



The Southern California

Statistician

SOUTHERN CALIFORNIA CHAPTER, AMERICAN STATISTICAL ASSOCIATION

Volume 30, No.3

January 1992

SECTION NEWS

West L.A. Section Events

Thursday, January 16

Speaker:

Dr. Arnold Goodman
County of Los Angeles
Information Technology Service

Title:

Key Events and People in the
Shared Evolution of Computers and
Statistics

Abstract:

Key events and people in the shared
evolution of computers and statistics
are discussed in terms of:

- Firmer connections between computer predecessors and statistical roots.
- More complete development of the major strands in that evolution.
- Statistical opportunities in current computer directions.

The discussion integrates and expands the historical material from the speaker's paper featured in the Fall 1991 issue of "Interface Bulletin" (Volume 1, Number 1).

Thursday, February 20:

Speaker:

Ronald L. Iman,
Sandia National Laboratories
Albuquerque, NM

Title:

The Role of Statistics in Addressing
Technical Issues of National Interest

Abstract:

Statisticians have a very important contribution to make in addressing technical issues of national and international interest. Frequently, this contribution goes unnoticed. This presentation considers the vital role of statistics in addressing issues related to: (1) Helping the U.S. regain a competitive position in the semiconductor industry through SEMATECH, the Austin based consortium of semiconductor manufacturers, (2) Efforts to reduce the use of ozone depleting CFC's, (3) The estimation of failure rates for the for the solid rocket boosters on the space shuttle, (4) The determination of external maintenance requirements for the proposed space station Freedom, (5) The assessment of risk for nuclear power generating stations, (6) The geologic disposal of radioactive waste, (7) Environmental modelling, and waste site monitoring.

Time and location for both of the
above events are as follows:

Time:

Social Hour: 6:30 p.m.
Dinner: 7:00 p.m.
Talk: 8:00 p.m.

Place:

China Garden Restaurant
10226 Venice Blvd.,
Culver City

Directions:

China Garden is located one mile east of the San Diego (405) freeway on Venice Blvd. at the southeast corner of Venice and Vinton (one block east of Motor). Park at the rear of the restaurant, inside the shopping center or on the street.

Reservations:

Call Dr. Michael R. Chernick at (714)753-8010 or Elizabeth Trybus at (818) 885-2411 (by January 15th for the January talk) or for further information. ■

SCASA 11th Annual Workshop in Applied Statistics

The planning of the annual SCASA Workshop in Applied Statistics is well underway. This year's workshop is scheduled for May 15th and will feature Professor Bradley Efron from Stanford. The general topic of the workshop will be resampling. Look for more details in upcoming issues. Any questions may currently be directed to Carol Wilkinson at (310) 649-6737. ■

Statistical Seminars

U C RIVERSIDE STATISTICS DEPARTMENT COLLOQUIA

Information: Call Sarah DiMenna
at (714) 787-3774

Lectures are on Tuesdays at 3:45 in
Stat/Comp 2678. Refreshments at
3:30 in Stat/Comp 2634

January 14:

Speaker: Simon Potter,
Dept of Economics, UCLA

January 21:

Speaker: Barry C. Arnold,
Dept of Statistics, UCR

January 28:

Speaker: Arnold Zellner,
University of Chicago,
School of Business

February 4:

Speaker: Robert Beaver
Dept of Statistics, UCR

February 11:

Speaker: David Strauss
Dept of Statistics, UCR

February 18:

Speaker: Wes Johnson
UC Davis

February 25:

Speaker: Keh-Shin Lii,
Dept of Statistics, UCR

UCLA STATISTICS SEMINARS

Seminars are held on Mondays at
3 p.m. in the Math Sciences Build-
ing, Room 6627. Call Don
Ylvasaker at (310) 825-4819
for information.

Forthcoming Seminars

Speaker: Andrew Gelman

Statistics Dept.,
UC Berkeley

Title: "Goodness of Fit testing:
The Bayesian approach".

Date: January 27

Speaker: Brad Efron

Stat Dept., Stanford

Title: "Testing for indepen-
dence with truncated
data: Hubble's Law".

Date: February 3

Speaker: William Navidi

Dept. of Mathematics,
USC

Date: February 10

EDITOR'S NOTE

Send items for the next issue to:

Rita Petersen
30723 Calle Chueca
San Juan Capistrano,
CA 92675

Phone: (714) 493-6430

FAX: (714) 493-5596

(Call first to notify)

E-MAIL:

PETERSEN@VMSC.OAC.UCLIEDU

UCSB COLLOQUIA

University of California,
Santa Barbara Statistics and
Applied Probability Colloquia:

All talks are at 4:00 p.m. in South
Hall room 6635 unless stated other-
wise. For details call (805) 968-2129

January 7:

Speaker: Professor R.Durrett,
Cornell University

Title: "Predator-prey Models"

January 14:

Speaker: Professor M.Maejima
Keio University, Yokohama,
and UCSB

Title: "On Self-similar Stable
Processes"

January 21:

Speaker: Professor A. DasGupta,
Purdue University and UCSD
(Date and time tentative)

Title to be announced.

January 28:

Speaker: Professor R. Schonman,
UCLA

Title: "The Pattern of Escape from
Metastability of a Stochastic Ising
Model"

February 3:

Speaker: Professor J.K. Ghosh,
Indian Statistical Institute
and MSRI

Title to be announced.

Please take a moment to check for correctness the information shown on your mailing label. If your address should be changed, please contact Jim Ashurst at the return address given below. If you are in arrears in your chapter dues, please contact Jim Sayre, at UCLA, by calling (213) 825-5250.

USC DEPT. OF PREVENTIVE MEDICINE BIOSTATISTICS SEMINAR SERIES

Thursdays at 12:00 noon,
Parkview Medical
Building Room B-200
1420 San Pablo St.,
Los Angeles, USC Medical School
Campus

January 23:

Speaker: Robert Haile,
UCLA Dept. of Epidemiology
(11:30-12:30)

February 13:

Speaker: Ken Lange,
UCLA Dept. of Biomathematics

February 27:

Speaker: Simon Tavaré, USC Dept.
of Mathematics

For information, please call
Wendy Mack at
(213) 342-1820.

RAND STATISTICS SEMINAR SERIES

February 13:

Speaker: Dr. Thomas Belin,
UCLA

Title: "A Method for Fitting
Hierarchical Logistic Models"

March 12:

Speaker: Prof. Rob Kass,
Carnegie-Melon

Title: "Diagnostics of Maximum
Likelihood and Posterior
Non-normality"

*Talks are held at 4:00 p.m. in the
main conference room with refresh-
ments being served from 3:30 to 4pm.
For further information, please contact
Sally Morton at (213) 393-0411, ext.
7360. RAND is located at 1700 Main
St., across from Santa Monica City
Hall.*

EMPLOYMENT OPPORTUNITIES

Two Vacancies at RAND

Two Ph.D. level positions in the Statistics Group, RAND. We welcome new graduates with strong theoretical training and a genuine interest in applications. We also welcome senior candidates with strong publication records and extensive applied experience. Clear oral and written communication skills are essential. At RAND, opportunities exist for: (1) collaborative work as members of multi-disciplinary teams doing long-term, large-scale public policy research in such areas as health, criminal and civil justice, environment, demography, energy, and national defense, including military manpower and logistics; (2) basic research in statistical methodology and theory; and (3) teaching and consulting. RAND is located on the ocean near Los Angeles in Southern California, an area noted for its temperate climate and physical attractions.

Flexible starting date, preferably Summer 1992. Initial screening of applicants will begin January 31 1992. Later applications might be considered. Applications should include vita with details of experience and statement of interests, the names of 3-5 references, copies of papers and/or other written work, and (for candidates 0-2 years post Ph.D.) graduate transcripts. Correspondence and inquiries should be sent to:

Naihua Duan,
Chair, Statistics Search Committee,
RAND
1700 Main Street,
Santa Monica, CA 90407.
E-MAIL address:
Naihua_Duan@rand.org.

RAND is an Equal Opportunity Employer.

Statistical/Technical Consultant

BMDP is seeking a Statistician/Technical Consultant to provide statistical/technical support to our customer inquiries, test software, review documentation, and work on special projects related to the enhancement of the software.

Successful Candidates:

- will have an M.S. in Statistics, Biostatistics or related field.
- will have a working knowledge of BMDP or similar statistical packages.
- must have excellent oral and written skills and good command of the English language.

Requirements of the position:

- work experience in a problem solving environment.
- familiarity with a variety of computer hardware, particularly VAX/VMS and microcomputers.
- will be involved in quality control testing and investigating reported software problems.

Company offers a pleasant working environment and a competitive benefit package. Interested candidates should submit resume and salary history to:

Personnel Department
BMDP Statistical Software, Inc.
1440 Sepulveda Blvd., Suite 316
Los Angeles,
CA 90025

(Continued next page)

Job Announcement RAND Corporation

We are currently seeking qualified applicants for Quantitative Analyst in the Social Policy department. Quantitative analysts hold Masters degrees in statistics, biostatistics, economics, or related disciplines. Generally they possess strong statistical and programming skills, and work under the direction of project leaders with minimal supervision. Quantitative analysts are involved in collaborative research in the areas of health policy, labor and population studies, and military manpower.

Applicants should possess a Masters degree in statistics or a related quantitative discipline. Strong programming skills are necessary, including experience in data management and statistical programming in SAS. Previous experience (1-3 yrs) in multi-disciplinary research in the areas of health, economics, or behavioral sciences, especially in the analysis of observational research, is essential. Applications should include a vita with details of experience and a statement of interests, the names of 3 references, copies of papers and/or other written work, and graduate school transcripts.

Correspondence and inquiries should be directed to:

Kimberly A. McGuigan,
RAND,
1700 Main Street,
Santa Monica CA 90407-2138;
or via electronic mail to:
KimberlyMcGuigan@rand.org.

RAND is an affirmative action/EEO employer.

Biostatistician:

Commercial Programming Systems (CPS, Inc.) has five positions open for both junior and senior level biostatisticians.

Requirements: M.S. in Biostatistics or Mathematical Statistics and 2 or more years of experience in either a pharmaceutical or research hospital.

Responsibilities: Part of a team working with clinical trials in an SUN/UNIX environment. Could be some SAS programming.

Salary: \$50,000 +

Research Analyst:

CPS is also seeking to fill a research analyst position.

Requirements: M.S. in Statistics or Mathematics with a background of statistical analysis in a research environment. Knowledge of SAS

programming and U.S. Citizenship required.

