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Official Publication of the Chicago Section • Institute of Electrical & Electronics Engineers • February 1987

TIME SENSITIVE MATERIAL

CALENDAR OF EVENTS

For reservations call the IEEE office 236-4609
(unless otherwise indicated)

Copy Deadline for March Scanfax is Jan. 26, 1987

FEB. 4	"Appl. & Tech. Com- pari. of LV Circuit Breakers vs. Insula. Case Brkrs."	Power Engrng. Soc.	Carson Pirie Scott Wabash & Monroe Sts. Highland Rm., 8th Fl.	Social 11:30 AM Lunch 12 Noon Meeting 12:30 PM
10	Monthly Meeting ALL WELCOME	IEEE Executive Cte.	Allen-Bradley Company 910 Pasquinelli Dr. Westmont, IL	Meeting 7:30 PM
11	"Factory Automation"	Industry Applications Society/Industrial Electronics Society	Mr. Peter's Restaurant 1018 Mt. Prospect Ave. Mount Prospect, IL	Social 5:30 PM Dinner 6:15 PM Meeting 7:15 PM
21	"Management vs. Engrng. - Who is Re- sponsible for Relia."	ASQC - IEEE Reliability Management Seminar	Midway Motor Lodge 1600 Oakton St. Skokie, IL	8:30 AM - 3:00 PM (See article in this issue)
22-28	37th Annual National Engineer's Week - "Engineers: Turning Ideas into Reality"			
23	"The First Century of Microwaves - 1886 to 1986"	Antennas & Propa. Soc. & Micro. Theory & Techniques Soc.	Louis Restaurant 351 E. Lake St. Addison, IL	Social 5:30 PM Dinner 6:30 PM Meeting 7:30 PM
25	"Computer Graphics"	Fox Valley Subsec.	Wilton Manor 2200 Main St. Wheaton, IL	Social 6:00 PM Dinner 7:00 PM Meeting 8:00 PM
MAR. 4	"Downtown Chicago's Network Distribution System"	Power Engrng. Soc.	Carson Pirie Scott Wabash & Monroe Sts. Highland Rm., 8th Fl.	Social 11:30 AM Lunch 12 Noon Meeting 12:30 PM

(continued on pg. 15)



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MAY	MAR. 30	APR. 15
JUNE	APR. 27	MAY 15

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SCANFAX, (Publication) number (ISSN 0018-1297), Feb. 1987
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Bob Hofmann, Editor
979-3627

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979-5824

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IEEE Office
(312) 236-4609

Change of Address

Send change of address to Roseann Schulz, Member Services, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854-4150. Include your SPECTRUM mailing label is possible. We cannot forward this information for you, so please do not send it to the local office.

FOX VALLEY SUBSECTION

Computer Engineering: A Picture is Worth a Thousand Equations Wednesday, February 25, 1987

Mr. John Kunzer will demonstrate the latest engineering analysis software available for microcomputers. The emphasis will be on the graphic capabilities of these programs.

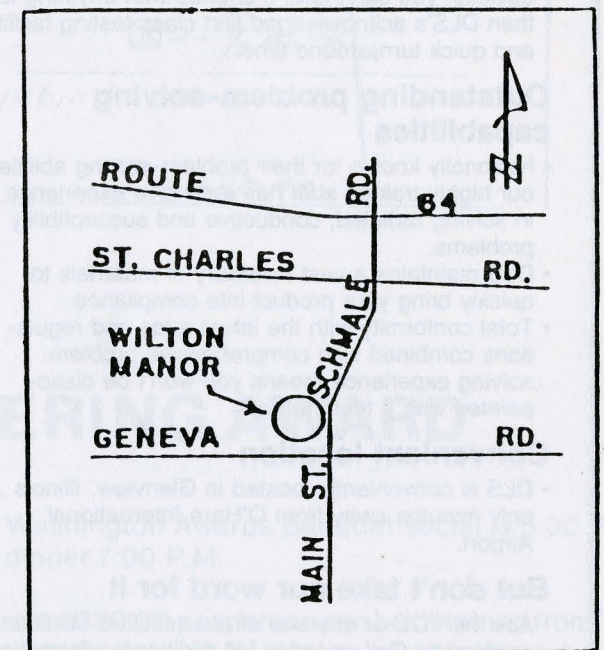
Mr. Kunzer has been associated with Computer Bay since 1979. Computer Bay is a Fox Valley Computer store serving the business and professional markets. They specialize in IBM and APPLE computers.

