

# EDITOR'S PROFILE of this issue

*from a historical perspective ...*

with Paul Wesling, SF Bay Area Council GRID editor (2004-2014)

April, 1975:

Cover: The campus of San Francisco State University is shown, location for an upcoming Section technical symposium. More on page 4E.

Page 4: Allan Alcorn, inventor of PONG and VP at Atari, gives a tutorial for the Computer chapter on electronic games. He'll demonstrate some of the latest games, and cover design philosophy, video graphics, lifetime (about 18 months), and speculate on when electronic games might be available in the home.

Pages 5-7: Election details for the three new Sections, with ballots.



Archive of available SF Bay Area GRID Magazines is at this location:

[https://ethw.org/IEEE\\_San\\_Francisco\\_Bay\\_Area\\_Council\\_History](https://ethw.org/IEEE_San_Francisco_Bay_Area_Council_History)

At time of scanning, the bound volumes are held by Paul Wesling.

April, 2025

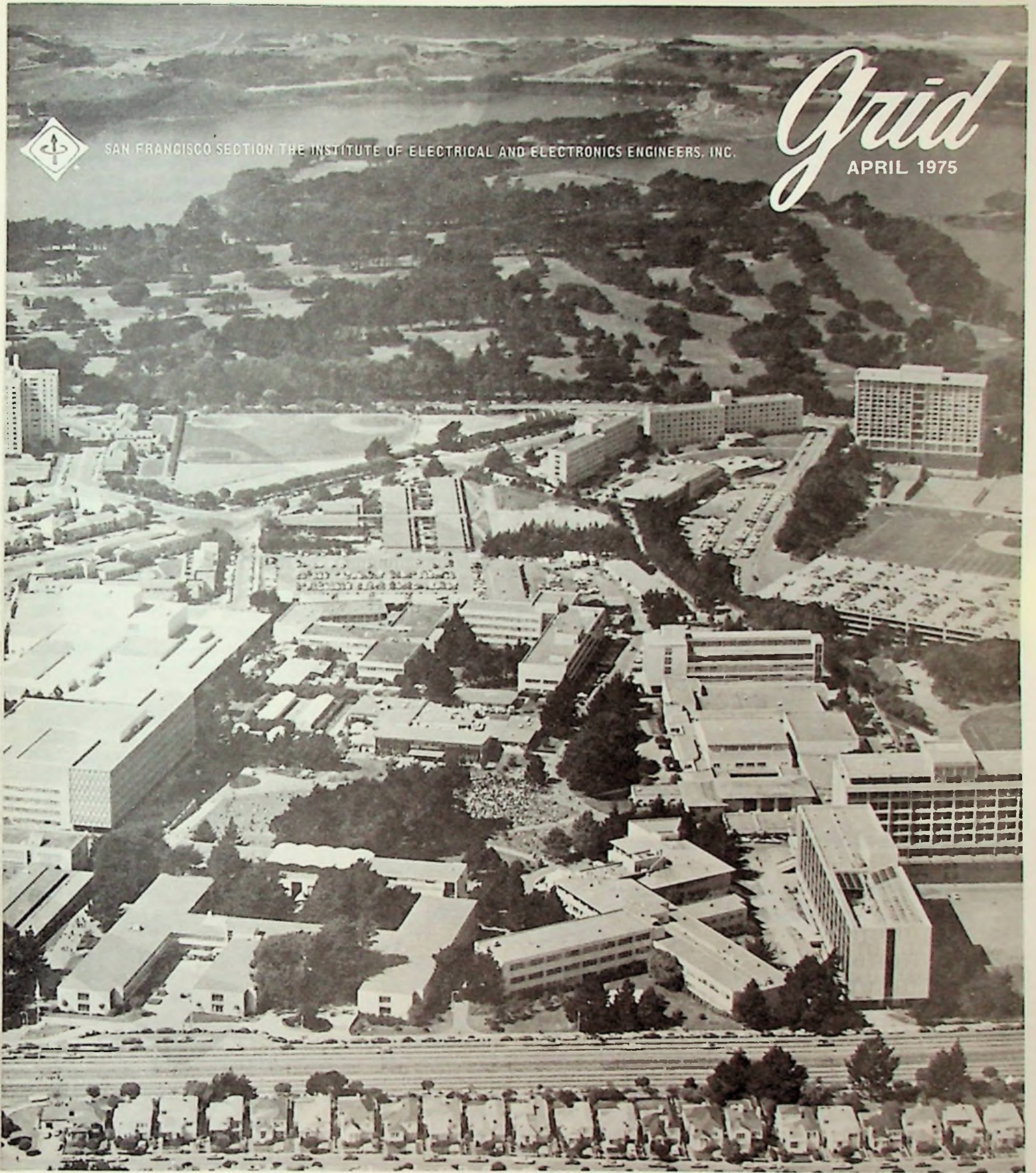
Contact [p.wesling@ieee.org](mailto:p.wesling@ieee.org)



SAN FRANCISCO SECTION THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

# *Grid*

APRIL 1975



**COUNCIL FIRST ANNUAL TECHNICAL SYMPOSIUM - PAGE 4E**  
**MINICOMPUTER/REALTIME OPERATING SYSTEMS TUTORIAL - PAGE 4C**  
**INTERNATIONAL CONFERENCE ON COMMUNICATIONS SYMPOSIUM - PAGE 4G**  
**EMPLOYMENT REFERRAL SERVICES - PAGE 2**  
**PLEASE VOTE — COUNCIL BALLOTS ON PAGE 5**



volume 21  
number 7

APRIL 1975

Published monthly except June, July,  
August and December by San Francisco Section  
Institute of Electrical and Electronics Engineers

**EDITORIAL BOARD**

E.D. Jackson, PTT Corp.  
R.J. Whittier, Intel Corp.  
R.W. Anderson, Hewlett-Packard Corp.  
B.R. Baarts, PG&E Co.

**EDITOR**

E.W. Morris  
4050 Valente Court  
Lafayette, California 94549  
(415) 283-8260

Address all mail except address change to  
**San Francisco Section Office, IEEE**  
Suite 2210, 701 Welch Road  
Palo Alto, California 94304  
**Telephone: (415) 327-6622**

Jean Helmke, Office Manager  
1974-75 San Francisco Section Officers  
Chairman: E.D. Jackson  
Vice Chairman: R.J. Whittier  
Secretary: R.W. Anderson  
Treasurer: B.R. Baarts

Members send address change promptly to  
IEEE, 345 East 47th St., New York, N.Y. 10017  
Telephone: (212) 752-6800

Second Class Postage paid at Palo Alto, California

**SUBSCRIPTIONS**  
\$4.00 per annum

**JOINT RAILROAD TECHNICAL CONFERENCE**

**Jack Tar Hotel - San Francisco**  
**April 15-17**

Information: Malcolm Gaddis, c/o  
Southern Pacific Company, San Fran-  
cisco. Phone: 362-1212 Ext. 21711.

**EDITOR'S OMISSION**

The "Workshop on Microcomputers  
Advanced Architecture and Applica-  
tions", April 30 - May 1, at Asilomar,  
described on page 5 of the March GRID,  
is being presented jointly by the Western  
Area Committee, and the Technical  
Committee on Computer Architecture,  
of the IEEE Computer Society.

For information, contact Don Senzig,  
Hewlett-Packard Laboratories, 1501  
Page Mill Road, Palo Alto, CA 94304.  
Telephone: (415) 493-1501.

