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Official Publication of Chicago Section • Institute of Electrical & Electronics Engineers • OCTOBER 1992

TIME SENSITIVE MATERIAL

CALENDAR OF EVENTS

For reservations please call IEEE Office at (708) 963-3828 before the stated deadline
The meeting details are stated in their relevant announcements inside
Copy Deadline for November SCANFAX is September 26, 1992

October 7 Wednesday	Communications Society	Digital Voice & Audio Compression	Sharko's Restaurant 2225 Ogden Avenue Lisle, Il.	Social: 6:00PM Dinner: 7:00PM Meeting: 8:00PM
October 13 Tuesday	Chicago Section	Executive Committee	Motorola Center 1295 East Algonquin Rd. Schaumburg, Il.	Meeting: 7:15 PM
October 14 Wednesday	Power Engineering Society	Industrial Control & Information Architecture	Chicago Bar Association 321 S. Plymouth Ct. Chicago, Il.	Social: 11:30AM Lunch: 12:00noon Meeting: 12:30PM
October 14 Wednesday	Antennas & Propagation/ Microwave Theory & Techniques Societies	Antennas Systems- High Temperature Semiconductors	Northrop Electronic Systems 600 Hicks Rd. Rolling Meadows, Il.	Dinner: 6:30PM Meeting: 7:30PM
October 15 Thursday	Computer Society, ACM, /usr/group/chicago	Future Directions of Object Orientation	Illinois Benedictine College 5700 College Rd. Lisle, Il.	Social: 6:00PM Dinner: 6:30PM Meeting: 7:30PM
October 18 thru 21 Sunday - Wednesday	System, Man & Cybernetics Society	Information Transfer Processing and Decision Making	Knickerbocker Hotel 163 E Walton Place Chicago, Il.	Call for Details (312) 567-3406
October 22 Thursday	Reliability Society	Components and Systems Reliability Panel Discussion	Elite Electronic Eng. Co. 1516 Centre Circle Downers Grove, IL.	Reservations Required Dinner: 6:00PM Meeting: 7:30PM
October 27 Tuesday	Fox Valley Subsection	Open Computing Systems & Today's Importance	Wilton Manor 2200 N. Main St. Wheaton, Il.	Social: 6:00PM Dinner: 7:00PM Meeting: 8:00PM
October 29 Thursday	IEEE Videoconference	How Will We Broadcast HDTV?	College of DuPage 22nd St. & Lambert Rd. Glen Ellyn, Il.	Call IEEE Office (708) 963-3828 Presentation: 11:00AM
October 29 Thursday	Communications Society	Wireless Symposium	University of Illinois-Chicago 840 S. Wood St. Chicago, Il.	Call for details (708) 713-1455
November 4 Wednesday	EMC Society	Antenna Calibration	AT&T Bell Laboratories 2000 N. Naperville Rd. Naperville, Il.	Social: 7:15PM Meeting: 7:30PM
November 12 Thursday	Electron Devices Society/ CHMT Society/ Northwest Subsection	IRIDIUM - Motorola Satellite Communications	Motorola Center 1295 East Algonquin Rd. Schaumburg, Il.	Registration Required Call (708) 963-3828

The IEEE Chicago Section would like to thank Graphix Products, Inc. in Wheaton, IL, our SCANFAX printer for their wholehearted support during the 1991/92 term of our elected Officers. They have been producing and then mailing ten issues per year to our membership. They have helped our editors make up for many missed deadlines, made numerous last-minute layout changes with a smile, and created the professional look for our newsletter. They also aided us in avoiding a major crisis by preparing a recent seminar announcement on a rush basis.

Our thank-you goes to Marsha Watt (our Account Executive) and Diane Tews (Graphix's Principal).
Barry Brusso, IEEE Chicago Section Chairman - 1992/93

Thinking of advancing your career with a graduate degree?

If so, Illinois Institute of Technology's
Electrical and Computer Engineering
Department offers more than 50
evening courses each semester at
locations all over the Chicago area.

IIT's flexible, part-time graduate
programs help you excel with MSEE,
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programs in Electrical Engineering,
including specializations in computer
engineering, communications and signal
processing, networks and
electromagnetics, and power and
control. And IIT now offers a new MS
degree in Computer Systems Engineering.