Location: Wilton Manor
2200 Main Street
Wheaton, IL

Time: Cash Bar 6:00 PM
Dinner 7:00 PM
Cost \$10.00
Meeting 8:00 PM

Dinner Reservations:

Call 312-236-4609 prior to
Monday, February 23, 1987



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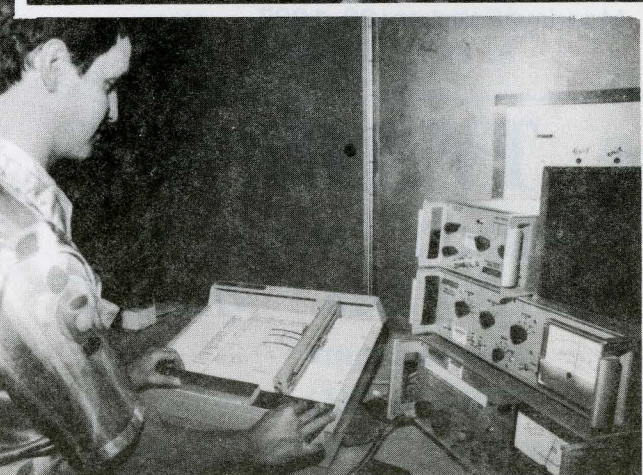
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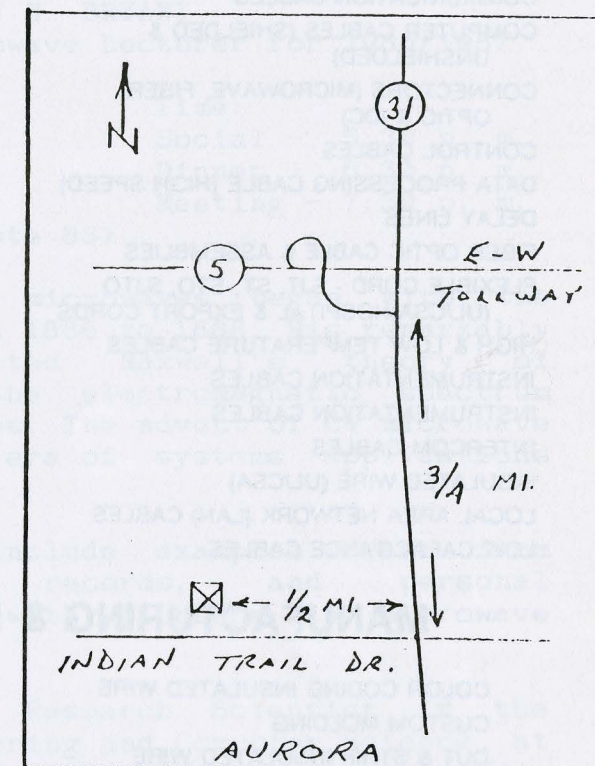
NORTHWEST SUBSECTION

FRIDAY, MARCH 20, 1987
FACILITY TOUR:
CHICAGO AIR TRAFFIC CONTROL CENTER

The Chicago Air Traffic Control Center handles all air traffic in an area which includes the Northern half of Illinois, Northwest Indiana, Western Michigan, Southern half of Wisconsin, Eastern Iowa and Northeastern Missouri. It is responsible for all air traffic (commercial, private and military) in this corridor from the ground up to infinity.

Place: Air Traffic Control Center
Location: 619 West Indian Trail Drive
Aurora, IL
Time: 1:45 - 3:30 PM
Reservations: (312) 236-4609
Limits: 20 People

CALL NOW!



NATIONAL ENGINEERING AWARD

Retired Rear Admiral Grace M. Hopper, U.S.N., of computer fame, has been elected to receive the 1986 Washington Award, one of engineering's prized national honors. The presentation will take place on February 18, 1986 at the Americana-Congress Hotel, 520 South Michigan Avenue in Chicago. The event is presented annually by seven national and regional engineering societies, among which is the IEEE. The Award is administered by The Western Society of Engineers (Chicago).

