

LOS ANGELES



# IEEE BULLETIN

ISSN 0162-3842

*Official publication of the Los Angeles Council  
Institute of Electrical and Electronics Engineers, Inc.*

VOLUME 45

MAY, 1983

NUMBER 5

## **ANNUAL INSTALLATION/MEETING AND DINNER DANCE**

Saturday, June 4, 1983  
The Castaway, Burbank

See page 16 . . .



Mailed April 25

# EDITORIAL MUTTERINGS

by Jim Pearson

The next time the boss turns down your pet idea, dry your eyes and reach for a copy of "Rejection" by John White (Addison-Wesley, \$5.95, trade paperback). I don't yet understand how a book can be simultaneously so inspiring and yet depressing, but White succeeds.

Enough of the sweet smell of success. It's time to study the fetid fragrance of failure.

Gregor Mendel, founder of genetics, was rejected by his university. He went to the University of Vienna but left without graduating. One of his professors wrote, "Mendel lacks the requisite clarity of thought to be a scientist."

Einstein's parents feared that he was retarded and a teacher told him he would never amount to anything.

Thomas A. Edison's first teacher called

him "addled" and other educators promised that he would "never make a success of anything."

As a boy one of the finest thinkers of the Middle Ages, philosopher-theologian-scientist-writer Saint Albertus Magnus was rated an utter dolt by his Dominican teachers and declared incapable of serious study.

So much for educational success. What next?

Well, engineer Frank Whittle offered a jet engine to the British Government in 1923. Not until 1939 did jet engines go into production.

George B. Selden invented the modern gas-powered automobile in 1877 and spent the next fifteen years trying to get it manufactured.

An instrument for studying the electric waves generated by the brain was built in Germany in the 1890's and not put to use until 1934.

With all this encouragement, the only thing to do is persevere, right?

Kodak was offered Chester Carlson's patent on xerography and saw nothing worthwhile in it. A half dozen other firms also rejected the patent. Haloid picked it up and formed the Xerox Corporation. One of the firms that turned down the xerography patent was IBM — on the advice of their market analysis company, Arthur D. Little.

Before William Saroyan (who became one of this country's most published authors) got his first acceptance he had a pile of rejection slips thirty inches high — perhaps seven thousand in all. This one is particularly distressing to would-be authors like yr hmbl scribe.

The author of this collection, John White, is a former newspaper reporter for the Boston *Herald Traveler* and the Washington *Times Herald*. He began collecting rejection stories when a painting by fellow Cantabrigian, artist Gardner Cos, had a portrait rejected by Henry Kissinger. The ensuing publicity only made the rejected portrait more valuable. White does not tell us whether, or how many times, "Rejection" was rejected before seeing print.

As indicated above, rejection occasionally has its rewards. A man supposedly sent a story to *Reader's Digest* titled, "How I Made Love to a Bear." It was rejected. He rewrote it a little and retitled it, "How I Made Love to a Bear in an Iron Lung" and sent it back. Again *Reader's Digest* rejected it. Another rewrite, another title change to "How I Made Love to a Bear in an Iron Lung for the FBI," and another rejection. This time he didn't bother to rewrite at all — he just lengthened the title to "How I Made Love to a Bear in an Iron Lung for the FBI and Found God." Back came a telegram of acceptance.

Every engineer ought to dip from time to time into this volume to help overcome the "noes" syndrome. Remember that Lao Tse once noted, "Failure is the foundation of success, and the means by which it is achieved. Success is the lurking-place of failure; but who can tell when the turning point will come?"

And, my favorite, from one of my role-models, Winston Churchill, "Never give up . . . never give up . . . give up never!"

## OOPS!

The Editorial Horde extends apologies to new IEEE Fellow Dr. Steward D. Per-sonick for misspelling his name on the cover of our March 1983 issue.

**R.C. HANSEN, Ph.D., D.Eng.**  
Consulting Engineer in  
Antennas, phased arrays, conformal  
arrays and radiating systems  
**Box 215, Tarzana, CA 91356**  
**(213) 345-0770**

Volume 45

No. 5

May 1983

Official publication of the  
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Institute of Electrical  
and Electronic Engineers

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Torrance, CA 90501  
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Issued monthly, except July. Subscription: IEEE  
Members \$4.00 per year; non-members \$6.00  
per year.

Second Class postage paid at Los Angeles,  
California.

## DEADLINES FOR THE IEEE BULLETIN

The final deadline for the next issue of the IEEE BULLETIN is to be at 12:00 noon on the last workday of the month, two months preceding the month of intended publication. This deadline applies to both editorial material, and advertising. For camera ready advertising, a firm commitment to pay for the space of given dimensions must be received by the above deadline. If the advertiser so desires, the advertising copy may initially consist of dummy material such as the company's name. Then camera ready copy of the agreed upon dimensions may be substituted for the original material if received at the Engineer's Secretarial Service office no later than 12:00 noon on the seventh (or nearest workday) of the month immediately preceding publication. Articles and meeting notices should be submitted typed with the calendar section on a separate sheet.

## ADVERTISING POLICY

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## THE NAVSTAR GLOBAL POSITIONING SYSTEM



*Lt. Col. John F. Scheerer*

We are honored to have a systems expert covering one of the most impressive systems involving microwaves in recent years: The NAVSTAR GPS System.

Navigation has advanced dramatically from the methods of just a few years ago. However, accurate navigation on a worldwide basis with a common coordinate and timing system has not been possible until the ultimate location for placing a navigation system could be achieved — and that is in space. A space-based navigation system will have a major impact on many aspects of life around us. The Navstar Global Positioning System (GPS) is such a system. This presentation will cover an overview of the three major segments, (Control, Space, and User Segment), test results, applications, GPS/INS integration and future potential enhancements.

Our distinguished speaker, Lt. Col. John F. Scheerer, is the Director of Systems Engineering for the Navstar Global Positioning System Programs. Previous positions have included developing and deploying communication and radar systems, and in supporting satellite command and control systems. Lt. Col. Scheerer has his BS and MS degrees in Electrical Engineering from the Air Force Institute of Technology, and a Master of Business Administration degree from the University of Utah. He is a member of Tau Beta Pi, Eta Kappa Nu, Beta Gamma Sigma, IEEE, and the Texas and National Society of Professional Engineers.

The meeting will be held Tuesday, May 17, at the Officer's Club, Los Angeles Air Force Station (formerly SAMSO), Bldg. 120 (see map). Access to the meeting place after 6:00 p.m. will be through a manned gate. Please bring with you, for purposes of identification, a copy of this notice or a copy of the MTT flyer announcing the meeting. The technical meeting, which starts at 8:00 p.m. is preceded by Social Hours (6:00 to 7:00 p.m.) and Dinner, served at 7:00 p.m.

If you plan to attend, reservations for both the dinner and/or the meeting are mandatory. Cost of the dinner is \$9.00. Both the dinner and the meeting will be at the Daedalion Room. For reservations, please call Chuck Swift at (213) 989-1133 by May 13.



## X-15 TO VOSTOK TO SHUTTLE, A PERSPECTIVE ON MANNED SPACE FLIGHT

Joint Meeting Of Institute of Electrical and Electronics Engineers Aerospace and Electronic Systems Society (AESS-10) and the American Institute of Aeronautics and Astronautics (AIAA)

Dr. Myron Kayton  
President, Kayton Engineering Company

Dr. Kayton will review the history of manned space flight from the rocket tests at Edwards Air Force Base through the early space capsules, to Apollo and Skylab, and Shuttle. He will describe the evolution of guidance and communication technology throughout this 40-year period. Younger members are especially encouraged to attend.

Dr. Kayton had held senior positions at TRW, NASA, and Litton and has many years of experience in the American and European space programs.

## The Military Space System Technology Model — A Guidance, Navigation, and Control Perspective

Dr. Robert Williamson  
The Aerospace Corporation

The Military Space System Technology Model (MSSTM) is a systematic approach to identifying future technology needs based on perceived mission requirements. The AIAA was asked by the Air Force Space Division to review this model to obtain an industry view of the MSSTM.

