



# American Statistical Association

## SAN FRANCISCO BAY AREA CHAPTER

### CALENDAR

MAY 24, 1990 THURSDAY Mary Haan  
"Childhood Lead Poisoning in California"

JUNE 7, 1990 THURSDAY Juliet Shaffer  
"X-Fixed and X-Random Models in Regression"  
Followed by annual business meeting.

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### JOINT GENERAL APPLICATIONS AND BIostatISTICS PROGRAM

**SPEAKER:** Mary Haan  
California State Department of Health Services

**TOPIC:** "Childhood Lead Poisoning in California" Resource"

Dr. Haan is program director for the Childhood Lead Poisoning Prevention Program, California State Department of Health Services, Environmental Epidemiology and Toxicology Branch.

This talk will address the association between blood lead levels and environmental levels of lead as found in two epidemiological studies in California in the past two years. Sociodemographic and nutritional factors which influence the association between blood lead and environmental lead levels will be discussed.

The studies which will be discussed were legislatively mandated. In August 1990, there will be a policy report to the California state legislature regarding further activities in this area.

**DATE:** May 24, 1990 (Thursday)  
3:30 - 4:00 Coffee  
4:00 Presentation

**PLACE:** Syntex Corporation, Palo Alto  
3401 Hillview Avenue  
Room A2-1, Gallery Building

For more detailed directions, call Rose Ray (415) 688-7264.

Dr. John Varaday will be the local host, there will be a special get together after the meeting.

CO-ORDINATOR OF CHAPTERS REP.  
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ASQC TASK GROUP REP.  
Fred Khorasani  
(408) 779-0035

ASQC STATISTICAL TASK GROUP  
Curtis Engelhard  
(408) 765-9325

## APPLICANTS

Graduate of Polytechnic State University in San Luis Obispo seeks employment as a statistician in scientific, health or medical fields. Contact Tony Salehi, 1227 Stoney Creek Drive #4, Paso Robles, CA 93446.

## CHAPTER BUSINESS

The annual business meeting will be held Thursday June 7, 1990 in room 400 Golden Gate University, 536 Mission, San Francisco. The business meeting will include election of chapter officers for the 1990-1991 term. The business meeting will be preceded by Dr. Juliet Shaffer's talk "X-Fixed and X-Random Models in Regression."

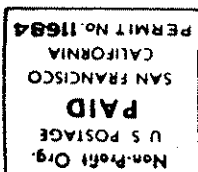
### WORKSHOP: San Francisco Bay Area

A 3 day workshop "Understanding and Implementing Dr. Deming's Continuous Improvement Culture" will be held July 12-14 in Monterey California. This workshop is jointly sponsored by the American Statistical Association, San Francisco Bay Area Chapter and the Continuous Improvement Consortium. A brochure and registration form for the workshop is included in this newsletter.

### WORKSHOP: Southern California

"Analysis of Follow-Up Data: Poisson, Relative Risk and Conditional Logistic Regression" is the topic of the 9th annual Workshop in Applied Statistics. sponsored by the Southern California Chapter, ASA. The workshop will be held on May 18, 1990 at the Annenberg School of Communications, University of Southern California. Normal Breslow, Chairman of the Department of Biostatistics at the University of Washington will be the speaker. Professor Breslow is the author of the three volume work, Statistical Methods in Cancer Research.

The workshop will survey Poisson regression analysis of grouped person-years data; relative risk regression analysis of continuous epidemiological data; and conditional logistic regression analysis of case-control samples. The common conceptual foundation underlying these apparently distinct approaches will be emphasized. For more information, contact Nancy Berman at (213) 212-1874 or Roberta Madison at (818) 885-4645.

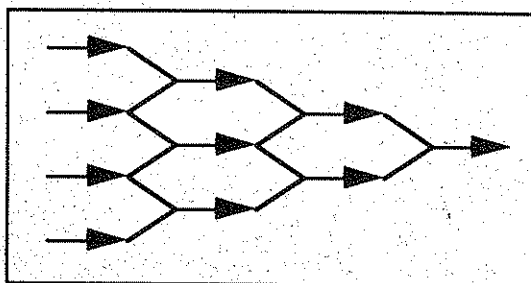


SAN FRANCISCO BAY AREA CHAPTER  
American Statistical Association  
921 Regal Rd.  
Berkeley, CA 94708



A Three-day Workshop

**Understanding and Implementing  
Dr. Deming's  
Continuous Improvement Culture**



**Monterey, California**

**July 12 - 14, 1990**

Sponsored by:  
American Statistical Association, San Francisco Chapter  
The Continuous Improvement Consortium

## ■ OBJECTIVES

By attending this workshop, you will:

- Develop a thorough understanding of the elements and principles underlying Dr. Deming's continuous improvement approach,
- Determine how to create a culture of continuous improvement in your organization that will enable you to compete successfully in the 1990s,
- Develop a road map to apply the continuous improvement approach in your organization, and
- Prepare yourself to lead the continuous improvement effort in your organization.

## ■ TOPICS

Losing the economic war: The quality and productivity crisis

What prevents organizations from foreseeing the future:

The concept of paradigms in relation to change

The role of the leader in bringing about successful change

Elements of the Continuous Improvement culture

Developing constancy of purpose in your organization

Statistical thinking and statistical reasoning:

Understanding variability; the correct way to deal with it

Results of tampering with statistically stable systems

The system's impact on people's performance

Optimizing the whole organization versus individual departments

Innovation, invention and commercialization

Developing high-performance teams throughout the organization

A systematic method for continuous process improvement

How to use personal behavior strengths when initiating change

Understanding why the US fell behind Japan

The philosophy of W. Edwards Deming:

- The New Economic Age
- Deming's 14 Points and the their Underlying Principles
- The Deming Philosophy at Work: A Case Study

Developing a strategy for implementing Continuous Improvement in your organization

## Understanding and Implementing Dr. Deming's Continuous Improvement Culture

In the early 1980's, U.S. industries began to realize that America was facing a severe quality and productivity problem and as a result was losing shares of national and international markets. After a decade, we continue to lose market share, and companies are still working hard to understand the underlying problems. In his bestselling book, *Yen!*\* Daniel Burstein says: "By the year 2000, Japanese net external assets may reach \$1,000,000,000,000 (positive one trillion dollars). The figure for the United States could be -\$1,000,000,000,000 (negative one trillion dollars)."

