



IEEE

Scanfax

APRIL, 1997

Institute of Electrical & Electronics Engineers

Chicago Section Newsletter

- > **Power Engineering Society.....Page 3**
Gas Insulated Vacuum Circuit Breaker Switchgear Wed. April 16
- > **Electromagnetic Compatibility Society.....Page 4**
Measurement Uncertainty Workshop April 7 & 8
- > **Components, Packaging & Manufacturing Technology.....Page 4**
IC/ Microelectronics Packaging Seminar Friday May 16
- > **Components, Packaging & Manufacturing Technology.....Page 5**
Radio Assembly Manufacturing & Materials Characterization- May 14
- > **Engineering in Medicine & Biology Society.....Page 6**
Biomedical Signal Analysis Friday April 11
- > **Engineering in Medicine & Biology Society.....Page 7**
Implanted Drug Pump for the Treatment of Atrial Fibrillation April 15
- > **Computer Society/ Fox valley Subsection.....Page 9**
Broad Band Access Networks Tuesday April 23
- > **Electron Devices/ Northwest Subsection.....Page 11**
Microelectronics for Megawatt Power Switching Tuesday April 29
- > **Industry Applications - Industrial Electronics.....Page 13**
City of Chicago Plan Approval Process Wednesday May 14
- > **Electromagnetic Compatibility Society.....Page 13**
 Wednesday April 23
- > **Magnetics/ Nuclear & Plasma Sciences Society.....Page 15**
Modeling Magnetic Properties of Materials Tuesday April 15

Chicago Section Business Meeting-Tuesday April 8 • 7:15 PM
DeVry DuPage Campus • 1221 N. Swift Road • Addison, IL

Visit the Chicago Section Home Page at <http://ieeefnal.gov>

In Memoriam

We are sorry to hear of the death of Dr. John Staunton, a long time officer and fellow of the IEEE. John had a long and illustrious multi-talented career. He received many honors and patents, in addition to building his own 72 stop electronic organ. We shall miss his pleasant manner and generous assistance in the operations of the Chicago Section.

SCANFAX (ISSN 0018-1297) April 1997, Volume 49, No.4. Published by the Chicago Section, Institute of Electrical and Electronics Engineers for its members. Third class postage paid at Glen Ellyn, IL. Unless specified, Chicago Section IEEE neither endorses nor sanctions any positions espoused in SCANFAX or at meetings.		
BUSINESS OFFICE IEEE Chicago Section 2460 Wisconsin Ave. Downers Grove, IL 60515 800 898 4333 630 964 4333 FAX: 630 963 2122 ChrisRow@aol.com	CHAIRMAN Tom Jurgens 313 Raddant Rd, S Batavia, IL 60510 847 523 7915 tjurgens@ieee.org	EDITORS Judy Gemperline 20650 Elizabeth Ave. Prairie View, IL 60069 j.gemperline@ieee.org Jack Sherman 1395 Highland Blvd. Hoffman Estates, IL 60195 847-576-8222 j.sherman@ieee.org
MEMBERSHIP & CHANGE OF ADDRESS IEEE Member Services: 800 678 4333 member.services@ieee.org IEEE Service Center, 445 Hoes Lane Piscataway, NJ 08854-4150 Scanfax- contact business office	SUBMITTAL DEADLINES June issue: April 25. Sept. issue: July 20. Submit articles electronically to the editor. Announcements not submitted electronically due 1 week earlier than the above deadlines. ADVERTISEMENTS: Call business office	

PRINTING BY - graphix products, West Chicago, IL

TKJ, Inc.

Engineering Design and Development

Meeting your internal requirements as well as those of external agencies

- ISO 9000/FDA/GMP/GLP guidelines
- Hardware/software design of digital and embedded microprocessor systems:
4 bit thru 32 bit
Assembly language and C
Real Time operating systems
- Hardware/software instrumentation design
- Digital Signal Processing(DSP) design
- Mentor GraphicsTM process and environment consulting
- FPGA/PAL design
- ASIC development
- Rapid prototyping
- Concept through production services available
- International Client base
- Since 1987

Our clients meet their goals... shouldn't you?