Dr. Williamson will discuss the AIAA Guidance, Navigation and Control technology panel results. The review will cover attitude determination and navigation, acquisition pointing and tracking, large space structure control, space operations, and system considerations. Particular emphasis will be given to those technologies which support advanced precision pointing and tracking applications.

**Wednesday 11 May 1983 Meeting Starts at 7:00 p.m.**

The meeting will be held at the Long Beach Convention Center. Each presentation will last about 45 minutes.

Attendees are invited to view either or both of these talks and also will be able to tour the 1983 AIAA Annual Meeting Technical Display. It is planned to be the largest and most comprehensive AIAA exhibit in 20 years, with more than 100 participants. A large majority of booth operators are committed to show new products or processes for the first time, assuring attendees a look at the front line of technology.

No-charge tickets for admission to the talks and exhibit area will be available from AIAA facility representatives or from:

Steve Brody: Chairman, AIAA Orange County STC for Guidance, Control and Dynamics, Intermetrics, Inc. (714) 891-4631.

Dave Mitchell: Chairman, AIAA LA STC For Mechanics and Control of Flight, Systems Technology, Inc. (213) 679-2281

Bill Hartman: Chairman AESS-10, Hughes Aircraft Co., (213) 615-8432

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## A SYMBOLIC DESIGN METHODOLOGY FOR VLSI



Robert P. Larsen

Mr. Robert P. Larsen, Member of the Technical Staff, Microelectronics Research and Development Center, Rockwell International, will be the speaker at the May 18th meeting of the Electron Devices/Circuits and Systems Joint Chapter — Orange County Section. The topic of his presentation is "A Symbolic Design Methodology for VLSI."

Most computer-aided design (CAD) systems being utilized today were architecturally conceived prior to the emergence of the VLSI era. This means they utilize a powerful central computer which is time-shared among many designers. These CAD systems generally incorporate interactive graphics processing for polygonal mask-oriented layout design with batch processing utilized for logic stimulation, circuit analysis, design rule checking, layout verification, and mask generation. This style of design methodology can be generally termed as a "bottom-up" approach to microelectronic device synthesis.

But the technical environment has dramatically changed with emergence of the VLSI era; i.e., devices possessing 100,000 FETs or more. New strategies must be utilized to manage this level of design complexity; namely, hierarchy, modularity, and regularity. Recent cost/performance trends of computers have made a reality of the concept — "a design station in every engineer's office." A further need has emerged with the reality of the silicon foundry. That is, the need for portability of a device design to several selected silicon foundries — each practicing unique process recipes within a common technology. And more importantly, the development of high performance circuitry demands a synergistic coupling of analysis and synthesis where present CAD methodologies practice a distinct dichotomy. The VLSI CAD system must support a "top-down" design methodol-

ogy which emphasizes device architectural planning to promote exploration of candidate plans in striving to achieve apriori real estate and performance objectives.

These innovative concepts are being implemented in an interactive symbolic CAD methodology, called SYMCAD, which has been under joint development by Rockwell International and ERADCOM, U.S. Army, since late 1980. It utilizes a low-cost design station that incorporates a high quality color graphic display. In SYMCAD, the designer interactively composes his desired circuit topology with a symbolic representation that utilizes color to enhance interpretation. A Concurrent Design Rule Checker (CDRC) is continuously verifying the incremental development of the symbolic design and immediately signals detected errors to the designer for corrective action. SYMCAD incorporates two novel interactive analysis techniques in which the underlying models are algorithmically derived directly from the symbolic representation of the circuit topology. Circuit analysis is performed by the Isolated Node Circuit Analyzer (INCA) and layout verification is performed by the Color Contrast Logic State Simulator (C<sup>2</sup>LS<sup>2</sup>). Design portability is supported by an algorithmic transformation of the symbolic design into a set of polygonal mask geometries as demanded by the present state of each silicon foundry selected as a fabricator.

Mr. Larsen has been associated with Rockwell International for the past 19 years in various CAD-related assignments. He received the BSEE from Union college, Schenectady, NY, in 1953 and the MS from Cornell University, Ithaca, NY, in 1959. He is a Senior Member of the IEEE, a licensed Professional Engineer in New York, technical advisor to the Editor of VLSI Design magazine, and has authored over 20 technical papers on CAD-related topics.

The meeting will be held on May 18 at the Saddleback Inn, 1660 E. 1st Street, Santa Ana, CA. A cocktail hour will begin at 6:00 p.m. followed by dinner at 7:00 p.m. Mr. Larsen will speak at 8:00 p.m.

In order to obtain an accurate attendance count, reservations are requested by May 13 with payment no later than May 16. The cost of dinner is \$9.50. There is no charge for attending the presentation only.

For reservations, call Alan Lee at (714) 557-3550 (work) or (714) 752-8336 (home). Please make checks for dinner payable to IEEE ED/CAS. Checks should be mailed to Alan Lee, 69 Highland View, Irvine, CA 92715.

## GUIDED TOUR OF THE VAN NUYS POST OFFICE

Some of our readers may recall those galant old days when the mails were carried by the Pony Express. However, we are sure that most of you also know that the Postal Service has been modernized. A modern Post Office will not only employ the use of men to handle the mail, but also mechanical and electrical machinery.

On Thursday evening, 26 May 1983, the San Fernando Valley Section will sponsor a guided tour of the Central Van Nuys Post Office. Our host will be Mr. Dick

### Cost Effective Design Technique Seminar Copes With FCC/VDE Regulations on Radio Frequency Interference

A seminar is offered to the electronic data processing community whose products come under the regulations of the Federal Communications Commission. The FCC has mandated that equipment manufactured on and after October 1, 1983 must meet rigid radio interference limits. The seminar mix of theory and cost effective practical solutions is ideally suited for senior technicians, electronic engineers, mechanical engineers, and engineering managers. Technical sales and marketing personnel will also find the material most helpful.

**Day One — Regulatory Requirements and Grounding Methods**

**Day Two — Shielding and Packaging Concepts**

**Day Three — Cost Saving Design Techniques for Achieving Compliance**

The course will be taught by Chris Kendall of CK Consultants, Inc. Chris has taught more than 60 courses worldwide. His company operates field test labs that have tested more than 200 units for over 50 clients during the past two years.

The seminar is scheduled for **San Diego** on May 24-25-26 at the Bahia Hotel. The student may select any one day, two days or all three days. Seminar fee: any one day, \$250; any two days, \$475; all three days, \$675. For a more detailed course outline and registration information contact: Jim Hill, The EMXX Corp., 6706 Deland Drive, Springfield, VA 22152. Telephone (703) 451-4619.



Richards, Manager, Retail Sales, U.S. Postal Service. We will be given a personalized inspection tour of the facility, which will include both the manual and mechanized operations.

For the manual part of the operations, we can expect to view the work at the mail loading docks, hand sorting procedures and the outgoing mail shipping operations.

The standard electro-mechanical machinery includes letter-sorting machines and stamp-collecting devices. Both of these machines are keypunch electrically-controlled. We have also been given some hope of inspecting one of the latest Optical Character Reading Machines, which is expected to be operational by the time the tour starts. This OCR reads the zip codes on the letters and applies a bar code to the envelope.

Check your schedule — join us on this first-of-a-kind tour of our own Central Van Nuys Post Office. A 20-cent stamp does 'buy' quite a lot. Bring the wife and kids. The tour will start at 6:30 p.m. on Thursday, 26 May 1983. Where? At the Van Nuys Post Office, 15701 Sherman Way, Van Nuys, California. For information at reservations, contact: Dr. Robert Y. Wong, P.E., at (213) 885-3883; or, Sergene Zimmerman, at (213) 885-2190. The cost? FREE.



You are sitting at your neat and tidy desk with every document filed in its proper place. All of your contract negotiations are complete and all of the computer runs have been analyzed. The spouse's birthday gift problem has been solved and you are more than comfortable with FERC, NERC, PURPA, and WAPA when along comes SCPPA (pronounced SCAPPA). What is a SCPPA? It must be new! It must be different! Anything that looks like chicken pox on a map of Southern California must be different.

The May 17, 1983 luncheon meeting of the Power Engineering Society will feature Mr. Arthur T. Devine, Executive Director of the Southern California Public Power Authority (SCPPA), as its guest speaker. Mr. Devine will discuss the role and future goals of this young joint powers agency.

