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TIME SENSITIVE MATERIAL

CALENDAR OF EVENTS

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

Copy Deadline for May Scanfax is Mar. 24, 1986

APR.	8	Monthly Meeting ALL WELCOME	IEEE Executive Cte.	Allen-Bradley Company 910 Pasquinelli Dr. Westmont, IL	Meeting	7:30 PM
	9	"Techniques to Improve Heart Assist Devices"	Engineering in Medicine & Biology Society	Hyatt Regency Chgo. 151 E. Wacker Dr. Chicago, IL	Meeting	7:30 PM (Columbus B Room)
	9	Student Night - "Computer Security Systems & Methods"	Industry Appls./ Industl. Electronics Society	Mr. Peter's Restaurant 1018 Mount Prospect Rd. Mount Prospect, IL	Social Dinner Meeting	5:30 PM 6:15 PM 7:15 PM
	9	"Cogeneration - Utility Interface"	Power Engrng. Soc.	Carson Pirie Scott Wabash & Monroe Sts. Highland Rm., 8th Fl.	Social Lunch Meeting	11:30 PM 12 Noon 12:30 PM
	14	"Mini Microwave Expo"	Antennas & Prop./ Microwave Theory & Techniques Soc.	Arlington Park Hilton Route 53 & Euclid Ave. Arlington Heights, IL	Exhibits Dinner Meeting	3:30 PM 6:30 PM 7:30 PM
	18	Annual Awards Banquet & Election	Reliability Society	Midway Motor Lodge 1600 Oakton St. Elk Grove Village, IL	Social Dinner Meeting	6:00 PM 7:00 PM 8:00 PM
	30	"Fundamental Chemistry of Illinois & Synthetic Coals"	Fox Valley Subsection	Wilton Manor 2200 Main St. Wheaton, IL	Social Dinner Meeting	6:00 PM 7:00 PM 8:00 PM
MAY	7	"Applica. of Enclosures for Hazardous Loca."	Power Engrng. Soc.	Carson Pirie Scott Wabash & Monroe Sts. Highland Rm., 8th Fl.	Social Lunch Meeting	11:00 PM 12 Noon 12:30 PM
	13	Monthly Meeting ALL WELCOME	IEEE Executive Cte.	Allen-Bradley Company 910 Pasquinelli Dr. Westmont, IL	Meeting	7:30 PM

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SCANFAX, (Publication) number (ISSN 0018-1297), April 1986 Volume 38, Number 8, SCANFAX is published monthly, except July and August by the Chicago Section Institute of Electrical and Electronics Engineers for the information of its members. Business Office is at 125 S. Clark St., Chicago, Illinois 60603, telephone number (312) 236-4609. Subscription rate for IEEE members collected in dues. \$1.50; for others, \$3.00 per year. Third class postage paid at Glen Ellyn, Illinois.

Unless otherwise specified, Chicago Section IEEE neither endorses nor sanctions any positions or actions espoused in SCANFAX.

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979-3627

James Carroll, Assoc. Editor
979-5824

Eleanore Burda, Copy Manager
IEEE Office
(312) 236-4609

Change of Address

Send change of address to Roseann Schultz, Member Services, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 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.

FEBRUARY 1986 IEEE STANDARDS LISTINGS NOW AVAILABLE

New York, NY February 1986 . . . The February 1986 Standards Listing is now available free of charge from the Institute of Electrical and Electronics Engineers, Inc. (IEEE). The new document includes each of the over 450 electrical and electronics standards published by the IEEE and it provides a handy numerical sequence listing of every standard. The many American National Standards published by IEEE are included in a separate numerical listing. Single copies of the new Standards Listing may be obtained from the IEEE Standards Office, 345 East 47th Street, New York, NY 10017.

Standards developed within the IEEE cover test methods, practices for electrical installations, units, definitions,

graphic symbols, and application methods. The February listing includes important new and newly revised publications such as the Guide to Power Station Noise Control, new Software Engineering, microprocessor and interface standards, and new Color Books on Industrial and Commercial Power Systems.

Engineers in such widely varied fields as antenna design, communications, power generation and distribution, microwave measurement, industrial applications, electromagnetic compatibility, and rotating machinery will find many authoritative documents that have received recognition both nationally and worldwide.



