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Institute of Electrical & Electronic Engineers Chicago Section Newsletter

APRIL 1996



***Chicago Section
Annual Award Banquet
April 27, 1996***



IEEE

INSTITUTE OF
ELECTRICAL AND
ELECTRONICS
ENGINEERS, INC.

IEEE CHICAGO SECTION ANNUAL AWARD BANQUET

Saturday, April 27, 1996

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
Table Prizes

DINNER: 7 P.M.

Appetizer, Salad,
Wine, Main Entree,
Coffee and Dessert

IEEE FELLOW AWARDS

Richard B. Dyott of Andrew Corporation
Wayne C. Luplow of Zenith Corporation
Majid Sarrafzadeh of Northwestern University
Jeffrey J. P. Tsai of the University of Illinois at Chicago

ENTERTAINMENT

Bobby Hunt
Renowned Comedian
and
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: (800)-898-4333
Tables of Ten Available
Special Meals on Request

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Chicago Section Executive Committee Meeting

April 9, 1996 • 7:15 PM

Northwestern University • Technical Institute Building

Sheridan Road at Noyes Street

Contact the Chicago Section Office for Travel Directions

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IEEE CHICAGO SECTION BUSINESS OFFICE

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Include your SCANFAX mailing label if possible

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SUBMITTAL DEADLINES

Articles for June '96 Scanfax due April 25.
Submit articles to Editor.

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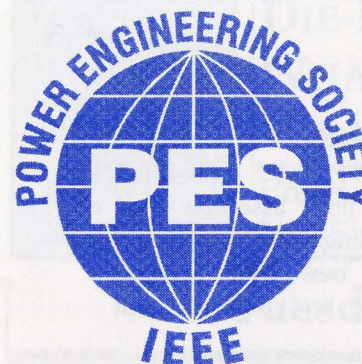
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Automated Distribution Scheme Speeds Service Restoration

Presented by
David Kearns of S&C Electric Co.

Wednesday, April 10, 1996

ABOUT OUR TOPIC

Lakeland Electric & Water provided a state-of-the-art 12.47kV automated distribution system to the Publix complex in Lakeland, FL; which covers two million square feet, housing a dairy plant, bakery, product plant, deli plant, data processing facility, etc. The presentation will discuss the Automated Distribution Scheme used in the project which restores power to a major customer in less than sixty seconds.

ABOUT OUR SPEAKER

David Kearns is a senior application engineer at S&C Electric Company. Prior to his six years with S&C, he was product marketing manager for Kearney VacPac Switches and was with Kentucky Utilities as their district engineer for distribution and division underground engineer. Mr. Kearns has a BSEE from the University of Kentucky.

PLACE

Chicago Bar Association
321 S. Plymouth Court
Chicago, IL (Near Jackson and Dearborn)

TIME

Social 11:30 AM
Lunch 12:00 PM
Presentation 12:30 PM

NOTES

Lunch tickets can be purchased in the Chicago Bar Association Shop on the first floor for \$8.50.

FOR RESERVATIONS

Please call the IEEE Business Office at (800) 898-IEEE to make your reservation no later than noon, Monday, April 8th.

FOR FURTHER INFORMATION

Contact Sam Peach at (815) 942-2920 x3866.

SOFTWARE ENGINEER

Responsible for hands-on programming of embedded microprocessors and computers utilizing both assembly and C languages. 3-5 years experience designing new programs, debugging, modifying and fine tuning new and existing programs necessary. Hardware knowledge and dealing with vendors and customers is a must.

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Responsible for electronic design engineering and project leadership to support new product development and enhance current products. BSEE and 3-5 years experience in circuit, analog and digital, and power supply design and microprocessor systems necessary.

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Please send resume with salary history to:

Gendex Medical Manufacturing
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11550 W. King Street
Franklin Park, IL 60131

EOE-M/F

IEEE
DIELECTRICS
and
ELECTRICAL
INSULATION
SOCIETY
KICKOFF
MEETING

DIE-HARD DIELECTRICS: WHAT IS AVAILABLE AND WHAT IS NEEDED

Presented by
Jack Sherman of Motorola

Tuesday, April 16, 1996

ABOUT OUR SOCIETY

Our Dielectrics and Electrical Insulation Society (DEIS), Chicago Chapter became a reality February 8, 1996. A brief kick-off meeting and officer election will precede a technical presentation on capacitors. Members interested in serving on the DEIS Chapter or with material for a technical presentation should contact the Interim Chair, Howard Penrose at: (708) 347-8850.