Salary: \$50,000 - \$60,000

For further information on any of the above contact:

Victor Romano
Commercial Programming
Systems, Inc.
3250 Wilshire Blvd, Suite 1212
Los Angeles, CA 90010-1602
(213) 380-2681

Sr. Research Associate/ Statistician:

To provide Statistical consulting and data processing services to physician/investigator at the original office and eleven medical centers of Kaiser Permanente.

Requirements: M.S. in Statistics or Biostatistics with 4 or more years of experience; or PhD in Statistics or Biostatistics with one or more years of experience. Good oral and written communication skills required.

Salary: \$42,000 - \$64,000 depending on qualifications and experience.

Contact:

Girma Wolde-Tsadik
Kaiser Permanente
393 E Walnut, Pasadena 91188
(818) 564-3461



The Southern California

Statistician

SOUTHERN CALIFORNIA CHAPTER, AMERICAN STATISTICAL ASSOCIATION

c/o Jim Ashurst, Research Support Services
4521 Campus Dr. #201 Irvine, CA 92715



ROBERT L. NEWCOMB [9109]
SOCIAL SCIENCES
UNIVERSITY OF CALIFORNIA
IRVINE, CA 92717



The Southern California

Statistician

SOUTHERN CALIFORNIA CHAPTER, AMERICAN STATISTICAL ASSOCIATION

Volume 30, No. 4

FEBRUARY 1992

The Annual Workshop in Applied Statistics...

...will be held on Friday May 15, 1992 at the Annenberg School of Communications, University of Southern California from 8:30 to 4:30pm. The topic of this year's workshop, "SAMPLING REVISTED" will be presented by **Bradley Efron** of the Stanford University Statistics Department and **Richard Olshen** of the Stanford University School of Medicine.

Abstract

In the past decade there has been an exponential growth in research on the bootstrap method. Although the bootstrap was recognized as an interesting new method with a variety of applications, it has only recently been recognized as a breakthrough in statistical methodology. Professor Efron will describe the bootstrap and briefly mention its connection with the other earlier resampling techniques such as the

jackknife. He will cover a variety of applications for the estimation of the standard error of an estimate. Professor Olshen has applied the bootstrap to important medical problems. He will discuss in detail a cholesterol case study and will briefly touch on an application to gait analysis (i.e. the study of the way infants develop their ability to walk). In the afternoon session Professor Efron will discuss the most recent developments for the bootstrap focussing on the problem of constructing confidence intervals. Professor Efron's lectures will each be one hour with 15 minutes for discussion. Professor Olshen will have 75 minutes.

Information on registration will be sent out in a separate flyer. Any questions may currently be directed to Bobby Madison at (818)885-4645 or Connie Vadheim at (310)533-3842. ■

1992 Careers Day in Statistics

The annual Careers Day is being held on February 29th at UC Riverside beginning at 10:00am. Lunch is available for students at \$5.00 and others at \$8.00. The featured speaker is Dr. Gary McDonald of General Motors Research Laboratories, Warren Michigan.

A separate flyer was recently sent out on this. If you did not receive it and are interested in attending, contact Subir Ghosh at the Dept. of Statistics, UC Riverside. (714) 787-3781 or Sarah Dimenna at (714) 787-3774.

Note: All appropriate organizational representatives are invited to attend regardless of the availability of job positions. All interested parties should contact Subir Ghosh as soon as possible. Also, those already attending as representatives are requested to arrive by 9:45am ■

WEST LA SECTION DINNER MEETINGS

February 20

Speaker: Ronald Iman, Sandia Nat'l Laboratories Albuquerque, NM
Title: The Role of Statistics in Addressing Technical Issues of National Interest

April 30

Speaker: Prof. Wallace Blischke, Graduate School of Business Administration, USC
Title: The Role of Statistics in the De-

sign and Analysis of Complex Systems: An Application of the Rocket Propulsion Industry"

May 21

Speaker: Dr. Jacek Leskow, UCSB
Title: Nonparametric Estimation for Periodic Phenomena

June 18

Speaker: Prof Janet Myhre, Claremont College

Time: Social Hour: 6:30 p.m.
Dinner: 7:00 p.m.
Talk: 8:00 p.m.

Place: China Garden Restaurant
10226 Venice Blvd.,
Culver City

Reservations and information:

Call Dr. Michael R. Chernick at (714)753-8010 or Elizabeth Trybus at (818) 885-2411 for further information. ■

San Gabriel Valley Meeting, Thursday, March 19, 1992

Speaker:

Professor Sam Saunders,
Mathematics Department Washington
State University Pullman, Wash-
ington

Title:

GREAT EXPECTATIONS, or Playing
the State Lotteries

Abstract

There has been a national upsurge in the adoption of state lotteries. These have proved to be a bonanza for the sponsoring states and for the touts who sell advice on methods of developing winning strategies. Some of the surprising statistics from the recent operation of the lotteries will be compared with claims of the experts selling advice. Are there patterns of randomness which repeat at such frequency that winning strategies can be formed? Should strategies change as the prize increases? What is a player's true expectation? Are there really prescribed methods of picking a winning combination which improve ones odds? These and other questions will be discussed along with their relation to the

classical occupancy problem, the collector's problem, and Russian roulette. The probabilistic details will be kept to a minimum.

Time:

Social period: 6:30 p.m.

Dinner: 7:00 p.m.

Talk: 8:00 p.m.

Location:

City of Hope National Medical
Center, Duarte; Conference Room B

Directions to the City of Hope: from the 210.Freeway:

Take the Buena Vista exit (just west of the 605 Freeway) Go south on Buena Vista (if you are coming from the west, e.g. Pasadena, turn right at the light; if you are coming from the east, e.g. Pomona, turn left at the stop sign, then left at the light). Turn left onto Duarte Road (first light) Turn right into the main entrance for the City of Hope (past the Beckman Research Institute)

Once On The Grounds Of The City Of Hope: Go straight until reaching the main medical building and fountain. Turn left and circle around cam-

pus on one-way street. Go straight at stop sign where one-way street ends. Cafeteria and adjacent conference room B will be on your left.

PARKING: Parking is available to the left and right just past the cafeteria, or in the parking lots you will pass on your left while driving along the one-way street.

RESERVATIONS: It is essential that prior reservations be made for dinner. Please call Catherine at (818) 359-8111, extension 3032 no later than the end of the day on Friday, March 13. (Note the lead time required!) The cost of the dinner and pre-dinner soft drinks is \$8.50.

Persons who want to hear the talk but who do not want to have dinner are most welcome and at no cost.

INFORMATION: Dr. Ernie Scheuer: on Tuesday, Wednesday, and Thursday at (818) 354-1632/9671; otherwise at (818) 577-4757; escheuer@vax.csun.edu or scheuer@sec-521.jpl.nasa.gov or Dr. Milt Brown: (818) 354-4968; mbrown@kilroy.jpl.nasa.gov.

UCLA STATISTICS SEMINARS

Call Don Ylvasaker at
(310) 825-4819 for information

February 28, 3:00 pm

Speaker: Peter Hall,
Australian National
University

Title: "On the statistical estimation of fractal dimension".

Room: Boelter Hall 5422.

March 2, 3:00 pm

Speaker: David Freedman,
UC Berkeley

Title: "Inter-species correlation of carcinogenic potency: how artifactual are they?".

Room: Math Sciences 5147.

USC Dept. of Preventive Medicine Biostatistics Seminar Series

Thursdays at 12:00 noon,
Parkview Medical Building, B-200
1420 San Pablo St., L.A.
USC Medical School Campus

February 27:

Speaker: Simon Tavaré, USC Dept.
of Mathematics

March 12:

Speaker: Robert Haile, UCLA
Topic: A case control study of
bilateral breast cancer

Time: 11:30 -12:30

April 23:

Speaker: Jim Dwyer, Institute for
Prevention, USC

For information, please call
Wendy Mack at (213) 342-1820.

U C Riverside Statistics Department Colloquia

Information: Call Sarah DiMenna
at (714) 787-3774
Lectures are on Tuesdays at 3:45 in
Stat/Comp 2678.

February 25:

Speaker: Keh-Shin Lii, Dept of
Statistics, UCR

March 3:

Speaker: D.V. Gokhale, Dept of
Statistics, UCR

March 10:

Speaker: S.James Press and Reuben
Klein, Stat. Dept. UCR
Title: "ABC/LPP - A New
Statistical Method for
Reconstructing Images from
Remotely Sensed
Noisy Data".

Arnold Zellner featured at Chapter Dinner Meeting

Plans are underway for a Chapter dinner meeting to be held on March 12 on the UC Irvine campus. The featured speaker will be Dr. Arnold Zellner. A separate announcement will be sent out on this. For information, please call Bob Newcomb at (714) 856-5366.

UCLA School of Public Health Biostatistics Colloquium

CHS 51-279 - 3:30 pm (Coffee @ 3:00 in CHS 51-262)

February 26

Dr. Robert E. Weiss, Dept. of Biostatistics, UCLA
"Influence diagnostics with the Gibbs sampler"

March 4

Dr. Xiao-Li Meng University of Chicago, Statistics Dept.

March 11

Dr. William G. Cumberland Dept Biostatistics, UCLA

For further information call (310)825-5250

RAND STATISTICS SEMINAR SERIES

SPEAKER:

Prof. Robert E. Kass
Department of Statistics, Carnegie Mellon University

TOPIC:

"Curvature Diagnostics of Maximum Likelihood and Posterior Non-normality"

TIME:

4 pm, Thursday, March 12, 1992

PLACE:

Main Conference Room

SPEAKER:

Ian Diamond,
University of Southampton

TOPIC:

"Do Deaths Cluster: an application of nonlinear multilevel models to infant mortality in Brazil"

TIME:

4 pm, Thursday, April 28 1992

PLACE:

Main Conference Room

Refreshments will be served in the Main Conference Room from 3:30 to 4pm. For further information, please contact Sally Morton at (213) 393-0411, ext. 7360. RAND is located at 1700 Main St., across from Santa Monica City Hall.

EMPLOYMENT OPPORTUNITIES

Statistical Research Analyst:

Rapidly growing hi-tech company in the Irvine Spectrum seeks statistical programming and analysis support in the Research Department. Strong SAS/UNIX experience with BS or MS in statistics or math required. Statistical background preferred. System operates on HP 400 and 700 series workstations.

Send resume with salary history to:

Risk Data Corporation
2 Venture Plaza, Suite 400
Irvine, CA 92718

Biostatistician:

Health Net, California's fastest growing HMO, has an opportunity for an experienced biostatistician. Responsibilities include statistical tests on data, analyzing data, creating formats of data reports, presenting reports, and applying statistical theories to audit processes.

Medical terminology and disease process, multiple statistical methods/concepts, and statistical software package knowledge necessary.