The Washington Awards Banquet social is 5:30 P.M. and dinner 7:00 P.M.

Tickets at \$30.00 per person can be obtained from The Western Society of Engineers at 176 West Adams Street, Room 2006, Chicago 60603, or call 372-3760.

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JOINT CHICAGO CHAPTER OF IEEE ANTENNAS & PROPAGATION SOCIETY AND MICROWAVE THEORY AND TECHNIQUES SOCIETY

FEBRUARY 1987 MEETING NOTICE

The First Century Of Microwaves - 1886 to 1986

BY: DR. JOHN H. BRYANT

IEEE MTT-S Distinguished Microwave Lecturer for 1986/1987

Date: Monday, February 23, 1987

Place: Louis Restaurant

351 E. Lake Street

Addison, IL

(First traffic light West of Route 83)

Time:

Social - 5:30 p. m.

Dinner - 6:30 p. m.

Meeting - 7:30 p. m.

ABSTRACT: The first century of microwaves began with the historic experiments of Hertz in 1886 to 1888. His remarkably thorough investigations validated Maxwell's theory of electromagnetism and opened up the electromagnetic spectrum for scientific and practical uses. The advent of CW microwave sources in the 1920's began the era of systems applications in communications and radar.

Dr. Bryant's presentation will include examples drawn from his search of historical records, and personal correspondence and interviews with pioneers in microwave devices and applications.

John H. Bryant is an Adjunct Research Scientist in the Department of Electrical Engineering and Computer Science at the University of Michigan in Ann Arbor. His career in radar began with service in the U. S. Army Signal Corps, serving in England and Europe. He then spent six years each at ITT&T Laboratories and then with the Bendix Research Laboratories, working with microwave electron tubes and passive devices in radar. In 1962 he was a founder of Omni Spectra, Inc and served as its President. Omni Spectra pioneered in the design and production of coaxial and planar microwave components which were a major influence in the move from waveguide to compact microwave systems design.

Dr. Bryant holds a BSEE from Texas A&M University, and MS and PHD from the University of Illinois. He is a Fellow of the IEEE and a Past President of the Microwave Theory and Techniques Society.

The dinner is optional. A reservation is helpful even if you plan to attend the talk only. Reservation may be made by calling Eleanore Burda at the Chicago IEEE office, 236-4609, before noon on Friday, February 20, 1986. Student members of the IEEE are encouraged to attend meetings. Dinner for student members is available for the nominal charge of \$1.00.

Non-IEEE members are also welcome.

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February 17, 1987

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Return completed form before Feb. 9, 1987

POWER ENGINEERING SOCIETY

Meeting Notice

LUNCHEON MEETING

WEDNESDAY - FEBRUARY 4, 1987

Speaker: James E. "Bo" Hylton
BBC Brown Boveri, Inc.

Topic: Application & Technical Comparison of Large Low Voltage Power
Breakers Versus Insulated Case Breakers

Abstract: Insulated case breakers are able to obtain high instantaneous interrupting ratings due to the light "blow off" contact assemblies and the resulting fast operating time. The insulated case circuit breakers have an 18 cycle short-time rating and must always be equipped with an instantaneous trip to protect the breaker at high levels of current. They are tested to the Standard UL 489.

The large power circuit breakers are design tested to ANSI C37.50, and have a "true" 30 cycle short-time rating and a close and latch delayed trip rating. The extended full interrupting capacity short-time rating of this large low voltage power breaker gives it an advantage in system coordination, system growth, and continuity of service over the equivalent insulated case breaker.

About the Speaker: James E. "Bo" Hylton received his BSEE Degree from West Virginia University in 1972. He received his MS in Mining Engineering from Virginia Polytechnic Institute and State University in 1977. He worked two years for A.E.P., as a Distribution Line Protection Engineer.

He has worked five years for Bethlehem Steel Corporation responsible for Electrical Facilities Design, Construction & Maintenance. He worked for five years with Brown Boveri, Inc. as Application Engineer responsible for large power circuit breakers.