Ten Southern California cities and one public district of the State of California formed SCPPA on November 1, 1980. The Authority was created for the purpose of the planning, financing, development, acquisition, construction, operation and maintenance of projects for the generation or transmission of electric energy. SCPPA is governed by a board of directors, con-

sisting of one representative from each member, and functions under Mr. Devine's management. The SCPPA members are the Department of Water and Power of the City of Los Angeles, Imperial Irrigation District, the City of Riverside, the City of Vernon, the City of Burbank, the City of Glendale, the City of Pasadena, the City of Azusa, the City of Banning, the City of Colton, and the City of Anaheim.

The Authority is beneficial to both the customer and the utility by not requiring rate increases in advance to finance new projects and by allowing the utility members to have closer control of the type, size, and timing of projects. In September 1982, SCPPA purchased an ownership in-

terest in the Palo Verde Nuclear Generating Station and certain rights in the Arizona Nuclear Power Project Valley Transmission System.

Mr. Devine earned his B.S.E.E. from the University of Colorado and was an electrical engineer at the Los Angeles Department of Water and Power from 1955 to 1963. After receiving his Juris Doctorate from Loyola University School of Law he served as an attorney for the Department from 1963 until June 1982. He began serving as Executive Director of SCPPA on September 1, 1982.

Please refer to the Meetings Calendar section of the Bulletin for reservation information.

## ENGINEERING SHORT COURSES -Summer 1983-

Project Evaluation Using the Personal Computer  
May 9-10

Digital Avionics Systems for Aircraft  
June 20-24

Performance Evaluation of Computer Systems With Queuing Models  
June 20-24

Principles of Spread Spectrum Systems  
July 11-14

Microcomputer Applications for Aerospace Guidance and Control  
July 11-15

Computer Communications Networks: Design and Implementation  
July 11-15

Structural Design for Earthquakes  
July 11-15

Satellite Communications  
July 18-21

Modern Inertial Navigation Systems With External Aiding  
July 18-22

Understanding Robotics  
July 18-20

Real-Time Systems and Software Design  
August 22-26

For registration-hotel information or brochures call (213) 743-2410.

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## HOW TO UNDERSTAND WOMEN



*Dr. Shirley Bekey*

How to understand women is the topic of a talk to be given by Dr. Shirley Bekey at the May 19, 1983 meeting of the San Fernando Valley Section.

As more women enter the field of engineering and other professions, men find themselves confronted with several "faces of Eve": the professional colleague or supervisor, the wife, girl friend, mother and daughter. Few men would deny their working relationships with female co-workers are different from their working relationships with male co-workers.

At this meeting, Dr. Bekey, a counselor and psychotherapist in private prac-

tice, will examine questions such as: What is "female intuition"? What are the major obstacles to open communication between men and women? How should a man relate to a female boss or to a female employee?

Whether you believe that differences in approach to problems by men and women are due to biology or to social pressure, this lecture promises to be of great interest. Here is your chance to find out why female colleagues don't understand male co-worker's humor and why your relationships don't seem to work out the way you think they should.

In her counseling career, Dr. Bekey has worked in hospitals, psychiatric clinics, schools, and counseling centers. Now in private practice, she specializes in problems of interpersonal stress in relationships. In her work with children, she deals with the adjustment problems of bright and talented youngsters. Being married to an electrical engineer and whose father is also an electrical engineer, she has gained both insight and tolerance toward members of our profession.

The meeting will take place on Thursday, May 19, 1983 at 6:30 p.m. in the Plaza Suite Restaurant located at 18460 Roscoe Blvd., Northridge, CA. For reservations and more information, call Kim or Sergene (213) 885-2190.

## COMPUTER - HUMAN PRODUCTIVITY ENHANCEMENT

Use of computers and associated work stations for better productivity will be described along with results obtained by Hughes at Fullerton and TRW at Space Park on Thursday, May 26, 1983 Computer Society meeting. The meeting will be preceded by a full course Roast Beef Dinner at 6:30 p.m. (Fish on request) at the Hacienda Hotel, South Starlight Room, 525 N. Sepulveda Blvd., El Segundo, CA (take San Diego Freeway to Imperial Blvd., then west to Sepulveda and south to the Hacienda). Send a check for \$11.50 to the Computer Society, P.O. Box 1285 Pacific Palisades, CA 90272 or call Sam Lehr at (213) 535-2905.

Don Stuckle will describe the TRW Software Productivity Project including the background and goals for the project, its current status, conclusions and experience to date, and future plans.

The TRW Software Productivity Project (SPP) was formed in January 1981 following an extensive software productivity study performed the previous year. Corporate direction for the project is to improve software productivity by a factor of two by 1985 and by a factor of four by 1990.

In his presentation, Mr. Stuckle will discuss the key factors, capabilities, and problems involved in gaining user accep-

tance of techniques to improve productivity. Plans for continuing the development of new SPP capabilities to meet long term goals will also be reviewed. Performance measurement data obtained in 1982 will be presented in addition to plans for collecting additional measurement data in the future.

Don is Manager of the TRW Defense Systems and Space Group's (DSG) Software Productivity Project. In his present position, he is responsible for managing and directing the TRW DSG multi-dimensional Software Productivity Project.

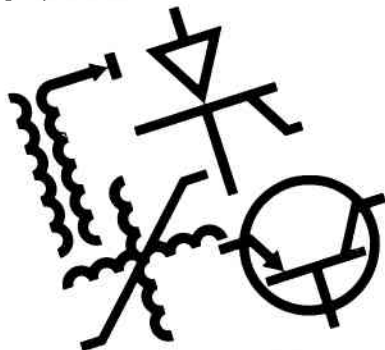
Since joining TRW in 1959 as a computer programmer, he has been actively involved in the development and implementation of software standards and procedures. In the mid 1970's, he was a key participant in the formation of the TRW life cycle software development methodology and accompanying software development policies and procedures.

During his twenty-five years with TRW, Mr. Stuckle has been involved in a variety of software development activities. While his recent work has primarily involved the development of large real time data processing systems, his experience also includes scientific simulations, data base management systems, and business data processing applications.

Virginia Martin will present "Work Stations and Their Impact on Productivity in the Engineering Environment". For the past two years, Hughes Aircraft has developed work station requirements and conducted hardware and software evaluations of engineering work station productivity at the Fullerton facility. This presentation will consist of an overview of the evaluation/acquisition process and the results of their analysis.

Virginia is presently on the staff of the Manager of the CAD Department. That Department has responsibility for distribution and support of engineering work stations in the Data Processing Products Division. Ms. Martin studied Mathematics and Physics at UC, Irvine and University of Birmingham, England. More recently she attended graduate school in Mathematics at UC, Irvine and taught Mathematics and Physics for three years. Subsequently she worked in the Minuteman Project Office at Rockwell, Anaheim. There she supported engineers in automation of the system design process.

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## OCEAN INSTRUMENTATION & BIOLOGICAL LIFE-OCEAN TRIP

This Dusk Cruise is planned for a **Instructive Experience**. Dates will be May 17 and May 24, leaving Dana Point at 6:15 p.m. and returning at approximately 10:00 p.m.

Wives and children (12 years and over) of IEEE Members are also invited. Please call Gwen Bacon at (213) 573-5663 for reservations as loading is limited. The price is \$8.00 per person. An overflow date will be planned if the reservations warrant it.

Upon receipt of your check (please send check, this will be your receipt), a booklet of facts and information will be sent to each family group. Send payment to W.L. Bacon, 323 North Elizabeth Avenue, Monterey Park, CA 91754.

The ship is a USCG authorized ship and this should be a learning experience with fun. Coffee will be available so brown bag your snacks and come along for an evening cruise on the Sun Fun.

## INTERFERENCE REJECTION TECHNIQUES IN DIRECT SEQUENCE SPREAD SPECTRUM COMMUNICATIONS

The final information theory talk before summer will be held on Tuesday, May 24, 1983. The speaker will be Dr. Laurence Milstein, who will give a lecture on "Interference Rejection Techniques in Direct Sequence Spread Spectrum Communications."