It does not necessarily have to be so. We too can learn from the man who in the 1950's provided Japan with the knowledge required to take over the world's market.

W. Edwards Deming, Ph.D. is the American statistician largely responsible for establishing what we know today as the Japanese system of management. The intent of this workshop is to bring to you, in an interactive way, the philosophy and management method of Dr. Deming. To this end, we have integrated all elements of the continuous improvement culture: vision, mission, values, philosophy, behavioral sciences, statistical thinking and an objective approach to process improvement.

## ▼ COURSE INSTRUCTORS

**Fred Khorasani, Ph.D.**, is a management consultant and industrial statistician, and a member of the Continuous Improvement Consortium. His early exposure to Dr. Deming's work has put him on the cutting edge of continuous-improvement efforts in this country. Since 1980, he has been applying the Deming philosophy and methods to improve quality and productivity in the semiconductor industry, including experience at Fairchild, Signetics, Intel and VLSI. Dr. Khorasani has served as Associate Professor of Statistics and as Associate Dean of Jundi Shapour's College of Mathematics and Computer Science. He received his Ph.D. in Statistics in 1974 from Kansas State University and has published and presented papers on theory and application of statistics, quality and productivity.

**L.B. Day, M.B.A.**, founded Day-Floren Associates in 1976, a company specializing in strategic organization development and executive team-building. A member of the Continuous Improvement Consortium, he has used Dr. Deming's philosophy and methods to help implement continuous improvement with clients since his first meeting with Dr. Deming in the mid-1980s. Mr. Day has worked as a consultant to Intel, Allergan, Sequent, Arthur Anderson, VLSI, Sun Microsystems, Syntex and various US Government agencies, and has written articles and training texts on management development, strategic planning, and team leadership. He received his MBA in 1971 from the George Washington University, where he was a Scottish Rite Fellow.

\* (Fawcett Colombine, New York, 1988)

## ■ WHO SHOULD ATTEND

Individuals who would like to develop a deep understanding of Dr. Deming's philosophy and the continuous improvement culture

Managers who want to learn enough about Dr. Deming's philosophy and its application to decide whether to initiate it in their company.

We cordially invite executives of organizations to attend as teams. Your three days in this workshop may well be the most valuable investment you ever make in your organization's future.

## ■ REGISTRATION INFORMATION

**Title:** Understanding and Implementing Dr. Deming's Continuous Improvement Culture

**Date:** July 12, 13 and 14, 1990

**Fee:** The fee for the workshop is \$695. If you attend with three or more people from your organization, or if you are a member of the ASA, a discounted rate of \$620 per person is available. The fee includes all course materials, continental breakfast, lunches, and beverages.

**Cancellation policy:** Should you need to cancel, your fee will be refunded if prior to June 19, 1990. After that date, another person may be substituted in lieu of a refund.

**Make check to:** American Statistical Association, San Francisco Chapter  
Use the enclosed form to register. If the form is missing, contact Denise Wolfe at (408) 296-5558.

**Location:** Monterey Beach Hotel  
2600 Sand Dunes Drive, Monterey, California  
Telephone: (408) 394-3321

A reduced rate is available for a limited time for session participants. To ensure the reduced rate, please make your reservations by June 16 and indicate you will be attending the workshop.

**Directions:**

(From the Bay Area) Take Highway 101 south to Highway 156. Turn west on Highway 156 (to Monterey Peninsula). When you reach Highway 1, turn south. After about 15 miles, take the Seaside/Del Ray Oaks exit to Sand Dunes Drive.

Airport shuttle and rental cars are available at the Monterey Airport.

■ For more information, contact Denise Wolfe at (408) 296-5558.



# American Statistical Association

## SAN FRANCISCO BAY AREA CHAPTER

### CALENDAR

APRIL 16, 1990      MONDAY      Abe Silvers  
"Advisory Systems in Statistics for a  
National Institute of Health Computer  
Resource"

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### JOINT GENERAL APPLICATIONS AND BIostatISTICS PROGRAM

**SPEAKER:** Abe Silvers  
Electrical Power Research Institute

**TOPIC:** "Advisory Systems in Statistics for a National Institute of Health  
Computer Resource"

Dr. Silvers will discuss work in progress in developing a statistical advisory software system for biomedical researchers that focuses on statistical techniques commonly used in this community. The system will be incorporated in a NATIONAL INSTITUTE OF HEALTH computer resource called PROPHET.

PROPHET is a graphics-oriented computing resource tailored to meet the data management needs of molecular biologists, medicinal chemists, pharmacologists, clinical investigators, and other biomedical scientists.

The advisory system used an object-oriented programming framework to represent the statistical analysis and is based on a hierarchical tree structure to represent the knowledge base and a statistical taxonomy to describe statistical objects and their relations. The talk will describe the statistical strategy used, the inference engine, the taxonomy and the dynamic interface that was developed.

**DATE:** April 16, 1990 (Monday)  
3:30 - 4:00      Coffee  
4:00              Presentation

**PLACE:** California State University at Hayward  
Room 207 North Science

**DIRECTIONS:** Parking is available in a fee lot (\$.50), see map on the reverse of this notice. A shuttle bus runs every 20 minutes from the Hayward BART station.