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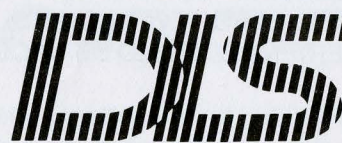
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ANNUAL ELECTION

The IEEE Chicago Section Nominating Committee composed of George Thomas - Chairman, Bill Everson, Dennis Lamont and Howard Wolfman has recommended the following slate of candidates for Section Officers and Executive Committee members for the 1986-87 term. Please mark your choices on the ballot below. If you wish to vote for another member, write the name in the space provided and check the box.

OFFICERS (Vote for four)

Chairman

☐ Norbert Orszula
CYGNA
Energy Services

☐

Vice Chairman

☐ Edward Barrett
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Control Sys., Inc.

Treasurer

☐ Terence Sumner
Motorola, Inc.

Secretary

☐ Andy Gasiorowski
Allen-Bradley Co.

(write-in)

EXECUTIVE COMMITTEE (Vote for Eight)

☐ Len Cohen
Underwriters
Laboratories

☐ Cara Lindell
Commonwealth
Edison

☐ Robert Hofmann
Bell Laboratories

☐ Robert Schrage
Commonwealth
Edison Co.

☐ Henry Dwyer
Abbott Labs

☐ George Stout
GPE Controls

☐ John Waters
Bussman
Mfg. Division

☐ Howard Wolfman
Grayhill, Inc.

(write-in)

Mail the ballot to: George Thomas, Nominating Committee Chairman • c/o IEEE Chicago Section • 125 South Clark Street, Room 1545 • Chicago, Illinois 60603. Ballots must be received no later than April 15, 1986. Results will be announced in the June Scanfax.

THE BUSINESS AND PROFESSIONAL INSTITUTE AT THE COLLEGE OF DUPAGE

The Business and Professional Institute at the College of DuPage is seeking persons to work part-time, in the daytime. This is a natural for retired people and/or those who are able to adjust their work schedules. If you are knowledgeable in the areas of Manufacturing Technology or Electricity/Electronics and would like to convey your expertise to others, we would like to have the opportunity to talk with you. It is not necessary that you have a teaching degree. In depth knowledge or extensive experience is what we are looking for; particularly those persons who can relate to the problems encountered in industry.

From time to time we have need for instructors to work on-site at companies teaching inplant classes such as: Technical Math, Blueprint Reading, Technical Drawing, Physics, Metallurgy, Die Making, Tool Making, Geometric Dimensioning and Tolerancing, Machine Repairs, Mechanical Press Repairs and Maintenance, Resistance Welding, Electricity, Electronics, Schematics, Motor Controls, Machine Controls, Programmable Controllers, Computerized Numeric Controls, and Statistical Process Control.

If you or someone you know would be interested, please contact Mary Lou Enami at C.O.D. 858-2800, ext. 2389. We would like to speak with you about the opportunities we have available.



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Antenna Design Engineers

BSEE or Physics or equivalent, MS desirable. Requires knowledge of phased arrays, monopulse D.F. systems and millimeter wave techniques.

Power Supply Design Engineers

BSEE or equivalent, MS desirable. Perform IR & D activities involving new techniques development in high voltage microwave/millimeter wave transmission, nanosecond control of high DC voltages and modulation of microwave tube devices.

Electronic Development Engineers

BSEE or equivalent, and experience in digital (microprocessor, logic design), analog (power supply, A/D, D/A conversion, video processing), and RF (500 MHz-mm wave).

Advanced Technology Engineers

BSEE or equivalent, MS desirable. New techniques development/applied research in MICROWAVE, RECEIVERS, ANALOG & DIGITAL.

Transmitter Engineers

Responsibilities will include the specification, design and integration of high power microwave transmitter subsystems from first development models through production start-up. Background in analog and digital is desirable.

Project Engineers: Digital Processing Subsystems

BSEE or equivalent. Background in semi-custom LSI devices and CAE design tools. Manage entire engineering development of digital processing subsystem for advanced airborne electronics system.

Qualified candidates are invited to submit resume with salary requirements to: **Supervisor staffing, NORTHROP CORPORATION, DEFENSE SYSTEMS DIVISION, 600 Hicks Road, Rolling Meadows, IL 60008.** We are an equal opportunity employer M/F/V/H. All positions require U.S. Citizenship.