**PAC - NEW PROFESSIONAL ENGINEER OPENINGS**

**PROFESSIONAL ACTIVITIES COMMITTEE  
IEEE EMPLOYMENT REFERRAL SERVICES**

IEEE members seeking a new position  
may obtain current lists of job openings  
by sending a self-addressed stamped set  
of #10 (business size) envelopes to:  
IEEE Employment Services, 701 Welch  
Road, Suite 2210, Palo Alto, CA 94304.

The job openings list will be up-dated and  
mailed bi-weekly. A limit of 4 envelopes  
is requested at one time. Confidentiality  
will be maintained. The mailed job listings  
represent the priority needs of em-  
ployers.

Unemployed non-member EE's also may  
obtain job listings by payment of \$20  
(\$40 if employed). This payment will  
apply toward IEEE membership and in-  
clude all benefits.

The IEEE Employment Services also has  
at its office a list of Bay Area employers,  
resume forms and brochures, with help-  
ful hints for obtaining and conducting job  
interviews.

IEEE members are urged to bring this  
service to the attention of their employers  
and personnel departments. Employers  
desiring to list openings, please send job  
description with a check for \$35 per job  
listed, to the above address. A listing will  
receive four mailings at 2-week intervals.

At its monthly meeting on February 12,  
1975 the California Board of Registration  
for Professional Engineers voted 5 to 3 in  
favor of opening up a new classification  
called "Professional Engineering Special-  
ist." These "specialist" categories are  
Traffic, Safety, Quality, Nuclear, Manu-  
facturing, Fire Protection, Corrosion,  
Agricultural, and Control Systems  
Engineers.

Privately, your PAC representative to that  
meeting was assured that EE's working in  
servo systems, automation, and certain  
biomedical work would "certainly" qualify  
as Control System Engineers.

Until January 1, 1977 no examination is  
required (grandfather clause). To apply,  
write to the Board of Registration for  
Professional Engineers, 1021 O St.,  
Room A-102, Sacramento, CA 95814  
and ask for an application and a list of  
requirements for the specialist classifica-  
tion you desire.

It is important to note that none of these  
new classifications will allow you to  
practice civil, electrical, or mechanical  
engineering as defined in the Profes-  
sional Engineers Act. They are what is  
called title protection categories as  
separate from practice protection.

\* \* \* \* \*

The next meeting of PAC, San Francisco  
Section will be in Oakland at 7:30 PM on  
Monday, April 21, 1975 at the PG&E  
Service Center, 4801 Oakport St., Oak-  
land (High St. exit off Rt. 17), and is open  
to all IEEE members.

**WESCON75**  
Electronics in the next thousand days  
Sept 16-19, Brooks Hall/Civic Auditorium, San Francisco

**INTERNATIONAL CONFERENCE  
ON COMMUNICATIONS**

**Fairmont Hotel - San Francisco**  
**June 16 - 18, 1975**

The Eleventh Annual International  
Conference on Communications  
(ICC'75) is scheduled for June 16 -18  
at San Francisco's historic and beauti-  
ful Fairmont Hotel. Technical sessions  
will span the spectrum from wire  
transmission through satellite com-  
munications. Arrangements have been  
made for exhibits.

A more detailed announcement is  
included in this issue on page 4G, but  
if additional information is desired,  
address ICC'75, P.O. Box 77191, San  
Francisco CA, 94107, or contact Harry  
Lewenstein, Farinon Electric (415)  
593-8491, or Tom Rigoli (415) 948-  
4843.

**LAST CALL**

**The May Issue of the GRID is the last  
until September. Deadline for May-  
June news is March 31, IN THE  
OFFICE!!!**

**BUT WHAT HAVE YOU  
DONE FOR US LATELY?**

The Santa Clara Valley Section officers  
will host a meeting on April 9th to discuss  
what the new Section plans to do for its  
members. The approximately 6000  
members pay annual dues of \$210,000  
to the IEEE. What are we doing with the  
money? Are we spending it the way you  
think we should? Now is the time to make  
yourself heard. See the meeting calendar  
for details.

# IEEE MEETING CALENDAR

## AEROSPACE & ELECTRONIC SYSTEMS SOCIETY APRIL 17

Story on Page 4F

**HIGH-POWER TRAVELING WAVE TUBES.** Dr. J.A. Ruetz, Sr. Engrg. Mgr., Varian Associates - Microwave

APRIL 17, Thursday, 8:00 PM, Philco-Ford Auditorium, 3825 Fabian Way, Palo Alto. No dinner.

## ANTENNAS & PROPAGATION SOCIETY APRIL 10

Story on Page 4F

**RADIO ASTRONOMY AT THE SHORTEST RADIO WAVELENGTHS.** Dr. Williams J. Welch, Director of Radio Astronomy, UC, Berkeley. ANNUAL EAST BAY MEETING.

APRIL 10, Thursday, 8:15 PM, Hughes Room (Room 421), Cory Hall, UC Berkeley Campus. Cocktails at 6:30 and dinner at 7:00 PM at Oleg's, 1974 Shattuck Ave., Berkeley. Reservations: Dr. Fred Tesche (415) 845-5019 by April 8th.

## COMPUTER SOCIETY APRIL 16

Story on Page 4

**ELECTRONIC GAMES: A TUTORIAL** Allan Alcorn, Vice Pres. of Engineering, AT&T Inc SPOUSES NIGHT

APRIL 16, Wednesday, 8:00 PM, University of Santa Clara Daly Science Center. Cocktails at 6:15 and dinner at 7:00 PM at Benson Parlors at Benson Center, University of Santa Clara, corner of the Alameda & Santa Clara Sts. Reservations: Stan Conway, (408) 742-2450 before noon, April 14th.

## OAKLAND-EAST BAY/ SAN FRANCISCO SECTIONS APRIL 23

Story on Page 4C

**DISCRETIONARY TELECOMMUNICATIONS FUTURES.** Dr. Dean Gillette, Executive Director, Systems Research Division, Bell Telephone Laboratories

APRIL 23, Wednesday, 8:00 PM, Engineers Club of San Francisco, 160 Sansome St., S.F. Cocktails 6:00 PM, dinner 7:00 PM. Reservations: Leon Glahn (415) 764-4067 or Jim St. Arnaud (415) 542-4974 by April 20th.

## ELECTROMAGNETIC COMPATIBILITY APRIL 16

Story on Page 4F

**BASE BAND DATA TRANSMISSION AND NEW INTERFACE STANDARDS.** Ken True, Fairchild

APRIL 16, Wednesday, 8:00 PM, Rick's Swiss Chalet, 4085 El Camino Way, Palo Alto. Cocktails at 6:00 and dinner at 6:45 PM. Reservations: Vic Turesin (408) 742-5336 by April 16th.

## ENGINEERING IN MEDICINE & BIOLOGY APRIL 23

## ELECTION OF OFFICERS FOR 1975-1976.

APRIL 23, Thursday, 8:00 PM, Stanford Medical Center Room M-110. Dinner 6:30 PM at Stickney's, Embarcadero at El Camino, Palo Alto. No reservations.

## INDUSTRY APPLICATION SOCIETY APRIL 22

Story on Page 8

## PROGRAMMABLE CONTROLLERS.

Ken Anthony, Allen Bradley Co.

APRIL 22, Tuesday, 7:30 PM, Four Seas Restaurant, 731 Grant Ave., San Francisco. Cocktails at 6:00 and dinner at 6:30 PM. Reservations: Moon Yuen (415) 764-4067 by April 21st.

