



Scanfax

POSTMASTER:
SECOND CLASS POSTAGE
paid at Chicago, Illinois.

SCANFAX, 125 S. CLARK ST., ROOM 1545, CHICAGO, IL 60603

CHICAGO SECTION • IEEE • INSTITUTE OF ELECTRICAL & ELECTRONICS ENGINEERS

JANUARY 1976



CALENDAR OF EVENTS

For Reservations Call the IEEE Office at 236-4609 (Unless Otherwise Indicated)

- Jan. 6 IEEE Executive Committee Meeting; Brown & Root Offices, Spring Rd., Oak Brook, Ill., 7:30 PM — ALL WELCOME.
- Jan. 13 Antennas & Propagation/Microwave Theory & Techniques Group (No information by deadline).
- Jan. 14 "Electric Vehicles," Industrial Electronics & Control Instrumentation/Industry Application Group, Nielsen's, 7330 W. North Ave., Elmwood Park, Ill., Social Hour 5:30 PM; Dinner 6:15 PM; Meeting 7:15 PM.
- Jan. 14 "Automotive Engine Control With Microprocessors," Vehicular Technology Group.
- Jan. 20 "AEP-ASEA UHV Project Test Station — A Progress Report," Power Engineering Society, Midland Hotel, 172 W. Adams St., Chicago, Ill., Cocktails 11:00 AM; Luncheon 11:45 AM; Meeting 12:30 PM.
- Jan. 21 "Electrical Safety in Hospitals," Northwest Subsection, Maitre "D" Restaurant, 111 E. Higgins Rd., Elk Grove Village, Ill., Social Hour 6:00 PM; Dinner 7:00 PM; Meeting 8:00 PM.
- Feb. 3 IEEE Executive Committee Meeting; Brown & Root Offices, Spring Rd., Oak Brook, Ill., 7:30 PM — ALL WELCOME.
- Feb. 4 "Cybernetics," Fox Valley Subsection, Andy's Steak House, 17W61 - 22nd, Oak Brook, Ill., Cocktails 6:30 PM; Dinner 7:00 PM, Meeting 8:00 PM.
- Feb. 8 Dinner/Theater Party, Power Engineering Society, Candelight Dinner Playhouse, 5620 S. Harlem Ave., Summit, Ill., "Odd Couple," Dinner 5:30 PM; Play 7:30 PM.
- Feb. 10 Antennas & Propagation/Microwave Theory & Techniques Group (No information by deadline).
- Feb. 11 "Hospital Medical Electronics," Industrial Electronics & Control Instrumentation/Industry Application Group, Nielsen's, 7330 W. North Ave., Elmwood Park, Ill., Social Hour 5:30 PM; Dinner 6:15 PM; Meeting 7:15 PM.
- Feb. 24 "Experiences with SF₆ Substation & Transmission Equipment," Power Engineering Society, Midland Hotel, 172 W. Adams St., Chicago, Ill., Cocktails 11:00 AM; Luncheon 11:45 AM, Meeting 12:30 PM.
- Feb. 25 "Engineers Week," Fox Valley Subsection (Joint ASME, SAE and ISPE), Gaslite Manor, 2485 Church, Aurora, Ill.
- ? "Emergency Medical Plan — Washington, D.C.," Vehicular Technology Group, David Hodgkin, Spectra Associates, Cedar Rapids, Iowa.
- May 15 IEEE Recognition Dinner, O'Hare Inn, Chicago, Illinois.

Deadline for copy: First week of month preceding publication

IEEE PRESS PUBLISHED BOOK ON TECHNICAL PRESENTATIONS

The publication of *A Guide for Better Technical Presentations*, a Book of Selected Reprints, has been announced by the IEEE PRESS. This collection was edited by Robert M. Woelfle of E-Systems Greenville Division.

Virtually every engineer, scientist or manager is occasionally required to give a technical presentation, and many do so as a routine part of their jobs. However, few such professionals, when faced with the requirement to present a technical briefing, explain a proposal, outline a management plan, or provide other similar face-to-face communications before a group, can draw upon formal training for the needed background and techniques. Yet technical presentations are a vital part of almost every phase of the governmental, industrial and academic worlds.

This book is basically a "how to" guide to help professional people communicate their ideas to others on a real-time basis. It contains articles that describe various techniques for planning, preparing and executing presentations using virtually all types of media, including multimedia. The articles were carefully selected from the large body of

literature in this area because they have a tutorial approach and address subjects that are of practical value in solving the problems normally encountered in preparing and implementing a presentation. Included in the articles are checklists for selecting the best medium and equipment for various applications.

The 35 articles included are divided into the following six areas:

- general considerations in understanding the importance and application of presentations
- planning and preparation required to develop an effective presentation
- visual aids used to enhance the effectiveness of presentations
- delivery techniques used to execute presentations
- multimedia intergration of various combinations of visual aids
- special techniques associates with motion pictures

This guide will be a much-used addition to the library of any individual who values effective communications and is interested in his own professional growth and advancement. This 240-page book, sponsored by the IEEE Professional Communication Group, is priced at \$7.45 for the paperbound member edition. A cloth-bound edition is available for \$14.95 (discounted to \$11.20 for IEEE members.)