Location: Carson, Pirie, Scott & Co.
Highland Room
Monroe & Wabash
Downtown Chicago

Cocktails: 11:30 AM
Lunch: 12:00 Noon
Meeting: 1:00 PM

Lunch is \$11.00 per person. Advance reservations should be made by calling Eleanor Burda at 236-4609. For further information contact John Whelan at Klockner-Moeller at 593-0980.

FIBER OPTICS SEMINAR

POWER ENGINEERING SOCIETY

DATE: March 28, 1987

TIME: 8 A.M. - 4 P.M.

LOCATION: Wilton Manor
Wheaton, Illinois

COST:	Members	\$50.00
	Non-Members	\$65.00
	Students	\$15.00

The Chicago Section of the IEEE/PES will present a seminar on Fiber Optics. The following topics will be covered:

1. Fundamentals & Industrial Applications of Fiber Optics.
2. The Principles & Techniques of Fiber Optic Cable Terminations.
3. Selection of Fiber Optic Equipment.
4. Communications Using Fiber Optic.
5. Transmission Application Using Fiber Optic Communications.

Please use the registration form below. Make check payable to:
Chicago Section PES/IEEE and send it to:

Commonwealth Edison Company
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P.O. Box 767 - 36FN E
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Chicago, IL 60690

REGISTRATION FORM

My check # _____ in the amount of \$ _____ is enclosed as payment
for the Fiber Optic Seminar - March 28, 1987.

NAME _____ IEEE # _____

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1987 IEEE RECOGNITION DINNER

The IEEE Chicago Section will hold its 1987 Recognition Dinner on Saturday, April 11, 1987 at the Westin Hotel O'Hare - 6100 River Road, Rosemont, IL.

This 1987 Recognition Dinner is special as the Chicago Section will be honoring three Fellow Awardees and also Student Awardees from our local Universities.

The success of this event is dependent on the supporting contributions of Electrical and Electronic Companies in the Chicago area and the attendance of IEEE members and guests. An excellent dinner and entertainment will be provided. Tickets are \$30.00 per person. (same as last year) Please make your reservations early. Recent Fellow Awardees are especially invited!

Dinner Committee members are:

Henry Korman, Chairman; Frank Lakowski, Vice Chairman and Secretary; Trevor Hinchliffe, Treasurer; John Murray, Tickets; Anthony Susie, Tickets; Frank Valtaggio, Solicitations; Robert Bowers, Entertainment; Cara Lindell, Student Activities; George Stout, IEEE Section Coordinator, and Margaret Stout, Arrangements.

Date: Saturday - April 11, 1987

Time: 6:00 P.M. (Cocktails) 7:00 P.M. (Dinner) 8:00 P.M. (Awards
followed by Entertainment & Dancing)

Place: Westin Hotel O'Hare - 6100 River Road, Rosemont, IL
(on River Road between Kennedy Expressway and Higgins Road)

Entertainment: Lindy Kao and Orchestra

Fellow Awards: Charles M. Knop
Michael G. Strauss
Bruce R. DeMaiyer

Student Awards: To be announced

Mail Reservations to: John E. Murray, Tickets/Arrangements Chairman, IEEE
Recognition Dinner, Zenith Microcircuits Corp.,
Subsidiary of Zenith Electronics Corporation
1851 Arthur Ave.
Elk Grove Village, IL 60007-6066
(312) 956-1550

Enclosed is my check in the amount of \$ _____ covering _____ tickets at \$30.00 each for the 1987 IEEE
Recognition Dinner at the Westin Hotel O'Hare, Rosemont, IL.

NAME _____

FIRM _____

ADDRESS _____ PHONE _____

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Make checks payable to: IEEE Recognition Dinner. Please mail by March 28, 1987.

THIRD ANNUAL ENGINEERS DAY CAREER FORUM TO FOCUS ON ENGINEERING RESOURCES OF THE ILLINOIS RESEARCH AND DEVELOPMENT CORRIDOR

CHICAGO - December 31, 1986 — This February, IIT West, the Illinois Society of Professional Engineers (Salt Creek and DuKane Chapters), the College of DuPage, the National College of Education, and local chapters of the country's leading professional engineering societies are combining efforts to provide students, parents, and professionals located along the Illinois Research and Development Corridor (IRDC) with an opportunity to explore changes and careers in the engineering professions.