CHIEF OF CHAPTERS REP.  
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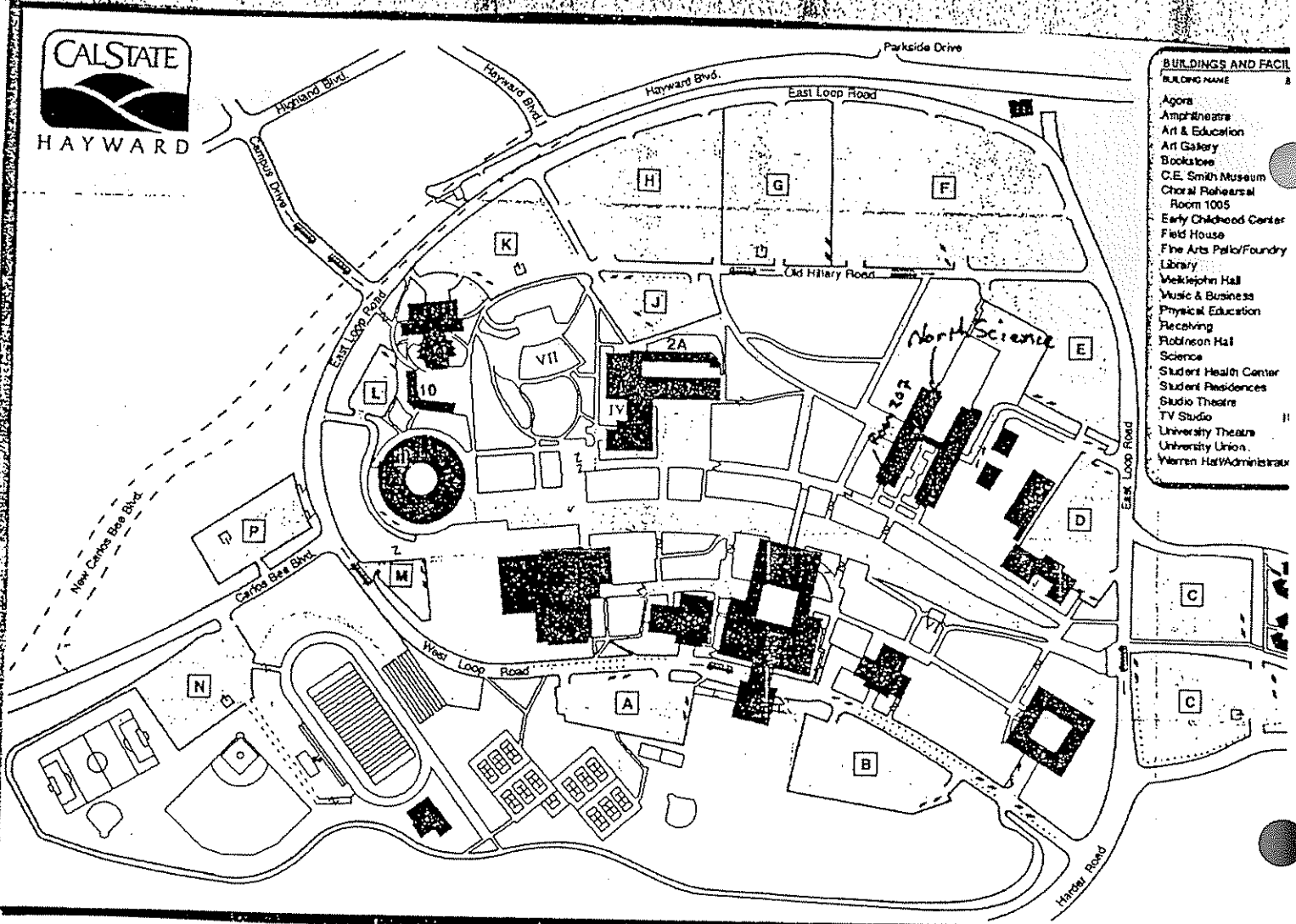
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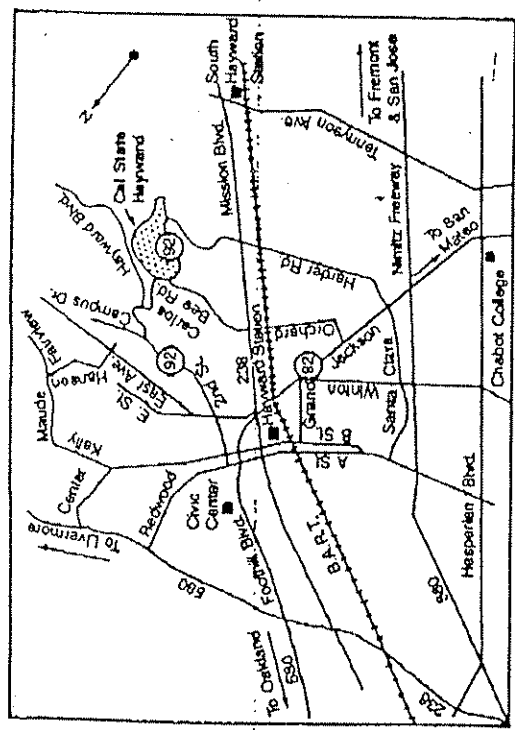
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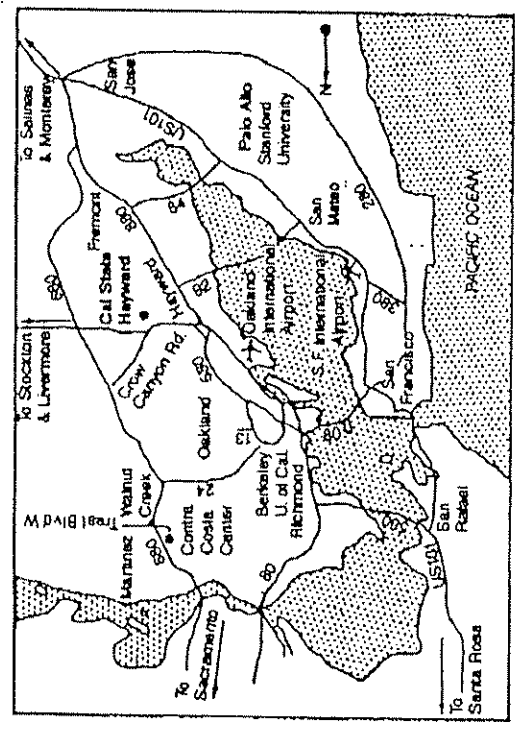