## MICROWAVE THEORY & TECHNIQUES APRIL 17

Story on Page 4C

## PRESENTATION: DESIGN OF A VARACTOR DIODE FREQUENCY DIVIDER FOR MICROWAVE AND MILLIMETER WAVE APPLICATIONS.

Ashok K. Gorwara, SRI.

APRIL 17, Thursday, 8:00 PM, SRI Building 44 - Laurel St., Menlo Park. No dinner.

## POWER ENGINEERING SOCIETY APRIL 8

Story on Page 4C

## FIELD TRIP - RAYCHEM CORPORATION'S MANUFACTURING FACILITY, USE OF DIELECTRICS IN THE ELECTRIC POWER INDUSTRY.

APRIL 8, Tuesday, 7:00 PM, Raychem Corp., 300 Constitution Drive, Menlo Park. No dinner. Reservations for tour: Carol Franke (415) 781-4211 Ext. 1442 by April 7th.

## RELIABILITY APRIL 16

Story on Page 4

## FAILURE MECHANISMS 1 - VOIC MODEL FOR METAL MIGRATION, FRACTURE, STRESS CORROSION AND EARTHQUAKES.

Dr. Robert G. Stewart, Stewart Research Enterprises.

APRIL 16, Wednesday, 8:00 PM, PH 101, Physics Lecture Hall, Stanford University. Cocktails and dinner at 6:00 PM, Stickney's, Embarcadero & El Camino, Palo Alto. Reservations: Section Office: (415) 327-6622 by noon April 16.

## SANTA CLARA VALLEY SECTION APRIL 9

Story on Page 2

## BUT WHAT HAVE YOU DONE FOR US LATELY? New Section Officers will explain purpose of reorganization.

APRIL 9, Wednesday, 7:30 PM, Pacific Telephone Training Center, 196 W. St. John St., San Jose. No dinner.



## MEMBERSHIP APPLICATION

• Mail application to: IEEE SERVICE CENTER  
445 Hoes Lane, Piscataway, New Jersey 08854

Full signature \_\_\_\_\_ Date \_\_\_\_\_

Date of birth \_\_\_\_\_  Male  Female

Were you ever a member of IEEE?  Yes  No

### PRINT NAME AND ADDRESS for IEEE MAIL

First name \_\_\_\_\_ Middle initial(s) \_\_\_\_\_ Last name \_\_\_\_\_

Street address \_\_\_\_\_

City \_\_\_\_\_ State/Country \_\_\_\_\_ Zip code \_\_\_\_\_

### EDUCATION (Highest level completed)

Name of educational institution \_\_\_\_\_

Course \_\_\_\_\_ Degree received \_\_\_\_\_ Date \_\_\_\_\_

### ENDORSEMENT (Name one individual, preferably an IEEE member, who knows you professionally.)

Name (Please print full name) \_\_\_\_\_

Entrance Fee and Membership Dues.....\$ \_\_\_\_\_

Enrollment in Groups/Societies (use codes).....\$ \_\_\_\_\_

Codes; \_\_\_\_\_

Subscription to *Proceedings of the IEEE*.....\$ \_\_\_\_\_

TOTAL AMOUNT PAID WITH APPLICATION.....\$ \_\_\_\_\_

PAY THE FOLLOWING AMOUNTS ON APPLICATIONS RECEIVED IN IEEE DURING THE PERIOD  
MARCH 1-AUGUST 31:

\$22.50 for applicants residing in the U.S. and Canada

\$20.00 for applicants residing elsewhere

Pay one-half of annual fee for optional items, such as Group/Society membership, subscription to PROCEEDINGS, etc.

NOTE: The \$5.00 entrance fee is included in all of the above amounts

## SAN FRANCISCO IEEE MEMBERS APPOINTED TO NATIONAL AND REGIONAL IEEE OFFICES



**C.A. (Bud) Eldon**, past chairman of the San Francisco Section has been appointed chairman of the Budgets Committee of the IEEE. The appointment was made by Burke Schneider, the IEEE Treasurer. In this position, Bud will develop and recommend the annual budget; monitor and measure operational and financial performance; plan, advise, and forecast capital and cash needs of the Institute and other major responsibilities. Bud has been an active member of the San Francisco Section (now the Bay Area Council) for several years holding elective and appointive offices.



**Byron Thinger**, professor and student counselor at the San Francisco State University has been appointed Chairman, Student Activities Committee of the IEEE. The Student Activities Committee is responsible for all policy and programs relating to over 22,000 student members and 430 student branches of IEEE. Professor Thinger served as Chairman of the Region Six Student Activities Committee for 1974. He has been a great promoter of the IEEE at the University over the years.



**Hadi Monsef**, past chairman of the East Bay Subsection has been appointed Secretary of the Region Six for 1975. The appointment has been made by Carl Bayless Region Six Director. Hadi is also serving as Public Relations and Publicity Chairman for the San Francisco Bay Area Council and is active in several committees of the IEEE Power Engineering Society, San Francisco Chapter. Hadi is an Engineering Supervisor with Bechtel Power Corp., San Francisco.

# WESCON 75

### VOID MODEL FOR METAL MIGRATION, FRACTURE, STRESS CORROSION, AND EARTHQUAKES

The Reliability Group will see and hear a presentation by Dr. Robert G. Stewart of Stewart Research Enterprises on a void migration model for electromigration, metal migration, fracture, fatigue, stress corrosion, and (would you believe it) earthquakes. The model is based on the effects of electric and mechanical stress fields upon vacancies in the atomic lattice of the materials.

Stress concentrations in the earth at fault zones, according to Dr. Amos Nur of Stanford, can result in enhanced scattering of the longitudinal sound velocity because of the formation of voids. Ground water then fills the voids, the sound velocity returns to normal, and the earthquake occurs. The void migration model explains why this sequence happens.

Dr. Stewart has been head of Stewart Research Enterprises for 5 years doing contract R&D, engineering, and consulting work. He holds A.B. and M.S. degrees from the University of Illinois, Ph.D. from Illinois Institute of Technology, is a member of Sigma Xi, the American Physical Society, and a Senior Member of the IEEE.

### ELECTRONIC GAMES TUTORIAL

The Computer Society April meeting will feature a presentation on electronic games by Allan Alcorn of Atari. Live demonstrations of the latest products will be held. This meeting will be of exciting interest to both men and women, especially if they like to play games.

Although electronic games are all around us, their inner workings are a mystery to most computer engineers. Allan Alcorn will present the basics of the emerging industry.

- Design Philosophy - Tradeoffs between analog, digital and micro-processor approaches.
- Fundamentals of videographics.
- Game selection - The ones engineers like are not commercial.
- Design lifetime - Typically 18 months.
- Cost objectives - Must return production costs in 6 months.
- Speculation of the future - Games at home?

Allan Alcorn is the inventor of PONG and is co-founder and Vice-President of Engineering at Atari. He holds a BSEE from U.C. Berkeley.

### POWER ENGINEERING SOCIETY 1975 SUMMER MEETING

San Francisco - July 20-25  
San Francisco Hilton Hotel  
The theme?

"Tomorrow's Energy-Today's  
Concern"

General Chairman Chuck (C.H.) Sedan announces that plans are well under way for a varied and stimulating week of technical sessions, inspection trips, luncheons and special events.

The aim is to provide a well-rounded program with something of interest to all participants. Special emphasis is being given to the latest developments in the specialties that are vital to all professional levels in today's power system technology. An estimated 130-140 technical papers will be presented in parallel sessions throughout the week. A number of papers by foreign authors will be included.

Because of the wide diversification of equipment requirements in today's power systems, this meeting will be of interest to other IEEE Group/Society members and guests.