IIT WEST and the Illinois Society of Professional Engineers have announced that they will sponsor the Third Annual Engineers Day Career Forum on Saturday, February 28, 1987, from 9:00 AM to 1:00 PM. The event, to be held in conjunction with National Engineers Week (February 22-28, 1987), at IIT West, 600 S. Lambert Road, Glen Ellyn, will showcase the engineering resources of the Illinois Research and Development Corridor in the context of this year's national theme, "Turning Ideas into Reality." The public is invited to attend; there is no charge.

Others associated with, or participating in, Engineers Day include the College of DuPage, the National College of Education, the American Institute of Chemical Engineers, the Institute of Industrial Engineers, the American Society of Civil Engineers, the American Society of Mechanical Engineers, and the Institute of Electrical and Electronics Engineers.

Illinois Institute of Technology (IIT), ranked among the top-ten private research universities in the country, is the leading research university in the Chicago area. IIT WEST, IIT's first suburban campus, is designed to extend the university's educational and research resources to working professionals, other residents, and corporations located along the Illinois Research and Development Corridor.



DO IT NOW !!

CALL THE IEEE OFFICE AT 236-4609 FOR COPIES OF THE 1987 MEMBERSHIP INFORMATION & APPLICATION BOOKLETS. WE'RE SURE ONE OF THE RESOLUTIONS YOU HAVE MADE FOR THIS YEAR IS TO OBTAIN A NEW MEMBER, OR TWO, SO DO IT NOW !!

INDUSTRY APPLICATIONS SOCIETY INDUSTRIAL ELECTRONICS SOCIETY * CHICAGO CHAPTER *

MEETING - February 11, 1987

TOPIC
Factory Automation - The Paperless Factory

SPEAKER
Martin Lenow, P.E.
Digital Equipment Co.

Mr. Lenow will talk about Automating Manufacturing. Included in his presentation will be analyses of several successful factory automation implementations.

The topic is related to important current events, such as the loss of manufacturing to overseas locations. We invite you to bring your spouse or a friend.

Mr. Lenow is a Senior Computer Integrated Manufacturing (C.I.M.) Consultant. Before joining DEC, he held manufacturing, marketing, and engineering management positions with Interlake, Pullman-Standard, and Boeing-Vertol Companies.

Place: Mr. Peters Banquets
1018 E. Mt. Prospect Plaza
Rand & Central Rd.
Mt. Prospect, IL

Time: 5:30 Social Hour
6:30 Dinner
7:30 Meeting - All Welcome

For dinner reservations, call Eleanor Burda at the Electrical Institute 312-236-4609.

For information, call Erwin Plofsky 312-293-5565.

