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CHICAGO SECTION • IEEE • INSTITUTE OF ELECTRICAL & ELECTRONICS ENGINEERS

JANUARY 1975

CALENDAR OF EVENTS

IEEE OFFICE: 263-5954

- Jan. 8, 1975 "Hospital Wiring"; IAS/IECI; Nielsen's Village, 7330 W. North Avenue. Social hour, 5:30 p.m.; dinner, 6:15 p.m.; meeting, 7:15 p.m. (Page 3)
- Jan. 8 "Future of Mobile Radio;" Vehicular Technology; Lancer Steak House, Algonquin Road, Schaumburg. Social hour, 6:00 p.m.; dinner, 7:00 p.m.; program, 8:00 p.m. (Page 3)
- Jan. 15 "Pensions and Vesting;" Chicago Section/Northwest Subsection/EMC; Maitre D' Restaurant, Elk Grove Village. Social hour, 6:00 p.m.; dinner, 6:30 p.m.; meeting, 7:30 p.m. (Page 1)
- Jan. 21 "Adaptive Array Antennas;" MTT/A&P; Black Steer Restaurant, 6446 W. North Avenue, Chicago. Social hour, 6:00 p.m.; dinner, 7:00 p.m.; program, 8:00 p.m. (Page 2)
- Jan. 28 "SF-6 Transmission Dips and Lines"; Power Engineering Society; Midland Hotel, 172 W. Adams Street, Chicago. Social hour, 11:30 a.m.; 12:00 noon; program, 12:30 p.m. (Page 1)
- Feb. 5 "The Electric Vehicle;" Fox Valley Subsection; Alywards, West Chicago. Social hour, 6:00 p.m.; dinner, 7:00 p.m.; program, 8:00 p.m.
- Feb. 6 "Hybrid Microelectronic Reliability;" Reliability Group. Heuers Restaurant, 5591 River Road, Rosemont, Ill. Social hour 5:30 p.m.; dinner 6:30 p.m.; technical session 7:30 p.m. Cost is \$7.50, for reservations, call the IEEE, 263-5954 or Hugh Edfors 647-9000, ext. 254, or Ray Schirmer, 259-0740, ext. 355.
- Feb. 12 "Types of Power Transformers;" IAS/IECI; Nielsen's Village, 7330 W. North Ave. Social hour, 5:30 p.m.; dinner, 6:15 p.m.; meeting, 7:15 p.m.
- Feb. 19 "Air Quality and Future Automobile Plants;" Engineer's Week joint meeting; Chicago Section, Fox Valley Subsection, ASME, SAE, and ISPE. Gaslight Manor, Aurora, Ill. Social hour, 6:00 p.m.; dinner, 7:00 p.m.; program, 8:00 p.m.
- Feb. 25 "Mass Transportation;" Power Engineering Society. Luncheon meeting. Call IEEE office for location.

Deadline for copy: First week of month preceding publication

Pensions and Vesting

At the January 15, 1975, joint meeting of the Chicago Section/Northwest Subsection/ENC, David R. Dalton, US Department of Labor, will discuss "Pensions and Vesting for Engineers."

The Pension Reform Act, recently passed by Congress, establishes new minimum standards for private pension plans. The Act, although providing less than complete "portability" of pensions for engineers moving from one employer to another, does establish a number of new pension safeguards, guaranteeing certain

pensions and benefits for employees.

Dalton, with the Chicago Area Commission of the U.S. Department of Labor, is with the group responsible for the enforcement of the new Pension Reform Act in the Chicago Area.

Meeting will be held at the Maitre D' Restaurant, 111 E. Higgins, at Arlington Heights Road, Elk Grove Village. Social hour, 6:00 p.m.; dinner, 7:00 p.m.; program 8:00 p.m. Cost of the dinner is \$6.00. For reservations, call the IEEE office, 263-5954.

Chicago Section

Membership

All sorts of fascinating material comes into the Chicago Section office that a Chicago Section member, unless (s)he is on the Executive Committee, never sees. A November bulletin from IEEE headquarters reports that Chicago Section membership as of October 31, 1974, was 4,837. Central Illinois and Calumet, both of which were offshoots of the Chicago Section, had memberships of 728 and 419, respectively.

Hybrid Circuits Presentation

The explosive growth of Hybrid Integrated Circuits over the past decade is a direct result of the significant improvements the user of these devices realizes in terms of size, weight, cost, and increased reliability. It is well known that Hybrid circuits have been widely used in Hi-Rel avionics equipment. More recently the technology is being increasingly applied to the packaging of circuits for commercial applications in telephone systems, automotive and medical electronics.