# NBS QUESTIONNAIRE FOR USERS OF WWV, WWVH SERVICES

NBS/BL-97

Form Approved  
OMB No. 41-574125  
REVISED

1. TO WHAT EXTENT DO YOU USE THE FOLLOWING FREQUENCIES?

	<u>FREQUENTLY</u>	<u>SOMETIMES</u>	<u>RARELY</u>	<u>NEVER</u>
2.5 MHZ				
5				
10				
15				
20				
25				

2. HOW IMPORTANT ARE THE FOLLOWING FREQUENCIES FOR YOUR OPERATION?

	<u>VERY IMPORTANT</u>	<u>SOMEWHAT IMPORTANT</u>	<u>RELATIVELY UNIMPORTANT</u>	<u>VERY UNIMPORTANT</u>
2.5 MHZ				
5				
10				
15				
20				
25				

3. HOW OFTEN DO YOU USE THE FOLLOWING?

	<u>FREQUENTLY</u>	<u>SOMETIMES</u>	<u>RARELY</u>	<u>NEVER</u>
WWV				
WWVH				
TELEPHONE NO. (303) 499-7111				

4. HOW OFTEN DO YOU EXPERIENCE HARMFUL INTERFERENCE BETWEEN NBS BROADCASTS AND OTHER TIME/FREQUENCY TRANSMISSIONS?

CHECK ONE:

NEVER   
  SELDOM   
  OFTEN   
  FREQUENTLY

5. IN WHAT APPROXIMATE GEOGRAPHICAL AREA DO YOU MAKE USE OF

WWV/WWVH SIGNALS? \_\_\_\_\_

6. TO WHAT EXTENT DO YOU USE THE FOLLOWING INFORMATION?

	<u>FREQUENTLY</u>	<u>SOMETIMES</u>	<u>RARELY</u>	<u>NEVER</u>
TIME OF DAY; VOICE				
TIME OF DAY; BCD CODE				
ONE-SECOND TICKS				
STANDARD FREQUENCY				
DUT 1 VALUES				
WEATHER				
GEOALERTS				
PROPAGATION FORECASTS				

7. HOW IMPORTANT FOR YOUR OPERATION IS EACH OF THE FOLLOWING CATEGORIES OF INFORMATION AS SUPPLIED BY WWV/WWVH?

	<u>VERY IMPORTANT</u>	<u>SOMEWHAT IMPORTANT</u>	<u>RELATIVELY UNIMPORTANT</u>	<u>VERY UNIMPORTANT</u>
TIME OF DAY; VOICE				
TIME OF DAY; BCD CODE				
ONE-SECOND TICKS				
STANDARD FREQUENCY				
DUT 1 VALUES				
WEATHER				
GEOALERTS				
PROPAGATION FORECASTS				

8. HOW WOULD YOU CHARACTERIZE THE SIGNAL WHICH IS TYPICAL FOR YOU?

	<u>MORE THAN ADEQUATE</u>	<u>ADEQUATE</u>	<u>MARGINAL</u>	<u>USELESS</u>
SIGNAL STRENGTH				
ACCURACY OF TIME AND/OR FREQUENCY				

(OVER)

U.S. DEPARTMENT OF COMMERCE  
National Bureau of Standards  
BOULDER COLORADO 80302

OFFICIAL BUSINESS

Penalty for Private Use, \$300

POSTAGE AND FEES PAID  
U.S. DEPARTMENT OF COMMERCE  
COM-215



*National Bureau of Standards  
Time and Frequency Division  
Boulder, Colorado 80302*

9. PLEASE CHECK THE CATEGORIES IN THE TWO LISTS BELOW WHICH MOST ACCURATELY CHARACTERIZE YOUR USE OF NBS FREQUENCY AND TIME SERVICES.

USER CLASSIFICATION

- GOV'T; MILITARY
- GOV'T; CIVILIAN
- EQUIP. MANUFACTURING
- NAVIGATION
- AVIATION/AEROSPACE
- TELEPHONE INDUSTRY
- ELECTRIC POWER INDUSTRY
- STANDARDS LAB
- SHIPPING/BOATING INDUSTRY
- PLEASURE BOATING
- UNIVERSITY
- COMMUNICATIONS INDUSTRY
- SEISMOLOGY/GEOPHYSICS
- OTHER (PLEASE SPECIFY):  
\_\_\_\_\_  
\_\_\_\_\_

PRINCIPAL USE

- HOBBY (OTHER THAN AMATEUR RADIO)
- AMATEUR RADIO
- CALIBRATION OF WATCHES/CLOCKS
- NAVIGATION/POSITION LOCATION
- COMMUNICATIONS SYSTEMS
- SCIENTIFIC DATA MONITORING
- INSTRUMENT CALIBRATION
- ROCKET/SATELLITE TRACKING
- STORM WARNINGS
- GEALERTS
- PROPAGATION FORECASTS
- ASTRONOMY
- OTHER (PLEASE SPECIFY):  
\_\_\_\_\_  
\_\_\_\_\_

10. ARE THERE OTHER SERVICES WE SHOULD ADD? YES  NO  IF YES, WHAT SERVICES?  
\_\_\_\_\_  
\_\_\_\_\_

11. DO YOUR RESPONSES TO THE ABOVE OFFICIALLY REPRESENT MORE THAN YOUR OWN PERSONAL INVOLVEMENTS? YES  NO

IF YES, PLEASE EXPLAIN \_\_\_\_\_  
\_\_\_\_\_

12. COMMENTS:

## DISCRETIONARY TELECOMMUNICATIONS FUTURES



The San Francisco and Oakland-East Bay Sections will hold a joint meeting on April 23 to hear Dr. Dean Gillette discuss how "Discretionary Telecommunications" carry personal messages over channels that connect a few users together at a time of their choice. The most readily available discretionary communications services are obviously those provided by today's telephone network. When we look to the future, we see that new service opportunities will be created by the introduction of new technology in such fields as broadband transmission, image sensing, graphical and animated displays, and information storage. A possible line of evolution of conferencing systems is a convenient way of describing potential application of emerging technologies.

Dean Gillette is Executive Director of the Systems Research Division at Bell Laboratories, Holmdel, New Jersey. He received his B.S. degree in chemistry in 1948 from Oregon State College, and his M.A. and Ph.D. degrees in mathematics from the University of California in 1950 and 1953, respectively. He joined Bell Labs in 1953, and was appointed Executive Director of the Transmission Systems Engineering Division in 1966, and assumed his present position in 1971.



### CALL FOR PAPERS

National Telecommunications Conference

New Orleans - December 1-3, 1975

Deadline: May 1, 1975

Paper and Summary

"Communications, Nucleus of a Nation"

Information: I.N. Howell, Jr.

South Central Bell Telephone Co.

P.O. Box 771

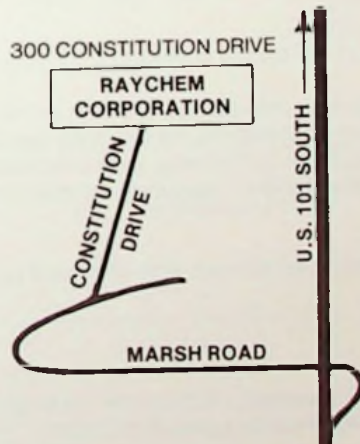
Birmingham, Alabama 35201

## PES - TECHNICAL PRESENTATION ON USE OF DIELECTRICS IN THE ELECTRIC POWER INDUSTRY, AND TOUR OF RAYCHEM CORP'S MANUFACTURING FACILITIES

The Power Engineering Society has made plans with the Raychem Corporation on Tuesday evening, April 8, 1975, for a technical presentation on the use of dielectrics in the electrical power industry, followed by a walking tour of their test, development, and manufacturing facilities.