Membership Information & Application



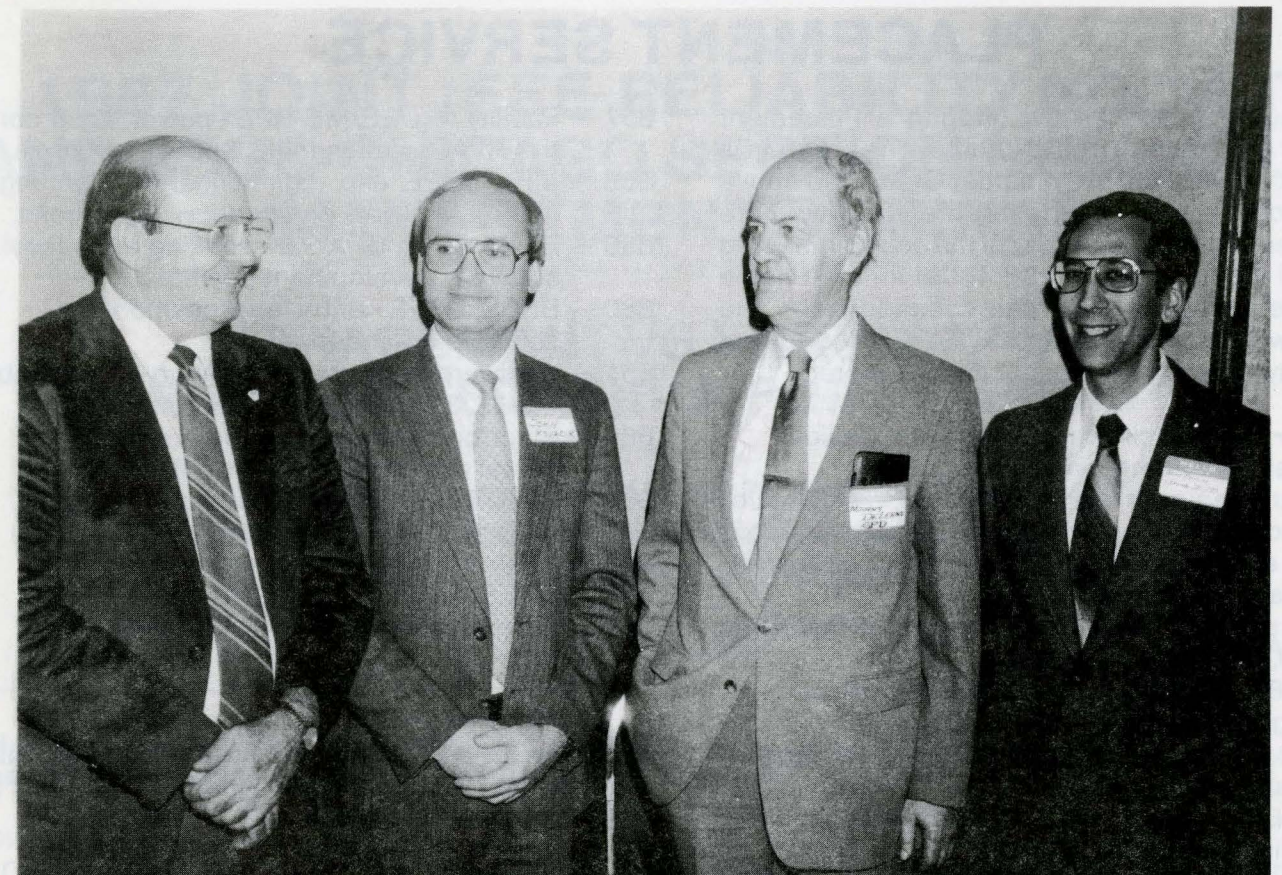
THE INSTITUTE OF ELECTRICAL
AND ELECTRONICS ENGINEERS, INC.

NOMINATING COMMITTEE REPORT

The Nominating Committee shared by Henry Korman met in December and early January to develop a slate of officers for the Executive Committee for the 1987-1988 term. The following candidates are proposed:

POSITION	NAME
Chairman	Ed Barrett
Vice-Chairman	Joe Feitler
Treasurer	Andy Gasiorowski
Secretary	Robert Schrage
Member Services	Henry Dwyer
Publication	Bob Hofmann
Professional Services	John Waters
Conferences	Howard Wolfman
Program	Len Cohen
Student Activities	Cara Lindell
Finance	George Stout
Special Events	Henry Korman

Nominations by petition will be accepted by the section Executive Committee if accompanied by ten or more signatures of section IEEE members and submitted to the Section Secretary by the February Executive Committee Meeting on Feb. 10, 1987 when nominations will be closed. The ballot for the election will appear in the April issue of Scanfax.