TKJ, Inc 632 Anthony Trail, Northbrook, Illinois 60062
Contact: Norb Wojcik voice 847 498 2630 x15 fax 847 498 6094
Visit our web site for time-saving industry links: www.tkjinc.com

Power Engineering Society presents

Alternative Solutions to Conventional Power Applications: Gas Insulated Vacuum Circuit Breaker Switchgear

SPEAKER: Brent Ebert
Siemens Energy & Automation

Wednesday, April 16, 1997

ABOUT THE SPEAKER:

Brent Ebert is the product manager for Siemens Medium Voltage Gas Insulated Switchgear, based in Raleigh, NC. He has held various positions within the low and medium voltage switchgear business for Siemens for the past 16 years. Prior to joining Siemens, Mr. Ebert worked for Duke Power in the nuclear power plant area.

PLACE

Chicago Bar Association
 321 S. Plymouth Court
 (Near Jackson & Dearborn)

TIME

Social.....11:30 a.m.
 Lunch (optional).....12:00 p.m.
 Presentation.....12:15 p.m.- 1:00 p.m.

COST

Lunch tickets can be purchased from cashier on the first floor for \$10

UPCOMING MEETINGS

The GE Company, Chicago Service Center Generator Transformer and Turbine Repair Facilities. Plant Tour.

Saturday, April 26, 1997 9:00 a.m.- 11:00 a.m.

6045 S. Nottingham, Chicago, IL 60638

Call Arno Tapani for directions 312-670-4698.

Light refreshments will be served.

Line Side Effects of VFD Harmonics

Speaker: Wanda Bloomfield of Toshiba International, Inc.

Wednesday, May 21, 1997

Sharko's Restaurant

2225 Ogden Av, Lisle, IL

Social - 5:30 p.m./ Dinner (optional) 6:00 p.m./ Presentation 7:00p.m.

Embedded Support & Systems, Co.

Specializing in embedded microcontroller and microcomputer design and support. Turnkey designs, analog and digital hardware design, software design, real-time systems, design evaluations, test and evaluation, design services for systems, subsystems, instruments and dedicated products.

P.O. Box 872 Lake Forest, IL 60045

Tel. 847 234 8681

UPCOMING MEETING- CPMT Society

American Society for Metals and Materials Integrated Circuit/ Microelectronics Packaging Seminar

PURPOSE: Introduction to the materials and processes used in packaging IC's for assembly into electronic products

DATE: Friday, May 16, 1997 8:30 a.m.- 4:30 p.m.

PLACE: Motorola Galvin Center Auditorium

COST: Advance reservations are required. If paid by May 9- \$30 (students \$15); After May 9- \$40 (students \$20). The registration fee includes lunch.

Registration and further information: Call George Carson 847-538-4310

EMC Measurement Uncertainty Workshop

April 7 and 8, 1997

Double Tree Guest Suites
O'Hare North, Glenview
1400 Milwaukee Avenue
Glenview IL

Organized by American National Standards Institute (ANSI)
Accredited Standards Committee C63
with the National Institute of Standards and Technology (NIST)
Cosponsored by Chicago Chapter IEEE EMC Society

Information and Registration: Call Brian Mattson 847 537 6400.

There will be an ACIL Laboratory Accreditation Workshop on April 9 following the above workshop. Contact Shelia Way 202 887 5872.

Components, Packaging and
Manufacturing Technology
Society
and
American Institute of
Chemical Engineers

RADIO ASSEMBLY
MANUFACTURING
TECHNOLOGY &
MATERIALS
CHARACTERIZATION

Jack Sherman, Motorola

Wednesday, May 14, 1997

About the Topic:

This will be a joint meeting for CPMT and the AIChE Chicago Chapter, preceded by a factory walkthrough past clean rooms and wet chemistry for product development and manufacture, radio development work stations, quartz crystal oscillator and radio assembly. The AIChE annual meeting (30 minutes max) will follow an informal dinner in the cafeteria.