Paul Schwartz, General Manager of General Instruments' Hybrid Circuit Division and Tom Scott, the Division's Quality Assurance Manager will discuss a variety of topics relating to Hybrid circuits at the Feb. 6, 1975 Chicago Reliability IEEE meeting. The flexibility of this approach will be presented with emphasis on the improvements in circuit performance made possible by mixing monolithic and discrete components. The characteristics of individual circuit elements within Hybrids and monolithic circuits will be examined to demonstrate which applications benefit most from the Hybrid approach. In particular, Active Filters will be singled out as one of the more cost effective Hybrid circuits.

The information required by Hybrid vendors prior to starting a design will be given together with a discussion of typical start up costs. Various manufacturing technologies such as thick film versus thin film will be presented.

Increased reliability is a feature of Hybrid circuits because this technology eliminates one level of interconnections.

Adaptive Array Antennas

The Chicago joint chapter of Microwave Theory and Techniques and Antennas and Propagation will hear Dr. S. M. Sanzgiri, University of Illinois, Chicago Circle Campus, talk on "Adaptive Array Antennas." Meeting will be held on January 21, 1975, at Menard's Black Steer Restaurant, 6446 W. North Ave., Chicago, Ill. Dr. Sanzgiri will discuss adaptive array antenna applications and basic adaptive array algorithms. He will then cover behavior of adaptive arrays using LMS algorithms. Sanzgiri will also cover acquisition techniques, and will end with a discussion of how to implement adaptive arrays.

S. M. Sanzgiri was born in Goa, India, and received his BS from the University of Bombay in 1965; his MS from the Indian Institute of Science, Bangalore, India, in 1967, and his PhD from Sou-

thern Methodist University, Dallas, in 1971.

The number of hermetic seals in a given system is also considerably reduced. This increased reliability, however, will be attained only through proper care in the establishment of controls during both design and manufacturing phases. This aspect of the technology will be reviewed by Mr. Scott.

The meeting will be held Thursday, February 6, 1975 at Heuers Restaurant, 5591 River Road, Rosemont, Ill. Social hour 5:30 p.m., dinner at 6:30 p.m. (\$7.50) you need not attend the dinner to participate in the technical session at 7:30 p.m. For reservations, call the IEEE, 263-5954 or Hugh Edfors, 647-9000, ext 254 or Ray Schirmer, 259-0740, ext 355.

Future of Mobile Radio

The January 8 meeting of the Chicago Vehicular Technology Group will feature a program on "The Future of Mobile Radio." Speaker will be Martin Cooper, vice president and director of Systems Operations, Motorola, Inc.

Meeting will be at the Lancer Steak House, Algonquin Road near Meacham in Schaumburg. Social hour, 6:00 p.m.; dinner, 7:00 p.m.; program, 8:00 p.m.

Dinner will include Chicken Oregano, with salad, potato, vegetable, roll, beverage, and dessert. The cost is \$6.00.

For reservations, call Dan Clark, 397-1000, ext. 3863, or the IEEE office, 263-5954.

thern Methodist University, Dallas, in 1971.

Dr. Sanzgiri was a research associate, Department of Electrical Engineering, Laval University, Quebec from May 1972 to November 1973. From December 1973 to August 1974 he was an antenna design engineer at General Precision Industries, Montreal. In September 1974 he was appointed assistant professor in electrical engineering, Laval University. He is currently a visiting associate professor at the University of Illinois, Chicago Circle Campus. Dr. Sanzgiri's major research interests are in electromagnetics, numerical analysis, and phased and adaptive array antennas.

Social hour, 6:00 p.m.; dinner, 7:00 p.m.; program, 8:00 p.m. For reservations, call the IEEE office, 263-5954.

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Meeting Reservations

Remember that the IEEE office, (312) 263-5954, will take your meeting reservations. The best time to call is between 9:30 a.m. and 12:30 p.m. or between 2:30 p.m. and 5:00 p.m.

The meeting coordinator for any group should call and leave his number with Ollie at the office, so she 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.

Carroll Elected Region 4 Director

Paul F. Carroll, who has served the Chicago Section in many capacities including chairman, has been elected Region 4 Director. He is president, Semiconductor Specialists, Inc., Chicago, an electronics distributor specializing in high technology products. Since its founding in 1959 by Carroll, Semiconductor Specialists has expanded to ten branches in the United States and three wholly owned international subsidiaries in the United Kingdom, Germany, and Canada. Carroll is also Chairman of the Board of Midwest College of Engineering, Lombard, Ill.

We've Got His Number

Dan Vieth, Section Vice Chairman, has a new extension number at Argonne Laboratory. His new telephone number is 739-7711, ext. 3898. Please correct your Directory of Section Officers.

Nant Notices Published?