It can be ordered postpaid from the IEEE Service Center, 445 Hoes Lane, Piscataway, N.J. 08854. Payment should accompany the order.

COMPUTER FOR CARS

At the Vehicular Technology meeting on January 14, Sean Devlin will discuss "Automotive Engine Control with Microprocessors." He is Senior Engineer of the Electronic Engineering Control Task Force for the Ford Motor Company.

With an electronic controller exhaust emissions will be lowered, fuel economy will be improved and engine durability will be increased. Programmable microprocessors are incorporated in the system to control ignition, timing and gas recirculation. Trade offs of different circuits have been considered to realize a low cost approach.

Mr. Devlin's talk will be based on three S.A.E. papers, of which he is the author of one.

Scanfax Officers

Ed Osterberg, Publisher
Illinois Bell Telephone Company
(312) 727-5405

George Mack, Finance Manager
Illinois Bell Telephone Company
(312) 727-3339

Scanfax Office
Room 1545
125 S. Clark St.
Chicago, IL 60603
(312) 236-4609

Chicago Section Officers

Daniel J. Veith, Chairman
Argonne National Laboratory
Paul E. Jahn, Vice Chairman
Commonwealth Edison Company
Robert A. Waghorne, Treasurer
Teletype Corp.
John E. Waters, Secretary
Bussmann Mfg.

SCANFAX, January 1976 — Volume 28, Number 6. SCANFAX is published monthly, except July and August by the Chicago Section, Institute of Electrical and Electronics Engineers for the information of the members. Business office is at 125 S. Clark St., Chicago, Illinois 60603, telephone number (312) 236-4609. Subscription rate for IEEE members collected in dues, \$1.50; for others, \$3.00 per year. Second-class postage paid at Chicago, Illinois.

Meeting Reservations

Remember that the IEEE office, (312) 236-4609 will take your meeting reservations. Call anytime between 8:00 AM and 5:00 PM, Monday through Friday.

The meeting coordinator for any group should call and leave his number with the office, so they can refer questions on matters other than reservations.

Change of Address

If you have moved — or are about to move — please notify the IEEE office in NEW YORK. Our SCANFAX mailing labels come from there, and we cannot update your mailing address locally in Chicago.

A change of address form is included in each issue of SPECTRUM. Your local post office will also supply you with cards; mail to Emily Sirjane, Membership Services, IEEE, 345 E. 47th Street, New York, NY 10017. Include your SPECTRUM mailing label if possible. We cannot forward this information for you, so please do not send it to the local office.

You are invited to enjoy an evening of dining and theater, an affair sponsored by the Chicago Chapter of the Power Engineering Society.

PLACE:

Candelight Dinner Playhouse
5620 South Harlem Avenue
Summit, Illinois

PLAY:

Niel Simon's "Odd Couple" starring Ray Rayner and Dale Benson

WHEN:

Sunday — February 8, 1976
Dinner at 5:30 PM Play at 7:30 PM

MENU:

Included with the cost of the ticket is your choice of a complete Beef, Chicken, Manicotti or Fish dinner. Steaks, Lobster and other specialties available at additional charge. Drinks are also available at additional charge.

To reserve your seats, complete the Reservation Form below and return it with \$19.00 per couple (\$9.50 per seat) to the address shown.

A limited number of seats are available so it is suggested that reservations be made early. Reservations must be mailed by January 19.

Tickets will be held for you at the door.

For additional information, call Mark Bailey at 294-8437 or 274-1761.

CANDELIGHT EVENING RESERVATIONS

Please reserve _____ seats in the name of _____

Enclosed is \$_____ at \$9.50 per seat.

Make checks payable to: Mark Bailey, Power Engineering Society

Mail reservation form to:

Mr. Mark Bailey
Station Mechanical Engineering
P.O. Box 767
Chicago, Ill. 60690

LET'S TRY FOR AWARDS

One extremely important activity of a professional society is the recognition of distinguished achievement and service. IEEE Awards serve several purposes: 1) they are an expression of recognition for outstanding contributions to the art and science of electrical and electronics engineering; 2) they are an incentive to youth to emulate excellence; 3) they are a personalized presentation to the public of the achievements of the profession and its members; and 4) they are the identification of IEEE with these achievements.

The Institute Awards fall into five categories: Medal of Honor, Major Annual Medals, Field Awards, Prize Papers and Scholarships. The Medal of Honor and the Major Annual Medals aim at the recognition of achievements having general significance for the profession, the Field Awards recognize unusual accomplishment in a particular field of interest to the society, and the Prize Papers recognize publications significant for their excellence. The Scholarships aim at the support of worthy superior students. Recipients of Prize Paper awards and Field awards may in some instances receive future major awards for the same

work if time demonstrates that the work has exceptional significance.