Raychem Corporation is a manufacturer of heat shrinkable polymeric materials and provides the electric energy industry with a wide range of products operating in the 5-110 kv region. Major topics of the technical presentation will cover the use, selection, and durability of dielectric materials when used at high voltages. Other topics include discussion on thermal stability, leakage currents, tracking conditions, and UV stability and durability versus operating stresses. It will include witnessing the various types of tests performed by the manufacturer during the design, development, and manufacturing stages of its products.

The program will originate at the Raychem Corporation's manufacturing facility located at 300 Constitution Drive, Menlo Park, California. The program will begin at 7:00 PM and the entire presentation is estimated to last approximately one hour and forty-five minutes. Tour space is limited and reservations are required. Reservations and information on transportation to Raychem can be obtained by calling Carol Franke at 781-4211, Ext. 1442, no later than April 7.



## VARACTOR DIODE FREQUENCY DIVIDER



Ashok Gorwara will follow up his well-received January presentation to the Microwave Theory and Techniques Society with a discussion of a varactor diode frequency divider at the April 17th meeting. Basic principles, method of operation and design details will be presented, and the theoretical transient analysis will be introduced briefly. The design and performance of a divider operating in the 3 to 4 GHz range will be shown using broadband complementary diplexer techniques. The response of a divide-multiply cascade pair to a high power FM signal will be treated, along with the test instrumentation used to measure transient responses and FM signal distortion.

Mr. Gorwara is presently project leader in charge of research and development of microwave and millimeter wave sub-systems using planar techniques in the Electromagnetic Techniques Laboratory at Stanford Research Institute. He has the BSEE and MSEE from London University and has completed Ph.D. course work at Northwestern University.

## JACK A. MORTON AWARD ON SOLID STATE DEVICES

A new IEEE Award has been established for outstanding contributions in the field of Solid-State Devices - the JACK A. MORTON AWARD. It will consist of a medal, a certificate and an honorarium of \$1,000 and is being sponsored by the friends of Dr. Morton.

The due date for receipt of nominations is April 1, the same deadline for the other IEEE Field Awards. Nomination forms can be obtained from the Staff Secretary of the Awards Board, IEEE Headquarters.

It is most important that recognition is given to those who have contributed greatly to our profession. This is another opportunity for you to help those receive the recognition they so richly deserve.

# TUTORIAL

## MINICOMPUTER/REALTIME OPERATING SYSTEMS

presented by

The San Francisco IEEE Council  
Educational Committee

Saturday April 29, 1975      9:00 AM - 5:00 PM

at the

**Bold Knight Restaurant**  
769 No. Matilda, Sunnyvale, California

**Nationally known lecturer:**  
**Dr. J.D. Schoeffler**  
Systems Research Center  
Case Institute of Technology  
Case Western Reserve University  
Cleveland, Ohio

### For Whom the Course is Intended

This course has been designed to familiarize the practicing engineer with minicomputer hardware and software characteristics which affect real-time applications.

### Course Abstract

Of central importance to the economic realization of minicomputer applications is the real-time executive. Applications such as data acquisitions, process control and communications are discussed to identify their needs in a real-time executive. The main element of these executives discussed include memory management, scheduling, data structuring and file handling, interprogram communication, and control structures. The characteristics of any real-time executive are mainly determined by the selection of alternatives for the realization of each of these elements.

Various real-time executives are discussed from this point of view with emphasis on the way the choice of design of the various key elements affect the application of the system.

### Fee

The fee for this one-day tutorial is \$50.00 for IEEE Members; \$25.00 for IEEE Student Members, showing a student card; and \$75.00 for non-members of the Institute. The payment of fee includes a luncheon.

### For further details contact:

Dr. D.T. Magill  
Stanford Research Institute  
Building 306-A  
333 Ravenswood Avenue  
Menlo Park, California 94025  
Phone: (415) 326-6200 Ext. 2664

The Section Office  
or  
(415) 327-6622

# FIRST ANNUAL TECHNICAL SYMPOSIUM

Presented by the

## SAN FRANCISCO IEEE COUNCIL

**Saturday May 17, 1975  
9:00 AM - 3:00 PM  
San Francisco State University**

There will be nine sessions, three held concurrently and each will be devoted to selected programs of interest to all IEEE members.

The topics and speakers include:

- 1) Nuclear Power-speaker Mr. Paul Schmidz, Chief Nuclear Engineer, Bechtel Thermal Power Organization
- 2) Microprocessors Overview and Outlook-speaker Mr. Rudolph Panholzer U.S. Naval Post Graduate School, Monterey.
- 3) Trends in Communication Facilities-speaker Mr. Fred Doelt, Pacific Telephone, San Francisco
- 4) Geothermal Power-speaker Mr. John Finney of Pacific Gas and Electric Company
- 5) Energy Crisis-Sources and Economics -speaker Mr. Edwin L. Ekholm, manager of Energy Planning, Bechtel Corporation

Other subjects including Micro and Mini Computers, Telecommunication and Computers have been scheduled and the speakers will be announced in the May GRID.

A special series of outstanding manage-

ment films will be presented during the entire program. These films will cover areas such as management by objective, motivation and productivity and the effective executive.

The luncheon speaker (to be announced) will brief all on the new laws affecting engineers.

There will be a \$20 registration fee which will include the cost of the luncheon and coffee and doughnuts.

Please pre-register in advance by sending the following registration form to the Council office with your check for the registration fee. Registration deadline, May 7, 1975.

Information:

Dr. D.T. Magill  
Stanford Research Institute  
333 Ravenswood Avenue  
Menlo Park, CA 94025  
(415) 326-6200 Ext. 2664

or

Hadi Monfey  
Bechtel Power Corp.  
P.O. Box 3965  
San Francisco, CA 94119  
(415) 768-1786

Cut on dotted line and mail:

### Registration Form

Name \_\_\_\_\_

Address \_\_\_\_\_

Company \_\_\_\_\_

Phone Bus. \_\_\_\_\_ Home \_\_\_\_\_

Registration Fee \$20 (members), \$30 (non-members)  
Students: Pay \$5.00 for luncheon only.

Mail to:

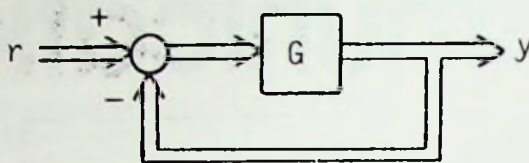
S.F. Bay Area Council of IEEE, Suite 2210  
701 Welch Road  
Palo Alto, CA 94304

# APPLIED SYSTEMS CORPORATION

Short

Course

on:



## MULTIVARIABLE CONTROL SYSTEMS

Dates and Location: Choice of either June 23-27, 1975 or October 20-24, 1975. Sheraton-Harbor Island Hotel, San Diego, California.

Fee: \$300 which includes copy of text and notebook containing lecture Vue-Graphs.

Lecturers: D. L. Alspach, J. S. Meditch and H. W. Sorenson of Applied Systems Corporation.

Scope: A five-day intensive short course devoted to the formulation, interpretation and illustration of modern analytical and computational techniques for the analysis and synthesis of feedback control systems for multi-input/multi-output dynamic processes.