Courses are offered at IIT's Main
Campus on Chicago's near South Side,
the Rice Campus in west suburban
Wheaton, and via live television at
dozens of sites around the Chicago
metropolitan area.

Two new courses will be offered in
spring of 1993: EE 597 "Mobile Radio"
and EE 433 "Real-time Data
Acquisition and Processing."

For further information and
an application packet,
call 312-567-3400.

**Electrical and Computer Engineering
Illinois Institute of Technology**

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SCANFAX DEADLINES

ISSUE	COPY DUE	MAILED ON
NOV	SEPT 24	OCT 15
DEC	OCT 28	NOV 15
JAN 93	NOV 25	DEC 15
FEB	DEC 21	JAN 15
MAR	JAN 28	FEB 15
APR	FEB 25	MAR 15
MAY	MAR 25	APR 15
JUNE	APR 28	MAY 15

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IEEE

POWER ENGINEERING SOCIETY

SPEAKER: Gary Adrian Rathwell - Director, Control Systems Fluor Daniel, Chicago

TOPIC: Industrial Control and Information Architecture

ABSTRACT: The presentation will discuss the importance of sound architectural design
of power plant control and information systems. Issues of integration of
Distributed Control Systems, Programmable Logic Controllers, and Supervisory
Control and Data Acquisition Systems will be addressed, as well as differences
in design requirements between control devices, operator interfaces, industrial
computers, site-wide industrial LANs, office systems, and corporate wide area
networks.

BACKGROUND: Mr. Rathwell received his BSc from Queen's University. He has twenty-five
years experience in automation of processes, including power, petroleum and
petrochemical, pulp and paper, food, industrial chemicals and explosives. He
is currently world-wide Control Systems Functional Leader for Fluor Daniel,
where his responsibilities include Corporate Standards and Practices.

PLACE: Chicago Bar Association, 321 S. Plymouth Ct. (near Jackson and Dearborn)
Purchase lunch tickets in lobby (\$7.50)

DATE/TIME: October 14, 1992 / 11:30 Social, 12:00 Lunch, 12:30 Presentation

RESERVATIONS MUST BE MADE BY MONDAY 10/12/92, 12:00 PM. RESERVATIONS MAY BE MADE BY
CALLING THE IEEE CHICAGO MESSAGE CENTER AT (708) 963-3828. PLEASE LEAVE NAME (S) AND
COMPANY NAME (S) FOR THOSE WISHING TO ATTEND.

THE CHICAGO CHAPTERS OF THE IEEE COMPUTER SOCIETY AND OF THE ACM, AND /usr/group/chicago, THE CHICAGO AREA UNIX USER GROUP (A UNIFORM AFFILIATE)

Invite you and your friends to our next meeting, a joint event for our three organizations.

PLACE: Krasna Hall at Illinois Benedictine College at College Avenue/Yackley Road,
just south of Maple Avenue in Lisle, IL (IBC is west of this I-355 exit)
Yackley is a north-south street intersecting Ogden Avenue between Route 53 and Naperville Road;
from Ogden Avenue (Route 34) follow Yackley south which becomes College Avenue)

DATE: Thursday, October 15, 1992

TIME: 6:00 PM — Social Hour
6:30 PM — Dinner (Chicken Kiev) at \$12.00/person

*** PLEASE MAKE YOUR DINNER RESERVATIONS TO THE IEEE OFFICE AT (708) 963-3828 BY 10/12/92 ***

7:30 PM — Technical Presentation — Admission is FREE

SPEAKER: Joe Dvorak, Senior Project Engineer, Northrop Electronics Division, Rolling Meadows, IL

TOPIC: FUTURE DIRECTIONS OF OBJECT ORIENTATION

ABSTRACT:

Since the development of SIMULA, the first object-oriented language 25 years ago, the "object model" has matured
considerably. However, several significant issue have arisen that must be resolved if object orientation is to realize its
potential as one of the most significant advances in software technology during the last three decades.

Our speaker will discuss these issues, why they pose challenges to the continued evolution and increased acceptance of
object-orientation, and how they might be resolved. He will set the stage with a brief look at the current status of object
technology.

ABOUT OUR SPEAKER:

At Northrop Joe Dvorak is responsible for the development of the software processes and methodologies, technology
insertion, and software tools. He is also a PhD candidate in Computer Science at the University of Illinois at Chicago. His
research area is the cognitive foundations of the object model.