After the meeting, Jack Sherman will discuss radio systems and related technologies with an emphasis on material characterization. The presentation will include uses of scanning electron microscopy, packaging and assembly materials for encapsulation, and procedures for mechanical and chemical decapsulation of electronic components for failure analysis.

About the Speaker:

Jack Sherman is a past Chair of IEEE Chicago Section and a Senior Engineer at Motorola. He is a Life Senior Member of IEEE, a Senior Member of SWE and a member of ASQC and ASM. He is a graduate of the University of Chicago with graduate studies in Electronics Engineering, Experimental Psychology, Statistics, and Physics at the University of Connecticut. In addition to the capabilities of lab equipment, he can discuss the design and use of apparatus to investigate the learning abilities of mentally challenged individuals.

Place

Motorola
Land Mobile Products Sector
Radio Network Systems Group
(Base Radio Stations)
1301 E. Algonquin Road
Schaumburg IL 60196

Time:

5:00-6:00p	Registration and Social Hour
6:00-6:30p	Facility Walkthrough
6:30-7:00p	Cafeteria Dinner
7:00-7:30p	Dessert & AIChE Annual Meeting
7:30-8:15p	Presentation
8:15-8:30p	Questions & Answers

Cost: about \$5 for cafeteria style dinner

Reservations are required.

Call the ACS Office at (847) 647-8405 to make a reservation before May 9.

Note: No admission after 6:00 p.m.

**21st Annual
Great Lakes
Biomedical Conference**

**Biomedical Signal Analysis
Presented by Richard Shiavi, Ph.D.**

Friday, April 11, 1997

About the Speaker

Dr. Shiavi is Professor of Biomedical Engineering and of Electrical Engineering at Vanderbilt University. He is actively engaged in teaching and research at Vanderbilt and at the VA Medical Center. Research publications appear in the literature and congress proceedings of biomedical engineering and biomechanics. He has written a textbook entitled "Introduction to Applied Statistical Signal Analysis" and has been one of the main developers for a Web based course for first year engineering students.

Conference Schedule

8:00 a.m. -8:45 a.m.	Registration and opening remarks
8:45 a.m.-10:30 a.m.	Concept of modeling data with polynomials and periodic time series with Fourier series
11:00 a.m.- 12:00 N	Random signals, first and second order properties and autoregressive modeling
12:00 N-12:45 p.m.	Frequency content of signals, discrete Fourier transform and estimation of power spectra, part I
12:45 p.m.-1:05 p.m.	Movie presentation from Johnson Wax
1:15 p.m.-2:10 p.m.	Lunch
2:10 p.m.- 3:00 p.m.	Frequency Content of Signals, part II
3:00 p.m.- 5:00 p.m.	Social

Place: Golden Rondelle Theater, S.C. Johnson Wax, Racine Wisconsin

Cost IEEE members \$60.00/ non-members \$80/ students \$35.
\$5.00 discount available until March 31.

Pre-registration is required

For information and registration please contact John D. Gassert at the Milwaukee School of Engineering, 1025 N. Broadway, Milwaukee, WI 53202
Ph: 414-277-7167. FAX 414-277-7465. e-mail gassert@msoe.edu.
Sponsored by Milwaukee EMBS.

**Engineering in
Medicine and
Biology Society
presents**

**Implanted Drug Pump for the
Treatment of Atrial Fibrillation**

Dr. Robert Arzbaeher

Director, Pritzker Institute of Medical Engineering
Illinois Institute of Technology

Tuesday, April 15, 1997

About the topic

Atrial fibrillation is the most common cardiac arrhythmia. Once dismissed as benign, it is now known to have serious consequences, particularly stroke. The current therapy is long-term oral drug use, which has serious risks of its own.