If you want meeting notices published, make sure meeting notices are sent to the Scanfax office, Room 532, 55 E. Washington Street, Chicago, Ill. 60602, include: date of meeting, names of sponsoring group, or society, place of meeting, time for dinner and meeting, and name and telephone number of someone in group.

If these items are not included in the meeting notice, the editor must either make them up, based on previous experience with the groups, or try to locate someone in the group who knows. When the group name is left off the meeting notice — as has happened several times this year — locating the information becomes a task for a private detective.

Remember that the Chicago Section, two subsections (Fox Valley and Northwest), and 15 groups/societies all submit material. Add to this, various conferences, and you can see identification of "nameless" meetings becomes difficult when not impossible.

If you expect meeting notices to be published, and published correctly, send them in (telephone is for emergency only!) and include all information.

Update on Hospital Wiring

On January 8, 1975, Kent P. Stiner, I-T-E Imperial Corporation, will discuss "Updating Hospital Wiring Systems" at the meeting of the joint chapter of the Industry Applications Society and the Industrial Electronics and Control Instrumentation Group.

In his presentation, Stiner will include the proposals submitted for changes in the 1971 National Electrical Code which resulted in a thorough review of past as well as present practices in "critical care areas" and in anesthizing areas. Stiner will also review requirements for ground fault control for equipment. He will conclude with some words on the extension of Health care facilities to locations other than hospitals.

Kent P. Stiner holds a BS in electrical engineering from Lawrence Institute of Technology. He was in the electrical

SF-6 Transmission Dips and Lines

SF-6 gas insulated circuit breakers and switches have been in general use in the utility industry for many years. Recently, this type of insulation has been used on substations, short transmission lines, and in other places where normal high voltage line clearances cannot be used. Engineers working with substations, high voltage power cables, and insulation systems will find this presentation very timely.

At the January 28, 1975, luncheon meeting of the IEEE Power Engineering Society, Lance A. Kilar, I-T-E Imperial Corporation will discuss "SF-6 Transmission Dips and Lines."

Kilar has broad experience in the underground transmission field, having been supervising engineer of underground systems, advance systems technology, Westinghouse Electric Corporation. He is now manager, market development for gas insulated transmission equipment at I-T-E Imperial.

Kilar is a registered professional engineer and has an MS in electrical engineering and an MBA. He is author of several technical papers and trade journal articles dealing with underground transmission.

Social hour, 11:30 a.m.; lunch, 12:00 noon; program, 12:30 p.m. Because the Chicago Engineer's Club has been sold, meeting place has been changed. New meeting place is the Midland Hotel, 172 W. Adams Street, Chicago. For reservations, call the IEEE office, 263-5954.

contracting business from 1935 to 1947, and also served in both the army and the navy for six years. Stiner was field supervisor and chief electrical inspection of the building department, City of Detroit for six years. He was in engineering liaison with Bulldog Electric from 1953 to 1956. Stiner has been product planning manager for the distribution and controls group of I-T-E Imperial Corporation for the past 15 years.

Dinner and meeting will be at Nielsen's Village, 7330 W. North Avenue. Social hour, 5:30 p.m.; dinner, 6:15 p.m.; meeting, 7:15 p.m. Cost of dinner is \$7 for members; \$8 for nonmembers. All who come to dinner will receive complimentary liquid refreshments. For reservations, call Bob Loewe at 782-5520, or the IEEE office, 263-5954.

Automatic Testing

The publication of *Automatic Test Equipment: Hardware, Software, and Management*, a book of selected reprints, has been announced by the IEEE PRESS. This collection was edited by Fred Liguori of the Naval Air Engineering Center.

A virtual explosion of commercial applications of automatic testing has occurred in the last few years. This followed a slower but constant growth in the use of automatic test equipment in military applications. This book fills a real need by providing information on understanding, preparing for, and managing this important new technology. The 28 papers included emphasize applications rather than design, so that the volume will be of maximum value to users and prospective users of automatic test equipment.

This 264-page book, sponsored by the IEEE Aerospace and Electronic Systems Group, is priced at \$6.00 for the paperback member edition.

A clothbound edition is available for \$11.95 (discounted to \$8.95 for IEEE members).

A new catalog describing the 18 IEEE PRESS Books now in print may be obtained free of charge by writing to: IEEE PRESS, The Institute of Electrical and Electronics Engineers, Inc., 345 East 47th Street, New York, N.Y. 10017.

Arthur P. Stern Elected IEEE President

Arthur P. Stern has been elected President of the Institute of Electrical and Electronics Engineers, Inc., the largest professional engineering society in the world. Stern, who will take office on January 1, 1975, succeeds John Guarrera. Joseph K. Dillard was elected executive vice president. They will both serve for one year.