For additional information or detailed travel directions contact Joe Feitler (at ISC) at (708) 505-9100, X277.
IEEE would like to say thank-you to Fred Franci (ACM) and Dr. Dan Nohl (IBC) for these meeting arrangements.

DeVry grows - moves to a new campus

You are invited to attend the new DeVry Institute of Technology DuPage campus open house, 1221 N Swift Road, Addison IL. You can see the construction from IL 355. It's on the west side.

November 18 1992 4pm to 7 pm.

The 92,000 square foot new campus will replace the crowded 78,000 square foot Lombard facility. More classrooms, increased space for student services and faculty and administrative functions.

The electronics lab is expanded to include 54 microprocessor based work stations, supporting the communications courses in the bachelor and associate degree programs.

The computer lab has 100 work stations in a network environment, 60 of which include Everex 386 pc's. The telecommunications lab has 30 workstations in a Token Ring and Novell environment.

IEEE committees are invited to use the facility for meetings.

Contact: Bill Edwards, Dean of Students, 708 953 1300

UIC The University of Illinois at Chicago

The University of Illinois at Chicago will offer the following graduate-level courses at selected suburban locations the Spring Semester 1993:

Spring Semester 1993—January 11 to May 7, 1993

ME 408 Intermediate Vibration Theory
ME 421 Intermediate Heat Transfer
ME 512 Automatic Control of Mechanical Systems

EECS 470 Introduction to Software Engineering
EECS 530 Statistical Communication Theory
EECS 550 Linear Systems Theory and Design
EECS 581 Database Management Systems

Earns your MS degree in Mechanical Engineering (ME) or Electrical Engineering and Computer Science (EECS) in the evening.

Your Spring 1993 application for degree admission must be complete by November 6. Contact the Off-Campus Engineering Programs Office at (312) 996-2311 for complete details.

This schedule is subject to change

Meeting of the IEEE Communications Society (Chicago Chapter)

DATE: Wednesday, October 7, 1992

GUEST SPEAKER: Dr. Richard J. Bruno, Prism Interactive Corp.

TOPIC: Digital Video and Audio Compression

PLACE: Sharko's Restaurant, 2225 Ogden Avenue, Lisle, IL

TIME/COST: Social: 6:00 PM - Cash Bar

Dinner: 7:00 PM - \$13.00

Speaker: 8:00 PM - FREE

RESERVATIONS: Call (708) 963-3828 to make dinner reservations by Monday, October 5, 1992

FURTHER INQUIRIES: For further questions, contact Janusz Hyziak at (708) 576-8426.

ABOUT THE TOPIC: Compression is very important in the communications community. It allows us to make better use of the capacity of transmission and storage systems and enables numerous applications over slower Wide Area Networks. Dr. Bruno will be speaking about Digital Video and Audio compression which can be used for Video Conferencing and ISDN Services. He will address whether compression is a viable business now, and in the future. Some important industry standards, such as JPEG, MPEG, and CD-I ADPCM will be discussed as well.

ABOUT THE SPEAKER: Dr. Bruno founded PRISM in the fall of 1989. He was the key contributor and driving force behind CD-ROM, CD-I, Minitel and Interactive Laser Vision at Philips N.V. A graduate in physics and mathematics from McGill University and a PhD in physics from McMaster University, Dr. Bruno was professor of physics at the Technical University of Munich from 1971 to 1972. Prior to joining Philips N.V. in 1974, he headed the AKL Research Group in preventive medicine. From 1974 to 1987 at Philips, he served as Group Leader of the Systems Analysis and Energy Group at the Philips Research Laboratory, a Corporate R&D Coordinator for the Board of Management, technical head of Philips Home Computers and Games, and head of R&D for H.I.S. Division. In 1987, Dr. Bruno became Vice President Technical and one of the founders of OptImage, a Philips N.V. and R. R. Donnelley and Sons joint venture. Dr. Bruno is a prolific writer and has spoken at numerous conferences. Presently, Dr. Bruno is Chairman of PRISM, President of R. J. Bruno and Consultants, President of GCA, a digital audio and video chip designer, and a Vice President and member of the Board of GCT, a chip design consortium based in Tokyo.

IEEE RELIABILITY SOCIETY - CHICAGO SECTION MEETING NOTICE FOR OCTOBER 22, 1992

TOPIC: Panel Discussion on "Reliability for Components and Systems".