BUILDINGS AND FACILITIES	
BUILDING NAME	
Agora	
Amphitheatre	
Art & Education	
Art Gallery	
Bookstore	
C.E. Smith Museum	
Choral Rehearsal Room 1005	
Early Childhood Center	
Field House	
Fine Arts Patio/Foundry	
Library	
Wicklesjohn Hall	
Music & Business	
Physical Education	
Receiving	
Robinson Hall	
Science	
Student Health Center	
Student Residences	
Studio Theatre	
TV Studio	
University Theatre	
University Union	
Warren Hall/Administrative	



**CAMPUS VICINITY ACCESS ROUTES**

82 BUS ROUTE TO CAMPUS



**BAY AREA ACCESS ROUTES**

## EMPLOYMENT OPPORTUNITIES

### 1. BIostatistician/Epidemiologist, Failure Analysis Associates, Menlo Park

**RESPONSIBILITIES:** Assist in conducting quantitative epidemiological studies, health risk analyses, and statistical analyses. Perform literature reviews and maintain literature reference databases. Run analyses using statistical software packages.

**REQUIREMENTS:** Master's degree or Ph.D. in Statistics, Biostatistics or Epidemiology with a strong biostatistics component. Good computing skills and familiarity with statistical packages is highly desirable.

**COMPANY:** Failure Analysis Associates is an international engineering and scientific consulting firm. Excellent remuneration and benefits packages.

**SEND RESUME:** Vernetta Wilson, Failure Analysis Associates, 149 Commonwealth Drive, Menlo Park, CA 94025. Reference BB775.

### 2. SR. SUPERVISOR/GROUP LEADER, SYVA, Palo Alto

**RESPONSIBILITIES:** Assume a key leadership role in clinical study design and data evaluation for new and continuing projects. Assure a valid statistical approach consistent with FDA guidelines. Provide statistical direction for the infectious disease diagnostics group and other Syva groups.

**REQUIREMENTS:** B.S or equivalent in statistics or biostatistics and at least 10 years related experience. Candidates must have a broad technical background, including application of statistics to medical diagnostic or pharmaceutical product clinical studies. Must have at least 2 years supervisory experience.

**SEND RESUME:** Denise Pringle, Syva Co., P.O. Box 10058, Palo Alto, CA 94303.

### 3. STATISTICAL PROGRAMMER, VA Medical Center, Palo Alto

**RESPONSIBILITIES:** Data management and statistical analysis of multi center clinical trials. Develop statistical programs as well as general programs for database maintenance such as data editing, storage and retrieval. Assist in the specification of appropriate statistical methods for data analysis. Prepare table for statistical reports. Aid in the development and design of forms. Provide general technical support for the microcomputer.

**REQUIREMENTS:** Masters degree in statistics, biostatistics or related field. Experience in FORTRAN, SAS, BMDP essential. PL/1, IBM mainframe, and LAN experience desirable. Must be U.S. Citizen.

**BENEFITS:** Excellent Computing facilities. Individual personal computers. Remote job entry and on-line access to Stanford University Computer Center Mainframe. Access to Center computing packages such as BMDP, SPSS, SAS, IMSL, etc. Academic environment with weekly seminars at Stanford University and monthly biostatistical and statistical meetings sponsored by the San Francisco Chapter of ASA. Excellent fringe benefits including retirement, investment plans, vacation and health plans. Salary \$30,473-\$42,601 per year.

**CONTACT:** Kenneth E. James, Ph.D. Chief, Palo Alto Cooperative Studies, Program Coordinating Center, V.A. Medical Center, Palo Alto, CA 94303 (415) 852-3252.



SF Bay Area Chapter Business

**TREASURER:** If you are interested in the post of chapter treasurer, contact Florence Van Geem at (415) 271-5987. The position requires access to a PC for the purpose of keeping the roster and printing mailing labels. It generally takes about 8 hours a month.

**ADDRESS CHANGES/DUES:**

Changes of address should be sent to the chapter treasurer, Anna Bagniewska at the address listed below.

Several members are more than a year behind in local chapter dues. Please check the date on your mailing label. The printed date is the last time that we received your dues. If you are overdue, please send \$8 to:

Anna Bagniewska  
Syntex Labs  
3401 Hillview Avenue L-2500  
Palo Alto, CA 94303

=====

*Addition Job opportunity: SAS programmer, Syntex  
Contact Ling-ling - Tsc0 (415) 855-6532*

DR. ROSE M. HAY  
921 REGAL ROAD  
BERKELEY, CA 94708  
03/89

Mailed 3/29/90

921 Regal Rd  
Berkeley CA 94708

SAN FRANCISCO BAY AREA CHAPTER  
American Statistical Association



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# American Statistical Association

## SAN FRANCISCO BAY AREA CHAPTER

### CALENDAR

MARCH 7, 1990      WEDNESDAY      William D. Heavlin  
 "Making Statistical Process Control Programs Auditable"

MARCH 15, 1990      THURSDAY      Rose Ray  
 "Analysis of Administrative Data: A New Paradigm for Inference"

MARCH 21, 1990      WEDNESDAY      Art B. Owen  
 "On Latin Hypercube Sampling"

APRIL 16, 1990      MONDAY      Abe Silvers  
 "Advisory Systems in Statistics for the National Institute of Health Computer Resource"

### STATISTICS TASK GROUP ASQC PROGRAM

**SPEAKER:** William D. Heavlin, Ph.D.  
Advanced Micro Devices

**TOPIC:** "Making Statistical Process Control Programs Auditable"

Many U.S. companies are actively pursuing statistical process control in their manufacturing operations. Procurement operations, including the Defense Electronics Supply Center, are engaged in evaluating the SPC programs of their suppliers. These trends present particular challenges to audit specialists.