At IIT, an implantable system has been developed to detect atrial fibrillation when it occurs and deliver a small, effective dose of drug intravenously. It is currently undergoing testing, and may be available to selected patients within three years.

In order to implement such a system, challenges in the fields of signal processing, fluid mechanics, biomaterials, pharmacology, and cardiology needed to be addressed. This presentation will describe the system and highlight the many engineering and scientific challenges involved in its development.

About the speaker

Robert Arzbaeher received his Ph.D. from the University of Illinois, Urbana in 1960. He has served on the faculties of the University of Tennessee, UIC, and University of Iowa, where he was chairman of the EE department. He has founded two medical device companies, and been involved with several others.

Dr. Arzbaeher is currently Professor of Electrical Engineering and Director of the Pritzker Institute of Medical Engineering at IIT Chicago. He is also professor of medicine at the University of Chicago. His research interests are in the application of computers to problems in cardiology, especially cardiac arrhythmias. Dr. Arzbaeher is a Fellow of the American College of Cardiology, the American Institute for Medical and Biological Engineering, and the IEEE.

Place

Motorola, Schaumburg Campus
Algonquin and Meacham Rds.

Time

Presentation...7:30 p.m.
Cafeteria escort available at 6:00 p.m.

Reservations are required

Call the business office at 800-898-IEEE by 5 p.m. April 11.
Directions will be provided if needed.



INSTITUTE OF
ELECTRICAL AND
ELECTRONICS
ENGINEERS, INC.

IEEE CHICAGO SECTION ANNUAL AWARDS BANQUET

Saturday, April 19, 1997

Starlight Inn
9950 W. Lawrence Ave.
Schiller Park, IL
*Overlooking O'Hare Field
At Mannheim and Lawrence Avenues*

COCKTAILS: 6 P.M.

Hot Hors D'oeuvres
Complimentary Cocktail
Dinner Music

DONATIONS:

\$35.00 per person

DINNER: 7 P.M.

Appetizer, Salad,
Wine, Entree,
Coffee, Dessert

IEEE Fellow Awards

Prof. Michael L. Honig- Northwestern University
Dr. David E. Borth- Motorola, Inc.
Dr. Fuyun Ling- Motorola, Inc.

Entertainment

Bates & Fammeree- Vocalists
Frank K. and Company- Dining and Dancing Orchestra

FOR TICKET INFORMATION CONTACT:

Joe Feitler
P.O. Box 5072
River Forest, IL 60305
708 383 8773 or IEEE office 630 964 4333
Tables of ten available
Special meals upon request

COMPUTER
SOCIETY
AND
FOX VALLEY
SUBSECTION

JOINT DINNER
MEETING

BROAD BAND ACCESS NETWORKS

Speaker: Chuck Byers
Lucent Technologies

Wednesday, April 23, 1997

ABOUT THE TOPIC:

Are you sick of staring at the hourglass icon when you surf the net at home? Would your business benefit from the same high speed network service that your competitors have? Want to rent a movie without ever touching a videotape? If so, you could use a connection to a broadband access network. This talk will introduce broadband access networks. These networks are similar to traditional telephone networks, but can transport data with bandwidths over 1 million bits to a large subscriber base. Many different services can be supported, including traditional telephony, high speed digital data transport, internet access, and digital video services. The following broadband access network types will be introduced:

- Copper-based digital subscriber lines (e.g. HDSL, ADSL, SDSL, VDSL)
- Coaxial cable systems (Hybrid Fiber Coax, Cable modems)
- Fiber to the curb systems (Subscriber Loop Carrier, Switched Digital Video)
- Fiber to the home systems (Point to point, Passive Optical networks, WDM)
- Wireless access systems (MMDS, LMDS, Microcell)

The talk will also cover the services a network provider can offer, customer premise equipment issues, traffic management, and evolution scenarios.