PANEL SPEAKERS:

Hugh Edfors - REL-TEK Engineering Associates (Reliability Consultant)
Dan Glab - SHURE BROS. (Wheeling, IL) (Quality Manager)
Mike Eros - BELL LABORATORIES - A T & T (Switching Systems Reliability)
Jim Klouda - ELITE ELECTRONIC ENGINEERING CO. (Dir. of Reliability Testing)

LOCATION: Elite Electronic Engineering Company
1516 Centre Circle
Downers Grove, IL 60515

TIME: 6 pm to 7 pm Beverages, Fried Chicken, Mostaccioli, Potato Salad
Charge \$5.00 per person
7:30 pm Panel Discussion Begins

RESERVATIONS: Make Reservations by October 19, 1992. Call Marianne at (708) 495-9770 or IEEE Reservations at (708) 963-3828

ABSTRACT: A panel of noted authorities in various fields of reliability, will discuss reliability in everyone's life and how properly documented testing results can insure product reliability. Members and guests in attendance will be able to participate by asking questions or share their experiences in how they may have contributed to increased reliability in a given product that they were involved with.

1992 IEEE International Conference on Systems, Man, & Cybernetics
Emergent Innovations in Information Transfer Processing and Decision Making

INVITATION

On behalf of the IEEE System, Man, and Cybernetics Society, the Program and Organizing Committees invite you to participate in the 1992 IEEE International Conference on Systems, Man, and Cybernetics (SMC '92).

The theme of SMC '92 is "Emergent Innovations in Information Transfer Processing and Decision Making." Authors representing 16 countries from the Americas, Europe, and the Far East will give technical presentations on the latest research and development in the field.

The 1992 SMC will be held at the Knickerbocker Hotel, 163 E. Walton Place, Chicago, Illinois on October 18-21. Many of the famous and exciting attractions of Chicago are easily accessible from the hotel.

REGISTRATION INFORMATION

SMC '92 Conference Office
Illinois Institute of Technology
(312) 567-3406

SEE YOUR SEPTEMBER SCANFAX FOR MORE INFORMATION

ELECTRON DEVICES SOCIETY
CHMT SOCIETY

NORTHWEST SUBSECTION

JOINT MEETING, MOTOROLA MUSEUM TOUR AND PLANT VISIT

IRIDIUM - MOTOROLA SATELLITE
COMMUNICATIONS

THURSDAY NOVEMBER 12 1992

- 2:30 to 4PM, (optional?) **MOTOROLA MUSEUM OF ELECTRONICS TOUR, consumer & communications equipment history, robotic assembler exhibit semiconductor foundry exhibit**
- 4:15 to 5:00, **Walk past clean room facility, wave and reflow soldering, communications systems assembly.**
- 5:00 to 6:00 **Bring \$5.00 for an engineered food taking.**
- 6:00 to 7:15 **IRIDIUM, the market, the technology, the risks. Presentations by Motorola staff members**

Register at 708 963 3828. Register by November 9th.
Attendance limited to 100. Your attendance will be confirmed.



IEEE COMMUNICATIONS SOCIETY
Chicago Chapter



Wireless Communications Symposium

Location: University of Illinois at Chicago

Date: Thursday October 29th, 1992

Agenda:

- 8:30AM - Morning Keynote
Dr. P.M. Chung - Dean Engineering UIC
- 9:00AM - Wireless Access Technologies and Wireless Communication Systems - FDMA, TDMA, CDMA, Cellular, Airfone, PCN, PCS
Dr. Jeffry Gluck - UIC
- 10:00AM - U.S. Standards - AMPS, TDMA, IS 54
Mr. Ken Smolik - DMTS AT&T Bell Labs
- Coffee Break
- 11:00AM - International Standards - Wireless PBX, GSM, etc.
Mr. Ken Sander - V.P. of Sales and Marketing Ericsson
- 12 noon - LUNCH
- 1:00PM - Afternoon Keynote
Mr. Jim Caille - V.P. of Marketing Motorola Inc.
- 1:30PM - Cellular Networking - IS 41, IS 45
Mr. Jim Naumann - Assist. Dir. Network Planning
Ameritech Mobile Communications
- 2:30PM - The Ameritech PCS Trial
Mr. Ken Hallman - Supv. Wireless Services Ameritech Corp.
- PCS & the Intelligent Network
Mrs. Debbie McCann - Mgr. Network Applications Platforms Planning
Ameritech Services
- Coffee Break
- 3:30PM - Authentication and User Privacy
Mrs. Mary Beth Flanders - Staff Engineer Corp R&D Motorola
- 4:30PM - Tour of UIC Research Labs