Content: System fundamentals, modeling and representation / Multivariable control problem formulations / Optimal control and state reconstruction / Regulation, tracking, disturbance rejection, sensitivity, and effects of nonlinearities / Proportional-integral-derivative controls and multi-variable servomechanisms. Examples used throughout include aircraft autopilot design, power system turbine-generator control, chemical reactor control, and steel mill operation.

Text: H. Kwakernaak and R. Sivan, "Linear Optimal Control Systems," Wiley-Interscience, New York, 1972, and supplementary notes.

For additional information and registration materials write:

Applied Systems Corporation  
P.O. Box 22113  
San Diego, California 92122

Please indicate preference of dates.

This course is also available for on-site presentation. Inquiries are welcome.

# 1975 INTERNATIONAL MICROWAVE SYMPOSIUM

"MICROWAVES  
IN SERVICE  
TO MAN"

The San Francisco Chapter of MTT-S will be host to the 1975 International Microwave Symposium to be held May 12-14, 1975, at Sierra's Hyatt House in Palo Alto, California. This year's symposium steering committee has been chaired by E. Wesley Matthews of Philco-Ford Corporation. Coordination of the technical program, inclusive of over 120 original papers, has been handled by the Symposium Technical Program Committee, chaired by Stephen F. Adam of Hewlett-Packard Company. During the symposium, a special Japanese session will be presented, with the cooperation of the Tokyo MTT Chapter. Professor Shigebumi Saito of the Institute of Industrial Sci-

ences at the University of Tokyo has organized the session, and specially Mr. Masao Wada is accompanying him to Japan.

In addition to the technical portion of the program there will be entertainment including a golf tournament, cocktail party, and a banquet in the evening. The keynote address will be given by H.W. Cooper, President of MTT-S Administrative Committee. At the banquet, Professor Pitt of the University of Colorado, College of Music, will present a musical interlude featuring the MTT-S Symposium. The following awards will be presented at the banquet: Microwave Prize to Charles A. Lee and Robert L. Tillman of Penn-

sylvania; Best Paper Award to Dr. Leo Young of Stanford University; and Best Student Paper Award to Dr. Leo Young of Stanford University.

For more information on this symposium, contact the MTT-S San Francisco Chapter, 1000 California Street, Suite 1000, San Francisco, California 94109. Telephone (415) 774-1100.

## CONDENSED SCHEDULE OF EVENTS

### Monday, May 12

- 0703-1600 Registration - Parkway Hyatt House  
0830-0915 Welcoming Remarks - E.W. Matthews, Chairman, Symposium Steering Committee  
Keynote Address - H.W. Cooper, President, MTT-S Administrative Committee  
0915-1700 Exhibits - Everyday, next to session rooms  
0915-1200 1. Microwaves in Earth Sensing - Room B, Kiyo Tomiyasu  
2. Microwaves in Communication - Room A, C. Ryan  
3. Microwave Filters and Components - Room C, E.G. Cristal  
1330-1700 4. Microwave Generation and Amplification - Room B, K. Kennedy  
5. Microwave Measurements - Room A, R.W. Beatty  
6. Microwave Filters and Components II - Room C, R. Levy  
2000-2200 7. Professional Action Panel - Room B, Dr. Leo Young  
0930-1800 Social Program - San Francisco, Golden Gate Bridge, Muir Woods, Sausalito, Lunch at Chinatown

### Tuesday, May 13

- 0830-1200 8. Microwave Integrated Circuits - Room B, Martin Caulton  
9. Technology Forecasting Panel - Room A, W. Cooper and A. Calvin  
10. Microwave Control Devices - Room C, J. White  
1330-1700 11. Computer Aided Microwave Practices - Room B, R. Hall  
12. Millimeter Wave Communications in Japan - Room A, Invited Session S. Saito and S. Okamura  
13. Microwave Ferrite Control Devices - Room C, E. Whicker  
1900-1900 Social Program - Stanford University, Lunch at Allied Arts, Menlo Park  
1900 Cocktails - Adobe Creek Lodge, Los Altos  
1930 Banquet - Adobe Creek Lodge, Los Altos

### Wednesday, May 14

- 0830-1200 14. Microwave  
1330-1700 15. Microwave  
1900-1900 Social Program  
1930 Banquet

PLAN EARLY TO ATTEND . . . MAIL FORM NOW!

See next page for registration form.

# 1975 INTERNATIONAL MICROWAVE SYMPOSIUM

"MICROWAVES IN SERVICE TO MAN"

PALO ALTO, CALIFORNIA, MAY 12-14, 1975

## SYMPOSIUM COMMITTEE:

CHAIRMAN E.W. Matthews	TECHNICAL PROGRAM Stephen Adam Louis Cuccia	DIGEST EDITOR Jack Lepoff	EXHIBITS AND DIGEST LISTING Don Weller Jay Stone Marv Waldman	SOCIAL PROGRAMS Sallie Lepoff
VICE CHAIRMAN Don Parker	LOCAL ARRANGEMENTS Doug Gray Don Chambers	PUBLICITY R. Ruttenberg		MEMBERS AT LARGE Dodge Angelakos Bertram Auld Peter Lacy Charles Susskind
SECRETARY R. Bathiany		FINANCE D. Messner		

	Pre-registration	Late Registration
IEEE Members	\$30	\$40
Non-Members	\$40	\$50
Authors	\$25	\$25
Students	\$10	\$10

Banquet price will be \$12.00 per plate. Ticket sales for the banquet will end Monday noon (May 12). Dinner will be a barbeque at Adobe Creek Lodge.



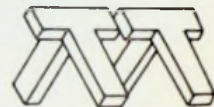
IEEE

### Make checks payable to:

1975 INTERNATIONAL  
MICROWAVE SYMPOSIUM

Forward this form together with remittance to:

1975 MTT-S International Symposium  
% DON MESSNER, MTTs  
Symposium Finance Chairman  
Aertech Industries  
825 Stewart Drive  
Sunnyvale, California, 94086 U.S.A.



MTT-S

## ADVANCED REGISTRATION CARD

1975 IEEE International Microwave Theory and Techniques Society Symposium  
Rickey's Hyatt House, Palo Alto, California U.S.A.

**MAY 12-14, 1975**

Check appropriate boxes	Postmarked by April 21, 1975	After
Registration:		
Member IEEE <input type="checkbox"/>	\$30	\$40
Non-member <input type="checkbox"/>	\$40	\$50

I'M INTERESTED IN  
ATTENDING SOCIAL PROGRAMS

Monday - San Francisco Program  
 Monday - Local Program  
 Tuesday  
 Wednesday

NAME \_\_\_\_\_  
Print or type (Last) (First) (Initial)

MAILING ADDRESS \_\_\_\_\_  
(Number) (Street)

\_\_\_\_\_  
(City) (State) (Zip Code) (Country)

IEEE Member No. \_\_\_\_\_

**DON'T DELAY . . . MAIL TODAY!**

# IEEE SAN FRANCISCO BAY AREA COUNCIL AREA



**San Francisco Section:**

Counties in California:  
 Del Norte Marin San Francisco  
 Humboldt Sonoma Medocino  
 and the Northern part of San Mateo County down to and including Half Moon Bay, Belmont, San Mateo, Foster City, and those County mailing addresses north of Highway 92.

**Santa Clara Valley Section**

Counties in California:  
 Monterey Santa Clara  
 San Benito Santa Cruz  
 and the Southern part of San Mateo County up to and including San Carlos, Redwood City, Woodside, and those County mailing addresses south of Highway 92.