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PLACEMENT SERVICE

The Chicago Section is now offering a Placement Service for it 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.

- B14 — IIT (MSEE Comm. Theory) Student - desperately needs to be on the field.
- B15 — General Manager or Marketing Manager electrical equipment manufacturer.
- B16 — Computer Graphics Engineer - interactive systems, image synthesis, animation.
- B17 — Sales/Sales Mgmt Telecommunications - 28 yrs. telephony related experience.
- B18 — Test Engr./Production & Cust. Relations or teach new customers.
- B19 — General Management line or senior level staff - proven record - MSEE, MBA.

- B20 — Telecom product/service and other new product developments heavyweight.
- B21 — Qualif. BSEE T entry level posi.-exp. in field service/telecom equipment.
- B22 — Entry level posi.-exp. hdwe. digital analog control sys., look. for sales eng.
- B23 — Sr. Electl. Proj. Engr. - industrial and commerical pwr. distr. and lgt. systems.
- B24 — Senior programmer analyst - telecommunications, real-time, machine control.
- B25 — Entry level posi. - exp. in electl. matl's., hybrid circuits - thick and thin.
- B26 — Entry level in control systems and related areas for EET.

If you are an IEEE member and unemployed, call or write for the necessary form. Direct your request to: IEEE Placement Service • 125 S. Clark Street - Room 1545 • Chicago, Illinois 60603.

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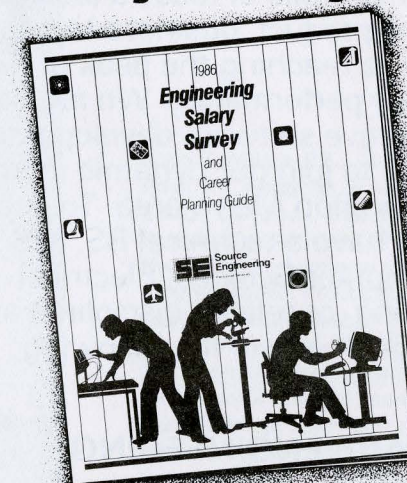
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The new 16-page 1986 *Engineering Salary Survey and Career Planning Guide* reviews salaries at twenty-seven different position and experience levels. So no matter if you're in design and development, manufacturing, test, quality control, sales, marketing, technical support or management, it can help you learn whether or not your salary is keeping pace with your peers and what you can expect to earn as you advance in your career.

The Survey includes a comprehensive evaluation of emerging trends in engineering (i.e. microprocessor hardware and software design, communications, CAD/CAM, ATE and much more) and what you can do to capitalize on them. Also included is a seven-step system for evaluating your career progress; with proven methods for defining career objectives, monitoring progress, and taking action to help assure growth.

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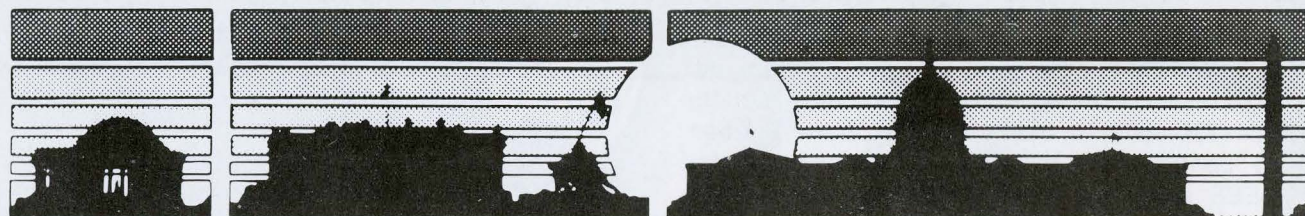


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JOINT CHICAGO CHAPTER OF IEEE ANTENNAS & PROPAGATION SOCIETY AND MICROWAVE THEORY & TECHNIQUES SOCIETY

MINI MICROWAVE EXPO

Monday, April 14, 1986

**EXHIBITS: 3:30 - 6:30 PM
DINNER BREAK*: 6:30 - 7:30 PM
MEETING: 7:30 -**

**Arlington Park Hilton
Rte. 53 & Euclid Ave.
Arlington Heights, IL**

The latest developments in microwave instrumentation and components will be displayed and discussed during this afternoon and evening presentation. During the afternoon microwave "mini trade show", hosted by Chicago area microwave manufacturers and manufacturers' representatives, coffee and soft drinks will be provided. The evening session will consist of a series of short technical presentations on selected new microwave products of special interest.