ABOUT THE SPEAKER

Chuck Byers is a Distinguished Member of Technical Staff at Lucent Technologies, in the Broadband and Photonic Switching Dept. In his 11 years there, he has done ASIC design, hardware and software design, and system architecture for toll switching, access and data switching systems.

PLACE

Jerry Sharko's
2225 Ogden Ave. Lisle, IL

TIME

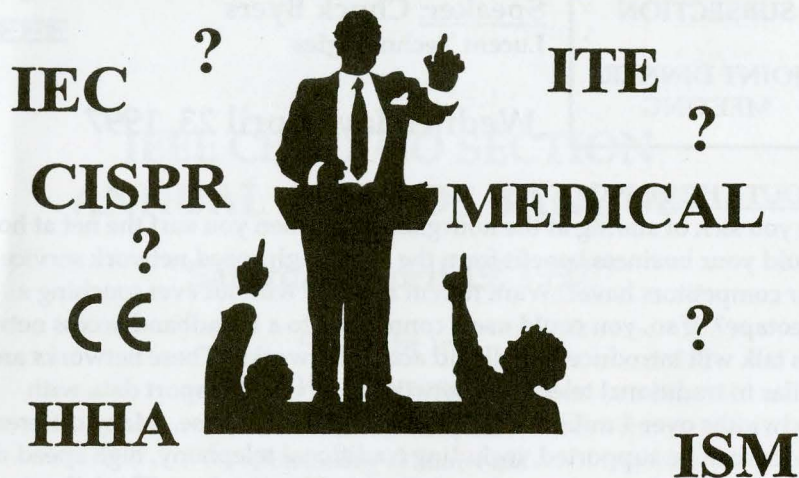
Social - 6:00 PM
Dinner - 7:00 PM
Presentation - 8:00 PM

FOR RESERVATIONS

Call the business office at 1-800-898-IEEE or 630-964-4333. Dinner cost is \$15 per person; the presentation is FREE. Dietary and vegetarian meals can be requested when you make your reservation.

FURTHER INFO Arup Bhuyan at 630-713-7759 or a.bhuyan@ieee.org

D.L.S. ANNOUNCES EUROPEAN EMC SEMINAR SERIES



Introduction to European EMC
Presented by D.L.S. Electronic Systems

SEMINAR TOPICS

- EMC Directive 89/336/EEC
- How to meet the requirements
- Declaration of Conformity
- Technical Construction File
- CISPR/EN Emissions
- IEC/EN Immunity
- Everything you need to know!*
- Q&A & Facility tour, if desired

*About European EMC

TO REGISTER

- Call today. 847-537-6400
Class size is limited.
 - Where: D.L.S. Electronic Systems,
Inc., Wheeling, IL
 - When: **2nd Wednesday**
each month
 - Time: 1 - 3 pm plus tour
 - Cost: \$55 including handout
- Please advise us at the time of registration if you are physically challenged and require special accommodations.
D.L.S. reserves the right to adjust the schedule and limit the number of people attending from one company.



Call Today for EC/EU EMC Help!
• 847-537-6400 • FAX 847-537-6488 •

Electron
Devices
Society
with
Northwest
Subsection

Microelectronics for megawatt power switching

SPEAKER: Prof. Krishna Shenai
University of Illinois at Chicago

Tuesday, April 29, 1997

ABOUT THE TOPIC

The power electronics market is over \$100 billion and may double by the end of next decade. This growth can be largely credited to innovations in power semiconductor devices and circuits. Power semiconductors used in transportation and electric utilities must be able to switch megawatts of power in microseconds. However, material and design problems limit the usability of silicon to medium power ranges; new wide-bandgap materials such as SiC and III-Nitrides promise a revolution. Other applications include: automotive electronics, motor and engine control, power supplies, lighting, and medical and aerospace engineering. This talk provides an overview of major application requirements and the current status and trends in associated power semiconductor device and circuit technologies, along with the CAD design tools.