**Oakland - East Bay Section**

Counties in California:  
 Alameda Lake Napa  
 Contra Costa Madera Solano  
 Fresno Mariposa Tulare  
 Kings Merced

Did you save your copy of the February GRID? Chairman Ed Jackson presented an outline of the change from Section to San Francisco Bay Area Council, consisting of three Sections related to areas and industries.

If you wish to be located in a Section other than that shown on the map, this can be arranged by sending two copies of a request to the office in Palo Alto. The second copy is for New York Headquarters, where the change must be made. Do not delay and please do not phone the request for change. Please include your membership number.

It now is time to vote on the nominees for office in each of the three new Sections.

Please mark the correct ballot below, cut out and return the prepaid card ballot. Vote for one candidate for each office in your present area. A space is available for "write-in" candidates.



Cut on dotted line (reverse side) and mail:

## BALLOT OAKLAND-EAST BAY SECTION

For Chairman:

- Dale Johnson, Pacific Gas & Electric Co.  
Oakland

For Vice Chairman:

- Terry Rossow, Lawrence Livermore  
Laboratories

For Secretary:

- Allan Jones, Pacific Gas & Electric Co.  
Oakland

For Treasurer:

- Jas Bhati, Bechtel Power Corp.  
 James Haggmark, Pacific Telephone  
& Telegraph Co., San Francisco

For Professional Activities Chairman:

- Jay Wiedwald, EH Research  
Oakland

## BALLOT SAN FRANCISCO SECTION

For Chairman:

- C.L. Ostrofe, Pacific Telephone &  
Telegraph, Co., San Francisco

For Vice Chairman:

- J. Art Wells, Artwell Electric, Inc.  
San Francisco

For Secretary:

- Fred Doell, Pacific Telephone &  
Telegraph Co., San Francisco

For Treasurer:

- Moon Yuen, Bechtel Corp.  
San Francisco

For Professional Activities Chairman:

- Gerald P. (Gerry) Parsons, Attorney  
San Francisco

## BALLOT SANTA CLARA VALLEY SECTION

For Chairman:

- C.R. Gilliland, Barry Research Corp.  
Palo Alto

For Vice Chairman:

- J.A. Kirtland, FMC Corp.  
San Jose

For Treasurer:

- S.G. Roll, Underwriters Laboratories  
Santa Clara

For Secretary:

- R.W. Haegele, Watkins-Johnson Co.  
Stanford Industrial Park  
 L.D. Test, Generia Electric Co.  
San Jose

For Professional Activities Chairman:

- J.T. Nawrocki, Philco-Ford  
Palo Alto



A.D. Johnson



T.L. Rossow



Allan Jones



Jas. Bhatti



J. Haggmark



J. Wiedwald

A. Dale Johnson for Chairman  
Oakland - East Bay Section

A. Dale Johnson, Division Electric Engineer for PG&E's East Bay Division, Oakland. Graduated from the University of Idaho with a BS, EE in 1959. Has worked since that time for PG&E in various substation and distribution engineering and operating functions. Past Treasurer and current Vice-Chairman of the East Bay Section.

Terry Rossow for Vice Chairman  
Oakland - East Bay Section

Terry Rossow, present Treasurer East Bay Subsection, is an Electronics Engineer for Lawrence Livermore Laboratory. Member of IEEE since 1966. Registered Professional Engineer in California. Member CSPE. BS and MS degrees from San Jose State University.

Allan Jones for Secretary  
Oakland - East Bay Section

Graham Allan Jones received the BS and MS degrees from the University of California, Berkeley. Presently he is employed by Pacific Gas and Electric Company as Diablo District Electric Distribution Engineer in the East Bay Division.

J.S. Bhatti for Treasurer  
Oakland - East Bay Section

Dr. Jaswant S. Bhatti, Senior Engineer, Bechtel Power Corporation, San Francisco, received his B.Sc. degree in Electrical Engineering from Panjab University India, M.Sc. Automatic Control Engineering from University of Manchester Institute of Science and Technology Manchester, England and Ph.D. in Electrical Engineering from University of Salford, England.

James Haggmark for Treasurer  
Oakland - East Bay Section

James E. Haggmark is a Transmission Standards, Applications, and Quality Engineer for the Pacific Telephone and Telegraph Company, presently assigned responsibility for message network transmission design standards, and their quality. Mr. Haggmark received his BSEE degree from California State Polytechnic

Jay D Wiedwald  
for Professional Activities Chairman  
Oakland - East Bay Section

Received BSEE from University of Pittsburgh, 1961; MSEE from University of California, 1965. Employed as Design Engineer at E-H Research Laboratories, Oakland, since 1974. Formerly at Lawrence Livermore Laboratory for 9 years. Active in East Bay Sub-Section since 1969.

Postage Will Be Paid By:

**BUSINESS REPLY MAIL**  
No Postage Stamp Necessary if Mailed in the United States

**San Francisco Section**  
**Institute of Electrical and Electronics Engineers**  
**701 Welch Road**  
**Suite 2210**  
**Palo Alto, California 94304**

FIRST CLASS  
MAIL  
Permit No. 112  
Palo Alto, Calif.

Postage Will Be Paid By:

**BUSINESS REPLY MAIL**  
No Postage Stamp Necessary if Mailed in the United States

**San Francisco Section**  
**Institute of Electrical and Electronics Engineers**  
**701 Welch Road**  
**Suite 2210**  
**Palo Alto, California 94304**

FIRST CLASS  
MAIL  
Permit No. 112  
Palo Alto, Calif.

Postage Will Be Paid By:

**BUSINESS REPLY MAIL**  
No Postage Stamp Necessary if Mailed in the United States

**San Francisco Section**  
**Institute of Electrical and Electronics Engineers**  
**701 Welch Road**  
**Suite 2210**  
**Palo Alto, California 94304**

FIRST CLASS  
MAIL  
Permit No. 112  
Palo Alto, Calif.



**C.L. Ostrofe**

C.L. Ostrofe for Chairman  
San Francisco Section

Charlie Ostrofe is a native of San Francisco. He has a BME from University of Santa Clara, an MBA from Golden Gate University, and is a registered EE in California.

He joined the Bell System in 1962 and has held various engineering and management positions.

J.A. Wells for Vice Chairman  
San Francisco Section

BSEE University of California. Registered Professional Engineer, California. Member IEEE since 1941, Senior Member since 1967. Immediate past chairman Golden Gate Subsection. Prior past chairman Santa Clara Valley Subsection. Founder and chairman Industrial & General Application Society 1961-1962 & 1962-1963.



**J. Art Wells**

Fred Doell for Secretary  
San Francisco Section

Mr. Doell joined Pacific Telephone in 1965, and is presently a Staff Engineer, Radio and Broadband District, in the Engineering Department, Northern California Region of Pacific Telephone.

He received his Bachelor of Science Electrical Engineering degree from the University of Washington, Seattle, Washington. He served in the U.S. Navy for twenty years, stationed at communication stations from Sangley Point, Philippines to Karamursel, Turkey.

He is a Registered Professional Engineer, State of California, and is a member of IEEE, CSPE, NSPE, and NACE.



**Fred Doell**



**Moon Yuen**

Moon H. Yuen for Treasurer  
San Francisco Section

Mr. Moon Yuen is a Project Engineer of Bechtel Scientific Development Facilities Engineering: Registered Professional Engineer in 12 states and Alberta, Canada. Senior Member of IEEE and ISA; Organizer and teacher of Electrical Engineering and Design Courses for University of California Extension and Bechtel Manpower Development Programs. BSEE 1948.

