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CHICAGO SECTION · IEEE · INSTITUTE OF ELECTRICAL & ELECTRONICS ENGINEERS

NOVEMBER 1974

CALENDAR OF EVENTS

IEEE OFFICE: 263-5954

- Nov. 6 "Microprocessors;" Fox Valley Subsection; Stevens Restaurant, Elmhurst, Ill; social hours, 6:00 p.m.; dinner, 7:00 p.m.; meeting, 8:00 p.m. (Page 3)
- Nov. 11-12 1974 IEEE International Ultrasonics Symposium; Pfister Hotel, Milwaukee, Wis.
- Nov. 12 "Analysis of Microwave Diodes;" MTT/A&P; Black Steer Restaurant, 6446 W. North Avenue, Chicago, Ill.; social hour, 6:00 p.m.; dinner, 6:30 p.m.; technical session, 7:30 p.m. (Page 2)
- Nov. 13 "Reliability of Power Systems and their Components;" 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.
- Nov. 13 "Chicago Police Communications System;" Vehicular Technology; Holiday Inn, Rolling Meadows, Ill.; social hour, 6:00 p.m.; dinner, 7:00 p.m.; technical session, 8:00 p.m. (Page 3)
- Nov. 20 "Paramedics and Medical Electronics;" Northwest Subsection/Chicago Section; Old Orchard Country Club, 700 W. Rand Road, Mount Prospect, Ill.; social hour, 6:00 p.m.; dinner, 7:00 p.m.; presentation, 8:00 p.m. (Page 2)
- Nov. 20 "Charge Coupled Devices" Reliability; Nielsen's Restaurant, 6445 N. Mannheim Road, Rosemont, Ill.; social hour, 5:30 p.m.; dinner, 6:30 p.m.; technical session, 7:30 p.m. (Page 3)
- Nov. 21 Power Engineering Society joint meeting with the Chicago Chapter ISPE. "Clinch River Fast Breeder Reactor" Speaker: Harvey Wyckoff, Commonwealth Edison Company, Chicago Engineering Club. 5:30 social, 6:30 dinner, 7:30 meeting. \$6.25.
- Dec. 4 "Environmental Analysis for Power Plant Siting;" Fox Valley subsection/ Power Engineering Society; Argonne National Laboratory, Argonne, Ill.
- Dec. 10 "Family Night at Arlington Park;" MTT/A&P (Page 3)
- Dec. 11 "Calibration and Maintenance of Protective Devices;" 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.

Deadline for copy: 25th of second month preceeding date of publication

Tax Reform Bill Threatens Professional Deductions

The tax reform bill now before the House Ways and Means Committee could seriously affect IEEE members. The committee has tentatively decided to make the first \$200 of employees business related expenses non-deductable in determining Federal taxable income. This would include such items as IEEE dues, subscriptions, technical conferences, short courses, etc. If they are not paid by your employer, these items can currently be used as a deduction if you itemize them on your tax return. The proposed legislation would allow these deductions only on the total amount that exceeded \$200.

This provision is contained in the "TAX Reform Act of 1974." IEEE urges you to write members of the House Ways and Means Committee from Illinois to say that you want this item deleted or amended to exempt professional society expenses. A sample letter follows, that can be used to form the basis of your own reply. IEEE also urges that you get members of other societies to write as well.

Members from Illinois:

Harold R. Collier
Dan Rostenkowski
Wilbur D. Mills (Ark.), Chairman

Sample Letter

Honorable
House of Representatives
Washington, D.C. 20515

Dear Mr. (Ms.) _____:

I wish to express my opposition to a tentative decision reached by the House Ways and Means Committee regarding the "Tax Reform Act of 1974." The Committee has indicated a desire to prevent employees from taking a deduction on the first \$200 of their trade or business expenses in determining their Federal taxable income. The \$200 "deductable" would include (but not be limited to) such items as professional association

Continued on Page 3

"Analysis of Microwave Diodes"

Professor C. Q. Lee, University of Illinois, Chicago Circle Campus, will discuss "A Technique for Analysis of Microwave Diodes" at the Tuesday, November 12 meeting of the joint MTT/A&P chapter.