An approach is presented for making SPC programs fairly auditable. The approach provides a framework which facilitates the audit process and establishes a systematic means for evaluating individual critical processes.

**DATE:** March 7, 1990 (Wednesday)  
6:30 - 7:00      Coffee  
7:00              Presentation

**PLACE:** Intel Corporation Auditorium (building SC9)  
2250 Mission College Blvd, Santa Clara

**Directions:** From Highway 101 in Santa Clara, take Montague Expressway east to the first stop light. Turn left onto Mission college Boulevard. At the first stop light, turn left into the Intel corporation parking lot.

**FOR FURTHER INFORMATION:** Call Curt Englehard (408) 765-9325.

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**GENERAL APPLICATIONS PROGRAM**

**SPEAKER:** Art B. Owen  
Department of Statistics  
Stanford University

**TOPIC:** "On Latin Hypercube Sampling"

On Latin Hypercube Sampling

Art B. Owen

Dept. of Statistics, Stanford University

Latin hypercube sampling was introduced by McKay, Conover and Beckman (1979) as a means of sampling the input space of a computer program. Stein (1987) shows that when the output of the computer run is nearly additive in the inputs, a significant reduction in the variance of sample means results.

The  $ij$  element of an  $N$  by  $K$  Latin hypercube sample is of the form

$$X_{ij} = F_j^{-1}((\pi_{ij} - U_{ij})/N)$$

where  $\pi_{1j}, \dots, \pi_{Nj}$  is a random permutation of  $1, \dots, N$ ,  $U_{ij}$  is  $U[0, 1]$  and  $F_j$  is a distribution function. The  $NK$  uniform variates and the  $K$  permutations are mutually independent. All  $n!$  permutations are equally likely for each column. Each row of  $X$  corresponds to one computer run, each column to one input variable.

The sample correlations among the columns of  $X$  are random variables with mean 0 and variance nearly  $1/N$ . (Taking all the  $U_{ij} = .5$  would make this variance  $1/(N-1)$ .) Iman and Conover (1982) modify the procedure to induce, at least approximately, desired rank correlations among the columns of  $X$ . A special case of this is to make the correlations more nearly zero. Some experimentation with their method shows that it reduces the magnitude of the off diagonal correlations by a factor of about 3. This talk will present a method of decorrelating the columns of  $X$  that appears to induce correlations of size  $O(N^{-3/2})$  versus  $O(N^{-1/2})$  obtained by Latin hypercube sampling. The modification is seen to be substantially more effective than Iman and Conover's. It is possible to explain why the new algorithm stops improving the correlations at around  $O(N^{-3/2})$ . An heuristic argument shows that  $O(N^{-5/2})$  might be the best possible rate and for  $N$  congruent to 2 modulo 4 a parity argument shows that at best  $O(N^{-2})$  can be obtained.

The talk will also consider the use of Latin hypercube samples as designs for multivariate nonparametric regression. They are well suited for fitting additive models and may also provide good designs for Friedman's MARS (1989). In particular taking  $U_{ij} = .5$  and all the  $F_j$  the same means that the same "smoother" could be used on each of the predictors. The near orthogonality in the design means that the backfitting algorithm will converge rapidly. The decorrelation method may be generalized to pick  $K$  columns so that for a collection of  $p$  functions  $f_1, \dots, f_p$  we have  $f_i(X_r)$  nearly uncorrelated with  $f_j(X_s)$  for all  $1 \leq i, j \leq p$  where  $X_r$  and  $X_s$  are any two distinct columns of  $X$ . For smoothers that are regressions on the  $f_j$  one obtains nearly uncorrelated additive effects.

**DATE:** March 21, 1990 (Wednesday)  
6:30 - 7:00 Coffee  
7:00 - 8:00 Presentation

**PLACE:** Intel Corporation Auditorium (building SC9)  
2250 Mission College Blvd, Santa Clara

**Directions:** From Highway 101 in Santa Clara, take Montague Expressway east to the first stop light. Turn left onto Mission College Boulevard. At the first stop light, turn left into the Intel corporation parking lot.

**BIostatistics PROGRAM**

**SPEAKER:** Rose Ray  
Failure Analysis Associates

**TOPIC:** "Analysis of Administrative Data: A New Paradigm for Inference"

A by product of computerized record keeping is the collection of large masses of data in machine readable form. The power of computerized data manipulation can be harnessed analyze and use this information for purposes far beyond those for which the data was initially collected. For example, accident data collected by state motor vehicle departments can be used to address automobile design questions, personnel transaction records may be used to test allegations of discrimination in hiring or promotion.

Such data is never a random sample from a well defined population. Nor is it the result of controlled randomized experiments. Therefore, the methods of classical inferential statistics using the frequentist theory of probability cannot be validly applied. Nonetheless there is a natural desire to do more with this data than to describe its source of the data and calculate summary statistics. A firm philosophical foundation for making valid inference is needed.

Examples of successful and of unsuccessful analysis of administrative data will be compared. Applications of quasi experimental design and methods of causal inference will be discussed.

The purpose of this presentation is to pose questions and to generate thought on the development of valid methodology for making inference from administratively collected data.