ABOUT OUR TOPIC

The presentation will target new and lifetime students, circuit and industry techies, and address characteristics, construction and application of capacitors - surface mount (electronic) to power factor correction (industrial), theoretical and practical aspects of dielectrics as used in printed circuits and transformers. A capacitor accumulates electrical energy and releases it at a predeterminable rate. Two conducting surfaces, the electrodes, are separated by an insulating material, the dielectric. It "blocks" the flow of steady-state and permits the flow of alternating or transient current dependent on the application.

ABOUT OUR SPEAKER

Jack Sherman is a Senior Quality Engineer, Material Quality Engineering, Motorola Land Mobile Products Sector, Schaumburg, IL. He is the Chair of the Chicago Section, a Life Senior DEIS and CPMT Member.

PLACE

Motorola Schaumburg Campus
Building 1301, Door Location 13
1301 Algonquin Road, Gate A

TIME

Social 6:00 PM
Kickoff/Elections 6:30 PM
Presentation 7:30 PM

NOTES

Kaffee und Nachtschen will be served. Prearranged cafeteria service from 5:15 to 6:00 PM.

FOR RESERVATIONS

Please call the IEEE Business Office at (800) 898-IEEE to make your reservation before noon on Monday, April 15th. This is necessary for both our count and Motorola Security. Please supply your business affiliation and phone when you make your reservation.

FOR FURTHER INFORMATION

Contact Howard W. Penrose at (708) 347-8850, h.penrose@ieee.org

12th International Conference on Advanced Science and Technology

Conference Theme: Embracing the Next Century

The University of Illinois at Chicago
Medical Center
833 S. Wood Street
Chicago, Illinois 60612

ICAST 96
April 6-8, 1996

Sponsors

Chinese Academic and Professional
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National Youth Commission, ROC
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In Association With

IEEE Chicago Section
Argonne National Laboratory
Motorola
Mid-America Chinese Science &
Technology Association

Technical Sessions:

Theme A: Pharmaceutical and Biotechnology (Sessions A1, A2, A3)
Theme BI: Basic Medicine Sciences (Sessions BI-1, BI-2, BI-3)
Theme BII: Clinical Medicine and Related Research (BII-1, BII-2, BII-3)
Theme C: Topics in Bioengineering (Session C1)
Theme D: Computer, Communication, & Networking
Session D1: Network & Telecommunication Technology
Session D2: Software Technology
Session D3: Object-Oriented Computing
Session D4: Panel Session of the Practical Aspects of Software
Process Improvements
Theme E: High Energy Physics (Sessions E1, E2)
Theme F: Health Economics and Management (Session F1)
Theme G: Materials Science (Session G1)

Workshop:

Session I1: Employment Interview

For More Information, please contact:

Dr. Wei-Pang Chin
Tel: (708) 979-5158
Fax: (708) 979-6216
Email: wei-pang.chin@att.com

**ELECTRO -
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A DISCUSSION OF RF EXPOSURE STANDARDS FOR HUMANS

Presented by
Dr. Gregory Lapin of Northwestern Univ.

Wednesday, April 17, 1996

ABOUT OUR TOPIC

In his talk, which will include a slide presentation, Dr. Lapin will discuss the present standards for human exposure to RF fields, how those fields are measured, what problems have been identified to date, and will offer a comparison of exposure to RF fields to those in the VLF region, particularly 60 Hz power line frequency.

ABOUT OUR SPEAKER

Gregory Lapin who received his PhD from Northwestern University, is presently on the faculty of Northwestern and on the staff at Evanston Hospital, and is working as a consultant in RF bioeffects and EMC issues of medical instrumentation. He serves on the Adcom of the IEEE Committee on Man and Radiation (COMAR) and is an original funded researcher of WTR, the Wireless, Technology Research effort supported by the Cellular Telephone Industry Association.

PLACE

AT&T Bell Laboratories
2000 N. Naperville Rd.
Naperville, IL
(708) 979-2000

TIME

Social 7:15 PM
Presentation 7:30 PM

NOTES

Refreshments will be served at 7:15 PM.

DIRECTIONS

Bell Labs is located at the northwest corner of Warrenville Rd. and Naperville Rd. To enter, go west on Warrenville Rd. to the first turn on the right. Enter the drive and again take the first right into the parking lot. To enter the building, go to the center of the southeast side near the flag poles.

FOR RESERVATIONS

Please call the IEEE Business Office at (800) 898-IEEE to make your reservation.

Nuclear/Plasma
Sciences Society
and Magnetics
Society,
&
Antennas/Prop-
agation Society
and Microwave
Theory and Tech-
niques Society

FAST METHODS FOR COMPUTING ELECTROMAGNETIC FIELDS IN COMPLEX STRUCTURES

Presented by Dr. Zoltan Cendes of
Carnegie Mellon Univ. and Ansoft Co.