An overview of several different interference rejection techniques in direct sequence spread spectrum communications will be presented. These techniques include the use of prediction-error filters for narrow-band interference rejection as well as transform domain processing techniques. Probability of error results will be presented, as well as comparisons between the different schemes.

Laurence B. Milstein received the Ph.D. degree from the Polytechnic Institute of Brooklyn, Brooklyn, NY, in 1968. From 1968-1974 he was employed by the

Space and Communications Group of Hughes Aircraft Company, and from 1974 to 1976 he was with the Department of Electrical and Systems Engineering, Rensselaer Polytechnic Institute, Troy, NY. Since 1976 he has been with the Department of Electrical Engineering and Computer Sciences, University of California, San Diego, working in the area of digital communication theory with special emphasis on spread-spectrum communication systems. He recently was a guest editor, together with Dr. Robert Scholtz of USC, of a special issue of the *IEEE Transactions on Communications on Spread Spectrum*.

The meeting will take place on Tuesday, May 24, 1983, at 7:45 p.m., in the Hacienda Hotel Dining Room, located at 525 North Sepulveda Boulevard, El Segundo (one mile south of LAX, between Imperial and El Segundo Boulevard). Cocktail hour starts at 6:30 p.m.; an optional dinner will commence at 7:00 p.m. The dinner cost is \$9.50, including beverage, tax and tip. The lecture is free and is open to all interested parties. For dinner reservations or further information, contact Dr. H.C. Osborne, TRW, (213) 535-3137, or Professor Andreas Polydoros, USC, (213) 743-7257.

## HIGH VOLTAGE MATERIALS IN MAGNETIC DESIGN

Dr. Robert D. Parker, Hughes Aircraft Company, Space and Communications Division, will speak on High Voltage Materials in Magnetic Design at the Wednesday 18 May 1983 meeting of the Los Angeles Chapter of the IEEE Magnetics Society. He will discuss the electrical design of a large high voltage system, like a radar pulse forming network, where you have a large number of components assembled in a can. As a specific example, he will use a pulse-forming network for a ground based radar. In particular he will discuss the application of the Theory of Extreme Values in picking the electric field that you should use in design.

Dr. Parker earned Electrical and Electronics Engineering degrees, BS at Cal Tech 1967, MS and PhD at USC 1969 and 1973. He joined Hughes Aircraft Company in 1972 and moved to the Space and Communications Division, Power and Electronics Department in 1982. He continues to consult to Hughes Aircraft Ground Radar Division, Fullerton on pulse forming networks.

The discussion will take place Wednesday 18 May 1983, 8:00 p.m. at #14 Steele Hall, Bldg 61, California Institute of Technology, Chester St., Pasadena CA. Park South on Chester from Del Mar St.

Dinner at 6:00 p.m. at One West Res-

taurant, One West California St. (corner California & Fair Oaks) Pasadena. Menu-prices from \$6.95. Reservations: Phil Massie (213) 839-6498 or Art Grinnell (213) 988-2600 X6949 by Tuesday Noon 17 May 1983.

New officers for the Chapter for 1983-4 are:

Chairman	Don Wilson, consultant
Vice-chmn	Fred Lilienstein, Rockwell
Secretary	Stephen Hayes, Consultant
Treasurer	Lloyd Thornblad, Magnespex
Program	Werner Treitel, Litton
Membership	Art Grinnell, Gilfillan
Publicity	Philip Massie, retired
Advertising	Ernie Carlson, Elnetic

## ARTIFICIAL INTELLIGENCE CONFERENCE

The IEEE Artificial Intelligence Conference, originally scheduled for broadcast by satellite throughout the United States all-day 7 June, has been delayed until September. The conference will be distributed in the Los Angeles/Orange County area via the USC Instructional Television Network to four public sites and thirty company sites. Details, including the location of the sites, will be announced in the Bulletin this summer.

Myron Kayton  
EDUCATION CHAIRMAN  
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# IEEE MEETINGS CALENDAR

## ACOUSTICS, SPEECH AND SIGNAL PROCESSING SOCIETY (S1)

Reservations & Information: Douglas F. Elliott (714) 632-2340

**Wednesday, May 11**

## AEROSPACE AND ELECTRONIC SYSTEMS SOCIETY AESS-10

Topic: X-15 to Vostok to Shuttle, A Perspective on Manned Space Flight  
Speaker: Dr. Myron Kayton, President, Kayton Engineering Company  
Time: 7:00 p.m.  
Location: Long Beach Convention Center  
Reservations & Information: Steve Brody (714) 891-4631 Dave Mitchell (213) 679-2281

**Thursday May 19**

## L.A. CHAPTER AP-S (GROUP 3)

"Two Phantom Antennas — Synthetic Aperture and Aperture Synthesis"

Joint Speakers: Mr. Carl Wiley, Hughes Aircraft Company (El Segundo), and Dr. Allen Love, Rockwell International  
Time: Social Hour 6:00 p.m.; Dinner 6:30 p.m.; Meeting 7:30 p.m.  
Location: Hacienda Room, UCLA Faculty Center, 405 Hilgard Avenue, UCLA Campus

Reservations & Information: (by May 13, please!) Dr. Lee Cooper, Rantec Corporation (213) 347-5446

**Thursday May 19**

## BUENAVENTURA SECTION

Topic: New Information Sources  
Speaker: Staff member of the Systems Development Corporation of Santa Monica and Camarillo, California  
Time: 7:30 p.m.  
Location: Systems Development Corporation, 5151 Camino Ruiz, Camarillo, CA

Reservations & Information: Call (805) 484-1331 or (805) 492-2056

## CHINA LAKE SECTION (S13)

Meeting information not available at press time.

Reservations & Information: Mel Creusere (714) 939-2009

**Wednesday May 18**

## ELECTRON DEVICES/CIRCUITS AND SYSTEMS JOINT CHAPTER — ORANGE COUNTY SECTION

Topic: A Symbolic Design Methodology for VLSI  
Speaker: Robert P. Larsen  
Microelectronics Research and Development Center, Rockwell International, Anaheim, CA  
Time: Cocktails at 6:00 p.m., dinner at 7:00 p.m., program at 8:00 p.m.  
Location: Saddleback Inn, 1660 E. 1st Street, Santa Ana, CA  
Reservations & Information: Contact Alan Lee at (714) 557-3550 (days), (714) 752-8336 (evenings) by May 13. Cost of dinner is \$9.50. Checks, payable to IEEE ED/CAS, should be mailed to Alan Lee, 69 Highland View, Irvine, CA 92715.

## COMMUNICATIONS SOCIETY (S19)

Reservations & Information: W. Larry Bacon (213) 573-5663

## COMPONENTS HYBRIDS AND ENGINEERING SOCIETY (S21)

Reservations & Information: Paul Sadler (213) 822-8229

**Thursday May 26**

## COMPUTER SOCIETY — JOINTLY SPONSORED WITH THE LA CHAPTER OF THE ACM

Topic: Computer-Human Productivity Enhancement  
Speaker: (1) E. Don Struckle, TRW, Project Mgr. Software Productivity Project  
(2) Virginia Martin, Hughes Aircraft Co. Staff member, CAD Department  
Time: 6:30 p.m.  
Location: Hacienda Hotel, South Starlight Room, 525 N. Sepulveda Blvd., El Segundo

Reservations & Information: Call Sam Lehr (213) 535-2905  
Send check for \$11.50 (includes tax & tip) to the IEEE Computer Society P.O. Box 1285, Pacific Palisades 90272

**Thursday June 30**

Topic:

Speaker:  
Time:  
Location:  
Reservations & Information:

**Thursday May 19**

Topic:  
Speaker:  
Time:  
Location:

Reservations & Information:

**Tuesday May 10**

Topic:

Speaker:  
Time:

Location:

Reservations & Information:

Reservations & Information:

Reservations & Information:

**Tuesday May 17**

Topic:  
Speaker:  
Time:  
Location:

Reservations & Information:

Reservations & Information:

Reservations & Information:

**Tuesday May 24**

Topic:  
Speaker:  
Time:  
Location:

Reservations & Information:

**Tuesday May 17 & Tuesday May 24**

Topic:  
Speaker:  
Time:

## COMPUTER AND RELIABILITY SOCIETIES

Software Reliability and Economics  
also Reports from Software Reliability Measurement Working Group and Software Reliability Technical Committee  
Dr. Barry Boehm, TRW  
6:30 p.m. for Dinner  
Hacienda Hotel, 525 N. Sepulveda, El Segundo, CA.  
Send check for \$13 (includes tax and tip) to L.A. Computer Society P.O. Box 1285 Pacific Palisades CA 90272 or call Sam Lehr for information at (213) 535-2905.