Stern is vice president of The Magnavox Company and general manager of its Advanced Products Division. He joined Magnavox in 1966 and is responsible for the company's businesses in communications and navigation systems and products. Stern is headquartered in Torrance, California and heads operations located in Torrance, Fort Wayne, Philadelphia, and Silver Spring.

Call for Papers

The Third Joint Conference on Sensing of Environmental Pollutants will be held November 10-13, 1975, in Las Vegas, Nevada. Technical sessions will feature information exchange on the close interrelation of sensing methodology and assessment of environmental problems.

Papers are solicited in the areas of pollutant measurement and assessment of problems associated with personal exposure monitoring; pollutants of current interest; energy extraction, processing, transport and use; general transportation and other urban activities; agricultural activities; industrial processes; waste disposal methods; interactions between climate and pollution; long-range global environmental trends; and relationship of data bases and processing to user needs.

Those wishing to present papers (20-25 minutes) should submit (a) a short (50-100 word) abstract to be incorporated in the Conference Program, and (b) an extended abstract (400-500 word) to be used by the Program Committee in selection of papers to be presented at the Conference. These abstracts must be received by April 30, 1975 by the Program Chairman, Dr. Henry Freiser, Department of Chemistry, University of Arizona, Tucson, Arizona 85721. Each contribution should list the full names and affiliations of each of the authors. A Conference Record containing the complete papers will be published. The deadline for receipt of the final manuscript of each paper is November 1, 1975.

He was born in Hungary and has advanced engineering degrees from the Swiss Federal Institute of Technology (where he also served as an instructor) and from Syracuse University. He came to the United States in 1951, and joined General Electric's Electronics Laboratory where he rose to the position of Manager of the Electronic Devices and Applications Laboratory. While at G.E., Stern also was a Non-resident Staff Member at M.I.T. In 1961, he became Director-Engineering with Martin-Marietta and later with its subsidiary, Bunker-Ramo.

A Fellow of IEEE, "for leadership and contributions in solid state circuits," Stern is currently Vice President-Regional Activities. He was Chairman of IEEE's Circuits and Systems Society. He has also been a member of the IEEE Board of Directors and of the Executive Committee as Secretary (1972) and Treasurer (1973). In 1964, Stern was Guest Editor of a special issue of *Proceedings of the IEEE* on Integrated Electronics. He has published numerous technical articles and holds 12 patents.

Adler Wins Honor

Dr. Robert Adler, Zenith Radio Corporation's vice president-research, received the outstanding technical paper award from the Chicago Section IEEE at a December 9, 1974, luncheon meeting at O'Hare Inn.

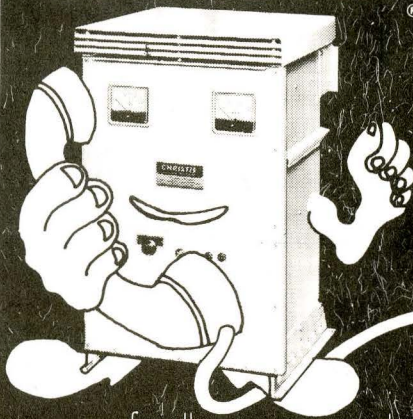
Adler's award-winning paper, titled "An Optical Video Disc Player for NTSC* Receivers," was selected the most outstanding from among 20 presented at the 1974 Chicago Spring Conference held June 10-11. The Chicago Spring Conference was sponsored by the Chicago Section and the Consumer Electronics Group. The Awards Committee chairman is James Hornberger, Delco Electronics.

The paper reports development of an optical video disc player based on a thin flexible disc and the aerodynamic disc stabilizer developed at the Central Research Laboratory of Thomson-CSF in France.

This video disc playback system is designed to play program material of the viewer's choice, through a color TV receiver.

Adler, who joined Zenith's research division in 1941 after receiving his Ph.D. degree in physics from the University of Vienna in 1937, has been a Zenith vice

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president since 1959 and director of research since 1963 and has been responsible for many developments in the electronics industry.

In television, Adler invented the ultrasonic remoted control system, the gated-beam tube for sound and color demodulation, a widely used synchronizing circuit that improves color reception, and a projected television picture that utilizes a laser beam modulated by ultrasonic diffraction.

In the communications and radar field, he developed a high-frequency magnetostrictive oscillator, an electromechanical filter, and the low-noise, beam-type amplifier known as the Adler Tube.

He received the Inventor of the Year Award from George Washington University in 1967, the IEEE Outstanding Achievement Award in 1970, and the 1958 Outstanding Technical Achievement Award of the IRE Professional Group on Broadcast and Television Receivers.

Adler is a member of the National Academy of Engineering, a Fellow of both IEEE and the American Association for the Advancement of Science.

*National Television Systems Committee.