All individual members, Groups/Societies and Sections of IEEE are eligible to nominate candidates for awards, medals, scholarships, and prizes; and to support such nominations by submitting forms and relevant communications to the Secretary of the Awards Board at IEEE Headquarters.

(The only exceptions are members of the Board of Directors, the Awards Board, the awards Committees and the Headquarters' staff.) Proposals must be accompanied by biographical sketches of the nominees, a list of publications and specific identification of the works on which the nominations are based, particularly the works to be recognized by the proposed award.

The evaluation and appraisal of the nominee's accomplishments is of great importance and should be prepared with care. It provides an opportunity to highlight contributions of particular significance and to show how these have been applied. An indication of the number as well as a brief outline of a few of the more significant patents is of interest. If

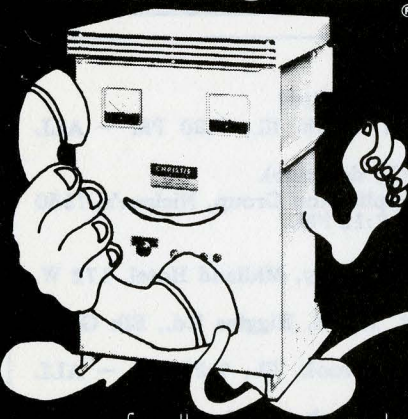
the nominee is not the sole author of important publications listed or evaluated, his contribution should be specified. Two supporting letters are required, and should contain factual information about the candidate, to be transmitted with the nomination to the Secretary of the Awards Board at Headquarters.

ENGINEERS/PROGRAMMER

Electronics company seeking an individual with BSEE degree and 5 to 8 years' experience in mini-computer hardware interface, automatic test and production equipment design. Real-time programming experience in control and communication systems necessary. Familiarity with automatic interconnection systems desirable. Send resume to:

Control Networks Corporation
6045 South Knox Avenue
Chicago, Illinois 60629

TALK TO THE
CHRISTIE



for all you ever wanted
to know about **high current**
DC POWER SUPPLIES
BATTERY CHARGERS
Call HERMAN RUDMAN toll-free
(800) 421-2058
SINCE 1929
CHRISTIE
ELECTRIC CORP.
3412-U W 67TH ST. • BOX 60020
LOS ANGELES, CALIFORNIA • 90060
(213) 750-1151 • TWX 910-321-3867

COURSE ANNOUNCEMENT-MICROPROCESSOR SYSTEMS DESIGN

Offered By

Chicago Chapter of IEEE Computer Society,
Chicago Section of IEEE and Northwestern University

To Be Held At Northwestern University — Evanston, Illinois

4 Days — March 4, 11, 18, 25, 1976

This is intended to be a comprehensive course dealing with the design of systems incorporating a microcomputer. Application examples are taken from systems actually designed and built and will be discussed in detail. To allow individual interaction, registration will be limited. This course is a repeat of the very successful one offered last spring. Fee is \$250 and includes course lectures, materials, texts and luncheons.

Session 1: Fundamentals of Microcomputer Systems (morning)
Architecture of Typical Microprocessors (afternoon)

Session 1 will be introductory in nature. It is meant to explain, quickly, the operation of a computer, to define terms and to give alternatives for CPU design. The afternoon session will discuss the architecture and characteristics of the more popular microprocessors.

Session 2: Microprocessor Interface Techniques (morning)
Design Fundamentals (afternoon)

Session 2 will discuss fundamental notions of interfacing microcomputers to memory systems and to peripherals. Several different ways to handle input/output will be considered including programmed input/output and priority interrupt systems.

Session 3: Application Examples (morning)
Alternatives to Microprocessor Based Design (afternoon)

Session 3 will first consider in detail a complete application example including timing and coding. In addition, modern design alternatives to microcomputer systems and based on MSI/LSI circuits will be discussed.

Session 4: Design Support Facilities (morning)
Discussion of the Class Design Problem (afternoon)

Session 4 will discuss the facilities available to support design of microcomputer systems. Both hardware and software support will be included and the advantage of different approaches will be pointed out. Finally, the second complete application example will be discussed.

SPEAKERS:

Dr. B. W. Jordan, Jr., Associate Professor, Departments of Electrical Engineering and Computer Sciences, Northwestern University; specialist in digital system design and organizer of microcomputer courses.

Dr. W. J. Lennon, Assistant Professor, Department of Computer Sciences, Northwestern University; specialist in real-time computer systems and Director of Computer Sciences Research Laboratory.

Dr. F. M. Brasch, Assistant Professor, Departments of Electrical Engineering and Computer Sciences, Northwestern University; specialist in computer control and digital design.

Dr. M. J. Gonzalez, Assistant Professor, Department of Computer Sciences, Northwestern University; specialist in computer organization and distributed systems.

MICROPROCESSOR SYSTEMS DESIGN COURSE REGISTRATION FORM

Mail to: IEEE — Chicago Section
125 South Clark Street
Room 1545
Chicago, Illinois 60603

Name _____

Home Phone _____ Business Phone _____

Affiliation _____

Address _____

Registration deadline February 15

Make Check payable to: Microprocessor Course 76