



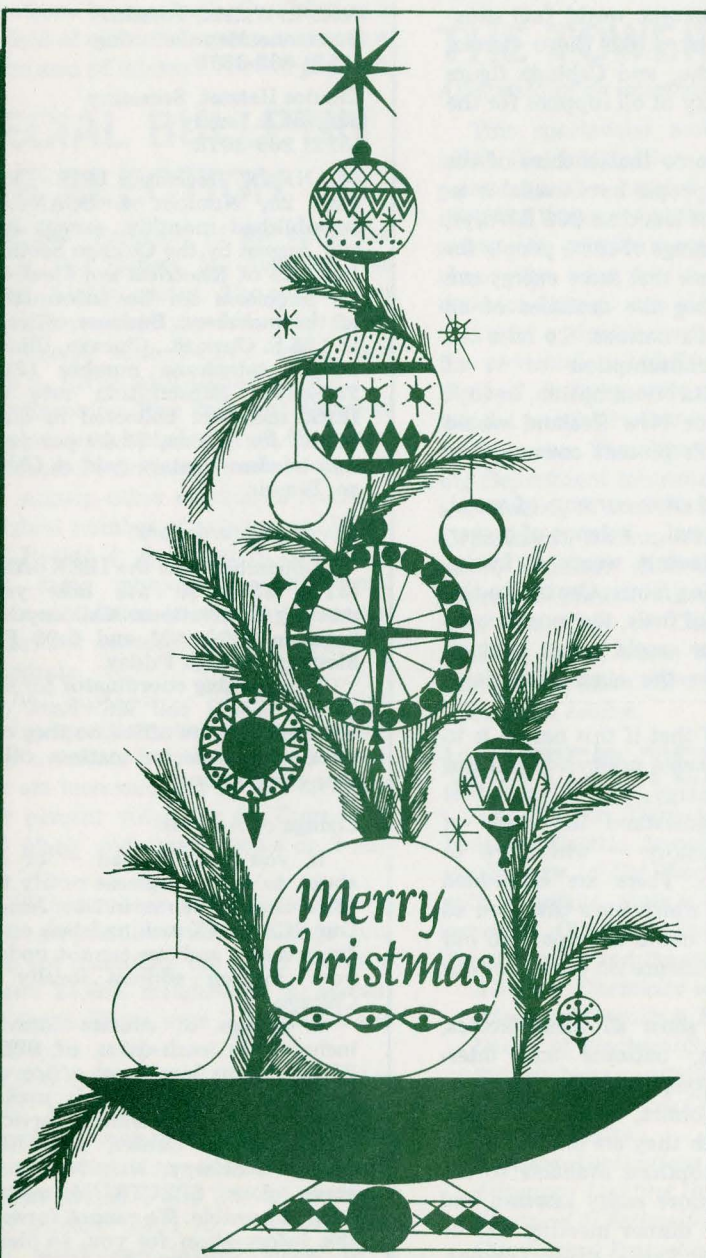
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CHICAGO SECTION • IEEE • INSTITUTE OF ELECTRICAL & ELECTRONICS ENGINEERS