*APS/MTTS members should call 236-4609 for dinner information.



John E. Waters, P.E., District Sales Engineer, Bussman Division, McGraw-Edison Company, IEEE Chicago Professional Activities Chairman; Henry Dwyer, Electrical Engineer, Pharmaceutical Products Division, Abbott Laboratories, IEEE IAS/IES Chicago Chapter Chairman; Milt Robinson, President Robinson Engineering; Bill Sommers, Executive Director of International Association of Electrical Inspectors (IAEI); are pictured at the IEEE IAS/IES meeting on Feb. 12, 1986 on "The NEC and the IEEE."

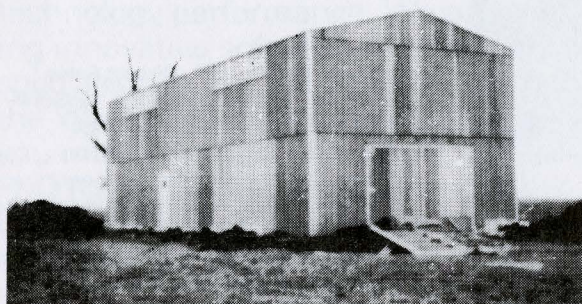
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POWER ENGINEERING SOCIETY

MEETING NOTICE

Luncheon Meeting

Wednesday, April 9, 1986

SPEAKER: Mr. Markus E. Etter
Assistant Manager - System & Application Engineering
Power Systems Division
BBC Brown Boveri
North Brunswick, New Jersey

TOPIC: Co-Generation - Utility Interface

ABSTRACT: Mr. Etter will discuss some of the problems co-generation plant owners encounter to connect to a utility grid.

ABOUT THE SPEAKER: Mr. Etter has a BSEE from an engineering college in Switzerland and an MS in Business Policy from Columbia University in New York.

He has been employed by Brown Boveri since 1977, first in Switzerland, and since 1981 by Brown Boveri, North Brunswick. He is responsible for planning, scheduling, technical and contractual interpretation of all electrical equipment for Hydro and Power Station Electrics which includes co-generation plants as well as auxiliary power plants for HVDC stations and static excitation.

LOCATION: Carson' Highland Room
Monroe & Wabash
Eighth Floor

Cocktails: 11:30 PM
Lunch: Noon
Meeting: 12:30 PM

Lunch is \$11.00. Please make reservations by April 7, 1986 by calling Eleanore Burda, 236-4609. Cancellations will be honored until 10:00 A.M. of the meeting day.

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IEEE POWER ENGINEERING SOCIETY

The Chicago Chapter of the Power Engineering Society is trying to identify the courses, luncheon meetings and tours of most value to our members.

Your assistance is needed. Please identify points of interest and return by May 1, 1986 to:

FLUOR ENGINEERS, INC.
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CHICAGO, IL. 60606

NAME-----

Power Engineering Society Member (PES)	Yes	___	No	___
Industry Application Society Member (IAS)	Yes	___	No	___
Industrial Electronics Society Member (IES)	Yes	___	No	___

MEETINGS AND COURSES :

Please check the following items under "MEETINGS" if you are interested and would like to attend a luncheon meeting on the subject. Check under "COURSE" if you would be interested in a in-depth course on the subject.

	MEETING	COURSE
Load Management-Industrial-Commercial-Utility	_____	_____
Industrial Power Plant Distribution	_____	_____
Industrial Plant Fault Protection Fundamentals	_____	_____
AC & DC Motor Drives	_____	_____
National Electrical Code (NEC)	_____	_____
Conversion of Zimmer Nuclear Power Plant to Coal	_____	_____
Low Head Hydro	_____	_____
Circuit Interruption-Theory and Application	_____	_____
Capacitor Application Fundamentals	_____	_____
Radio: Its Use in Power System Control and Operation	_____	_____
System Grounding	_____	_____
SCADA System-Substation Control and Data Acquisition	_____	_____
Programmable Controllers in Power Plants	_____	_____
-----	_____	_____
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TOURS:

Please check the following "TOUR" of interest to you.