ABOUT THE SPEAKER

Krishna Shenai is an Associate Professor of EE and Computer Science and Director of the Systems on Silicon Research Center at UIC. He earned his Ph.D. degree in electrical engineering from Stanford in 1986. He has held senior staff positions at the COMSAT Labs, GE, and Intel. From 1993-1995, he was an assistant professor at University of Wisconsin-Madison. Dr. Shenai has made significant contributions to ultralow noise cryogenically-cooled millimeter wave amplifiers and GaAs MMICs for satellite communication, and to high-speed GaAs digital IC, power MOS, and high-speed low-power scaled BiCMOS logic technologies. His current interests are in power semiconductor devices, submicron VLSI technologies, and semiconductor modeling, manufacturing and CAD. He is an IEEE Senior Member and a Distinguished Lecturer of the IEEE EDS.

PLACE

Motorola Schaumburg Campus
1301 Algonquin Road

TIME

Presentation.....7:30 p.m.
Cafeteria escort available at 6 PM.

RESERVATIONS ARE REQUIRED

For reservations, call the Business Office at 800- 898-IEEE by 1PM April 28.

- Attendance limited to 25. Name, Affiliation, Phone numbers required.
- Reservations will be confirmed and travel directions given if needed.

WELSH & KATZ, LTD.

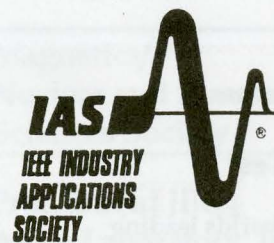
Attorneys experienced in virtually every scientific and engineering discipline and concentrating in all facets of intellectual property law including litigation, licensing, negotiation, client counseling and corporate identification programs, as well as protecting rights through trade secrets, patents, trademarks and copyrights worldwide.

120 South Riverside Plaza
22nd Floor
Chicago, Illinois 60606
Telephone 312-655-1500
Fax 312-655-1501

IEEE Member Contacts

A. Sidney Katz, BSEE, JD

James A. Scheer, BS, Eng. Sci.,
MSEE, JD, LL.M., Intellectual Property



City of Chicago Plan Approval Process

Speaker: Timothy M Cullerton
Chief Electrical Inspector, City of Chicago.

Wednesday, May 14 1997

** Note revised time and date **

About The Topic

An informative presentation on the policies and procedures necessary to obtain approval of Chicago electrical installations including plan review and the special permission process.

About The Speaker

Mr. Tim Cullerton brings to us his 27 years of knowledge and experience in the City of Chicago electrical installations, code compliance, application and planning. He is currently the Chief Electrical Inspector for the City of Chicago, Department of Buildings, Bureau of Electrical Inspection. He has served the city in various positions including Electrical Inspector, Supervisor of Electrical Inspectors and Code Instructor for Local 134.

Place	Time
Como Inn	Social 11:30 a.m.
564 Milwaukee Avenue. -	Lunch 11:45 a.m.
Just off 90/94, to the east	Presentation 12:30 p.m.- 1:30 p.m.

Cost: \$16 choice of entree- chicken or pasta.

Reservations: IEEE Business Office 630-964-4333 or 800-898-4333.

Attendance at IEEE Technical Meetings are acceptable as one PDH per meeting where required for PE License renewal.

IEEE EMC SOCIETY MEETING NOTICE

Speaker: T.J. 'Bill' Ritenour,
EMC Society 1997 Distinguished Lecturer

Wednesday, April 23, 1997

Place	Time
Lucent Technologies	Social 7:15
2000 North Naperville Rd	Meeting 7:30
Naperville IL	

Bill Ritenour is well known within the EMC community, serving on the EMC Society Board of Directors and the Standards Committee. Formerly with Storage Tek in Colorado, he is presently an independent consultant. Bill will discuss EMC issues from his unique perspective.

Reservations: IEEE Message Center, 800 898 4333.