A Master's level degree in Biostatistics or closely related area and 5+ years work experience required.

Our excellent benefits package includes medical, dental, vision, life insurance, 401k, tuition reimbursement, and 17 paid time-off days per year.

Please send or fax resume to:

HEALTH NET
Human Resources
21600 Oxnard Street Main Plaza
Woodland Hills, CA 91367
FAX (818) 593-7453

Non-smoking Environment Equal Opportunity Employer M/F

EDITOR'S NOTE

Send items for the next issue to:

Rita Petersen 30723 Calle Chueca
San Juan Capistrano, CA 92675 Phone: (714) 493-6430
FAX: (714) 493-5596 (Call first to notify)
E-MAIL: PETERSEN@ORION.OAC.UCI.EDU
(Please note change in E-mail Address)

Biostatistician:

Commercial Programming Systems (CPS, Inc.) has five positions open for both junior and senior level biostatisticians.

Requirements: M.S. in Biostatistics or Mathematical Statistics and 2 or more years of experience in either a pharmaceutical or research hospital.

Responsibilities: Part of a team working with clinical trials in an SUN/UNIX environment. Could be some SAS programming.

Salary: \$50,000 +

Research Analyst:

CPS is also seeking to fill a research analyst position.

Requirements: M.S. in Statistics or Mathematics with a background of statistical analysis in a research environment. Knowledge of SAS programming and U.S. Citizenship required.

Salary: \$50,000 - \$60,000

For further information on any of the above contact:

Victor Romano
Commercial Programming Systems, Inc.
3250 Wilshire Blvd, Suite 1212
Los Angeles, CA 90010-1602
(213) 380-2681

The following five positions are from: FORTUNE Personnel Consultants of Corpus Christi

Lead Statistician:

Location: Virginia.

M.S. or Phd and a minimum of 5 yrs experience in process/systems analysis in a manufacturing/development organization.

Sr. Biostatistician:

Four Positions

Location: So. California.

M.S. or Phd. 6+ years dealing with clinical trials in a pharmaceutical, biological or biomed environment.

Biostatistician:

Multiple Openings

Location: So. California

M.S. or M.P.H. in biostatistics. 1-4 years experience in statistical consulting and analysis in a biotech, pharmaceutical or biomed environment. Good knowledge of SAS and/or BMDP.

Statistical Programmer:

Location: So. California

BA or BS in biostatistics, computer science or math. 1+ years using SAS, construct analysis, files under the direction of a biostatistician.

Associate Biostatistician:

Location: New Jersey.

Masters with 3-4 years experience or Phd with 1+ years. Clinical study program with Phase III drugs.

Biostatistician:

Location: New Jersey.

Entry level Phd or better. Training in clinical data statistical input. Off campus consulting.

For further information on any of the above contact:

George Resnik
5334 Everhart, Suite 204
Corpus Christi, Texas 78111
(512) 992-7230
FAX: (512)992-7231

**Sr. Research Associate/
Statistician:**

To provide Statistical consulting and data processing services to physician/investigator at the original office and eleven medical centers of Kaiser Permanente.

Requirements: M.S. in Statistics or Biostatistics with 4 or more years of experience; or PhD in Statistics or Biostatistics with one or more years of experience. Good oral and written communication skills required.

Salary: \$42,000 - \$64,000 depending on qualifications and experience.

Contact:

Girma Wolde-Tsadik
Kaiser Permanente
393 E Walnut, Pasadena 91188
(818) 564-3461

Have you paid your Chapter dues? If you are in arrears, please contact Jim Sayre @ (310) 825-5250



The Southern California

Statistician

SOUTHERN CALIFORNIA CHAPTER, AMERICAN STATISTICAL ASSOCIATION

c/o Jim Ashurst, Research Support Services
4521 Campus Dr. #201 Irvine, CA 92715





The Southern California

Statistician

SOUTHERN CALIFORNIA CHAPTER, AMERICAN STATISTICAL ASSOCIATION

Volume 30, No.5

APRIL/MAY 1992

Resampling Revisited...

*at the Eleventh Annual Workshop
in Applied Statistics*

The Eleventh Annual Workshop in Applied Statistics will be held Friday, May 15th, at the Annenberg School of Communications on the USC Campus. The topic will be **RESAMPLING REVISITED**, presented by Professors Bradley Efron and Richard Olshen, both of Stanford University. They will be discussing applications of resampling, particularly the bootstrap method.

In the past decade there has been remarkable growth in research on the bootstrap method. From the beginning, the theoretical underpinnings of the bootstrap have engendered a good deal of interest among statisticians. Recently there have been many substantive applications and, accordingly, the bootstrap has been confirmed as a breakthrough in statistical methodology.

Professor Efron will describe the bootstrap and briefly mention its connection with earlier resampling techniques such as the jackknife. He will cover a variety of approaches to the estimation of the standard error of the estimate. Professor Olshen has applied the bootstrap to various medical problems. In particular he will discuss a case study of cholesterol and its changes over time; he will also briefly touch on an application to gait analysis (the study of free speed human walking). In the afternoon session, Professor Efron will discuss recent de-

velopments in the important problem of constructing bootstrap and bootstrap-like confidence intervals. Each presentation will be one hour long, followed by a discussion period.

In conjunction with the workshop, publishers and software producers have been invited to exhibit their products during the break and following the presentation. The exhibitors include some of the premier companies associated with the field of statistics, and many of them contribute books or software used in a drawing held for attendees at the conclusion of the workshop.

The registration fee is \$70 (\$30 for full-time students). Registration fees postmarked on or before May 4th qualify for an early registration discount of \$5. Each registrant is entitled to admission to the program and exhibits area, one set of handouts, refreshments and lunch. The fee does not cover the cost of parking. Lunch reservations cannot be guaranteed for walk-in registrants or for registration by mail postmarked after May 4th.

Members of the Southern California Chapter should already have received registration forms in the mail. However, if further information is required, contact either Connie Vadheim at (310) 533-3842 or Roberta Madison at (818) 885-4645. This should be a most informative workshop, and your attendance is encouraged. ■

Careers Day Success

The Careers Day of the Southern California Chapter of the ASA was held at UC Riverside on February 29th, 1992. Representatives from 14 organizations participated to discuss job opportunities in statistics. One hundred and thirty people attended the event with one hundred people participating in the luncheon. Dr. Gary McDonald's talk was excellent and stimulating. Several participants were interviewed as a result of their visit and, recently, one participant was hired as a result of the information obtained at the event.

It was a successful and rewarding day for all who attended and Dr. Subir Ghosh would like to convey his deep appreciation and gratitude to all participants and those who helped him in many ways. ■

Dinner with the Zellners...

The March 19th "Evening with the Zellners" held at the new Beckman Center of the National Academies of Sciences and Engineering in Irvine was a complete success. The after dinner talk by Professor Zellner was informal rather than technical in nature and his focus on his own statistical experiences was a vehicle by which he was able to carry those present through the growth of the ASA and the formation of Bayesian groups and meetings. His discussion of his year

continued on page 3

West L.A. Section Dinner Meetings

Thursday, April 30

Speaker:

Dr. Wallace A. Blischke,
Decision Systems Department
Graduate School of Business
Administration, USC

Title:

The Role of Statistics in the Design
and Analysis of Complex Systems:

An Application in the Rocket
Propulsion Industry

Abstract:

In complex, technologically advanced systems, reliability analysis is essential from the earliest stages of engineering design to final design and production of operational systems and beyond. Typically, a program manager will have available many types of information which are relevant to reliability analysis and prediction. Statistical models must incorporate these diverse elements at each stage of the process. This is particularly important in the context of systems composed of highly reliable parts, such as rocket propulsion systems, where reliability cannot be demonstrated by testing alone. An approach to reliability prediction, based on Bayesian statistical methods, is presented and applied to liquid and solid rockets. The Bayesian model provides a framework for incorporating various types of information and for regular revision and updating of predictions. It facilitates the calculation of confidence intervals for reliability and of required test numbers to achieve reliability goals.

A 10-course Chinese banquet is planned for \$14.00 for this event. Please call Ms. Mary Neville at (818) 885-2470 or Dr. Michael Chernick at (714) 753-8010 before noon Tuesday, April 28, 1992.

The above is a joint meeting with the Southern California Chapter of the Institute of Management Sciences/Operations Research Society of America (TIMS/ORSA).

May 21, 1992

Speaker:

Jacek Leskow
Dept. of Statistics and Applied
Probability, UCSB

Title:

Nonparametric estimation for
periodic phenomena

Abstract:

Let $\{X(t); t \in \mathbb{R}\}$ be a stochastic process which is nonstationary but its first and second order characteristics are periodic or approximately periodic. Such type of models are widely applied in signal processing, climatology or oceanography. In particular, the propagation of sound waves in the underwater medium is well modeled by such type of processes. Formally, a stochastic process $\{X(t); t \in \mathbb{R}\}$ for which the mean and covariance functions are ALMOST PERIODIC (approximately periodic) is called ALMOST PERIODICALLY CORRELATED (APC process). For APC processes there is a way of introducing the notion of the spectral density. In practical applications, therefore, there is a need to estimate such a density using the observations of the APC process.

This presentation will introduce the notion of a nonparametric spectral density estimator for APC process. It will also be shown that the introduced estimator is consistent and asymptotically normal. Some simulation examples will also be presented.

EDITOR'S NOTE

Send items for the next issue to:

Rita Petersen
30723 Calle Chueca,
San Juan Capistrano, CA 92675
Phone: (714) 493-6430
FAX: (714) 493-5596

EMAIL:

PETERSEN@ORION.OAC.EDU

The next issue is presently scheduled for the end of May/beginning of June. Because of the new bulk-rate mailing, items are required 21 days prior to mailing.

June 18, 1992

Speaker:

Professor Janet Myhre,
Institute of Decision Science
Claremont McKenna College

Title:

Randomness on the Road to Chaos

Abstract:

The fate of a system evolving over time is of interest to models of applications ranging from population growth to weather dynamics. Without randomness there are three fates typical for discrete bounded deterministic processes: 1) going to 1 point or state (the equilibria) in the limit; 2) approaching an orbit of n points in the limit; 3) chaos (not going to 1 or n points in the limit). With bounded randomness added to the model, points become intervals. Nonetheless some of the behavior is reminiscent of the deterministic process. (Without that similarity the study of deterministic systems would not be of much interest in applied modeling as there are no perfect models.) Analogues to simple concepts taken from the deterministic models and methods of analyzing those analogues will be discussed in this presentation.

Information for all three talks above:

Time: Social Hour: 6:30 p.m.