DECEMBER 1976



CALENDAR OF EVENTS

*For reservations call the IEEE office at 236-4609
(Unless otherwise indicated)*

- Dec. 1 "Structured Programming," Fox V. Sub. (j w/ Comp. Soc., Comms. and Infor. Theory Grps.), Bell Labs., Naperville, Ill. Meeting 8:00 PM. No dinner.
- 1 "Responsibility of IEEE PES Members as Communicators," PES, Midland Hotel, 172 W. Adams St., Chicago, Ill. Luncheon.
- 6-7 Fall Conference, Consumer Electronics Group. Ramada — The O'Hare Inn, 6600 N. Mannheim Rd., Des Plaines, Ill.
- 8 "The Chicago High Rise Code," IAS/IECI, Nielsen's, 7330 W. North Ave., Elmwood Park, Ill. Cocktails 5:30 PM; Dinner 6:15 PM; Meeting 7:15 PM.
- 8 "The Role of New Electronics in Nuclear Medicine," NW Sub. (j w/WSE and Engrng. in Med. & Biol. Grp.), Maitre D'Rest., 111 E. Higgins Rd., Elk Grove Village, Ill. Social Hour 6:30 PM; Dinner 7:00 PM; Meeting 8:00 PM.
- 8 "Antique Electronics," VT Group, Maitre D'Rest., 111 E. Higgins Rd., Elk Grove Village, Ill. Social Hour 6:30 PM; Dinner 7:00 PM; Meeting 8:00 PM. For reservations call the IEEE Meeting Coordinator at 576-6567.
- 14 IEEE Executive Committee Meeting; Brown & Root Offices, 2001 Spring Rd., Oak Brook, Ill., 7:30 PM — ALL WELCOME.
- Jan. 11 IEEE Executive Committee Meeting; Brown & Root Offices, 2001 Spring Rd., Oak Brook, Ill., 7:30 PM — ALL WELCOME.
- 12 "Industrial Power Systems — A Study in Coordination," IAS/IECI, Nielsen's, 7330 W. North Ave., Elmwood Park, Ill. Cocktails 5:30 PM; Dinner 6:15 PM; Meeting 7:15 PM.
- 12 VT Group. No information by deadline. Call John Zinkus on 298-1591.
- 19 "Impact of New Regulations on CB Radios," NW Sub., Maitre D'Rest., 111 E. Higgins Rd., Elk Grove Village, Ill. Social Hour 6:00 PM; Dinner 7:00 PM; Meeting 8:00 PM.
- 19 "General Energy Related Topic," PES (j w/Joliet Sec., ISPE and Fox V. Sub., ASME), White Fence Farm, Lemont, Ill. Evening.
- 22 "The Viking Mission," MTT/APS, Motorola Tower Bldg., 1301 E. Algonquin Rd., Schaumburg, Ill. Luncheon 12:00 PM; Meeting 1:00 PM.

Deadline for copy: One month before date of issue.

ENERGY *The Interlocking Influences of the National and International Energy Situation*

At the Wednesday, January 19, 1977 Power Engineering Society meeting, jointly with ISPE, Joliet Section and ASME, Fox Valley Section, Fredric C. Olds will cover various aspects of the all-important energy situation. Fred is now Senior Editor of Power Engineering magazine.

Fred enjoys an established reputation both here and abroad for his analyses of developments in energy and environmental matters. In 1972, he was invited to prepare a study of the world energy situation for publication in a leading European journal, and earlier this year he presented a major new paper on the topic in Washington, D.C.

He has written extensively on the growing problems in the field of environmental cleanup. His September 1975 analysis of the economic impacts and consequences of present national environmental protection activities has been discussed widely for the attention it called to the need for program revisions.

Mr. Olds spends considerable time abroad interviewing and doing research on energy developments. His treatise on the French breeder reactor, Phenix in 1974 was accepted as the definitive work on the Phenix at that time. It was used widely in technical and regulatory circles,

and was entered into the Congressional Record.

He was one of the first editors to recognize the severity of the powerplantschedule slippage, and published the first detailed analysis of the situation in 1969. The projections made in this article and later ones of 1971 and 1972 of how events would unfold proved to be remarkably accurate.

Some quotes from Mr. Olds planned talk should stimulate your interest in the meeting:

"I find it interesting that Lawrence of Arabia played a role in the early events that led to the present world fuel situation, and that places like Diego Garcia, Socotra, Mogadishu, and Cabinda figure large in the security of oil supplies for the United States.

I find it awesome that a third of the world's 4 billion people have available to them an average of less than 200 KWh/yr, and that the yearnings of these people for the better existence that more energy can provide are shaping the destinies of all 148 of the world's nations. To raise the lowest third's consumption to ¼ of Canada's per capita consumption, or to ½ that of Iceland or New Zealand would double the world's present consumption of energy.