	TOUR
Nuclear Power Plant Site	_____
A Large Hospital (Power Supply System)	_____
-----	_____
-----	_____

INDUSTRY APPLICATIONS SOCIETY INDUSTRIAL ELECTRONICS SOCIETY *CHICAGO CHAPTER*

STUDENT NIGHT

Wednesday, April 9, 1986

Schedule: 5:30 PM Cash Bar
6:15 PM Dinner
7:15 PM Technical Program

Location: Mr. Peter's Restaurant
1018 Mt. Prospect Ave.
(Rand & Central Rds.)
Mount Prospect, IL

Ms. Karen Resnik will be the featured speaker at the April 9 meeting of the Industry Applications/Industrial Electronics Societies.

Karen is a professor in the Computer Information Systems department at DeVry Institute of Technology - Chicago, where she specializes in such areas as computer security. Her earlier computer work experiences include systems, programming, training, and sales support.

She holds a Bachelor of Arts degree from the University of Wisconsin, and a MBA (with emphasis on information systems) from Keller Graduate School of Management, Chicago.

Karen's presentation will be entitled "Computer Security Systems and Methods," and will cover vulnerabilities of a system, methods of security analysis, and various approaches to achieve cost-effective computer security.

Reservations can be made by calling Eleanore Burda at 236-4609.

The price of the dinner for IEEE members is \$12.00 and \$13.00 for non-members. Since this is student night, please remember that there is no fee for those attending just the technical program.

INDUSTRY APPLICATIONS SOCIETY INDUSTRIAL ELECTRONICS SOCIETY *CHICAGO CHAPTER*

WEDNESDAY, MAY 14, 1986 MEETING NOTICE

Andrew J. Gasiorowski

"Energy Savings With Adjustable Speed Drives"

Variable Speed Drives allow coordination of motor outputs to varying load requirements, particularly fan and pump loads. Our speaker will discuss the available motor control options and their energy saving effectiveness.

Mr. Adnrew J. Gasiorowski, received his B.S. in Mechanical Engineering from Marquette University.

Schedule: 5:30 Cash Bar
6:15 Dinner
7:15 Technical Program

Location: Mr. Peter's Banquets
1018 Mt. Prospect Ave. (Rand & Central Rds.)
Mt. Prospect Shopping Plaza
Mount Prospect, IL

Reservations: Call Eleanore at IEEE - 312-236-4609 to make dinner reservations by noon Monday May 12, 1986. The cost for dinner for IEEE members is \$12, for non-members, \$13. There is no charge for anyone wishing to attend only the technical program portion of the meetings.

ENGINEERING IN MEDICINE AND BIOLOGY

Chicago Chapter Meeting

On April 9, 1986 at 7:30 PM in Hyatt Regency Downtown in the Columbus B room there will be an organizational meeting of the Chicago Chapter of the Engineering in Medicine and Biology Society. The objective is to provide interested person with a forum for learning and to meet others who have a professional interest in Biomedical and Clinical Engineering.

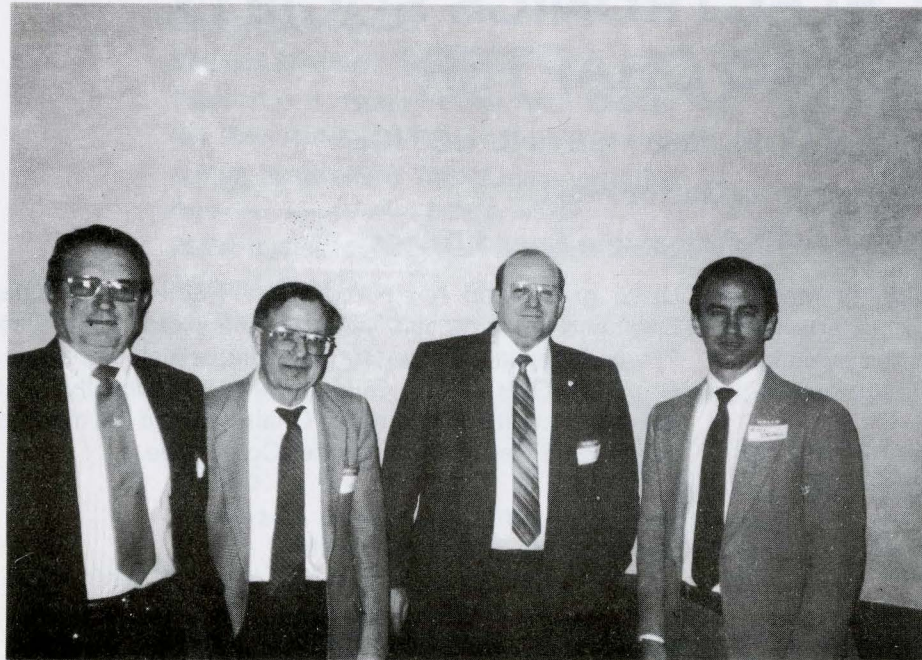
The first speaker will be Dr. Dov Jaron, President of EMBS, Director of the Biomedical Engineering and Science Institute at Drexel University, and Professor of Biomedical and Electrical Engineering at Drexel. He is a senior member of IEEE and currently does research in cardiac assist devices. The title of this talk will be,