Dinner: 7:00 p.m.

Talk: 8:00 p.m.

Place: China Garden Restaurant,
10226 Venice Blvd. Culver City

Directions: The China Garden (2nd floor) is about one mile east of the San Diego (405) freeway on Venice Blvd. at the southeast corner of Venice and Vinton (one block east of Motor). Park at the rear of the restaurant, inside the shopping center, or on the street.

Reservations:

Please call Ms. Mary Neville (818) 885-2470 or Dr. Michael Chernick at (714) 753-8010

Evening with the Zellners...

(Continued from page 1)

as President of the ASA included comments on the improved financial picture for the Association, the formation of a Sports Statistics section of the ASA, the movement to improve statistical education in elementary and secondary schools, the idea of certification for statisticians and the new membership drive. Comments on the statistical education of our young people led to much discussion at the end of the talk.

The Chapter is grateful to both the IRU, Mathematical Behavioral Sciences and the Department of Economics at UCI for their support. A special thanks is due to Bob Newcomb for all his efforts in putting together this most entertaining evening. ■

USC Dept. of Preventive Medicine Biostatistics Seminars

Thursdays @ 12:00 noon,
Parkview Medical Center, B-200
1420 San Pablo St., L.A. USC Medical School Campus

April 23:

Jim Dwyer, Institute for Prevention, USC

Call Wendy Mack @ (213) 342-1829 for information

UC Riverside Statistics Department Colloquium

Information: (714) 787-3774
Lectures: Tuesdays at 3:45 in Stat/Comp 2678
Refreshments at 3:30 in Stat/Comp 2634

April 21: Thomas Ferryman, Ph.D. Student, UCR
"A Student's Perspective on His Visit to the International Symposium on Multivariate Analysis and its Applications, Hong Kong on 3/14-18, 1992"

April 28: Dr. Arnold Goodman,
L.A. County Information Technology Service.
"Shared Evolution of Computers, Measurements and Statistics"

May 5: Professor Linda M. Collins, J.P. Guilford Lab.
of Quantitative Psychology, USC
"Latent Transition Analysis: Models for Categorical Longitudinal Data"

May 12: TBA

May 19: Joseph Koenig, B.S. Student Stat Dept, UCR
"An Estimation of Log-Density and Its Applications"

May 26: Angela Allred, B.S. Student Stat Dept, UCR
"Fatigue-Life Models and Estimation of Parameters of the Birnbaum-Saunders Distribution"

THE CLAREMONT COLLEGES Mathematics Colloquim

Wednesday, April 22, 1992

Speaker: Prof. Tom Cover, Stanford University

Title: Sports Statistics

Time: 4:15pm, tea at 3:45

Place: Room 208, Millikan Lab,
6th Street and College Ave.

on the Pomona College Campus in Claremont.

Abstract

A fresh look at the statistics for various sports shows a number of unexpected results lying on the doorstep of probability theory. We first ask how many runs a game would Babe Ruth generate if he were in all nine positions in the line-up. (Answer: 19.) Is anyone else close? Do longer games favor the stronger player? (Answer: not necessarily.) Are all sporting contests equally exciting? (Answer: to some extent.) How does the football pointspread translate into probability of winning? And, finally, what would be the high jump record on the moon? (We don't answer this one.)

For further information call Don Bentley at
(714) 621-8555 x2941.

UCLA School of Public Health Biostatistics Colloquium

Call (310) 825-5250 for information

UCLA Statistics Seminars

Call Don Ylvasaker at (310) 825-4819 for information

RAND STATISTICS SEMINAR SERIES

Thursday, April 28, 1992

Professor Ian Diamond,

Dept of Social Statistics, Univ. of Southampton
"Do Deaths Cluster: An Application of Nonlinear Multi-level Models to Infant Mortality in Brazil"

Thursday, May 28, 1992

Dr. John E. Rolph, Social Policy Department
"Targeting Malpractice-prone Physicians"

June 11 :

Jeremy Taylor, UCLA (topic TBA).

Talks are at 4:00p.m in the Main Conference room; refreshments served at 3:30. For further information, contact Sally Morton at (213) 393-0411, ext. 7360. RAND is located at 1700 Main St., across from Santa Monica City Hall.

SCASA CHAPTER OFFICERS 1991-1992

President:	President-Elect:	Vice President for Academic Affairs:	Vice-President for Professional Affairs:	Secretary:	Treasurer:	Past President:
Michael Chernick, Risk Data Corporation Two Venture Plaza, Suite 400 Irvine CA 92718-3331 (714) 753-8010	Tony Lachenbruch Dept. of Biostatistics, School of Public Health, UCLA, Los Angeles, CA 90024-1772 (310) 825-5250	Subir Ghosh Dept. of Statistics, UCR Riverside, CA 92521 (714) 787-3781	Patricia Osborne, Kaiser Permanente 24157 W. Del Monte Dr. #405 Valencia, CA 91355 (818) 405-6638	James Ashurst UC Irvine c/o Research Support Services, 4521 Campus Drive #201 Irvine, CA 92715 (714) 856-7039	James Sayre Dept. of Biostatistics School of Public Health, UCLA Los Angeles, CA 90024-1772 (310) 825-5250	Kenneth Resser, AMGEN Center, Thousand Oaks, CA 91320-1789 (805) 499-5725 ext 3275

Chapter Dues are \$8.00 (\$3.00 for full-time students). Please note the date on the mailing label. →

Please call James Sayre at the number above if you feel the date does not reflect your payments

EMPLOYMENT OPPORTUNITIES

The following five positions are from:
FORTUNE Personnel Consultants of
Corpus Christi.

Statistical Programmer:

Location: So. California
BA or BS in biostatistics, computer science or math. 1+ years using SAS, construct analysis, files under the direction of a biostatistician.

Biostatistician:

(Multiple Openings)

Location: So. California
M.S. or M.P.H. in biostatistics. One to 4 years experience in statistical consulting and analysis in a biotech, phar-

maceutical or biomed environment. Good knowledge of SAS and/or BMDP.

Sr. Biostatistician:

(Four Positions)

Location: So. California.
M.S. or Phd. 6+ years dealing with clinical trials in a pharmaceutical, biological or biomed environment.

Statistician:

Location: Ohio
B.S. Statistics. M.S. preferred but not essential. Work with engineers and suppliers. 3+ years commercial industry experience.

Lead Statistician:

Location: Virginia.
M.S. or Phd and a minimum of 5 yrs experience in process/systems analysis in a manufacturing/development organization.

Associate Biostatistician:

Location: New Jersey.
Masters with 3-4 years experience or Phd with 1+ years. Clinical study program with Phase III drugs.

For further information on any of the above contact: George Resnik
5334 Everhart, Suite 204
Corpus Christi, Texas 78111
(512) 992-7230 FAX: (512) 992-7231



The Southern California

Statistician

SOUTHERN CALIFORNIA CHAPTER, AMERICAN STATISTICAL ASSOCIATION

c/o Jim Ashurst, Research Support Services
4521 Campus Dr. #201 Irvine, CA 92715

ROBERT L. NEWCOMB [9109]
SOCIAL SCIENCES
UNIVERSITY OF CALIFORNIA
IRVINE, CA 92717



The Southern California

Statistician

SOUTHERN CALIFORNIA CHAPTER, AMERICAN STATISTICAL ASSOCIATION

Volume 30, No.6

June 1992

President's Message...

As we complete the academic year, I would like to look back at the year and review our accomplishments.

Through the efforts of Professors Subir Ghosh and Donald Bentley we were able to put on a very timely kick-off program with a renowned statistician, Professor Herman Chernoff. Professor Chernoff spoke about the acoustic evidence his committee reviewed on the John F. Kennedy assassination (prior to Oliver Stone's picture). He also spoke in the afternoon lecture on the challenging combinatorial and statistical problems associated with the study of the structure of DNA.

As usual we had an outstanding program for Career Day which was hosted this year at UC Riverside. The facilities and the program were excellent. Again Professor Ghosh deserves a great deal of credit for putting on the program and attracting a distinguished industrial statistician in Dr. Gary McDonald who spoke to us on his experiences as a manager of a mathematical research department for a major automobile manufacturer, General Motors.

The riots in Los Angeles occurred at a time when the joint meeting of our chapter and the local TIMS/ORSA chapter was scheduled. We were forced to cancel an interesting talk by Professor Blichke. I am glad that we are able to reschedule the talk for the fall.

We were also concerned that the riots might hurt the attendance at our annual workshop which was held

only two weeks later at USC near the center of the riots! Fortunately attendance was good with registrants coming from as far north as San Luis Obispo and as far south as San Diego. The presentations were excellent and I have already heard a number of favorable comments. Professor Efron gave us a very clear introduction to the bootstrap and its many applications. Professor Olshen followed with a very interesting case study on cholesterol which included a number of applications of the bootstrap. Efron's afternoon lecture showed us how good "nonparametric" bootstrap confidence intervals can be even in relatively small samples. There is now good theoretical support for some of these methods. Again our vendors were very generous and the drawing for free software and books was a big hit with a number of people leaving as winners. Our workshop committee headed by Nancy Berman and Carol Wilkinson deserves a great deal of credit for another fine workshop. I am happy to have been able to be part of this committee for the past three years and have seen first hand how seriously the committee goes about its work.

In March we were fortunate to have an excellent program organized by Professor Robert Newcomb at the National Academies of Science and Engineering at UC Irvine. This was a special event with Visiting Professor Arnold Zellner (past President of the American Statistical Association) giving an informal talk after dinner. Occasional meetings like this provide a

welcome change from our standard dinner meetings.

One disappointment has been the lack of activity in the Orange County Section. We also had to cancel two meetings in West Los Angeles for lack of attendance. Professor Ernie Scheuer did organize one meeting which was held in the City of Hope and featured Professor Sam Saunders from Washington State University who spoke about lotteries. I hope that monthly meetings will continue at the chapter sections. It will require initiative from chapter members to organize these meetings as those of us who have done it in the past are finding that we do not have the time to continue it. I know that Chapter meetings are continuing to be held by the San Diego section but unfortunately they have not been reporting them to the newsletter and so they are not being included in this publication, the AMSTAT News or LINK. I hope this problem will be remedied as we all like to hear about chapter activities.

continued on next page

ERRATUM: In the last newsletter, Randy Hamlin was inadvertently omitted from the list of Chapter officers. Randy is the Southern California Chapter representative to the National Association. He can be contacted at:

Hunt-Wesson, Inc.
1645 W. Valencia MS-502
Fullerton 92633-3899
(714) 680-1275

Apologies from the editor for the omission.