The trends and cross-currents of social, economic, political, balance-of-power, and diplomatic factors weave a fascinating and disturbing fabric. Central to this scene are the fossil fuels, the most economic of which the world seems bent on consuming within the span of a single lifetime.

It is my belief that if this nation is to establish a reasonable policy for assuring its supplies of energy, then it must first examine and understand the chain of events — the history — which led to today's situation. There are embedded national policies which have thwarted all recent efforts to come to grips with our accelerating dependence on others for our energy lifeblood."

His talk will show all these factors, historical events, national and international influences, logistics, reserves, usages, and economics, and will indicate the ways in which they are related. From this, the energy options available to the nation become more easily assessed and understood. The dinner meeting will be held at the White Fence Farm, Lemont, Illinois.



Scanfax Officers

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

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

John Johnson, Contributing Editor
Illinois Bell Telephone Company
(312) 727-7867

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

Chicago Section Officers

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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 Service Center in New Jersey. 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 Roseann Schulz, Member Services, IEEE Service Center, 445 Hoes Lane, Piscataway, N.J. 08854. Include your SPECTRUM mailing label if possible. We cannot forward this information for you, so please do not send it to the local office.

MEDICAL ELECTRONICS

The Role of New Electronics in Nuclear Medicine

The December 8, 1976 meeting of the Northwest Subsection will be held jointly with the Western Society of Engineers and the Engineering in Medicine and Biology Group.

As has been the case with many endeavors dependent on sophisticated instrumentation, Nuclear Medicine has benefited significantly over the last decade from the proliferation of advanced integrated circuit technology throughout the electronics industry. In particular, the so-called "new electronics" have helped bring about the development of the present day gamma camera, a device which evolved from the original technique of mapping in vivo isotope distributions by mechanically scanning a small-field-of-view Nal gamma detector over the area of interest. The integral part

SPECIAL BULLETIN IEEE ELECTION

The new President of the IEEE for 1977 is Dr. Robert M. Saunders. He received 21,425 votes. The other two candidates received the following votes: Irwin Feerst with 14,244 votes, and Robert A. Rivers with 13,145 votes.

For Executive Vice President, Carleton A. Bayless was elected with 26,491 votes. Mr. Robert D. Briskman received 21,389 votes. Among other candidates receiving the highest number of votes were: Director of Region 4: Burkhard H. Schneider.

All three proposed constitutional amendments failed to receive the necessary number of votes to be adopted by the Institute.

19,062 members or 39 percent voted against proposition one to require approval by members before dues and assessments are increased and 29,275 members or 59 percent voted for it. There were 1,033 blank and invalid votes or 2 percent.

22,970 members or 47 percent voted against proposition two to change procedure for amending the IEEE Constitution and 24,686 members or 50 percent voted for it. There were 1,714 blank and invalid votes or 3 percent.

23,686 members or 48 percent voted against proposition three to require approval by members before dues and assessments are increased to change member dues structure and 24,496 members or 50 percent voted for it. There were 1,188 blank and invalid votes, or 2 percent.

of a typical state of the art system is a high count rate large-field-of-view position sensitive detector capable of imaging entire organs in a fraction of the time and with far superior resolving capability than the earlier scanning systems.

In addition to discussing the advances that have led to improvements in the quality of standard low-energy radioisotope imaging, the presentation will also deal to a large degree with areas of research that are "up and coming" as a direct result of improvements in related technology. More specifically, some time will be spent reviewing the results of recent work in the area of imaging with positron emitting radionuclides. These agents, when used in conjunction with highly specialized camera systems, offer

the potential for deriving high resolution, full three-dimensional quantitative maps of uptake in an organ with the added possibility of actually viewing physiological/metabolic processes in vivo.

