University Hall is just across Oxford St. from the main entrance to the campus. The nearest BART station is 2-1/2 blocks away on Shattuck.

Business Matters:

Mailing List: *ASA will be sending us the latest membership list soon. If you don't want to miss out on the latest presentation and job opportunities, make sure you check the "Bay Area" chapter affiliation when you renew your ASA membership and keep our address record up-to-date.*

New Chapter Officers for 2001-2002:

President *– Mike Tarter*
President Elect *– Jim Lenihan*
Vice President (Biostatistics Program) *-Mark Ashby*
Vice President (General Application) *- Karuna Ramachandran*
Treasurer *– Ying-Qing Chen*
Secretary *– Ann Kalinowski*

Open Positions

Statistical Consultant/Analyst

William E. Wecker Associates, Inc., Novato, CA

William E. Wecker Associates, Inc. provides consulting services in applied mathematics and statistics. Areas of application range from consumer product performance to epidemiology, and to issues in accounting, finance and economics. Clients include Fortune 500 companies in the automobile, consumer products, banking, insurance and pharmaceuticals industries.

We invite inquiries for consulting positions at all levels. Desirable qualifications include:

1) University degree in statistics, mathematics, operations research or related field;
2) Aptitude for quantitative problem-solving and experience in data analysis;
3) Strong computer skills (we use SAS, S-Plus, Mathematica, and other business and scientific software on UNIX and Macintosh platforms);
4) Strong communication skills;
5) Ability to work in collaboration with others in an informal, collegial environment;
6) Ability to work effectively under deadlines.

Compensation is competitive and commensurate with performance.

We are located in the city of Novato, Marin County, California, thirty minutes north of San Francisco.

Applicants should e-mail, fax or mail résumé, most recent university transcript and compensation history to the following address. No telephone calls please.

Gary Harvey
William E. Wecker Associates, Inc.
505 San Marin Drive
Novato, California 94945
Fax: (415) 898-2260
Employment@wecker.com
http://www.wecker.com

Research Associate

Department of Radiology, Stanford University, Palo Alto, CA

DESCRIPTION: The Department of Radiology seeks a Research Associate to work on an NIH-funded study of breast cancer incidence and mortality trends in the US population. The specific aim of the project is to understand how these trends are affected by changes in screening and treatment practice patterns. The candidate will be expected to develop estimation methods and statistical hypothesis tests to measure the mortality benefit of early detection. Data is obtained from randomized controlled trials in breast cancer screening and treatment and population registries. The candidate will be expected to author and co-author journal publications, contribute to grant applications, attend and present at professional meetings, and be an active team member in a larger research group that includes faculty, graduate students and postdoctoral fellows. Stanford University is an equal opportunity employer.

QUALIFICATIONS: PhD in a quantitative field is required (PhD in Bio-statistics/Statistics preferred). Research experience in statistical inference, survival analysis, estimation theory, and optimization is required. Additional ex-perience with simulation analysis, stochastic model-ing and epidemiological data is preferred.

CONTACT INFORMATION:

Sylvia K. Plevritis, PhD
Assistant Professor
Radiology
LUCAS P267
Stanford, CA 94305-5488
Tele: (650) 498-5261
FAX: (650) 723-5795
Email: sylvia.plevritis@stanford.edu

TITLE: Biostatistician, Non-Clinical Statistics

COMPANY: Leading biotechnology company engaged in the research, development, manufacturing and marketing of biopharmaceuticals and medical diagnostic products worldwide.
LOCATION: San Francisco, CA area