West L.A. Section

JUNE 18, 1992

Speaker:

Professor Janet Myhre
Institute of Decision Science
Claremont McKenna College

Title:

Randomness on the Road to Chaos

Abstract:

The fate of a system evolving over time is of interest to models of applications ranging from population growth to weather dynamics. Without randomness there are three fates typical for discrete bounded deterministic processes: 1) going to 1 point or state (the equilibria) in the limit; 2) approaching an orbit of n points in the limit; 3) chaos (not going to 1 or n points in the limit). With bounded randomness added to the model, points become intervals. Nonetheless some of the behavior is reminiscent of the deterministic process. (Without that similarity the study of deterministic systems would not be of much interest in applied modeling as there are no perfect models.) Analogues to simple concepts taken from the deterministic models and methods of analyzing those analogues will be discussed in this presentation.

Time:

Social hour: 6:30 pm

Dinner: 7:00 pm

Talk: 8:00 pm

Place:

China Garden Restaurant, 10226
Venice Blvd., Culver City.

Reservations: Please call Mary Neville (818) 885-2470 or Dr. Michael Chernick @ (714) 753-8010 as early as possible.

Please make a note that the April 30th joint meeting with TIMS/ORSA featuring Professoralter Blischke which was cancelled has been rescheduled for October 28th. More information will appear in the fall issue of the newsletter.

continued from page 1

Early in the fall we also had one video workshop organized by Professor Dan Martinez and partially sponsored by the California State University at Long Beach Mathematics Department. This was a workshop on experimental design and quality control put on by Professor George Box and his associates at the University of Wisconsin. It was the best video presentation I have ever seen on a statistical topic. I hope the video workshops will also continue. Dan has put on a number of such workshops over the past few years. All have been worth the minimal amount of money required for production of the lecture notes and several local experts have

helped by moderating the presentations. This year the video workshop was moderated by Professor Ghosh.

Looking back I think it has been a very good year for the chapter. We have seen several changes in the newsletter thanks to the efforts of Rita Petersen. I am trying to reduce the cost of mailing the newsletter by getting a bulk mail permit for nonprofit organizations. We have applied and have just received the application approved for this mailing.

I am very pleased that we have been able to serve the membership so well this year and am confident and hopeful that this will continue in the future.
—Michael Chernick

UCSB STATISTICS AND APPLIED PROBABILITY COLLOQUIA

WEDNESDAY JUNE 10, 1992

SPEAKER: Prof. Ibrahim Ahmad, Statistics Dept, Northern Illinois University

TOPIC: "Highly Efficient Testing Procedures for Restricted Families of Life Distributions"

For the most commonly used families of life distributions such as IFR, IFRA, NBU and DMRL we offer new and interesting procedures for testing exponentiality against alternatives in these classes. These procedures are highly efficient and possess simplicity and high power.

Talk is held in South Hall 5421 at 4:00pm with refreshments being served at 3:30 pm. For further information call (805) 968-2129.

A Brief History of Scholarly Publishing

Donald Jackson, University of Illinois Press

- | | |
|---|--|
| <p>50,000 BC Stone Age publisher demands that all manuscripts be doubled-spaced, and hacked on one side of stone only.</p> <p>1455 AD Johannes Gutenberg applies to Ford Foundation for money to buy umlauts. First subsidized publishing venture.</p> <p>1483 Invention of <i>ibid</i>.</p> <p>1507 First use of circumlocution</p> <p>1859 "Without whom" is used for the first time in list of acknowledgements.</p> <p>1888 Martyrdom of Ralph Thwaites, an author who deletes 503 commas from his galleys and is stoned by a copy editor.</p> <p>1901 First free desk copy distributed (Known as Black Thursday).</p> <p>1916 First successful divorce case based on failure of author to thank his wife, in the forward of his book, for typing the manuscript.</p> <p>1927 Minor official in publishing house, who suggests that his firm issue books in gay paper covers and market them through drug houses, is passed over for promotion</p> <p>1928 Early use of ambiguous rejection letter,</p> | <p>beginning, "While we have many good things to say about your manuscript, we feel we are not now in position..."</p> <p>1934 Bookstore sends for two copies of Gleep's Origin of Leases from University Press and instead receives three copies of Darwin's Storage of Fleeces plus half of stale peanut butter sandwich from stock-clerk's lunch. Beginning of a famous Brentano Rebellion, resulting in temporary improvement in shipping practices.</p> <p>1952 Scholarly writing begins to pay. Proessor Harley Biddle's publishing contract calls for royalty on his book after 1,000 copies have been sold to defray printing costs. Total sales: 1,009 copies.</p> <p>1961 Important case of Dulany v. McDaniel, in which judge Kelley rules to call a doctoral dissertation a nonbook is libelous per se.</p> <p>1980 Copy editors' anthem "Revise or Delete" is first sung at national convention. Quarrel over hyphen in second stanza delays official acceptance.</p> |
|---|--|

RAND STATISTICS SEMINAR SERIES

Thursday, June 11, 1992

SPEAKER:

Dr. Jeremy M.G. Taylor
Department of Biostatistics, UCLA

TOPIC:

"Analysis of Longitudinal AIDS
Data Using an Integrated Ornstein-
Uhlenbeck Process"

ABSTRACT:

A model for the analysis of repeated measures data is

$$Y_i(t_{ij}) = X(t_{ij})\alpha + Z(t_{ij})b_i + W_i(t_{ij}) + e_{ij}$$

where $Y_i(t_{ij})$ is the measurement of subject i at time t_{ij} , $X(t_{ij})\alpha$ represents fixed effects terms, $Z(t_{ij})b_i$ represents random effect terms, $W_i(t_{ij})$ is a stochastic process allowing correlation between measurements and e_{ij} is measurement error. In the simplest case $X(t_{ij})$ and $Z(t_{ij})$ contain the times of the measurements. For $W_i(t_{ij})$ we use a two parameter integrated Ornstein-Uhlenbeck (OU) process. The OU process is the continuous stationary mean-zero Gaussian Markov process which includes Brownian Motion and White Noise as special limiting cases. The model is a continuous-time version of a AR(1) process for the deviations of the derivative of y from the expected derivative of y with respect to t . This approach is flexible and tractable as the covariance structure has a closed form expression. The model allows unequally spaced observations and can be generalized to multivariate responses. This model enables one to assess whether individuals maintain their trajectories, that is whether their slope of y 'tracks'.

The model was applied to serial CD4 measurements in an AIDS related study. For these data the best fitting model was a random intercept for each person, Brownian Motion for $W_i(t_{ij})$ and measurement error. This model was compared with the popular random intercept, random slope plus measurement error model. The model containing the Brownian Motion term was preferred because it gave a better fit to the data, has less parameters and has more plausible scientific interpretation.

Thursday, July 16, 1992

SPEAKER:

Professor Donald Berry
Statistics and Decision Science
Institute, Duke University

TOPIC:

"Bayesian Meta-Analysis"

ABSTRACT:

Bayesian inference focuses on questions of interest to clinicians: In view of the available information, is the therapy effective? how effective? How does the response depend on the type of patient? on the treating physician? The requirement to use all available information makes the Bayesian approach ideal for meta-analysis. We describe a Bayesian hierarchical approach for analyzing data from many studies. We address dichotomous responses and the comparison of two treatments, A and B . Let p_A and p_B be the probabilities of success on A and B . We focus on $p_A - p_B$. We consider two prior distributions. In the first, p_A and p_B are either equal or independent. We find posterior distributions for p_A and p_B and the Bayes factor for $p_A - p_B = 0$. In the second prior distribution there is a logistic relationship between the two probabilities of success; namely,

$$p_B/p_A = p_A \exp \mu / (p_A \exp \mu + 1 - p_A).$$

We find the posterior distribution of parameter μ and the probability that $p_A - p_B > d$ for all d .

The research is joint work with Kris Gillingham of the University of Minnesota.

Talks are held at 4:00 pm in the Administrative Conference Room (June 11 talk) and the Main Conference Room (July 16 talk) with refreshments being served from 3:30 to 4 pm. For further information, please contact Sally Morton at (213) 393-0411 (x7360). RAND is located at 1700 Main St., across from Santa Monica City Hall.

EMPLOYMENT OPPORTUNITIES

BIostatistician

Hybritech Incorporated, a subsidiary of Fortune 100 Eli Lilly and Company, is an industry leader in the biotechnology/in vitro diagnostic products community. We currently seek an experienced Biostatistician for our San Diego based corporate headquarters.

This statistician will work closely with R&D and QC in developing specifications for new and existing products using statistically controlled experimental designs and sampling techniques. Responsibility will also include design of experiments that lead to statistically significant conclusions on optimization of parameters that affect product and process designs. There will be involvement with our Clinical/Regulatory Affairs group to design clinical trials in order to evaluate the safety and efficacy of our in vitro diagnostic and in vitro therapeutic products.

Our ideal candidate will possess a Master's degree in a related field (Statistics, Biostatistics, or Bio-science) with prior biotech industrial experience. A Phd is an asset, however actual statistical operations experience is essential. Knowledge of software programs for statistical data analysis and multi-factorial experimental designs is preferred.

Hybritech offers a stimulating and challenging work environment, excellent salary and competitive company paid benefits. For consideration, please send resume to:

HYBRITECH INCORPORATED,
TV/BP/5-14-92
P.O. Box 269006
San Diego, CA 92196-9006

We are committed to diversity in our work force.

(Continued next page)

Employment Opportunities (cont)

RESEARCH ANALYST

Join Kaiser Permanente, one of the nation's leading health care providers, and experience your own success. We're seeking exceptional Research Analysts for our Planning Department.

These individuals will be responsible for data analyses and preparation of written and oral reports on healthcare planning projects, with an emphasis on quantitative research and program evaluation. Qualified candidates will have a Master's degree or equivalent experience in Public Health, Business Administration, Urban Planning, Sociol-

ogy, Statistics, Epidemiology or related field. One year related experience is preferred. Must have analytical, statistical, computer skills. Excellent oral and written communication skills are also required.

We offer competitive salaries and a comprehensive benefits package. For immediate consideration, please submit resumes to:

Kaiser Permanente, Personnel Dept.
393 E. Walnut Street
Pasadena, CA 91188-5080

Please check the date on the mailing label. If it does not reflect your payment, call Jim Sayre @ (310) 825-5250 →

STATISTICAL/TECHNICAL CONSULTANT

BMDP is seeking a Statistician/Technical Consultant to provide statistical/technical support to our customer inquiries, test software, review documentation, and work on special projects related to the enhancement of the software.

Successful candidates

- will have an M.S. in Statistics, Biostatistics or related field.
- will have a working knowledge of BMDP or similar statistical packages.
- must have excellent oral & written communication skills and good command of the English language.