Overall, the talk will cover a review of the basic physical principles involved in Nuclear Medicine imaging followed by a medium level discussion of several advanced camera modalities. Throughout, clinical examples will be used to illustrate the different principles being emphasized.

The meeting will be held at the Maitre D' Restaurant, 111 E. Higgins Rd., Elk Grove Village, Illinois. Social Hour 6:00 P.M., Dinner 7:00 P.M., and Meeting 8:00 P.M. For reservations, call the Electrical Institute IEEE, Chicago phone: 236-4609.

THE TOWERING INFERNO

Aftermath of an imaginary tragedy

This spectacular motion picture excited the imagination of many movie goers and also created concern in the minds of those we entrust with our public safety. It probably made you wonder about the need for a strong electrical code for Chicago area high rises.

Could a similar event occur in one of the new modern buildings that grace our skyline? Surveys were made that indicated a possibility that such a catastrophe could occur. The City of Chicago Building Department immediately made intensive studies, in consultation with the Fire Department, leading architects and engineers, insurance underwriters and other interested parties. As a result we now have the City of Chicago High Rise Building Code, which is a model document which other cities in similar circumstances can follow.

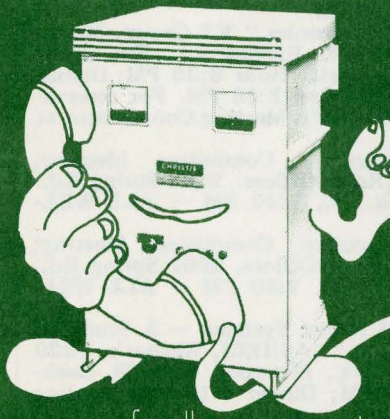
WINTER TERM COURSE SCHEDULE

The Winter Term schedule of courses being offered by the Chicago Lighting Institute/Electric Association has been scheduled to begin January 3, 1976. Whether you're new to the Electrical Institute where our IEEE office is located, or have been with us awhile, there is a course available to increase your professional knowledge and expertise. Classes are held one day a week starting January 3, 1977. The following is a list of courses and the starting times:

ABC's of Electricity	Tuesday	January 4 — March 22
Electrical Circuits & Equipment	Thursday	January 6 — March 24
Design of Electrical Systems for Buildings	Thursday	January 6 — March 24
Process Instrumentation & Control	Thursday	January 6 — March 24
Electric Comfort & Conditioning	Monday	January 3 — March 7
Lighting Basics	Monday	January 3 — March 21
Lighting Applications	Tuesday	January 4 — March 22
Advanced Lighting Design	Wednesday	January 5 — March 23
Electrical & Estimating I	Wednesday	January 5 — March 9
Overcurrent Protection	Thursday	January 6 — March 10

For further details, call 236-4609.

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MEMBERS AS COMMUNICATORS

At the December 1 luncheon meeting of the Power Engineering Society, Frank A. Jenkins, President of the PES will speak on the "Responsibility of IEEE Power Engineering Society Members as Communicators." He will talk about the role that the PES members play regarding the operating of their Society and the benefits derived from membership; he will bring them up-to-date on current activities taking place within the IEEE PES.

Mr. Jenkins is Vice President, Transmission & Electric Installations, Duke Power Company located in Charlotte, North Carolina.

ELECTRONIC GAMES - AGAIN

For all you disappointed members and friends who couldn't make it to the recent popular "Electronic Games" meeting — the turnout was terrific — the show will be repeated during Engineering Week in 1977. The planned date is February 23, 1977. The location is the Gaslite Manor, 2485 Church, Aurora, Illinois. The Section meeting will be jointly sponsored with the Fox Valley Sub-Section

The meeting will be held at the Midland Hotel, 172 West Adams Street, Chicago. The social period will begin at 11:00 A.M. followed by lunch at 11:45 A.M. The program will begin at approximately 12:45 P.M. Reservations are to be made with the IEEE office at 236-4609.

and the Computer Society. Plan ahead for this event.

ANTIQUE RADIOS, ETC.