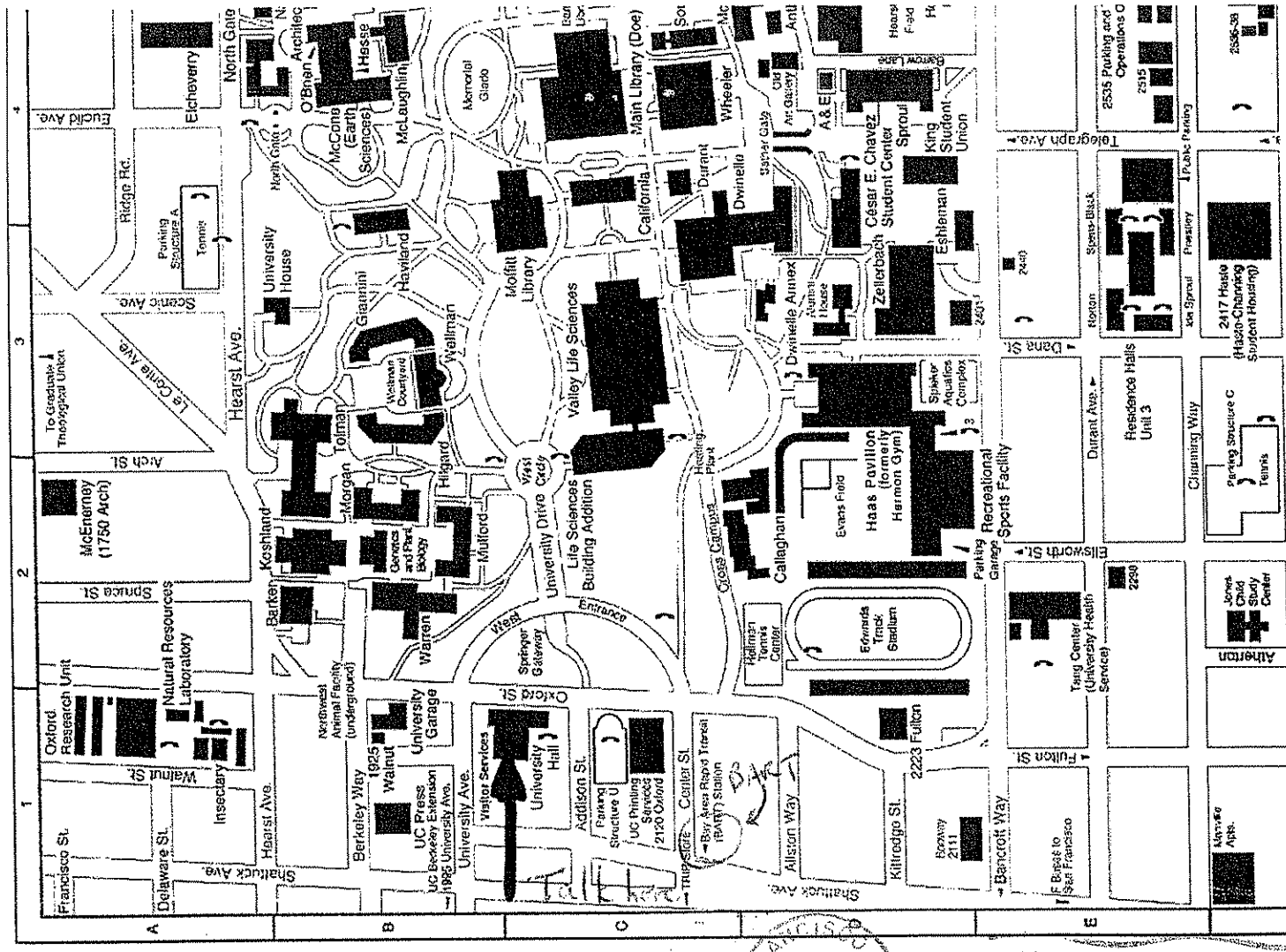
RESPONSIBILITIES: Will serve as an internal statistical consultant in providing support for biopharmaceutical and medical diagnostic product research and development programs. Specific areas include: manufacturing, quality control, chemistry, and process engineering. Plans and develops efficient and practicable statistical designs and analyses concerned with assay development and validation, process validation, SPC, sample size justification, stability studies, problem investigation, method and specification development and vendor qualification studies. Provides training and guidance in statistics to internal company personnel. Prepares statistical reports in support of FDA submissions on product studies.

REQUIREMENTS: M.S./Ph.D. in Statistics including a background in applied statistics to include related experience in the application of statistical methods to assay validation, process optimization and validation, quality control, design of experiments and pharmacokinetics. Knowledge of statistical theory and applications pertaining to general linear models and variance components. Experience with SAS programming, data analysis and experimental design.
Must have strong leadership and communication skills.

COMPENSATION: to $80K range (based on industry experience and credentials) + bonus + stock options.Excellent benefits; and an excellent relocation package based on the needs of the candidate.

CONTACT:

Romeo Consulting, Executive Search Consultants
309 Fellowship Rd., Suite 210
Mt. Laurel, NJ 08054
Phone; 856-642-4054
E-Mail: promeo@msn.com



San Francisco Bay Area Chapter

American Statistical Association

149 Commonwealth Drive

Menlo Park CA 94025

SAN FRANCISCO, CA
PM
NOV
2001

34 USA

LEE, KELVIN
VAHCS-CSPCC (151K)
182 Exeter Ave
San Carlos, CA 94070-1671