Requirements of the position:

- work experience in problem solving environment
- familiarity with a variety of computer hardware, particularly VAX/VMS and microcomputers.
- will be involved in quality control testing and investigating reported software problems.

Company offers a pleasant working environment and competitive benefit package. Interested candidates should submit resumes and salary history to:

Personnel Department
BMDP Statistical Software, Inc.
1440 Sepulveda Blvd., Suite 316
Los Angeles, CA 90025



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American Statistical Association, Southern California Chapter
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UNIVERSITY OF CALIFORNIA



The Southern California Statistician

SOUTHERN CALIFORNIA CHAPTER, AMERICAN STATISTICAL ASSOCIATION

Volume 31, No.1

SEPTEMBER 1992

Annual SCASA Fall "Kick-off" Meeting

The 1992 Fall "Kickoff" will be held this year on **Saturday, October 3**, at Pomona College. The featured speaker will be David S. Moore of Purdue University. The topic will be on the teaching of statistics. As in past years, this event promises to be most interesting.

Saturday, October 3

Place:

Lyman Hall, Pomona College,
Claremont, (3th and College Ave)

Times:

- 9:30 - 10:30: Registration
10:30 - 12:00: "Statistics in the Schools:
How? What? Why?"
12:15 - 1:15: Lunch and Business
Meetings, Blue Room,
Frank Dining Hall
1:30 - 3:00: "The Uses of Video in
Teaching Statistics"
3:00: Reception and
informal discussion

Costs:

Lunch \$15.00 (Students & guests \$9.00)

Please note the article on inviting guest educators and use a copy of the form on the back page for registration by mail.

Abstract:

Morning Session

"STATISTICS IN THE SCHOOLS:
WHY? WHAT? HOW?"

Statistics in the schools is fashionable. The 1989 Standards of the National Council of Teachers of Mathematics call for substantial experience with data and chance starting in the early grades. State standards in California and other states have a similar emphasis. The Educational Testing Service is preparing an advanced placement examination in statistics. Yet most teachers had only limited exposure to statistics during their college education and are not receiving adequate help in teaching the new ma-

terial. Is statistics in the schools another "new math" movement, advocated from above with little attention to the needs of teachers and students? This talk will argue that working with data and chance serves the learning of core mathematical concepts and that this, rather than statistics for its own sake, is the point of the new curriculum. It will describe what aspects of statistics belong and don't belong in the schools. It will suggest that teachers do need help, and point to some resources, such as the ASA Quantitative Literacy program, that statisticians can draw on in working with their local schools.

Abstract:

Afternoon Session

"THE USES OF VIDEO IN
TEACHING STATISTICS"

Television is, as one review of research on teaching puts it, "the new teaching technology of the 1950s." Video has nonetheless gained in importance because of the prevalence of video recorders in households and classrooms, and may play a much larger role in instruction (including training in industry) as digitized multimedia technology advances. This talk will review the strengths, weaknesses, and appropriate use of video as a teaching tool, with emphasis on teaching statistics. The presentation draws both on research and on Dr. Moore's experience as the content developer for the Annenberg/Corporation for Public Broadcasting telecourse (Against All Odds: Inside Statistics) and the National Science Foundation series of school video modules (Statistics: Decisions Through Data). The talk will be illustrated by excerpts from the school video series, but the content applies to using video in any instructional setting.

Biographical Note

David S. Moore is professor of statistics at Purdue University. He received his A.B. from Princeton and the Ph.D. from Cornell.

He has written many research papers in statistical theory and served on the editorial boards of *Technometrics*, the *Journal of the American Statistical Association* and the *International Statistical Review*. Professor Moore is a Fellow of the American Statistical Association and of the Institute of Mathematical Statistics, and has served as director of the statistics and probability program at the National Science Foundation. Recently he has concentrated on statistical education. He was the content developer for the Annenberg/Corporation for Public Broadcasting college-level telecourse *Against All Odds: Inside Statistics* and for the series of secondary school video modules *Statistics: Decisions Through Data*. He is the author of two leading college texts, *Statistics: Concepts and Controversies* and (with George P. McCabe) *Introduction to the Practice of Statistics*, wrote the chapter on "Uncertainty" in the National Research Council volume *On the Shoulders of Giants: New Approaches to Numeracy*, and (with David C. Hoaglin) edited the recent *Mathematical Association of America Notes* volume *Perspectives on Contemporary Statistics*. ■

Invite Mathematics Educators to the Kickoff

Last year's winter meeting of the ASA centered on the theme of Statistics Education. The attendance was 150% that of any other meeting. At this August's Boston ASA Meeting, Kathy Wallman had a demonstration of the Quantitative Literacy Program as the President's Invited Address, and her remarks in the President's Address were focused on the need for better statistics education of the American Public. Following in this spirit, the theme for the Fall Kickoff Meeting of the SCASA is Statistics Education.

The speaker is David Moore, well-known for his contributions in statistics education through textbooks, films and

Continued on back page

A Message from the Chapter President

Amidst a state budget crisis, our chapter activities will begin again. Many of us are facing somewhat more randomness in this year than we would like. This is also true for those who are employed by the state as well as those in the private sector.

We have approximately 600 members. This makes us one of the largest chapters in the ASA. We are also one of the most spread-out chapters. We cover the territory from San Diego to San Luis Obispo, and from the Pacific Ocean to the Nevada and Arizona state lines. It would be great if each member could attend at least one function each year. These activities include dinner meetings (approximately monthly), video workshops (two or three each year), Careers Day (usually in February or early March), and the Applied Statistics Workshop (in May). There's something for every member somewhere. If you have a topic or an activity you'd like to have included, please call or write me (address and phone below) and I'll make sure it gets to someone who will try to help. You may even get to organize something! Also, if you have colleagues who are not members of the chapter, please invite them to join. They should contact Jim Sayre, our Treasurer.

Chapter officers met in late July to plan this year. Areas we considered were:

Fall kickoff event. This will be held at Pomona College October 3rd this year. David Moore will speak on Statistical Education. An article appears elsewhere in this issue. Don Bentley will organize this event.

Videotape Workshops. These have been very popular. ASA shortcourses have been videotaped for many years. We obtain them and show the tapes on a Saturday with a local faculty member as a resource person. They are a good introduction to a topic. This year we will try to have sessions in several locations throughout the chapter. In this way, the driving time should be shortened for some members. Contact Dan Martinez at Cal State, Long Beach if you have questions.

Careers Day. This is organized by the Chapter Vice Presidents. Statisticians from universities and colleges and industry participate. Undergraduates and high school students attend to learn what a

statistician does and what training is needed.

Applied Statistics Workshop. Each year an outstanding statistician is invited to present a workshop on an applied topic of general interest to our members. Nancy Berman is the chair of the organizing committee.

SCASA Dinner Meetings. We will hold meetings approximately monthly in the central area, and slightly less frequently in the other areas. The San Gabriel Valley area has held meetings at JPL and City of Hope (Milt Brown or Ernie Scheuer), the Inland Empire area holds meetings in Riverside and Pomona (Don Bentley or Subir Ghosh), the San Diego group holds its meetings about four times a year (Joe Moser), San Fernando Valley (Elizabeth Trybus, Paul Baum), the Santa Barbara group (S.R. Jammal-ammadaka), the Los Angeles group meets about monthly (Janet Elashoff). These names are for you to contact with your suggestions about speakers, topics, etc.

Constitution and By-Laws Revision. When the ASA revised its constitution, it requested chapters to revise their constitutions and by-laws. Mike Chernick (past-president) is chairing a committee that is doing this. We hope to publish a draft revision later this year for comments and issue a revised constitution for the chapter to vote on.

Newsletter. Rita Petersen is the editor for this year. Articles on news of interest to the chapter, profiles of our members, personal notes and basic technical ideas would be welcome.

Some issues which led to much spirited discussion at the Joint Statistical Meetings in Boston were related to certification of statisticians and accreditation of undergraduate statistical majors/departments. The certification of statisticians would be ASA's attempt to indicate to employers and government that these individuals met certain qualifications. I have not seen the written proposals, so I'm not sure exactly what's being proposed. One of the proponents is J.S. Hunter, the President-Elect of ASA, so we will certainly hear more of this. The accreditation issues on what courses should be required. It is controversial as very few departments could meet the

proposed standard. Stay tuned for further developments.

-Peter A. Lachenbruch
Dept. of Statistics,
School of Public Health, UCLA
Los Angeles, CA 90024-1772
(310)825-5250 ■

West LA Section Dinner Meeting

Wednesday, October 28

Speaker:

Dr. Wallace A. Blischke

Decision Systems Dept. Graduate
School of Business Administration, USC
Title

The Role of Statistics in the Design and
Analysis of Complex Systems:
An Application in the Rocket
Propulsion Industry

Abstract:

In complex, technologically advanced systems, reliability analysis is essential from the earliest stages of engineering design to final design and production of operational systems and beyond. Typically, a program manager will have available many types of information which are relevant to reliability analysis and prediction. Statistical models must incorporate these diverse elements at each stage of the process. This is particularly important in the context of systems composed of highly reliable parts, such as rocket propulsion systems, where reliability cannot be demonstrated by testing alone.

An approach to reliability prediction, based on Bayesian statistical methods, is presented and applied to liquid and solid rockets. The Bayesian model provides a framework for incorporating various types of information and for regular revision and updating of predictions. It facilitates the calculation of confidence intervals for reliability and of required test numbers to achieve reliability goals.

Social Hour: 6:30 p.m.

Dinner: 7:00 p.m.

Talk: 8:00 p.m.

Place: China Garden Restaurant,
10226 Venice Blvd. Culver City

Reservations: Please call Ms. Mary Neville (818) 885-2470 or Dr. Michael Chernick at (714) 753-8010

The above is a joint meeting with the Southern California Chapter of the Institute of Management Sciences/Operations Research Society of America (TIMS/ORSA).

Members Honored in Boston

Several members were honored at the Joint Statistical Meetings in Boston. Wil Dixon, who conceived and developed the BMD programs, received the S.S. Wilks award for his pioneering contributions to statistical practice. Naihua Duan (RAND Corporation) and David Strauss (UC Riverside) were named Fellows of the ASA. Barry C. Arnold (UC Riverside) was named a Fellow of the Institute of Mathematical Statistics. Also, John Rolph of the Rand Corporation is now the new editor of *Chance Magazine*.