Wednesday, April 17, 1996

ABOUT OUR TOPIC

Microwave and radiating structures used in today's microwave and RF design often involve complicated geometries, material properties, frequency ranges, and excitation sources. Three key capabilities must be provided to model the electromagnetic fields in such structures: (1) ability to handle the problem complexities efficiently, (2) ability to model the fields and s-parameters while including all losses, arbitrary geometries, and true 3D electromagnetic effects, (3) ability to generate solutions rapidly over a wide bandwidth.

We will also present methods used to create the new true 3D planar tool which can analyze dense planar circuits including microwave and millimeter-wave monolithic microwave integrated circuits (MAC) and planar antennas. Several examples of the application of these packages in real-world design will be presented. Modeling of ferrite material will also be covered.

ABOUT OUR SPEAKER

Dr. Zoltan Cendes is Professor of Electrical and Computer Engineering at Carnegie Mellon University, Pittsburgh, PA. He is also founder of Ansoft Corporation, a leading supplier of easy to use electromagnetics design software.

PLACE

IIT Rice Campus, The Board Room
201 East Loop Road
Wheaton, IL

TIME

Social 6:00 PM
Dinner 6:30 PM
Presentation 7:30 PM

NOTES

Dinner costs \$15.00 per person and the presentation is free. Dinner reservations must be made by noon, Friday, April 12th.

FOR RESERVATIONS

Call the IEEE Business Office at (800) 898-IEEE.

FOR FURTHER INFORMATION

Contact Dr. Thomas Jurgens at (708) 840-4803, t.jurgens@ieee.org



PLAN 9 FROM BELL LABS

Presented by
Kenneth Rehor of AT&T Bell Laboratories

Wednesday, April 24, 1996

ABOUT OUR TOPIC

Plan 9 is a distributed computing environment that tries to apply and extend the most successful features of the UNIX system to the environment of the 1990's, yet it keeps the underlying design simple. Much of its power depends on exporting objects into the file system name space, and using a simple, universal protocol to communicate with them.

A Plan 9 system consists of three kinds of components: CPU servers, file servers, and terminals. The pieces are connected by a single file-oriented protocol and local name space operations. None of the components need be highly specialized, and each has been implemented with several commercially available hardware platforms.

ABOUT OUR SPEAKER

Kenneth Rehor is a Member of Technical Staff in the Software and System Research Center at Bell Laboratories in Naperville, Illinois. His research interests include large-scale distributed computing systems, human-computer interaction, and computer graphics. He has been experimenting with Plan 9 for more than 4 years.

Ken is a graduate of the Electronic Visualization Laboratory at the University of Illinois at Chicago. He is a member of IEEE and ACM.

PLACE

Jerry Sharko's
2225 Ogden Ave.
Lisle, IL

TIME

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

NOTES

Dinner costs \$15.00 per person and the presentation is free. Dinner menu includes Soup of the Day, Dinner Rolls, Stir Fry Beef Entree, Coffee, and Chef's Choice of Dessert. Dietary and vegetarian meals can be requested when you make your reservation.

FOR RESERVATIONS

Please call the IEEE Business Office at (800) 898-IEEE to make your reservation.

FOR FURTHER INFORMATION

Contact David Schumacher at (708) 224-6471.

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AC CONTACTOR MOTION COMPUTED WITH COUPLED ELECTROMAGNETIC AND STRUCTURAL FINITE ELEMENTS

Presented by Mark Juds of Eaton Corp. and
Mark Jenich of MacNeal-Schwendler Corp.

Tuesday, April 30, 1996

ABOUT OUR TOPIC

An overview of the fundamentals of finite element computations and a description of the modeling process including geometry creation, meshing, and post processing of the results will first be presented.

Then, the analysis of an AC relay contactor using coupled electromagnetic and structural finite elements will be discussed. The structural finite elements include a nonlinear spring that simulates a coil return spring plus the relay contact springs. Videos showing the armature motion and variation of the flux density as a function of time will be presented.

ABOUT OUR SPEAKER

Mark Juds received his BSME from the University of Wisconsin-Madison in 1973 and his MSME from the University of Wisconsin-Milwaukee in 1991. He holds 17 patents, has authored or co-authored 7 papers. He is a principal engineer at Eaton Corporation's, Corporate R&D Center in Milwaukee.