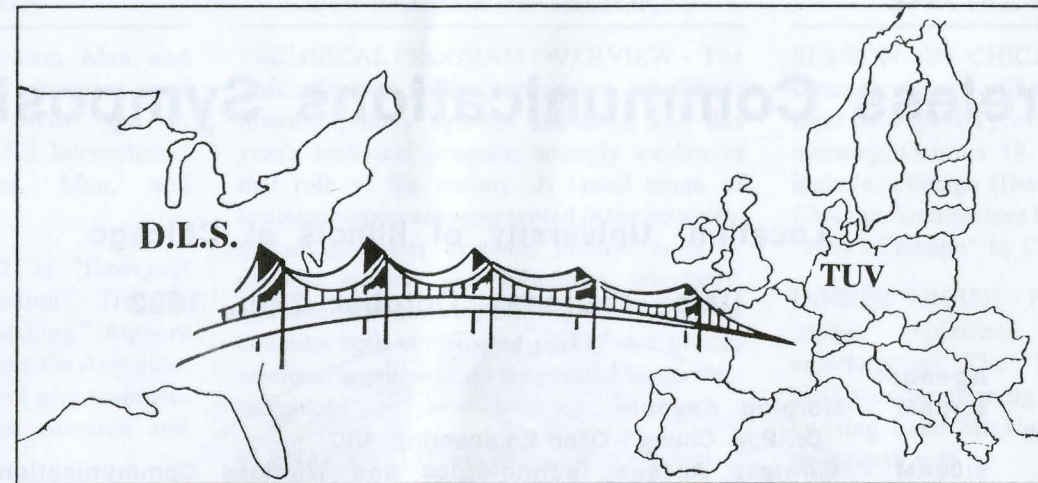
Registration Fees:

\$95 IEEE Members and Students :: \$120 after 10/15/92
\$125 Non-Members :: \$150 after 10/15/92
Check, VISA, MasterCard, American Express.
Fees Go up after October 15th, 1992. So Register Early.
Fees includes admission for the one-day seminar and lunch.
Sorry, no refunds for cancellations after October 1, 1992.

Please Send Form To:
Wireless Symposium
Registration
c/o Ken Smolik
AT&T Bell Labs
1000 E. Warrenville Rd.
Naperville, IL. 60566
Phone: 708.713.1455
FAX: 708.979.3983

Pre-Registration Form	Name	Business Telephone Number	Company/Organization
	Room Number/Mail Stop	Street Address	City/State/Zip
	IEEE Membership # (Please make checks payable to "Chicago Chapter of the Communications Society")	☐ Check ☐ MasterCard ☐ VISA ☐ American Express	Amount Enclosed
	Account Number	Exp Date	Signature
		Date	E-mail

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ELECTRONIC SYSTEMS, INC. 10350 DEARLOVE ROAD, GLENVIEW, IL 60025 708-699-9060

Open Computing Systems and Their Relative Importance Today

Your

FOX VALLEY SUBSECTION

invites you

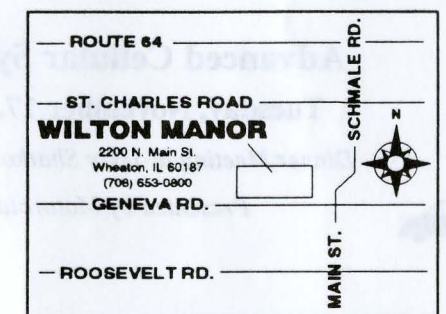
On Tuesday evening, October 27, 1992 your Fox Valley Subsection welcomes Mr. Bradley K. Hargett of Pyramid Technology to the Wilton Manor in Wheaton.

Mr. Hargett will discuss computing options available to MIS managers in light of today's trend to re-examine computing costs and attempts to justify those costs. The Open Systems concept allows customers to escape proprietary environments, often creating competitive advantages, and lowering the cost of providing data processing services to the organizations they support. This presentation will be a non-vendor-specific discussion of the Open Systems Marketplace.