Congratulations! ■

Interface '93 to be held in San Diego

Originally started in Southern California, *Interface* was born from the notion that not only could computers be used to solve statistical problems, but statistics could be used to solve computer problems as well. The first *Interface* was held in 1967 and co-sponsored by the SCASA. A national organization now, *Interface '93* will be held April 14-18 next year in San Diego. The *Interface* symposiums have provided a forum for the interaction of professionals in statistics, in computing science, and in numerical methods, where they can discuss a wide range of topics at the interface of these disciplines. Mark your calendars and look for more information in future issues. ■

Applied Math Course

The University of California, Irvine Extension is offering a new course called *Introduction to Applied Mathematics* beginning September 29th. Topics include symmetric linear systems; eigenvalues and dynamical systems; linear algebra review; matrix factorizations; equilibrium equations and minimum principles; and equilibrium in the continuous case. The course emphasis is on practical algorithms and their applications. For information call the University Extension office @ (714) 856-5414.

San Gabriel Valley Section Meeting

Save Thursday, Nov. 19 for a Chapter meeting at the City of Hope in Duarte. The meeting held there last March was a great success — due to easy access (free-way close), good meeting facilities, excellent food at a reasonable price, and a fine speaker. Another interesting meeting is expected on November 19.

The program on that date will be conducted by Dr. Joyce Niland, Director of Biostatistics at the City of Hope, and members of her staff. They will provide a comprehensive discussion of the work of the Biostatistics Unit in supporting cancer clinical trials, including experimental design, data gathering and validation, custom software developed at COH, analysis, and reporting. Additional details will be forthcoming closer to the time of the meeting. ■

SYSTAT Introductory Data Analysis Short Course

October 19-20, 1992

Place: Seaver Academic Computing Services Pomona College, Claremont, CA

Course Format: A general introduction to SYSTAT with presentations focusing on statistical procedures and high resolution graphics. Lectures, slide presentations, participation in discussions and hands on experience.

Instructor: MaryAnn Hill
PhD UCLA. Currently Adjunct Professor at the University of Michigan, Dept. Of Statistics.

Registration: Call, FAX or write SYSTAT. Include name, affiliation, address, telephone and FAX number on all correspondence to:

Attention: Mary Kennedy
SYSTAT, Inc. 1800 Sherman Ave.
Evanston, Illinois 60201
Phone: 708-864-5670
FAX: 708-492-3567

Costs: Registration fee: \$595. (\$525 if SYSTAT for PC or Windows is purchased). Payment by Mastercard, Visa or check. Includes continental breakfast, lunch, set of SYSTAT manuals and a 400 page Student Handbook with examples of input and output.

RAND Statistics Seminar Series

*Upcoming Talks
(Topics to be Announced)*

- September 17: Peter Lewis,
Naval Postgraduate
School
October 8: Kinley Larntz,
Univ. of Minnesota
November 5: Brad Efron,
Stanford University

Refreshments will be served in the Administrative Conference Room from 3:30 to 4pm. For further information, please contact Sally Morton at (310) 393-0411, ext. 7360. RAND is located at 1700 Main St., across from Santa Monica City Hall.

Employment Opportunities

Statistical Research Analyst Position

Risk Data Corporation (RDC) has an immediate opening for an experienced SAS Programmer. The position of Statistical Research Analyst requires:

1. A graduate degree in statistics, mathematics, or other quantitative area. Candidate with a BS/BA degree and valuable work experience will be considered.
2. Experience using the SAS System, including DATA STEP programming experience and experience using statistical procedures.
3. Experience working in a UNIX environment.

RDC is a rapidly growing information services company that serves the insurance industry. The Research Department has state-of-the-art UNIX workstations and a variety of SAS System products. RDC is conveniently located in the Irvine Spectrum. Interested candidates should contact Vince Bianco by calling (714) 753-8010, or by FAXING a cover letter and resume to:

Vince Bianco,
Risk Data Corporation,
Two Venture Plaza, Suite 400,
Irvine, CA 92718-3331.
FAX number: (714) 753-8020.

Invitation to Mathematics Educators (cont. from page 1)

innovative teaching methods. He is also an outstanding speaker, to which those of us who heard him give the banquet address at ICOTS 3 in New Zealand can attest.

While the examples he will use to demonstrate new directions in statistics education will come more from secondary and college education, they will contain valuable information for those interested in education in the industrial environment as well. This should be a program of great interest to all members of the SCASA. In order to begin to address the challenge which Kathy Wallman gave the membership of the A.S.A. in her address, all members of the Southern California Chapter are encouraged to invite educators from their local school systems to attend this meeting. Consider inviting not only teachers (particularly

department chairs), but principals and school board members. Invite anyone who can get the message through to the schools. This is a unique opportunity to expose educators to the fun that can be introduced into the statistics curriculum, as well as where this curriculum is headed in the future. Guest educators will be able to attend for the student's registration fee of \$9. It is hoped that some funds will be made available so they can attend free.

Fill out the registration form below and mail it along with a check made out to SCASA to Prof. Don Bentley, Mathematics Department, Pomona College, Claremont CA 91711. Reservations must be received by Wednesday, Sept. 30. For further information you can call Don at (714) 621-8409. ■

UCR Statistics Colloquia

Talks are held every Tuesday @ 3:45 in Stat/Comp 2678 with Refreshments at 3:30 in Stat/Comp 2634. For information call Sarah @ (714) 787-3774.

Currently scheduled:

October 6: D.V. Ghokale

(Topic to be announced)

October 13: Barry C. Arnold

Topic: "Multivariate Logistic Distributions"

EDITOR'S NOTE

Please send items to:

Rita Petersen

30723 Calle Chueca,

San Juan Capistrano, CA 92675

Phone: (714) 493-6430

FAX: (714) 493-5596 (Call first)

EMAIL: PETERSEN@ORION.OAC.UCL.EDU

The next issue is scheduled for mid October.

Please send items 2 weeks prior.

Registration Form for SCASA Annual Fall "Kickoff" Meeting, October 3, 1992

Name: _____ Telephone: (____) _____

Number of Attendees: Registrant(s) _____
 Guest(s) _____
 Student(s) _____

Make checks payable to SCASA
 Mail to: Don Bentley,
 Mathematics Department
 Pomona College
 Claremont, CA 91711

() Vegetarian Lunch(s) _____

Reservations must be received by Wednesday, September 30, 1992



The Southern California

Statistician

SOUTHERN CALIFORNIA CHAPTER, AMERICAN STATISTICAL ASSOCIATION

American Statistical Association, Southern California Chapter
 4521 Campus Dr. #201 Irvine, CA 92715

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 UNIVERSITY OF CALIFORNIA
 IRVINE, CA 92717



The Southern California Statistician

SOUTHERN CALIFORNIA CHAPTER, AMERICAN STATISTICAL ASSOCIATION

Volume 31, No.2

October/November 1992

Fall Kickoff Meeting Report

The Fall Kickoff meeting of the SCASA was held on October 3 at Pomona College. The featured speaker was David Moore, well known for his contributions to statistics education. The fifty plus members in attendance were provided insight into the way in which mathematics education can be enhanced by including data in the curriculum. Prof. Moore emphasized the need for active, as opposed to passive learning. Further, there is a need to expose students to opportunities to work in teams which is the environment they will encounter after they leave the academic world.

A great deal of discussion occurred based upon the foundation of Prof. Moore's lectures. The major emphasis of this discussion was ways which the SCASA can become involved in assisting schools, both primary and secondary, in Southern California to introduce statistics into their curriculum. The consensus was that the place to start is support of the teachers. On the basis of this discussion a committee is being formed to pursue such a project. For further information, contact Don Bentley at (714)621-8555 ext. 2941, or email: DBENTLEY@POMONA.CLAREMONT.EDU. ■

SCASA and Quantitative Literacy

As a consequence of the Fall Kickoff Program of the SCASA, a committee is being formed of persons interested in helping to introduce statistics at both the primary and secondary school level. For the last several years the ASA office has been supporting the Quantitative Literacy Program, which provides summer workshops for school teachers to experience curriculum which they can then introduce into their own classrooms. A number of members of the Southern California Chapter have individually had experience lending support in local schools.

The wealth of local talent is now

being mobilized to move forward in introducing data in the mathematics curriculum of our area schools. While we can call upon the experience available through the ASA office, a great deal of help will be needed on the local level. People are needed who have contacts with teachers and administrators in the local schools, can help in obtaining the funding to put on a summer workshop, and support in the organization and presentation of the program. Anyone interested in helping should contact Don Bentley at (714)621-8555 ext 2941, or email at DBENTLEY@POMONA.CLAREMONT.EDU. ■

Chapter Officers 1992-1993

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Dept. of Biostatistics
School of Public Health, UCLA
Los Angeles, CA 90024-1772
(310) 825-5250

President-Elect:

Subir Ghosh
Dept. of Statistics,
UC Riverside, CA 92521
(714) 787-3781

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Cal Poly San Luis Obispo, CA 93407
(805) 756-2026

Vice President for Professional Affairs:

Patricia Osborne
Kaiser Permanente
24157 W. Del Monte Dr. #405
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(818) 405-6638

Secretary:

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Information and Decision Sciences
Cal State Univ. San Bernadino 92407-2397
(714) 880-5765

Treasurer:

James Sayre
Dept. of Biostatistics,
School of Public Health, UCLA
Los Angeles, CA 90024-1772
(310) 825-5250

Chapter Rep. to the National Assoc.:

Ken Resser
AMGEN Center,
Thousand Oaks, CA 91320-1789
(805)499-5725 ext 3275

Past President:

Michael Chernick
Risk Data Corporation
Two Venture Plaza, Suite 400
Irvine, CA 92718-3331
(714) 753-8010

San Gabriel Valley Dinner Meeting Thursday, November 19

Speaker:

Dr. Joyce C. Niland and Staff
Department of Biostatistics
City of Hope Medical Center

Title:

A Survey of Biostatistical Consulting Units, and Statistical Applications in Cancer Clinical Trials

Abstract

Individuals responsible for providing biostatistical services in health care research settings frequently encounter a number of common issues and problems. To facilitate the exchange of information, a survey of biostatistical units throughout the United States and Canada was conducted in February 1992. The purpose was to determine the organizational structures, funding sources, salary ranges, computer resources and operational concerns of these centers. These issues were discussed among 19 participating centers attending the second meeting of heads of units of biostatistics (HUBS) at the City of Hope in March. A summary of the survey and the meeting discussions will be presented.

The operations and activities of the City of Hope Biostatistics Department will be described as well, particularly as they relate to the conduct and analysis of cancer clinical trials. Biostatistical applications will be presented which arise from trials on: bone marrow transplantation for leukemia; monoclonal antibodies for identifying and treating lesions; and high dose chemotherapy with stem cell infusion for solid tumors. Statistical issues discussed will include: sequential patient monitoring, intent-to-treat analyses, equivalency trials, intraclass correlation, sensitivity/specificity, and bootstrap estimation of standard errors for censored data.