Pictured at the December 10, 1986 meeting of the IAS/IES are (left to right):
William I. Summers - International Association of Electrical Inspectors
John Kovacik - Underwriters Laboratories (Guest Speaker)
Manny Delerno - Consultant
Barry C. Brusso - Chairman: IEEE Chicago Chapter IAS/IES
Mr. Kovacik spoke on the subject - Use of Industrial Control Equipment in Fire Pump Control Applications

CALENDAR OF EVENTS

(continued from pg. 1)

10	Monthly Meeting ALL WELCOME	IEEE Executive Cte.	Allen-Bradley Company 910 Pasquinelli Dr. Westmont, IL	Meeting 7:30 PM
11	"MAPP"	Industry Applications Society/Industrial Electronics Society	Mr. Peter's Restaurant 1018 Mt. Prospect Ave. Mount Prospect, IL	Social 5:30 PM Dinner 6:15 PM Meeting 7:15 PM
25	"Robotics: Industrial Controls & Feedback Networks"	Fox Valley Subsec.	Wilton Manor 2200 Main St. Wheaton, IL	Social 6:00 PM Dinner 7:00 PM Meeting 8:00 PM
26	Seminar - "Fiber Optics"	Power Engrng. Soc.	Wilton Manor 2200 Main St. Wheaton, IL	8:00 AM - 4:00 PM (See article in this issue)

PLACEMENT SERVICE

The Chicago Section is now offering a Placement Service for its members free of charge. The program is intended for those who are Member Grade and above and is a positive step to help our members who are unemployed. If interested in any of the applicants listed below, call the IEEE office (236-4609) for their name and phone number. If marked "confidential," the applicant will be contacted by the IEEE office so that he/she may contact the prospective employer.

- B50 — Bio-medical/clinical & instrument design - desire part time - instructor E.E.
- B51 — Plant engineer high voltage dist. electl. main. machine main. or multi-faceted plant support.
- B52 — Sr. electl. proj. engr. - nuclear & fossil power all aspects inc. I & C.
- B53 — Tel sys hdw/sfw des exp, assem pascal fortran PLI, GTE sys's, sys tst, QA
- B54 — BSEE - looking for entry level electrical engineering position.
- B55 — B.S. Elec. - looking for field service engrng. position - I like to work.
- B56 — BSEET - GPA 3 - 90 (4.0) entry level position in field service or in house.

- B57 — Facility Mg. EE/ME/RPE - power, Itg. & control HVAC, matl. handlg. & mech. systems.
- B58 — MBA, BSEE, exp. mgr. in finance, planning, market analysis, engineering, operations.
- B59 — BSCS UIUC, GPA 3.8 - seeking entry level software development position.
- B60 — BSCS, BSEE - entry level position in software engineering.
- B61 — Hardware/software engineering - C, assembler, MS-DOS, UNIX, PC's, communications.
- B62 — Electronic project engineer - analog/digital design DC, audio to RF.
- B63 — R & D Mgr. - medical products, 15 yrs. experience, hdw/sftw/disp, BSEE.
- B64 — Sr. Project Engr. - factory automation, robotics, vision, AI, CAD/CAM, communication, software develop.

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1987 JOINT IEEE-RELIABILITY SOCIETY AND ASQC-CHICAGO SECTION RELIABILITY MANAGEMENT SEMINAR

MANAGEMENT VS ENGINEERING - WHO IS RESPONSIBLE FOR RELIABILITY?

Saturday, February 21, 1987, 8:30 AM - 3:00 PM
Midway Motor Lodge, 1600 Oakton St., Elk Grove, IL
(Corner of Oakton/Route 72 and Busse/Route 83)

PANEL	TOPIC	AND	SPEAKER
	"WHAT SHOULD THE ENGINEER ASK OF MANAGEMENT?"		Dennis McClain, Quality Consultant, Baxter Travenol, Deerfield, IL
	"HOW TO DESIGN-IN RELIABILITY!"		Pat Quirke, Director of Advanced Products Development, TRW-Electronic Assembly Div., Schaumburg, IL
	"PRODUCT LIABILITY CONSIDERATIONS FOR DESIGN AND MANUFACTURING"		George Karosa, Senior Engineer, Product Safety and Integrity, Rockwell Graphic Systems, Chicago, IL
	"MATERIALS AND ENVIRONMENTAL EFFECTS ON ELECTRICAL SPACINGS FOR PRODUCT RELIABILITY AND SAFETY"		John Knecht, Engineering Team Leader, Underwriters Laboratories, Northbrook, IL
	"QUALIFICATION TESTING"		Henry Buscke, Manager of Reliability, Engineering, Zenith Electronics, Glenview, IL
	"WHAT IS EVERYONE DOING ABOUT RELIABILITY?"		William Ireland, Project Reliability Engineer, TRW-Steering and Suspension Div., Detroit, MI
	"WHAT IS NEEDED IN THE DESIGN CYCLE TO TRANSFER TO MANUFACTURING?"		Frank Straka, Director of QC, Ameritech, Schaumburg, IL

FEE:

Advance register by February 13, 1987. Seminar fee includes lunch.