**DATE:** March 15, 1990 (Thursday)  
3:30 - 4:00 . Coffee  
4:00 Presentation

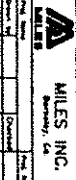
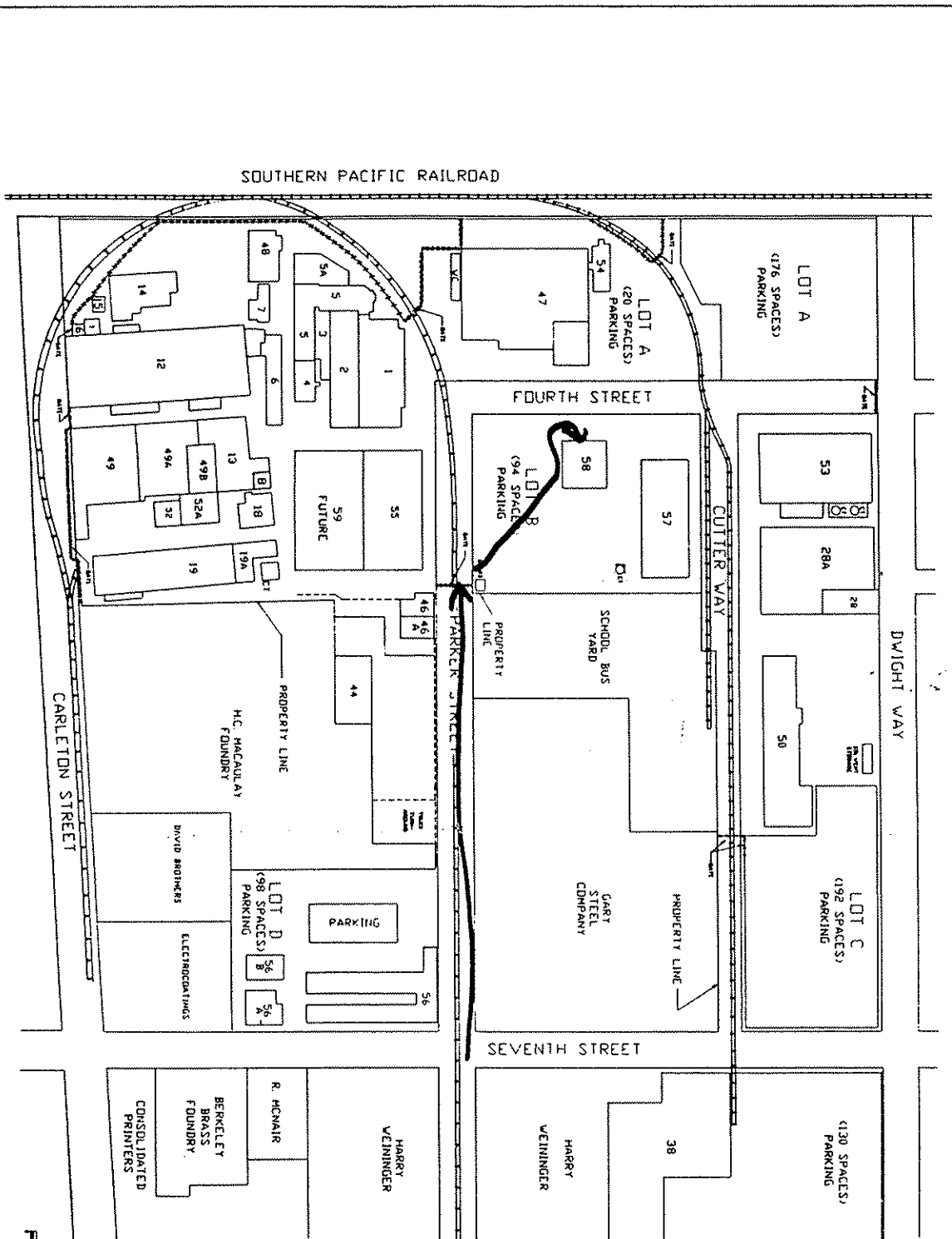
**PLACE:** Cutter Laboratory  
4th and Parker Street  
Berkeley, CA

**DIRECTIONS:** From Seventh street take Parker west to the guard post on Parker near Fourth street. The meeting is in the Library/Auditorium building 58. (See map on the reverse.)

REVISIONS

No.	Date	Description

CURRENT 1/89



BERKELEY SITE  
FACILITY AS OF JANUARY, 1989

BLDG. NO.	DESCRIPTION
1	FINISHING
2	MAINTENANCE/STORAGE
3	MECHANICAL
4	PERSONNEL OFFICES/
5	DISPENSARY
5A	TECHNOLOGY
6	SYRINGE PLANT
7	OFFICES LABORATORY
8	OFFICES
8A	PAINT SHOP
12	MAINTENANCE
13	UTILITIES, STORAGE, &
14	MAINTENANCE
15	MAINTENANCE/CAFETERIA
16	OFFICES
18	TELEPHONE EQUIPMENT/IDLE
19	TRANSFORMER VAULT
19A	BOILER HOUSE
28	BIOLOGICAL LABORATORY
28A	STORAGE/CREDIT UNION
38	LABORATORY
44	LABORATORY
46	ANIMAL QUARTERS
47	RETAILERS, STORAGE, &
48	STABILITY TESTING
49	UTILITIES
49A	BIOLOGICAL LABORATORY
49B	UTILITIES
49C	SHIPPING, RECEIVING,
50	WAREHOUSE & OFFICES
52	OFFICES
52A	PLASMA PROCESSING
53	STERILE FILLING
54	PLASMA STORAGE
55	RESEARCH LABORATORY
56	OFFICES
56A	LAB
56B	LAB
57	LAB
58	QUALITY ASSURANCE
59	-35°C PLASMA WAREHOUSE
CT	PILOT PLANT
VC	OFFICES - DEL MONTE COMPLEX
VC	RESEARCH & DEVELOPMENT
VC	LIBRARY/AUDITORIUM
VC	PROCESSING
VC	COOLING TOWER
VC	WASTE COMPACTOR
VC	TAKE-UP
VC	RAILROAD TRACKS

Statistics Task Group of ASQC  
and  
American Statistical Association  
Santa Clara Section  
Present

**J. Stuart Hunter**

A leading translator of significant statistical concepts into a format suitable for industrial application, Professor Hunter is practical, informative and entertaining. Professor Hunter has many years of industrial consulting experience. He is co-author with G.E.P. Box and W.G. Hunter of Statistics for Experimenters, is founding editor of Technometrics, and has published extensively. He has received the Deming Medal and the Shewhart Medal from the ASQC.