## COMPUTER SOCIETY, ORANGE COUNTY (S16.2)

Robot Eyes, Image Processing, and Automatic Inspection  
William T. Mayo, President, Extended Vision  
8:00 p.m.  
Cal-Comp Auditorium, 2411 W. La Palma, Anaheim  
Pre-meeting optional dinner; Hungry Tiger, 6231 Manchester, Buena Park (Call (714) 522-1542 for Reservations)

Reservations & Information: Dr. Dimitri Michalopoulos (714) 773-3717 or (714) 773-3119 (Leave Message)

## JOINT CHAPTERS — ELECTROMAGNETIC COMPATIBILITY SOCIETY, L.A., ORANGE COUNTY, SAN DIEGO

1) Present State of EMC Engineering in Europe and United States; 2) Electrostatic charging and simulation; 3) Overhead reviews with slides and equipment on display by various mfgs.  
Speaker: Diego R. Waser, Dipl. Engr.  
Time: 4-7 p.m. Exhibit Hours & Social time, no host bar.  
7:00 p.m. Dinner (\$11), 8:00 p.m. Speaker  
Location: Orange Room, Saddleback Inn, 1660 East 1st Street, Santa Ana, CA

Reservations & Information: Ed Nakauchi, (714) 730-2577. Make your reservations early, this is the first time for EMC's combined area meeting.

## ENGINEERING IN MEDICINE AND BIOLOGY SOCIETY (S18)

Reservations & Information: Andrew Lisiecki (714) 975-1800  
ENGR., MGMT., EDUCATION, PROFESSIONAL COMMUNICATIONS SOCIETIES (S 14/25/26)

Reservations & Information: Robert Foley (714) 540-4330

## FOOTHILL SECTION (S14)

Computer Automation in Railroadings  
Mr. Tony Adams, Southern Pacific Radio  
6:45 Dinner; 7:30 p.m. Program  
Dinner at San Bernardino Holiday Inn (Intersection of I-10 and I-15) in San Bernardino — Members, \$10.00  
Program — Meet at Restaurant at 7:30 p.m.  
Reservations are Required — Attendance will be limited.

Reservations & Information: Gary Davidson (213) 331-0011 X2812  
Dave Mains (714) 787-7425

## INDUSTRY APPLICATIONS SOCIETY (S34)

Reservations & Information: Philip S. Wessels (714) 595-3450  
INSTR. & MEAS. INDUS. ELEC. SOCIETY (S9/S13)  
W. Larry Bacon (213) 573-5663

## INFORMATION THEORY SOCIETY (S12)

Interference Rejection Techniques in Direct Sequence Spread Spectrum Communications  
Dr. Laurence Milstein  
Cocktails 6:30 p.m.; Dinner (\$9.50, optional) 7:00 p.m.  
Hacienda Hotel — Dining Room, 525 N. Sepulveda Blvd., El Segundo, CA (one mile south of LAX, between Imperial and El Segundo Boulevards)

Reservations & Information: Andreas Polydoros, USC (213) 743-7257  
Dr. H. C. Osborne, TRW, (213) 535-3137

## LOS ANGELES COUNCIL

Ocean Instrumentation & Biological Life-Ocean Trip  
W. L. Bacon  
6:15 p.m.



**Location:** The *Sun Fun* will depart Dana Point at 6:15 p.m. and return at approximately 10:00 p.m.

**Reservations & Information:** Cost is \$8.00 per person. Wives and children (12 years and over) of IEEE members are invited. Send payment to W. L. Bacon, 323 N. Elizabeth Ave., Monterey Park, CA 91754. Call Gwen Bacon at (213) 573-5663 for reservations as loading is limited.

### **Saturday June 4**

**Topic:** Annual Installation Meeting and Dinner Dance  
**Time:** 6:00 p.m., No Host Bar: 7:00 p.m., Dinner: 8:30 p.m.  
Installation/Business Session: 7-11, Dinner Music and Dancing for the Evening

**Location:** The Castaway, 1250 Harvard Rd., Burbank, CA

**Reservations & Information:** Use coupon this issue, or call IEEE Business Office at (213) 618-8314.

### **Wednesday May 18**

#### **S-33 MAGNETICS SOCIETY, LOS ANGELES CHAPTER**

**Topic:** High Voltage Materials in Magnetic Design  
**Speaker:** Dr. Robert R. Parker, Hughes Aircraft Company, Space and Communications Division

**Time:** 8:00 p.m.

**Location:** #14 Steele Hall, Bldg. 61, California Institute of Technology, Chester St., Pasadena. Park South on Chester from Del Mar.  
Dinner: 6:00 p.m., One West Restaurant. One West California St., Pasadena. Corner of Fair Oaks and California. Menu prices from \$6.95 plus tax & tip.

**Reservations & Information:** Dinner reservations by Noon Tuesday 17 May 1983. Philip Massie (213) 839-6498 or Art Grinnell (213) 988-2600 X6949.

### **Tuesday May 17**

#### **MTT-17**

**Topic:** The Navstar Global Positioning System

**Speaker:** Lt. Col. John F. Scheerer

**Time:** Social Hour, 6:00-7:00 p.m.; Dinner, 7:00-8:00 p.m.; Speaker, 8:00-9:00 p.m.

**Location:** Los Angeles Air Force Station  
Officers Club, Daedalion Room

**Reservations & Information:** Dinner and Lecture reservations are mandatory. Please call C. W. Swift and Associates at (213) 989-1133 by May 13.

### **Tuesday June 21**

#### **METROPOLITAN SECTION (515)**

**Topic:** CAD/CAM Systems

**Speaker:** Dr. Kenneth W. Chase

Prof. at Brigham Young University (Utah)

**Time:** 11:30 a.m. - Social Hour; 12:00 noon - Lunch

**Location:** Luminarias Restaurant  
3500 Ramona Blvd., Monterey Park, CA 91754

**Reservations & Information:** Reservations required by June 17th, 1983  
Call Don Goepper (213) 481-6246  
or Lester Fickle (213) 572-5109

#### **NUCLEAR AND PLASMA SCIENCES SOCIETY (\$5)**

**Reservations & Information:** James P. Spratt (213) 640-0480

### **Monday May 23**

#### **JOINT MEETING, ORANGE COUNTY SECTION AND S-29 GEOSCIENCE AND REMOTE SENSING**

**Topic:** Geo-Signal Processing

**Speaker:** Professor Jerry Mendel

**Time:** Cocktails 6:30 p.m. Dinner 7:00 p.m. Presentation 8:00 p.m.

**Location:** Griswold Hotel, 1500 South Raymond Avenue, Fullerton, CA, at the 91 Freeway  
Dinner cost: \$13.00  
Reservation required by May 17, 1983

**Reservations & Information:** Dr. Fred Aminzadeh (714) 528-7201 ext. 2494 (days)  
(714) 974-0428 (evenings)

Make check payable to: IEEE Geoscience Chapter  
Mail to: Fred Aminzadeh, 521 Tumbleweed Road, Anaheim, CA 92807

#### **QUANTUM ELECTRODYNAMICS AND APPLICATIONS SOCIETY (\$36)**

**Reservations & Information:** William H. Steiner (213) 743-2578

### **Tuesday May 17**

#### **S-31/POWER ENGINEERING SOCIETY LOS ANGELES CHAPTER**

**Topic:** SCPA, Southern California Public Power Authority

**Speaker:** Mr. Arthur T. Devine  
Executive Director  
SCPPA

**Time:** 11:30 a.m. (Social), 12:00 noon (Lunch) \$8.00

**Location:** Luminarias Restaurant  
3500 Ramona Blvd.  
Monterey Park, CA 91754  
(At junction of San Bernardino and Long Beach Freeways, opposite Cal State L.A.)