Dr. Lee will discuss a time domain analysis, using the Lagrangian approach, for a class of microwave diodes with unipolar injection, such as Read Diode, Gunn diode, and punch-through diode. He will show how this method can determine the small signal characteristics of diodes with various contact conditions and material having arbitrary field-dependent mobility, without using the simplifications assumed in the existing theories.

C. Q. Lee received his BS, MS, and PhD in electrical engineering in 1957, 1959, and 1966, respectively, all from the Illinois Institute of Technology. He is with the Department of Information Engineering, Chicago Circle Campus, University of Illinois.

The meeting will be held at Menard's Black Steer Restaurant, 6446 W. North Avenue, Chicago, Ill. Social hour, 6:00 p.m.; dinner, 6:30 p.m.; technical session, 7:30 p.m. For reservations, call the IEEE office, 263-5954.

Chicago Electrical Code Revision

The Chicago IAS/IECI joint chapter has just finished a comprehensive study of necessary revisions to update the Chicago Electrical Code. Their recommendations will be submitted to the Electrical Code Committee of Chicago, and then to the Chicago City Council for final approval. After November 1, copies of the proposed code revision will be available for review (or sale) at the IEEE office, Room 532, 55 E. Washington Street, Chicago, Ill.

The IAS/IECE committee, which proposed the recommendations was headed by Dennis W. Lamont, Weldy-Lamont Associates, chairman. Other members included: D. R. Jenkins, Commonwealth Edison Company; George Nejol, Epstein & Sons; Bill Schwartzburg, Greeley & Hansen; John Trutwin, P & W Engineering; G. Pelligrinetti, C. F. Murphy & Associates; Lou Sopkin, John Dollo & Associates; and Rudy Wolfson, Wolfson & Levitt.

Paramedics and Medical Electronics

Paramedic teams have come to the Chicago area. Dispatched from a central location, usually a fire department, these teams race to accident scenes, to the help of heart attack victims, or to aid persons burned in fires. Medical electronics provides both a communications link for the paramedics with a central hospital and a means of transmitting signals from portable medical instrumentation.

Lieutenant John Gibson, Mount Prospect Fire Department, will present a look at "Medical Electronics and Paramedics in the Northwest Suburbs" at the meeting cosponsored by the Northwest Subsection and the Chicago Section IEEE on Wednesday, November 20. He will display pictures of the medical center at Northwest Community Hospital. Barring community catastrophes requiring their services elsewhere, a rescue team will arrive at the meeting to demonstrate their equipment, including sending an EKG over the radio link to Northwest Community Hospital, where it will be analyzed and the results immediately relayed to the team.

This should be an interesting evening for all members, and spouses and friends are invited. Meeting will be held at the Old Orchard Country Club, 700 West Rand Road, Mount Prospect, Ill. (north-east corner, Rand Road and Euclid Avenue). Social hour, 6:00 p.m.; dinner, 7:00 p.m.; presentation, 8:00 p.m. For reservations, call the IEEE office, 263-5954.

Corrections

Please correct the group and Society Officers listing, published on page 3 of October issue as follows:

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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.

Chicago Police Communications System

On Wednesday, November 13, William Miller, Director of Communications, Chicago Police Department, will describe the Chicago Police Department Communications System for the members and guests of the Vehicular Technology Group.

Meeting will be held at the Holiday

"Charge-Coupled Devices Processing and Reliability"

Charge-coupled devices (CCD) are a relatively new solid-state development, and only a few devices are available. As yet, there are no consistently produced devices for which reliability data can be established; nevertheless, CCD's have already demonstrated superior performance in such applications as imagers, signal processing, and memories. The simplicity of the CCD structure, with ohmic contacts only at the input and the output, make a given device inherently more reliable than MOS-LSI circuits of similar complexity.