**The Arts of Charts**

This two day course provides a "show and tell" of graphical and charting techniques. It presents statistically sound visual approaches to gain understanding from data.

**Course Outline**

- Modern Graphics
  - histograms
  - stem & leaf plots
  - two level comparisons
- Elementary Statistics
  - concepts vs. realizations
  - simple hypothesis testing
- More Graphics
  - normal probability paper
  - Weibull plots
- Measuring Uncertainty
  - probability: relative frequency
  - Bayes postulate
- Shewhart Quality Control Charts
  - selecting rational subgroups
  - setting up the X-bar and R chart
- Estimating process capability
  - the capability index,  $C_{pk}$
- Variations on the Shewhart Chart
  - acceptance sampling chart
  - multivariate control charts
- CuSum (Cumulative Sum) Charts
  - plotting
  - detecting changes in slope, V mask
  - one-sided CuSum procedures
- EWMA Charts
  - exponentially weighted moving average
  - comparison with Shewhart and CuSum
- Simple Statistical Design of Experiments
  - iterative nature of the learning process
  - passive vs. active statistics

**Design of Experiments**

Experimentation speeds the learning process. This two day course shows how to develop a strategy for experimental investigation at minimal cost, how to design the experiments, and how to analyze them. It focuses on the statistical tools and concepts of greatest use to the industrial statistician.

**Course Outline**

- Learning is a process
- Elementary statistics
- The normal deviate as "signal to noise"
- Student's t statistics
- Hypothesis tests
- Interval estimates, Bayesian interpretation
- Comparing two processes
- Combining estimates of variance
- Blocking variability
- Paired t, sequential t, EVOP
- Comparing k processes
- Graphical "signal to noise"
- Multifactor experimentation
- The  $2^k$  factorial design
- The  $2^k$  factorial design
- The  $2^4$  and  $2^5$  designs
- Screening experimentation
- Fractional factorial designs
- The  $2^{k-1}$  half replicate designs
- The  $2^{k-p}$  designs
- Sequential application
- Three level fractional factorials
- The Latin Square
- Taguchi approaches
- First order mapping, k=2
- Path of steepest ascent
- Second order mapping, k=2
- Designs for k>2

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The Arts of Charts	\$595.00	Sunnyvale Hilton	March 27,28
Design of Experiments	\$595.00	Sunnyvale Hilton	March 29,30

Name \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City/State/ZIP \_\_\_\_\_

Phone \_\_\_\_\_

Advanced Registration  
 Make checks payable to:  
 Statistics Task Group ASQC  
 Mail to:  
 Curt Engelhard  
 Intel SC9-22  
 2250 Mission College Blvd.  
 Santa Clara, CA 95054  
 (408)-765-9325

SF Bay Area Chapter Business

**TREASURER:** If you are interested in the post of chapter treasurer, contact Florence Van Geem at (415) 271-5987. The position requires access to a PC for the purpose of keeping the roster and printing mailing labels. It generally takes &about 8 hours a month.

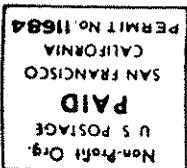
**ADDRESS CHANGES/DUES:**

Changes of address should be sent to the chapter treasurer, Anna Bagniewska at the address listed below.

Several members are more than a year behind in local chapter dues. Please check the date on your mailing label. The printed date is the last time that we received your dues. If you are overdue please send \$8 to:

Anna Bagniewska  
Syntex Labs  
34012 Hillview Avenue L-2500

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SAN FRANCISCO BAY AREA CHAPTER  
American Statistical Association  
921 Regal Rd  
Berkeley CA 94708  
Mailed 2/28/90





# American Statistical Association

SAN FRANCISCO BAY AREA CHAPTER

## CALENDAR

JANUARY 11, 1990 THURSDAY Ingram Olkin  
"Meta-Analysis: Current Issues in Research  
Synthesis"

JANUARY 17, 1990 WEDNESDAY Daniel Rubinfeld  
"Estimating Litigation Damages"

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### BIOSTATISTICS PROGRAM

**SPEAKER:** Ingram Olkin  
Professor of Statistics  
Stanford

**TOPIC:** "META-ANALYSIS: Current Issues in Research Synthesis"

The concept of aggregating the results of different experiments has a history of at least 50 years in the physical and agricultural sciences. It was the introduction of this concept in the social and health sciences in the late 1970's that set the stage for a stream of papers pooling results from randomized controlled trials in medicine as well as other fields.

In this talk, we review the history of Meta-Analysis, discuss some of the critical controversial issues and pose some technical problems that remain unsolved.

**DATE:** January 11, 1990 (Thursday)  
3:30 - 4:00 Coffee  
4:10 - 5:00 Presentation

**PLACE:** University of California at San Francisco  
Nursing 517 ( NOTE ROOM CHANGE )

**Directions:** The School of Nursing is located directly behind the Clinical Sciences Building which is at 521 Parnassus. Take the elevator in the Clinical Sciences building to the 5th floor, then go south through the building to Nursing 517. Public parking is available in the Millberry Union garage at 500 Parnassus midway between 3rd Avenue and Hillway. See map on the reverse on this notice.

**INSEL OF CHAPTERS REP.**  
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Curtis Engelhard  
(408) 765-9325





# The American Statistical Association

## San Francisco Bay Area Chapter

Since 1928

### CALENDAR

- NOV 28, 1990 WEDNESDAY Dan Weiner  
"Practical Experimental Design Considerations for  
Pharmacokinetics"
- DEC 13, 1990 THURSDAY Panel Discussion and Holiday Party  
"Bay Area Statistics in the 1990s: How Are We Doing,  
Where Are We Going?"
- JAN 24, 1991 THURSDAY Gordon Newall  
"Practical Applications of Queueing Theory"
- 

### PRESIDENT'S MESSAGE

The Chapter would like to congratulate one of its members, Professor Jessica Utts, at the University of California at Davis. At the August meeting in Anaheim, she was elected as a Fellow of the American Statistical Association for contributions to research methodology in psychology and in robustness techniques, for excellence in teaching and consulting, and for outstanding service to the profession. Well done !