**Reservations & Information:** Clifford Damron (213) 481-8852 or Dennis Miller (213) 481-5302 by May 13, 1983

### **Thursday June 16**

#### **RELIABILITY**

**Topic:** Spacecraft Reliability

**Speakers:** Atle Steen, TRW and Dave Tickert, Hughes Aircraft

**Time:** 6:30 p.m.

**Location:** Hacienda Hotel  
525 N. Sepulveda, El Segundo

**Reservations & Information:** Dinner \$11.50 (incl. tax and tip) Send check to IEEE Reliability Society P.O. Box 1285, Pacific Palisades, CA 90272. Call Sam Lehr for information at (213) 535-2905

#### **SADDLEBACK SUBSECTION (516.1)**

**Topic:** Meeting information not available at press time

**Reservations & Information:** Earl Switzer (714) 754-6781 ext 310

### **Thursday May 26**

#### **SAN FERNANDO VALLEY SECTION**

**Time:** 6:30 p.m.

**Place:** U.S. POST OFFICE

Central Van Nuys Office

15701 Sherman Way

Van Nuys, California 91409

**Topic:** Guided Inspection Tour of the Van Nuys Post Office

**Host:** Mr. Dick Richards, Manager, Retail Sales, U.S. POSTAL SERVICE

**Cost:** Free

**Reservations:** Dr. Robert Y. Wong, P.E., at (213) 885-3883; or, Sergene Zimmerman, at (213) 885-2190.

### **Thursday May 19**

#### **SAN FERNANDO VALLEY SECTION**

**Topic:** How to Understand Women

**Speaker:** Dr. Shirley Bekey

**Time:** Attitude Adjustment 6:30 p.m., Dinner 7:00 p.m., Meeting 8:00 p.m.

**Location:** Plaza Suite  
18460 Roscoe Blvd., Northridge, CA 91330

**Reservations & Information:** Kim or Sergene (213) 885-2190

### **Monday May 2**

#### **SAN GABRIEL VALLEY SECTION**

**Topic:** Synthetic Aperture Radar

**Speaker:** Dr. Charles Elachi

Manager for Radar Development at Jet Propulsion Laboratory and Principal Investigator on the Shuttle Imaging Radar-A (SIR-A).

**Time:** 7:30 p.m.

**Location:** Room 102

Steele Laboratory

California Institute of Technology

Geoff Hall at (213) 812-1265

#### **SANTA MONICA BAY SECTION (520)**

**Topic:** Meeting information not available at press time

**Reservations & Information:** Donald G. Reinertsen (213) 624-1414

#### **SONICS AND ULTRASONICS SOCIETY (\$20)**

**Reservations & Information:** Chen Tsai (714) 833-5144

### **Tuesday May 24**

#### **SOUTH BAY HARBOR SECTION**

**Topic:** Marine Biology and Oceanographic Instrumentation Cruise

**Speaker:** Ocean Vessel "Sun Fun"

**Time:** 6:15 to 10:00 p.m. cruise

**Location:** Dana Point Harbor for cruise departure  
TRW parking lot for charter bus at 4:20 p.m.

**Reservations & Information:** Peter Nilson (213) 641-8600  
Russell Gaspari (213) 648-1325

#### **SYSTEMS, MAN & CYBERNETICS (\$28)**

**Reservations & Information:** Andrew Lisiecki (714) 975-1800

#### **VEHICULAR TECHNOLOGY SOCIETY (\$6)**

**Reservations & Information:** Gary Gray (714) 834-2123



## TWO PHANTOM ANTENNAS — SYNTHETIC APERTURE AND APERTURE SYNTHESIS

AP-S Technical Meeting, sponsored by the Los Angeles Chapter of the Antennas and Propagation Society. Mr. Carl Wiley, of Hughes Aircraft Company (El Segundo), and Dr. Allen Love, of Rockwell International, to speak at UCLA on "Two Phantom Antennas — Synthetic Aperture and Aperture Synthesis."

The basic principles of the synthetic aperture and the aperture-synthesis array are briefly outlined. These two antenna types, which never exist in complete form, are constructed serially using a small number of array elements. The early histories of these antennas are traced through photographs of early equipment and images, and their similarities and differences are discussed. Some images made by contemporary synthetic-aperture radars and aperture-synthesis radio telescopes are used to show how these sensors are opening new windows on the universe, as well as our own earth, as seen from orbit. Several puzzles that are revealed by these advances will be presented.

Carl Wiley is a graduate of Antioch

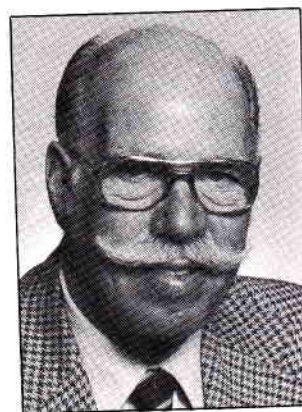


Mr. Carl Wiley

College. He has been involved in radar, sonar, and microwave radiometer design for the last 40 years. At present, he is a Senior Scientist at Hughes Aircraft, Space and Communications Group, where his major interest has been orbital remote sensing. At various times, he was Chief Engineer, Astrionics Division, manager of Advanced Radar, and Manager of the SONAR Department at Autonetics. Before then, he was President of Wiley Electronics for ten years, Manager, Goodyear Aerophysics in Arizona, and Section Chief at the Radiation Laboratory, Wright-Patterson AFB. He holds 18 patents on radars and associated technology. His inventions include synthetic-aperture radar, correlation guidance, solar sailing, and gravity-assisted trajectories. While at Wiley Electronics, he collaborated with Dr. Allan Love on the design and flight test of the first airborne microwave radiometric mapper.

Allan Love is Principal Engineer in the Satellite Systems Division of Rockwell International in Seal Beach, California. In recent years, his activities have been in fields of satellite antennas and in microwave radiometry for the remote detection of ocean surface temperature from an orbiting space vehicle. Recently, he completed studies of the microwave transmission of electrical power from the Satellite Power System (SPS) to an earth-based rectenna.

At the present time, he is Associate Editor of the Transactions on Antennas and Propagation, and is a member of the IEEE Press Editorial Board. He has edited two IEEE Press reprint books: "Electromagnetic Horn Antennas," published in 1976, and "Reflector Antennas," which appeared in 1978. He is a contributor to Volume I of "The Handbook of Antenna Design" sponsored by the IEEE in England. In 1973, he won the AP Society's Best Paper Award, and become a Fellow of the IEEE in 1980. He has completed a three-year term on the AdCom, during which he acted as AP representative to the U.S. National Committee of URSI, and currently is Vice-President of the Society.

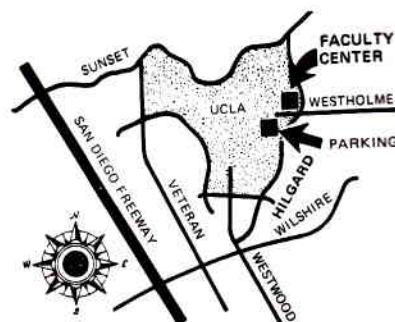


Dr. Allan Love

Born and raised in Toronto, Canada, he received the Ph.D. degree in Physics from the University of Toronto in 1951. He served with the Royal Canadian, Royal Australian and Royal Air Forces from 1941 to 1945, and was a Research Officer in the Radiophysics Laboratory CSIRO, Sydney, Australia, from 1946 to 1948. He came to the United States in 1951, spending six years in mining geophysical exploration before entering the Aerospace field in 1957.

The technical meeting will start at 7:30 p.m., Thursday, May 19, 1983 in the Hacienda Room at the UCLA Faculty Center, 405 Hilgard Avenue, UCLA Westwood Campus. The technical meeting will be preceded by Social Hour at 6:00 p.m. and Dinner at 6:30 p.m. (\$11.00). Nonmembers are cordially invited to attend.

For dinner reservations (by May 13, please) or information, call: Dr. Lee Cooper, Rantec Corporation, (213) 347-5446.



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## GEO-SIGNAL PROCESSING



Dr. Jerry M. Mendel

The newly founded IEEE Geoscience and Remote Sensing Chapter for the greater Los Angeles area is going to have its first meeting jointly with the IEEE Orange County Section.