Gerald Parsons,  
for Professional Activities Chairman  
San Francisco Section

Gerald Parsons, has been active in the committee for the last year, and is also a member of the National Ethics and Employment Practices Committee. He is a practicing patent attorney in San Francisco.



**C.R. Gilliland**

Clinton Gilliland for Chairman  
Santa Clara Valley Section

Present Vice Chairman Santa Clara Valley Subsection. B.S. in Physics Georgia Institute of Technology, 1959. Member Tau Beta Pi. Graduate work in Electrical Engineering at Stanford. Worked for Stanford University Radioscience Laboratory from 1964 to 1968. Since 1968 with Barry Research Corporation in Palo Alto.

J.A. Kirtland for Vice Chairman  
Santa Clara Valley Section

Present Secretary SCVS, Chairman of the IAS-Land Transportation Subcommittee on Non-Guideway Vehicles, BSEE Stanford University, Tau Beta Pi. Chief Engineer, Technical Staff, Ordnance Division of FMC corporation, where he directs the technical disciplines involved in development of specialized mobile vehicles and machinery.



**J.A. Kirtland**



**S.G. Roll**

S.G. Roll for Treasurer  
Santa Clara Valley Section

Present Treasurer, Member of the Administrative Committee for the Engineering Management Society. BSEE from San Jose University. Served 2 years in U.S. Army as a Design Engineer. Employed by Underwriters Laboratories, Inc. as a Project Engineer. Works mainly with industrial control equipment, low voltage switchgear, and Radio and Television Receiving Appliances.

R.W. Haegele for Secretary  
Santa Clara Valley Section

Senior Member IEEE, Chairman of Salt Lake Section 1959-60. Member of Sigma Tau, Rho Epsilon. BS, Illinois Institute of Technology; MS, Stanford University. Manager of the Low Noise and Display Tube Engineering Department, Tube Division, Watkins-Johnson Company where he is responsible for the development and engineering of all new products.



**R.W. Haegele**



**L.D. Test**

Louis D. Test for Secretary  
Santa Clara Valley Section

Louis Test is a Specialist in the General Electric Nuclear Energy Division, San Jose. He has had some 22 years experience in development and design of control and instrumentation for nuclear power stations.

Mr. Test has a BS and MS from Stanford, and is the author of several technical papers on the subject of nuclear control.

J.T. Nawrocki for PAC Chairman  
Santa Clara Valley Section

Senior Member IEEE, 1957. Charter member SFPAC and presently secretary. Speaker at several IEEE and other organizations' sessions. Author of several technical papers. Member AIAA and CSPE. Employed by Philco-Ford Corp., as Sr. Engineering Specialist engaged in weather and communications satellite systems design.



**J.T. Nawrocki**

## INTERNATIONAL CONFERENCE ON CYBERNETICS

### Final Call For Papers

The IEEE SMC Society 1975 International Conference on Cybernetics and Society will be held at The Hyatt Regency Hotel in San Francisco, September 23-25th. As in previous years, this conference will cover the full range of the field of systems sciences and engineering. A special theme of the 1975 conference, however, will be "Technological Forecasting and Assessment: 1975-2000."

Prospective authors are invited to submit short technical papers for publication in the conference proceedings by the deadline of April 15th. The cover page should include the title, author(s), institutional affiliation(s), mailing address, telephone number, and a 50-word abstract - all on one side of a double-spaced typewritten page. The 700-word body of the paper should clearly state: (i) the purpose of the work, (ii) how much it advances the state-of-the-art, and (iii) what results have been obtained. An original and four copies should be sent to:

Prof. Lawrence Stark, Program Chairman  
1975 SMC Conference  
Department of Physiological Optics and  
Engineering Science  
226 Minor Hall  
University of California  
Berkeley, California 94720

A series of "free sessions" (in parallel with the regular sessions) are also planned at which unrefereed, preliminary, or last-minute results may be presented.

# WESCON75

Electronics in the next thousand days

Sept 16-19, Brooks Hall/Civic Auditorium, San Francisco

### PROGRAMMABLE CONTROLLERS

The Industry Applications Society will hear a discussion on Programmable Controllers on April 22 by Mr. Ken Anthony, Systems Manager for Allen Bradley in Northern California. He will put the role of Programmable Controllers in proper perspective with regards to their place in industry, discussing their capabilities and limitations.

The different types of memories available, and methods of programming, will be covered in detail. Typical applications will be outlined as examples of where Programmable Controllers have advantages over more conventional logic. Mr. Anthony will have "live equipment" on display and will be available to answer questions.

GRID - 8

## IEEE COUNCIL ANNOUNCES JAPAN ELECTRONICS TOUR

The San Francisco Section of the Institute of Electrical and Electronics Engineers sponsors a 12 day group tour to Japan this September 28, 1975. The group travel program will use Japan Air Lines 747 scheduled flights from San Francisco.

The unprecedented overseas project, featuring the 1975 Japan Electronics show in Osaka, will enable local members to view the multinational scene, since some 65 per cent of Silicon Valley's growth companies are already engaged in assembly, licensing and joint ventures with the Orient.

The IEEE group will take in the Osaka show for three days, while headquartered in the Kyoto. After touring this "Classic City" of Japan, the group will ride the renown "Bullet train" to Nagoya where they will take in the famous Noritake China factory. Other will have options to visit the Mikimoto Pearl farms.

The group will leisurely continue Northbound, with stop-overs at Hakone, the famous mountain resort; at Kamakura, the site of the "Big Buddha" and visit Tokyo, the world's largest city. In Tokyo the group will stay at the Imperial Hotel, once made famous by Frank Lloyd Wright.

Information is available by writing the local IEEE office, 701 Welch Road, Palo Alto, Calif. 94304; or by calling Dave Parkinson at Travel Design Unlimited, (415) 989-2000.

### COMMUNICATIONS SOCIETY

There will be no April meeting of the Society. Our members and readers are invited to attend the International Conference on Communications (ICC '75) at San Francisco's Fairmont Hotel June 16-18. Details appear elsewhere in this issue.

Interested members are urged to volunteer a day's time at the conference acting as technical session monitors. Ladies are welcome to assist at the ladies hospitality suite. There will be no conference registration charge for volunteer assistants. Call J.J. Schembri, (415) 542-3115, or Lee Stephens, (415) 591-8461, for further information.

See CALENDAR for Program Arrangements

## EVOLVING TECHNOLOGY SEMINARS *presents a four day short course*

### "DIGITAL SIGNAL PROCESSING AND DIGITAL FILTERING WITH APPLICATIONS"

APRIL 21, 22, 23 and 24, 1975  
at SAN DIEGO STATE UNIVERSITY

Lecturers

Prof. Fred Harris, San Diego State Uni.  
Dr. Donald Rauch, Sysdyne, Inc.  
Mr. David Lynch, Hughes Aircraft Co.

For information call:

(714) 224-3788 or 286-6069

### REGISTRATION FORM

Mail: Evolving Technology Seminars  
3830 Wildwood Road  
San Diego, California 92107

Attn: Dr. D.J. Rauch

Name \_\_\_\_\_

Affiliation \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_ Office Phone \_\_\_\_\_

Home Address \_\_\_\_\_

\_\_\_\_\_ Phone \_\_\_\_\_

Check

\_\_\_\_\_ Registration . . . . . \$350.00

\_\_\_\_\_ Check Enclosed

\_\_\_\_\_ Bill my company.  
Give Purchase Order Number.

\_\_\_\_\_ Please send information on other  
ETS courses:

Please remit check with this card. Make  
check payable to Evolving Technology  
Seminars.



APRIL 1975