Warren P. Waters, Rockwell International, will discuss these devices at the November 20 meeting of the Reliability Group. Waters will describe the processing techniques and fabrication of surface-channel, buried-channel, and epitaxial peristaltic CCD's. He will show how the structural features, which are similar to MOS circuits, can be analyzed for a projection of CCD reliability. Waters will also describe some of the CCD work in progress at the Electronic Research Division of Rockwell International in terms of various applications.

Warren P. Waters received his BS and MS in physics from the California Institute of Technology and the University of Southern California, respectively. Since 1952 he has been working in semiconductor device design at Hughes Semiconductors, Texas Instruments, and Tele-dyne Semiconductors. He is currently responsible for CCD processing in the Special Programs Department, Electronic Research Division, Rockwell International, Anaheim, California.

The meeting will be held Wednesday, November 20, at Nielsen's Restaurant, 6445 N. Mannheim Road, Rosemont, Ill. Social hour, 5:30 p.m.; dinner, 6:30 p.m.; technical session, 7:30 p.m. For reservations, call the IEEE office, 263-5954 or Hugh Edfors, 647-9000, ext. 254.

Inn, Rolling Meadows, Ill., on Algonquin Road near Highway 53. Social hour, 6:00 p.m.; dinner, 7:00 p.m.; technical session, 8:00 p.m. For reservations, call the IEEE office, 263-5954, or Dan Clark, 397-1000, ext. 2100.

Microprocessors

Fox Valley Subsection members and guests will hear a user panel on "Microprocessors" at the November 6 meeting. Users on the panel represent applications including video terminals, process control, point-of-sale terminals, and communications. After an introduction covering the "What and Why" of microprocessors, the panel will discuss current application problems and plans for the future.

Panel moderator will be Paul M. Vargo, product manager for editing systems for the MCD Graphics Division, Rockwell International Corporation. Dr. Vargo, who formerly taught in the Electrical Engineering Department, University of Oklahoma, obtained his PhD from Case Western Reserve University.

Meeting will be at Stevens Restaurant, Elmhurst, Ill. Social hour, 6:00 p.m.; dinner, 7:00 p.m.; meeting, 8:00 p.m. For reservations, call the IEEE office, 263-5954.

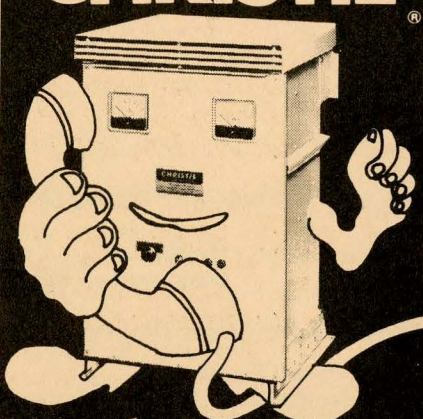
SAMPLE LETTER

Continued from Page 1

dues, educational expenses, and subscriptions to trade or technical publications.

There are many professionals, and engineering is just one of them, where professional societies provide a wealth of educational material for the practitioner. This person, although having completed college, thus has the opportunity to maintain his or her professional competency and improve productiveness by participating in conferences, short courses, and other society activities. The effect of the proposed legislation would be to discourage these individuals from continuing to improve their professional competence through continuing education. This is especially true of lower income professionals who could not afford to maintain their skills without the assistance of the current tax incentives. It would impede the development of one of our valuable national resources, the trained engineer. It would also seem an inopportune time to consider this type of legislation, since many states are considering modifying current registration laws requiring professionals to demon-

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Family Night at Arlington Park

MTT/A&P chapter plans a very special Family Night at Arlington Park on Tuesday, December 10. The evening will include dinner and the theater. Dinner will feature roast round of beef, Caesar salad, Parisienne potato, and julienne of string beans almondine. The nonprofit dinner will cost only \$9.00 per person, payable at the door by check only. Reservations must be made through the IEEE office, 263-5954, and are binding once made. Theater presentation will be announced in November. Start the holiday season this year by taking your family to Family Night at Arlington Park!

strate their participation in continuing education courses to maintain their licenses.