In this meeting, Professor Jerry M. Mendel from USC, will give an overview of "Geo-Signal Processing." The main objective of this talk is to overview the applications of the state-variable technology to a wide range of seismic signal processing and modeling problems. The flexibility of the state-variable approach permits us to treat variability, non-stationarity, non-linearity uncertainties, and multichannel capabilities from a unified point of view.

Based on more than seven years experience, we feel that state-variable technology, when properly applied, holds great promise for developing significant geophysical models and high resolution signal processing techniques.

Dr. Mendel is Professor of Electrical Engineering and Associate Department Chairman at the University of Southern California in Los Angeles. During the past eight years he has been studying applications of estimation and systems theory to seismic signal processing and modeling, and is also Director of the USC Geo-Signal Processing Program. He has published over 130 technical papers and is a Fellow of the IEEE. He is very active in the IEEE Control System Society, where he presently is Vice-President for Technical Affairs. He is also Associate Editor of *Automatica* and the *IEEE Trans. on Geoscience and Remote Sensing*. His book, entitled "Optimal Seismic Deconvolution: an Estimation Based Approach," will appear in June 1983.

Professor Jerry M. Mendel will be speaking at our joint meeting at the Griswold Hotel, 1500 South Raymond Avenue, Fullerton, California, on Monday, May 23, 1983. Social time at 6:30 p.m., Dinner at 7:00 p.m., and the Presentation at 8:00 p.m. Call Dr. Fred Aminzadeh for reservations at (714) 528-7201, X2494.

## ORANGE COUNTY ELECTROMAGNETIC COMPATIBILITY GROUP

Meetings of the newly formed Orange County Electromagnetic Compatibility Group have been planned for 1983. Starting in February, they will be held on the first Tuesday of each month at the Saddleback Inn in Santa Ana. The meetings will begin at 6:00 p.m. with No Host Cocktails, followed by Dinner at 7:00 p.m. and at 8:00 p.m. with the meeting and speaker for that evening.

The meeting dates are as follows: February 1, March 1, April 5 and May 3, 1983. For further information: Ed Nakauchi, BASIC 4, (714) 730-2577.

## Marine Biology and Oceanographic Instrumentation Cruise

An evening ocean cruise from Dana Point harbor to explore marine life and ocean instrumentation is being offered by the South Bay Harbor Section on Tuesday, May 24, 1983. The 85-foot USCG-authorized vessel "Sun Fun," owned by the Orange County School System, will depart from Dana Point at 6:15 p.m. and return at 10:00 p.m. Oceanographic instruments will be demonstrated and explained

by Cmdr. Larry Bacon. Also, marine sea life will be brought aboard from the ocean bottom for examination and explanation.

Wives and children (12 years and over) of IEEE members are also invited. The price for the boat trip is \$8.00 per person and roundtrip charter bus transportation will be available from the TRW parking lot at a cost of \$1.00 per person. Reservations and checks must be received by May 14, 1983 since the loading is limited. Contact Peter Nilsen at Axiomatic Corp., (213) 641-8600 or Russell Gaspari at (213) 648-1325 for further details.

Past participants in this trip have had high praise for the learning experience and enjoyable time they had. Bring warm clothes and a snack if you desire since only coffee will be available onboard.

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## UCLA Extension Electrical Engineering Review

June 22-October 19, 1983

Miscellaneous topics selected from the professional examination for electrical engineers. Solution to typical problems is emphasized.

**Prerequisite:** Engineer-in-Training Certificate or equivalent.

Wednesdays, 7-10 pm, 18 meetings  
2444 Boelter Hall, UCLA Campus  
Course No. Engineering 816  
5.4 CEU Fee: \$200

Instructor

**Robert E. Margolies, BEE**

Senior Staff Engineer, Hughes Aircraft Company

Students may enroll at the first class meeting. However, early enrollment is advised to assure your place in class.

**For enrollment information,  
call UCLA Extension at (213) 825-1047.**



## ROBOT EYES, IMAGE PROCESSING, AND AUTOMATIC INSPECTION

William T. Mayo  
President, Extended Vision

Dr. Mayo will present some of the ways electro-optical sensing, special electronics and micro computer systems are being used for industrial applications of inspection, measurement, and Robot Vision. The presentation will use slides and other visual aids and be understandable by a general audience. Dr. Mayo is currently teaching a UCI Extension course by the same title.

Extended Vision provides assistance in the development and application of new opto electronic and computer vision systems and subsystems. For 6 years before forming Extended Vision, Dr. Mayo was Director of the Electro-optical Systems Laboratory and then Director of Advanced Concepts at Spectron Development Labo-

ratories, after work at the Lockheed Georgia Research Laboratories, The Texas A & M Remote Sensing Center, and Science Applications. For questions concerning the content of the presentation, call (714) 545-5906.

Meeting place: Cal-Comp Auditorium, 2411 West Lapalma, Anaheim.

Date: Thursday, May 19, 1983.

Time: 8:00 p.m. (stop on your way home from NCC).

Pre-meeting dinner (optional): Hungry Tiger, 6231 Manchester, Buena Park Reservations: (714) 522-1542.

Information and Reservations: Dr. Dimitri Michaelopoulos (714) 773-3717 or leave message (714) 773-3119.

## RECLAIM MANAGERS ASSOCIATION

The first professional organization for the electronics industry reclamation managers was recently formed by seven industry representatives.

The organization's first meeting drew representatives of semi-conductor and electronics components manufacturers

from California, Texas and Colorado.

Bob Larson, Chairman of the Association's Membership Committee, said the organization is seeking additional members, specifically individuals involved in recycling surplus materials — from cardboard to precious metals — which are byproducts of the electronics industry.

The Reclaim Managers Association is an educational information group which analyzes methods and procedures for recovering or recycling scrap, surplus and reject materials. Their main focus is on precious metal recovery and surplus capital equipment recycling.

Individuals involved in reclamation who are interested in joining or want additional information, should call (408) 749-3218 or mail inquiries to 478 W. Hamilton Ave., Suite 223, Campbell, CA 95008.

### WANTED TO BUY

Old science fiction magazines and pulp magazines from 1930's to 1950's. Good prices. What do you have? Jim Pearson (213) 648-5876 (day) or (714) 821-4893 (evening).

## For working adults— a new, evening-only MS DEGREE PROGRAM IN AEROSPACE ENGINEERING

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Next term starts June 20.**

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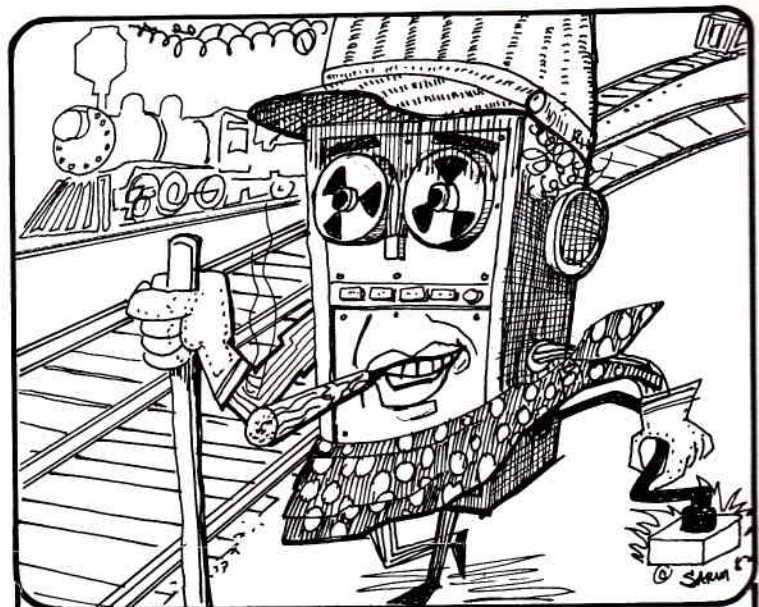
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344



## COMPUTER AUTOMATION IN RAILROADING

**Tuesday May 17, 1983**

### PROGRAM:

(FREE) MEET AT RESTAURANT AT 7:30 P.M.  
RESERVATIONS ARE REQUIRED, ATTENDANCE  
WILL BE LIMITED TO FIRST 30 TO CALL.