Have you ever seen a vacuum tube with an external grid? Do you know what a variometer is? Have you ever heard of a reflex circuit, a neutrodyne, or a loose coupler circuit?

These are some of the strange and wonderful things that can be seen at the December meeting of the Vehicular Technology Group where the topic of the evening will be *Antique Electronics*. The speaker will be Dr. Ralph Muchow, curator of the Historical Wireless Museum in Elgin, who will present a slide show of some of the outstanding items in his collection of antique radios and equipment. This collection is one of the finest in this country.

You need not be an antique buff in order to appreciate this program. Anyone with an interest in radio communication should find this exhibit of unusual circuitry, polished bakelite, and shining brass to be absolutely fascinating. A few 50 year old radios will be set up and operating at the meeting, and a prize will be awarded to the person tuning in the most distant station.

The meeting will be held Wednesday, December 8 at the Maitre D' Restaurant, 111 E. Higgins Road (near Arlington Heights Road) in Elk Grove Village. Social hour begins at 6:30 PM, dinner is at 7:00 PM, and the program is at 8:00 PM. Make reservations now by calling 576-6567 and ask for the IEEE meeting coordinator. Visitors and guests are welcome.

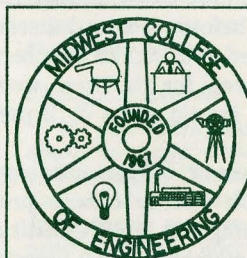
1977 FOX VALLEY SUBSECTION PROGRAM SCHEDULE

Feb. 13	Ladies' Night — Dinner & Stage Play	(To be determined)
23	Engineers' Week — (joint w/All Engineering Soc.)	(To be determined)
Mar. 2	Hi-Cap Mobile Communications (joint w/Vehicular Technology & Communication Groups)	Downers Inn Downers Grove, Ill.
	Dinner 7:00 P.M. — Meeting 8:00 P.M.	
Apr. 6	Solar Energy (joint w/Western Suburb Div., Western Society of Engineers)	Andy's Steak House Oak Brook, Ill.
	Dinner 7:00 P.M. — Meeting 8:00 P.M.	
May 4	Air Traffic Safety	Elmhurst Inn Elmhurst, Ill.
	Dinner 7:00 P.M. — Meeting 8:00 P.M.	
21	Tour — LaSalle County Nuclear Generating Station Commonwealth Edison Company (joint w/Power Engineering Soc.)	LaSalle, Ill. Morning Luncheon follows tour

RESULTS OF AUGUST 1976 IEEE/USAB SAMPLE SURVEY ON MEMBER OPINION TOWARD IEEE'S ATTEMPTING TO REGULATE QUALITY AND QUANTITY OF ENGINEERS

- 1(a) Do you favor IEEE's attempting to regulate the quality of electrical engineers?
[304] or **33%** NO **[611]** or **67%** YES
- 1(b) If yes, how?
[270] or **29%** By promoting universal registration.
[176] or **19%** By certification of technical societies.
[218] or **24%** By validation of continuing education courses by the technical societies.
[383] or **41%** By promoting higher accreditation standards for engineering curricula.
[131] or **14%** By examination to become an IEEE member, at the "Member" level or above.
- 2(a) Do you favor IEEE's attempting to regulate the quantity of electrical engineers?
[467] or **51%** YES **[441]** or **49%** NO
- 2(b) **[191]** or **21%** By working more actively through IEEE's student branches to educate high school students about the career opportunities available through the engineering profession.
[300] or **32%** By raising the standards for accreditation of colleges teaching engineering.
[120] or **13%** By increasing the number of years of study for an initial engineering degree through the accreditation process.
[279] or **30%** By obtaining for publication, and/or distribution, manpower reports on supply vs. demand of engineers.

 ★ Sample Size: Approx. 2500 ★
 ★ No. of Responses: 924 ★
 ★ Response Rate: 37% ★



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