In the interest of encouraging a more skilled and productive labor force, I urge you on behalf of the _____ members of the _____ Section of the Institute of Electrical and Electronics Engineers to delete the sections creating a \$200 "deductable" on employees business related expenses or at least exempt dues and continuing education costs from this limitation.

CHICAGO FALL CONFERENCE

on Broadcast and Television Receivers

DECEMBER 9 and 10, 1974
O'Hare Inn, Rosemont, Illinois
(Adjacent to O'Hare Airport)

MONDAY

DECEMBER 9, 1974

9:30 A.M. SESSION I: Display Devices and Deflection

Session Chairman: Harold Law
David Sarnoff Research Center

Phosphors and Picture Tube Performance

Michael Stevens
Zenith Radio Corporation

Thin Film EL Panel for TV Display

S. Mito and C. Suzuki
Sharp Corporation

Horizontal Linearity Correction for Wide-Angle Color CRT Deflection

F. E. Aldrich and M. Fischman
GTE Sylvania, Incorporated

A New Toroidal Yoke, In-Line System

L. Pridmore and A. Klein
GTE Sylvania, Incorporated

The Influence on High Voltage Regulation of the Harmonic Content in the Flyback Voltage of a Television Horizontal Output Stage

Richard Woodhead
Texas Instruments, Ltd.

12:15 P.M. CONSUMER AWARDS LUNCHEON

Guest Speaker: John J. Nevin, President
Zenith Radio Corporation
"The Outlook For Consumer Electronics in the United States"

2:30 P.M. SESSION II: Computer Aided Design

Session Chairman: Ray Niagaris
Admiral Group, Rockwell International
Theoretical and Practical Aspects of Electron Gun Design for Color Picture Tubes

Iva M. Wilson
Zenith Radio Corporation

Achieving the Optimum Picture Quality via Computer Aided Design

Paul J. Whiteneir
Admiral Group Rockwell International

Computer-Aided Horizontal Sweep Design

John F. Shouse, Jr.
General Electric Company

Statistical Analysis of Electronic Circuits by Computer

E. W. Nowak
Zenith Radio Corporation

6:00 P.M. COCKTAIL HOUR

Sponsored by: M. Gottlieb Associates, Inc.

TUESDAY

DECEMBER 10, 1974

9:30 A.M. SESSION III: New Technology

Session Chairman: Lee Nero
Warwick Electronics Incorporated

Surface Wave Filters for NTSC and PAL TV I.F. Applications

M. Fishman and N. Williams
GTE Sylvania, Incorporated

The Aerodynamic Stabilization of Video Discs

Mahfuz Ahmed, Richard Brown and Adrianus Korpel
Zenith Radio Corporation

International Trends of Engineering Thermoplastics in Color TV Components

Barry W. Fitzgerald
General Electric Company

Reliability Performance of High Power IC's in Plastic Packages

Walter Fumagalli
SGS-ATES Semiconductor Corporation

An Infrared Wireless Speaker System Utilizing a Super Wide Band F.M. Carrier

Richard Citta
Zenith Radio Corporation

2:30 P.M. SESSION IV: Integrated Circuits, Design and Applications

Session Chairman: Walter Ciciora
Zenith Radio Corporation

A Novel Automatic Hue Control System

Ted Rzeszewski
Quasar Electronics Corporation

One-Chip Chroma IC for the Color TV Receiver

M. Oguino, N. Nabe-yama, M. Shimano and T. Kuroyanagi
Hitachi, Ltd.

Combined Line Flywheel Combination and Switched Mode Power Supply Control

Terry Barnes
Plessey Semiconductors

A Novel TV Remote Control System

S. Takehara and S. Makino
Tokyo Shibaura Electric Company, Ltd.

Custom IC's in Consumer Electronics

Fred J. Gunther
University of Illinois at Chicago Circle