### RESERVATIONS (REQUIRED):

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**IEEE  
Foothill  
Section**

## STUDENT PROFESSIONAL AWARENESS CONFERENCE BOOSTED MEMBERSHIP

IEEE Student Branch at the California State University, Northridge organized a Student Professional Awareness Conference (SPAC). The conference, held from 10 a.m. to 5 p.m. on February 10, 1983, was sponsored by the national IEEE and supported by Region 6 and the San Fernando Valley Section. It was designed to help students aware of the concept and scope of professional practice and responsibility in an engineering career. Over 140 students attended the all day conference which in turn led to the enrollment of over 60 new student members in the branch.

The conference opened to all engineering students who wanted advice on professional, legal, economic and technical aspects of their chosen careers. A group of distinguished speakers with broad backgrounds in these areas were invited to speak in the conference. A panel discussion was held at the end of the conference to answer questions from students.

The conference began with introductions by Dr. Alfonso Ratcliffe, dean of the School of Engineering and Computer Science and Dr. Edmond Gillespie, chair of the Department of Electrical and Computer Engineering.

John Guerrero, past IEEE president, spoke on "IEEE in Washington: Overview of IEEE/U.S. Activities Board Legislation Concerning Engineers".

Guerrera was followed by IEEE member Robert Egermeier, attorney for the Hughes Aircraft Co. Egermeier's topic was "Ethical and Legal Considerations: Employment Agreements and Patent Rights". Lunch was served from 12:30 to 2 p.m. in the University Student Union.

The conference continued with Larry Dwon, a Life-Fellow member of IEEE with over 40 years of professional experience. Dwon spoke on "Planning A Career: Career Choices and Interviewing".

Hans Cherney, past Region 1 director and vice-president of IEEE spoke on "Professional Programs in IEEE: Pension, Age Discriminations".

At 4:00 p.m. there was a coffee break and at 5:00 p.m. the conference concluded with a question and answer session.

Chair of the student Branch is Hassan Bousmail and branch counselor is Dr. Robert Wong. SPAC Planning Committee included P. Halin, A. Ickovits, A. Kiany, N. Mansour, V. Markarian, A. Sareen, R. Satyawana and P. Virga.



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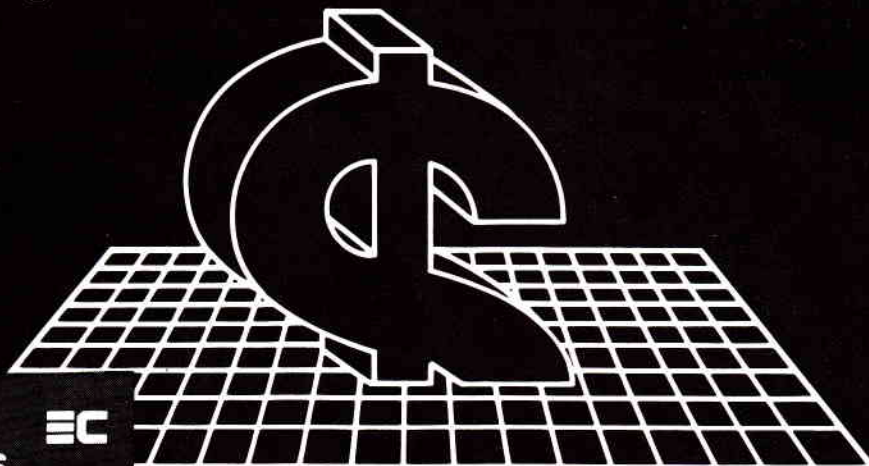
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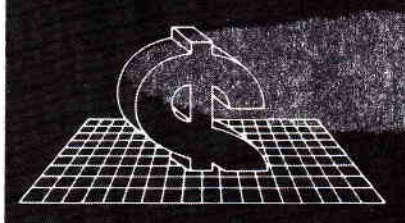
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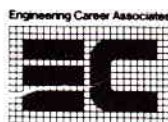
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Most significantly, you'll also read about which specific areas of specialization are forecasted for unusual demand in this decade and beyond. The past year saw many changes in the economy and has altered career prospects for some professionals who were not properly prepared, so the need to stay abreast of current trends and career planning has never been so critical.

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## PART-TIME TEACHING POSITIONS OPEN

Each semester the Electrical and Computer Engineering Department of the California State University, Northridge, employs part-time lecturers to teach a variety of courses from lower division to first year graduate levels. In addition to standard EE courses, they include courses in engineering for non-engineering majors, interdisciplinary courses in digital systems, and a number of specialized courses. There is usually a special need for instructors for lecture and laboratory courses in the area of pulse and digital circuits and microprocessors. Anyone who is interested in teaching part-time should send a recent resume, a statement of what courses you wish to teach, and the hours you are available for teaching, to Dr. Edmond S. Gillespie, Electrical and Computer Engineering Department, California State University, Northridge, Northridge, CA 91330. Equal opportunity and affirmative action employer.

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### MECH/ELECT

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### MFG/IND ENGRS

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### SALES/AP ENGRS

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## LOS ANGELES COUNCIL IS 75



In this Centennial year of IEEE, all of us are reflecting on the past of the Institute a bit. In so doing, we found that the May 19, 1908 AIEE Board of Directors' Minutes state, "On recommendation of the Sections Committee a Section was authorized at Los Angeles, Cal., the proper application having been presented to the Board."

Our thanks to Assistant Historian Robert Casey, of the IEEE Center for the History of Electrical Engineering, for the above quote and the following list of Los Angeles Section officers through 1934.

### LOS ANGELES

Authorized May 19, 1908

C. W. Koiner ..... 1908-09

J. A. Lighthipe .....	1909-10
J. E. MacDonald .....	1910-11
O. H. Ensign .....	1911-12
G. A. Damon .....	1912-13
E. R. Northmore .....	1913-14
C. G. Pyle .....	1914-15
E. Woodbury .....	1915-16
R. H. Manahan .....	1916-17
D. Morgan .....	1917-18
J. H. Cunningham .....	1918-19
C. A. Copeland .....	1919-20
R. W. Sorensen .....	1920-21
H. H. Cox .....	1921-22
J. N. Kelman .....	1922-23
E. R. Stauffacher .....	1923-24
C. A. Heinze .....	1924-25
R. A. Hopkins .....	1925-26
R. E. Cunningham .....	1926-27
L. C. Williams .....	1927-28
H. L. Caldwell .....	1928-29
N. B. Hinson .....	1929-30
H. W. Hitchcock .....	1930-31
P. S. Biegler .....	1931-32
F. E. Delinger .....	1932-33
A. P. Hill .....	1933-34

It's interesting to note that three of the Los Angeles Section presidents were also AIEE national vice-presidents in the years noted: J. A. Lighthipe, 1913-1915; J. E. MacDonald, 1923-1925; R. W. Sorensen, 1933-1935.

Here's where you can help. Our records are incomplete from 1934 to the early sixties. If you know who were the section officers in any of those years, please communicate that information to the IEEE Los Angeles Council office.

As part of our 75th anniversary, we are having an emblem made to place on the Council Banner to commemorate this anniversary. The banner is Royal Blue and Gold Yellow and is approximately 6 X 9 feet in size.

## ANNUAL INSTALLATION/ MEETING AND DINNER DANCE

The Los Angeles Council will be having their Annual Installation/Meeting Dinner Dance on Saturday, the 4th of June, 1983. The location will be The Casaway in Burbank and will be held in the beautiful Mountain View Ballroom with a panorama view of the mountains and city.

This meeting is held each year to honor the members who have served as officers and donated their time and efforts to our Organization and to install the new officers who will be serving for the 1983-1984 year.

Reservations can be made with the coupon printed in this issue. If more are needed, please call the IEEE Business office at (213) 618-8314 or (213) 775-2859.

Come and bring some friends and help give tribute to those who will be receiving the Los Angeles Council Awards. We will also be celebrating our 75th Anniversary. The Los Angeles Section was formed in May 1908 and that makes this our Diamond Anniversary. For our entertainment, and befitting the occasion, the Joe Diamond musicians will be with us for the evening. Dress will be informal so come and have a real good time.

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