Bradley Hargett has over 9 years experience in the Open Systems market. He holds a BS in Computer Science, and is pursuing a Masters degree in MIS.

Date: October 27, 1992
Place: Wilton Manor 2200 N. Main St. Wheaton, IL
Time/Cost: Social: 6:00 PM / Cash Bar
Dinner: 7:00 PM / \$13.00*
Speaker: 8:00 PM / Free+
Reservation: Call (708) 963-3828 by Friday October 23, 1992
Attire: Casual

* \$11.00 with student ID
+ While the speaker is free, recognize that the room is subsidized by the cost of the dinner. Attending the dinner helps support our continued offering of interesting meetings.



CHICAGO CHAPTER - IEEE EMC SOCIETY MEETING NOTICE

DATE: WEDNESDAY - NOVEMBER 4, 1992
Refreshments 7:15 P.M.
Meeting 7:30 P.M.

LOCATION: AT&T BELL LABORATORIES
2000 N. NAPERVILLE ROAD
NAPERVILLE, ILLINOIS

SPEAKER: ED BRONAUGH
ELECTRO-MECHANICS CO.

TOPIC: ANTENNA CALIBRATION
Ed will discuss various antenna calibration methods described in ANSI C63.5. He will review some of the advantages, disadvantages and pitfalls of each.

FOR RESERVATIONS & DIRECTIONS: CALL IEEE OFFICE 708-963-3828



IEEE

Fox Valley Subsection

**Program of Events
1992 - 1993**

Challenges Facing Nuclear Power

Sponsored by Chicago Section

Wednesday, September 23, 1992

Kick Off Dinner Meeting at Sharko's in Villa Park

Presented by Cordell Reed from Commonwealth Edison

**Sloan Digital Sky Survey:
Mapping the Cosmos**

Tuesday, February 23, 1993

Dinner Meeting at Jerry Sharko's in Lisle

Presented by Christ Stoughton from Fermi Labs

**Open Computing Systems and
Their Importance Today**

Tuesday, October 27, 1992

Dinner Meeting at Wilton Manor in Wheaton

Presented by Brad Hargett from Pyramid Technologies

Developing Hybrid Fuel Vehicles

Joint with Society of Automotive Engineers

Tuesday, March 23, 1993

Dinner Meeting at Itasca Country Club

Presented by Dr. Larry Oswald from GM Technical Center

Advanced Cellular Systems

Tuesday, November 17, 1992

Dinner Meeting at Jerry Sharko's in Lisle

Presented by Motorola

**The Fascinating World of Telescopes:
What is Going On?**

Joint with Laser and Electro-Optics Society

Tuesday, April 27, 1993

Dinner Meeting at Wilton Manor in Wheaton

Presented by Jose Sasian from AT&T Bell Labs

**Environmental Magic:
Electricity From Uranium**

Tuesday, December 8, 1992

Dinner Meeting at Jerry Sharko's in Lisle

Joint with Chicago Section and Power Engineering Society

Presented by Robert Boyar from Argonne National Laboratory

Achieving ISO9000 Certification

Joint with American Society for Quality Control

Tuesday, May 25, 1993

Dinner Meeting at Jerry Sharko's in Lisle

Presented by Praveen Gupta from Quality Technology Company

**Financial Freedom:
You Can Get There From Here**

Tuesday, January 26, 1993

Dinner Meeting at Wilton Manor in Wheaton

Presented by John Betterman from Shearson Lehman Brothers

Social 6:00 Dinner 7:00 Presentation 8:00

**Call IEEE Message Center
(708) 963-3828** to make your reservations.

Welcome IEEE members to this exciting season of activities, put together for your enjoyment. Do you see an event that catches your eye? Go ahead. Mark it down on your calendar. Meet your fellow IEEE members and experience a memorable evening. Don't miss out. See you there!

Marty Lake	Chairman	AT&T Network Systems	(708) 224-6626
Dave Schumacher	Vice Chairman	AT&T Network Systems	(708) 224-6471
Peter Nguyen	Secretary	AT&T Network Systems	(708) 224-2444
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Channing Brown	Past Chairman	Sargent & Lundy (Retired)	(708) 260-9631
Jerry Josken	Publicity	Cooper Power Systems	(708) 858-7100
John Gavin	Program	Cooper Power Systems	(708) 858-7100