Engineering Techniques Applied to Improving the Effectiveness of Heart Assist Devices

Put April 9 on your calendar and come to this meeting. You will be able to talk to the President of EMBS and have input to the national society. At the same time you will see how the Chicago Chapter of EMBS can help contribute to your professional growth and development.

The Chicago Chapter meeting of the Engineering in Medicine and Biology Society precedes the 21st annual meet of the The Association for the Advancement of medical Instrumentation which begins April 12, 1986 at the Hyatt Regency Downtown.

For further information contact Barry Feinberg at (312) 519-1440 or (312) 564-8364.



Robert Seelbach, V.P. & Chief Engineer, Electrical Division of Underwriters Laboratories; Milton Robinson, President, Robinson Engineering; Bill Sommers, Executive Director, International Association of Electrical Inspectors; and Bill Drake, Standards Manager; pose for the camera at the IEEE IAS/IES meeting on "The NEC and the IEEE" which was held on Feb. 12 at Mr. Peter's Restaurant in Mount Prospect.

1985-1986 CHICAGO SECTION ORGANIZATION THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

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Mount Prospect, Il. 60056
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Res. 312-888-1534

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Res. 312-833-4230

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Rosemont, Il. 60018
Ofc. 312-696-2000
Res. 312-457-0083

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FOX VALLEY

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INDUSTRIAL

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Res. 312-252-5686

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Res. 312-383-8773

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Res. 815-436-3016

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SUBSECTION CHAIRMAN

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H. Wm. Myers & Assoc.
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Res. 815-455-1343

FOX VALLEY SUBSECTION MEETING

WEDNESDAY - APRIL 30, 1986

FUNDAMENTAL CHEMISTRY OF ILLINOIS AND SYNTHETIC COALS

Dr. Randall Winans from Argonne National Laboratory will describe his studies on coals. The major objectives are to better understand the organic structures in coals and to use this information to predict reactivity of these materials in conversion processes. Coal is a very complex material which we have attempted to model by preparing synthetic coals. This is accomplished by heating plant materials, such as lignin, with clays at fairly mild temperatures, 150-200 C. Since Illinois coals are typically high in sulfur, we have prepared synthetic coals containing sulfur. Both the synthetic and authentic coals are characterized by a number of chemical and instrumental methods. Structural information from these two sets of samples will be compared and contrasted.

Dr. Winans is employed in the Chemistry Division of Argonne National Laboratory as a group leader since 1980. He has worked at Argonne since 1975 as a chemist. He has published some 30 papers on coal and organic chemistry, and has taken an active role in many conferences and committees on coal and fuel science. His current research interests include the characterization of coals, coal macerals and model systems including synthetic coals and the correlation of structure with reactivity; application of advanced mass spectrometric techniques to coal problems, and the development of new chromatographic methods to analyze physical structure of organic solids.

Place: Wilton Manor

Location: 2200 Main Street (Schmale Rd.)
Wheaton, IL

Time: Cocktails - 6:00 p.m.
(Open Bar)
Dinner - 7:00 p.m.
Meeting - 8:00 p.m.

Please call (312) 236-4609 for dinner reservations no later than Monday April 28, 1986. If you cannot attend the dinner, please feel free to come to the meeting.