Time:

Social Period: 6:30 pm
Dinner: 7:00 pm
Talk 8:00 pm

Location:

City of Hope National
Medical Center, Duarte;
Conference Room B

Reservations:

It is essential that prior reservations be made for dinner. Please call Catherine at (818) 359-8111, ext 3032 no later than the end of the day on Friday, November 13. (note the lead time required!) The cost of the dinner and pre-dinner soft drinks is \$8.50. Persons who want to hear the talk but who do not want to have dinner are most welcome, and at no cost.

Information:

Dr. Ernie Scheuer: on Tuesday, Wednesday and Thursday at (818) 354-1632/9671; otherwise at (818) 577-4757. E-mail: escheuer@vax.csun.edu or scheuer@oak.jpl.nasa.gov (not available Nov 6-16) or Dr. Milt Brown: (818) 354-4968; e-mail: mbrown@kilroy.jpl.nasa.gov

Directions to the City of Hope: From the 210 Freeway: Take the Buena Vista exit (just west of the 605 fwy). Go south on Buena Vista (if coming from the west, e.g. Pasadena, turn right at the light; if coming from the east, e.g. Pomona, turn left at the stop sign, then left at the light). Turn left onto Duarte Road (first light). Turn right into the main entrance for City of Hope (past the Beckman Research Institute).

Once on the grounds of City of Hope:

Go straight until reaching the main medical building and fountain. Turn left and circle around campus on the one-way street. Go straight at the stop sign when the one-way street ends. Cafeteria and adjacent conference rooms will be on your left

Parking: Parking is available to the left and right just past the cafeteria, of in the parking lots you will pass on your left while driving along the one-way street.

West LA Section Dinner Meeting

Wednesday, October 28

Speaker:

Dr. Wallace A Blischke
Decision Systems Dept., Grad, School
of Business Administration, USC

Title:

The Role of Statistics in the Design and Analysis of Complex Systems: An Application in the Rocket Propulsion Industry

Abstract

In complex, technologically advanced systems, reliability analysis is essential from the earliest stages of engineering design to the final design and production of operational systems and beyond. Typically, a program manager will have available many types of information which are relevant to reliability analysis and prediction. Statistical models must incorporate these diverse elements at each stage of the process. This is particularly important in the context of systems composed of highly reliable parts, such as rocket propulsion systems, where reliability cannot be demonstrated by testing alone.

An approach to reliability prediction, based on Bayesian statistical methods, is presented and applied to liquid and solid rockets. The Bayesian model provides a framework for incorporating various types of information and for regular revision and updating of predictions. It facilitates the calculation of confidence intervals for reliability and of required test numbers to achieve reliability goals.

Social Hour: 6:30

Dinner: 7:00

Talk: 8:00

Place: China Garden Restaurant
10226 Venice Blvd., Culver City
Reservations: Please call Ms. Mary Neville (818) 885-2470 or Dr. Michael Chernick at (714) 753-8010.

Directions: The China Garden (2nd floor) is about 1 mile east of the 405 fwy on Venice Blvd. at the S.E. corner of Venice and Vinton (one block east of Motor). Park at the rear of the restaurant, inside the shopping center or on the street.

The above is a joint meeting with the Southern California Chapter of the Institute of Management Sciences/Operations Research Society of America (TIMS/ORSA).

Interface '93 Call for Papers

A reminder that the 25th Symposium on the Interface: Computing Science and Statistics will be held here in San Diego in April 14-17, 1993. The theme of the Symposium is Statistics and Expanding Computer Capabilities. The Interface Symposium is a long-standing forum focusing on the interface between computing science and statistics and is held under the auspices of the Interface Foundation. The session will include invited and contributed papers, and a special session of invited posters, videos and demos. Authors wishing to give a contributed paper or to be considered for a poster/video/demo session should contact: **Michael E. Tarter, Program Chair at 779 University Hall, University of California, Berkeley, Berkeley, CA 94720; (510)642-4601; e-mail: tarter@stat.berkeley.edu.** The deadline for submissions is January 15, 1993. Suggestions for invited papers include:

Computing with Environmental Data
User Interfaces
Object Oriented Programming
Geosciences
Networking
Applications of resampling
Computational Biology
Statistical Consulting
Supercomputers
Data Compression
Machine Learning
Multivariate Function Estimation
Wavelets
The Interface at 25

More details and some historical notes about the Interface will be included in future newsletter issues. ■

EDITOR'S NOTE

Send items for the next issue to:
Rita Petersen
30723 Calle Chueca,
San Juan Capistrano, CA 92675
Phone: (714) 493-6430
FAX: (714) 493-5596
EMAIL:
PETERSEN@ORION.OAC.EDU

RAND STATISTICS SEMINARS

Thursday, November 5

Speaker:

Professor Brad Efron
Department of Statistics,
Stanford University

Topic:

Missing Data, Imputation, and
The Bootstrap

Time:

4 pm, Conference Room 1175:

Place:

Conference Room 1175
RAND 1700 Main Street
Santa Monica, CA 90401

Abstract

Missing data refers to a class of problems made difficult by the absence of some portions of a familiar data structure. A regression problem might have some missing values in the predictor vectors, for example. A substantial theory of imputation has been developed to estimate a parameter of interest θ in a missing data situation. Here we bring bootstrap methods to bear on the question of assigning confidence intervals for θ . Nonparametric bootstrap intervals based on a missing-data estimator $\hat{\theta}$ give convenient and accurate answers. There are interesting practical and theoretical differences between bootstrap methods and the multiple imputation approach, as well as some similarities.

Refreshments will be served in Conference Room 1175 from 3:30 to 4:00 pm. For further information, please contact: Sally Morton at (310) 393-0411 (ext 7360).

U C Riverside Statistics Department Colloquia

Information: Call Sarah DiMenna
at (714) 787-3774

Lectures are on Tuesdays at 3:45 in
Stat/Comp 2678.

October 20

Speaker: Keh-Shin Lii,
Dept of Statistics, UCR

Title: "Anti-aliasing Spectral
Estimation of Continuous Time
Stationary Processes"

BMDP Advanced Data Analysis Seminar

October 22-23, 1992

The Advanced Data Analysis seminar is directed toward high-level researchers who determine the appropriate statistical approach for their projects. During the seminar, presentations alternate between basic topics and advanced applications (previous experience with BMDP, however, is not a prerequisite).

A sampling of topics includes:

- multiple linear regression, regression diagnostics and the dangers of overfitting
- log-linear models and how to identify unusual cells or strata in a multiway frequency table
- various approaches to data screening and the problems of missing values, with suggested remedies for specific situations
- repeated measures ANOVA and factorial MANOVA, including how to specify contrasts and how to get answers when the usual assumptions are violated
- factorial analysis, principal components analysis, discriminant function analysis and more

Instructor: Barbara Tabachnick, Ph.D., professor of Psychology at California State University, Northridge and co-author of well-known text, *Using Multivariate Statistics*.

Location: Huntley Hotel,
Santa Monica, CA

Cost: \$445 registration fee includes seminar notebook, datasets and examples on diskette, complete set of BMDP documentation and continental breakfast.

For registration information, call BMDP at 1-800-238-BMDP ext. 2000

Other Seminars and Colloquia:

UCLA School of Public Health
UCLA Statistical Seminars
Call (310) 825-5250 for information
USC Dept of Preventive Medicine
Call Wendy Mack @ (310) 342-1829
for information

EMPLOYMENT OPPORTUNITIES

Research Statistician

Rapidly growing information services company located in the Irvine Spectrum area of Orange County (between L.A. and San Diego) is seeking to expand its Research Department. Preferred candidates will possess a Ph.D. in statistics with both theoretical and applied experience. Exceptional professional and personal growth opportunity developing and using the latest computer intensive statistical methods. Modern research environment with state-of-the-art UNIX HP workstations and advanced statistical software (SAS, S-Plus). Risk Data Corporation offers a competitive compensation package with an employee stock option plan. Please submit resume and salary history to:

Risk Data Corporation
2 Venture Plaza, Suite 400
Irvine, CA 92718

Seminar Instructor

BMDP Statistical Software, Inc., a leader in the development of statistical software is looking for a part-time instructor to prepare and teach seminars on Survival Analysis using BMDP. Applicants should be very familiar with BMDP programs 1L, Life Tables and Survivor Functions, and 2L, Survival Analysis with Covariates,

as well as Survival Analysis theory and applications. Applicants should send a resume to:

BMDP Statistical Software, Inc.
Education Department
1440 Sepulveda Blvd.
Los Angeles, CA 90025

Biostatistician

The Neuroepidemiology Section, Department of Neurology, Loma Linda University is accepting applications for a biostatistician to work on several epidemiological studies of neurologic diseases. Applicants should have a MS or PhD in Biostatistics and experience working on epidemiologic studies. Applicants should also have experience with SAS. Interested applicants should send a CV and three letters of references to:

Dr. Davanipour
Neurology Research Center
11175 Mt. View, Suite O
Loma Linda, CA 92354

Statistician/Technical Consultant

BMDP Statistical Software, Inc., a leader in the development of statistical software has an immediate opening for a statistician/technical consultant in its technical support and quality control department. The re-

sponsibilities include responding to users' questions, investigating reported problems, testing software, and reviewing documentation. This position also entails working on special projects related to enhancement of the software.

Applicants must have an M.S. in Statistics, Biostatistics, or a related field. In addition they must possess a working knowledge of BMDP and problem solving skills. Excellent oral and written communication skills and a command of English are required. Exposure to a wide variety of computer hardware would be helpful.

We offer a pleasant working environment and a competitive benefit package. Applicants should send a resume and salary history to:

BMDP Statistical Software, Inc.
Attn: Personnel
1440 Sepulveda Blvd., Suite 316
Los Angeles, CA 90025

The Atlantic Search Group, Inc. is a nationwide firm specializing in the placement of Statistical Professionals. Placement is offered in the Biostatistics, Market Research, Credit Analyst, Manufacturing and Quality Control applications. For information call or write:
Jim Baker
Atlantic Search Group
30 Myano Lane
Stamford, CT 06902
(203) 356-9540 Fax: (203) 967-8644



The Southern California

Statistician

SOUTHERN CALIFORNIA CHAPTER, AMERICAN STATISTICAL ASSOCIATION

American Statistical Association, Southern California Chapter
c/o Jim Ashurst, Research Support Services
4521 Campus Dr. #201 Irvine, CA 92715

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