Member (ASQC or IEEE):	\$50.	At door:	\$60.
Non-member	65.		75.
Student	20.		25.

Please make the check payable to IEEE-Reliability Society.
Seminar size is limited to maximize interaction with the Panel.

(Registration form is on reverse side.)

RELIABILITY MANAGEMENT SEMINAR
IEEE-RELIABILITY SOCIETY AND
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JOINT IEEE-RELIABILITY SOCIETY AND ASQC-CHICAGO SECTION

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SATURDAY, 8:30 AM - 3:00 PM, FEBRUARY 21, 1987

MANAGEMENT VS ENGINEERING - WHO IS RESPONSIBLE FOR RELIABILITY?

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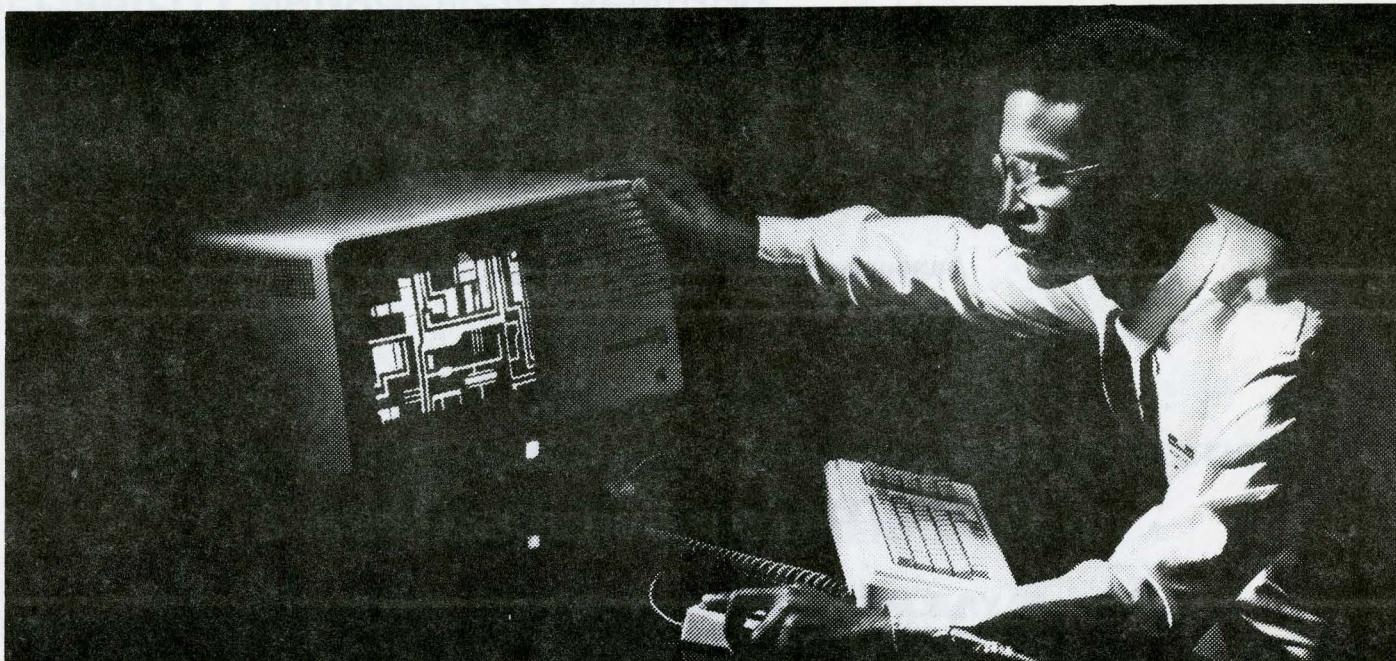
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