Krueger Associates

Consultants to Management for Executive Selection

Manager of Automated Test

In their field of audio equipment, our client is the worlds leading manufacturer. They are recognized for their innovative, high quality products and striving to transcend conventional technology. Annual sales are in excess of \$100 million. They manufacture in multiple locations. Headquarters is in a northern suburb of Chicago. The manager of automated test and the department staff of five degeed engineers will interface with new product development, engineering, manufacturing, and quality. This is a fully operational department and is highly respected throughout the company. The position is open because of a promotion. Candidates will have a minimum of a BSEE or BSCS and eight years of automated test equipment experience with three years in a supervisory position directing the day to day activities and setting the vision for the department. Excellent salary, bonus, benefits and growth opportunity. For complete details mail or fax resume or call Kurt Krueger, Krueger Associates, 1000 Skokie Blvd. Suite 200, Wilmette, IL 60091. Phone 847 853 0550 Fax 847 853 8202.

EMC Sales and Application Engineer Wanted

D.L.S. Electronic Systems is seeking an EMC Sales and Applications Engineer for our north suburban location. Candidates must have at least two years experience in the Electronics industry and possess good communication skills to deal with customers. Applicants will be chosen for technical qualifications, interpersonal skills and attention to detail. An understanding of EMC testing including regulations/standards would be a plus. There is a great deal of customer/phone contact in this position.

**If you enjoy variety, planning, engineering &
helping others, then this job's for you !**

Send resume outlining experience and interest to Human Resource Dept:



1250 Peterson Drive, Wheeling, IL 60090
• 847-537-6400 • FAX 847-537-6488•

Magnetics/ Nuclear and Plasma Sciences Society

Modeling Magnetic Properties of Materials

Prof. David Jiles,
Ames Laboratory, Iowa State University
1997 Magnetics Society Distinguished Lecturer

Tuesday, April 15, 1997

About the topic:

The understanding of the relationship between the structure and properties of magnetic materials is crucial in being able to design magnetic materials to meet specifications. It is extremely difficult to bridge the gap between the description of magnetism on the atomic level and the description of whole materials. Model theories developed on different length scales have little apparent common ground, but are all successful in their own ways. This lecture will provide an overview of the current methods to describe magnetic materials and consider how they may eventually be linked to provide a coherent description. The lecture will trace the development of model theories at increasing length scales through micromagnetics, microscopic Preisach, domain rotational models such as Stoner- Wohlfarth and phenomenological models of domain wall motion such as the stochastic process model. Finally, finite element models for describing the magnetic field and induction in entire engineering components will be discussed.

About the Speaker:

David Jiles is a Senior Physicist with Ames Laboratory. He received his Ph.D. in applied physics from the University of Hull (1979). After periods at Victoria University in New Zealand and Queen's University in Canada, he joined Ames Laboratory in 1984. In 1990 he was awarded a higher doctorate in physics by the University of Birmingham, UK for his work on magnetic and electronic properties of metals. He is fellow of the IEEE, the Institute of Physics, and an Associate Fellow of the Institute of Mathematics and its applications in the UK. He is registered as a professional Engineer in the US, as a Chartered Engineer in the UK, and serves as a consultant for several companies in America, Europe and Japan.

Place:

IIT West Rice Campus
201 East Loop Road
Wheaton, IL

Time:

Presentation 7:30 p.m.

Optional Dinner with the speaker at Grady's American Grill at 6:00 PM
(Located on Butterfield Road, near the Rice Campus)



Scanfax

Chicago Section
Business Office
2460 Wisconsin Ave.
Downers Grove, IL 60515

U.S. POSTAGE PAID
NON-PROFIT ORG
Permit No. 479
Glen Ellyn, Illinois

Get on the Internet with IEEE

Scanfax is now accepting advertising
for display on our WEB site.

In addition to the Chicago area members who check our web site regularly for information about meetings, the web site is accessed by surfers all across the country for information about Chicagoland IEEE activities and job opportunities. Check it out.

Write t.jurgens@ieee.org for rates and other information or call the IEEE Chicago Section Business Office at 630 964 4333.