The ASA Committee on Fellows request the help of all statisticians in the nomination of new Fellows. If you wish to make a nomination, contact me for a nomination packet.

Nominations for national committees -- The national office of the ASA has asked for nominees for committee appointments. A list of committees appears in the January issue of Amstat News. If you are interested in serving on any national committee or on a specific committee, or would like to nominate someone else, please contact me. I will be glad to send the names to the national office, although there is no guarantee of ultimate appointment.

The Chapter officers are heartened by the higher than average turnout at the first three activities of the school year. We would like to continue seeing the "old faces" and hopefully many new ones.

Since this will be the last newsletter in 1990, the Chapter officers would like to take this opportunity to wish you and your loved ones a joyous holiday season and a happy and health 1991.

Kelvin K. Lee  
Department of Veterans Affairs

#### UNSEL OF CHAPTERS REP.

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#### ASOC STATISTICAL TASK GROUP

Curtis Engelhard  
(408) 765-9325

**BIostatistics PROGRAM**

**SPEAKER:** Dan Weiner, Ph.D,  
Director, Biometry  
Syntex Research

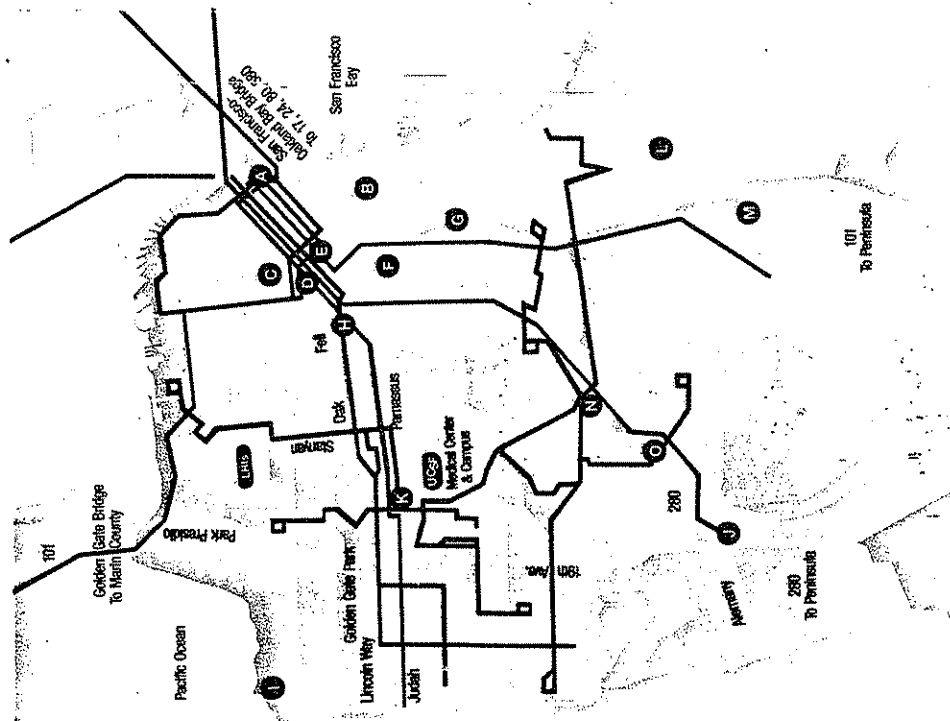
**TOPIC:** "Practical Experimental Design Considerations for  
Pharmacokinetics"

This seminar will provide an overview of methods proposed for estimating sampling times for kinetic experiments. "Optimal" methods will be discussed., as well as sensitivity analysis. In addition, a new approach will be presented which is useful for comparing different designs, and for determining the impact of adding or removing collection times. Also discussed will be a strategy for determining sampling times when one is primarily interested in estimation of some function of the model parameters (such as area under the curve) rather than the model parameters themselves.

**DATE:** Nov 28, 1990 (Wednesday)  
3:30 - 4:00 Coffee  
4:00 Presentation

**PLACE:** University of California, San Francisco  
Medical Sciences Room 214  
513 Parnassus  
San Francisco

**PARKING:** Public parking is available in the Millberry Union 500 Parnassus between Third Avenue and Hillway Avenue. See map below.



**JOINT BIOSTATISTICS and GENERAL APPLICATIONS PROGRAM**

**PANEL DISCUSSION AND HOLIDAY PARTY**

**TOPIC:** "Bay Area Statistics in the 1990s. How Are We Doing and Where Are We Going?"

**CHAIRMAN:** Professor Terry Speed, Department of Statistics, UCB

**PANELISTS:** Dr. Abraham Silvers, EPRI  
Dr. Sidney J. Yakowitz, Univ. of Arizona  
Loren Schoof, Pacific Bell  
Dr. Dean Fearn, Cal State Hayward

**DATE:** December 13, 1990 (Thursday)  
3:30 - 4:00 Coffee  
4:00 Presentation

**PLACE:** University of California, Berkeley  
Room 1011 Evans Hall

Following the panel discussion, there will be a cocktail party at the home of Professor Michael Tarter, 2717 Benvenue, Berkeley. Directions will be provided at the panel discussion. Please contact Mike Tarter at 642-4601 if you will attend.

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**APPLICANT:** M.Sc. with 6 years experience seeks full or part time employment as statistician or programmer. Experience in Speech recognition, image processing, network management. Familiar with BMDP, SPSS, Unix, C, Pascal, FORTRAN, VMS, TCP/IP. Contact Vivien (415)777-3255.