Mark Jenich holds a BS and MS in Civil Engineering from the University of Wisconsin-Madison. He has over 15 years experience with various aspects of applying, teaching, and marketing simulation tools using finite element techniques for electrical and mechanical engineering. He is a Senior Sales Representative with the MacNeal-Schwendler Corporation.

PLACE

Motorola Schaumburg Campus
Building 1301, Door Location 13
1301 Algonquin Road, Gate A

TIME

Social 6:00 PM
Presentation 7:00 PM

NOTES

Coffee and Donuts will be served. Dinner can be purchased at low cost in the cafeteria starting at 5:30 PM, if desired.

FOR RESERVATIONS

Please call the IEEE Business Office at (800) 898-IEEE to make your reservation before noon on Monday, April 29th.

FOR FURTHER INFORMATION

Contact George Studtmann at (847) 392-7189.



VTS LAND TRANSPORTATION DIVISION

INVITES YOU TO ATTEND THE

1996 ASME/IEEE JOINT RAILROAD CONFERENCE

**Oak Brook Hills Hotel and Resort
Oak Brook, Illinois
April 30 - May 2, 1996**

The Joint Railroad Conference has been an important technical forum for the presentation of American railroad and rail transit technology for the last 37 years. This historic conference is sponsored jointly by the American Society of Mechanical Engineers Rail Transportation Division and the Institute of Electrical and Electronics Engineers Vehicular Technology Society Land Transportation Division. Its focus is on new technologies, design concepts and maintenance practices to improve the quality, reliability, safety and cost effectiveness of rail transportation. The two/three day format of technical paper presentations in a world class, yet moderately priced resort provides a low cost solution to keeping abreast of technical issues and developments in the industry.

In addition, the Conference provides an ideal environment to exchange ideas and experiences with engineers and maintenance personnel of rail transit authorities and rail transportation properties. Subjects include train control and signaling, traction power systems, vehicle/wheel/rail interaction, vehicles design, drive systems, trucks and suspension systems, communications and systems integration. Manufacturers and consultants are well represented, presenting papers on the emerging technologies that will enable rail service providers to offer more cost effective rail transit and transportation in the coming decades.

The Conference will be held at the Oak Brook Hills Hotel and Resort, which features an 18-hole championship golf course, tennis and racquetball facilities, jogging path and fitness center. A block of rooms has been reserved for the Conference at special rates of \$110 single and \$120 double. Contact the hotel directly at 708-850-5555 no later than April 10, 1996 to make room reservations.

The Full Conference Fee is a bargain at \$225, which includes the technical tour, two luncheons, refreshments and a copy of the proceedings. Contact Bob Moore, De Leuw, Cather, 525 West Monroe St., Chicago, IL 60606, (Phone) 312-930-5100, (FAX) 312-930-0018 for copies of the registration form and preliminary program. Paper abstracts are printed in advance in the January issue of VTS News.

IEEE
ELECTRON
DEVICES
SOCIETY
with
Northwest
Subsection

PHOTONIC SWITCHING USING VLSI OPTOELECTRONIC DEVICES

Presented by
Dr. Anthony Lentine of AT&T Bell Laboratories

Thursday, May 16, 1996

ABOUT OUR TOPIC

Optical interconnections are playing an increasing role in the development of large telecommunications switching and computing systems. While fiber optic interconnections between circuit boards are now common, enhanced performance and lower cost may be possible by integrating optical receivers and transmitters directly onto VLSI circuitry.

Current research at Bell Labs in this area includes VLSI optoelectronic circuits consisting of the hybrid integration of quantum well optical modulators and detectors. This talk will describe recent research in free space photonic switching, including motivation, architectures, optical and optomechanical system design, the optoelectronic VLSI devices, results from photonic switching system experiments, and a discussion of future work in this area.

ABOUT OUR SPEAKER

Dr. Lentine received his BS and MS degrees in Electrical Engineering from the University of Illinois - Urbana in 1979 and 1980, respectively; he received his Ph.D. from Heriot-Watt University, Edinburgh, UK in 1993. He began his professional career at Bell Labs working on microwave integrated circuits. Since 1985, he has been a leading researcher in the areas of smart pixel optoelectronic devices and optical interconnects. This work has resulted in over 50 refereed journal articles and 17 patents.

PLACE

Motorola Schaumburg Campus
Building 1301, Door Location 13
1301 Algonquin Road, Gate A

TIME

Meeting 7:00 PM

NOTES

Coffee and rolls will be available.

FOR RESERVATIONS

Please call the IEEE Business Office at (800) 898-IEEE to make your reservation before Wednesday, May 15th. Reservations are required. Your attendance will be confirmed.



IEEE

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Business Office
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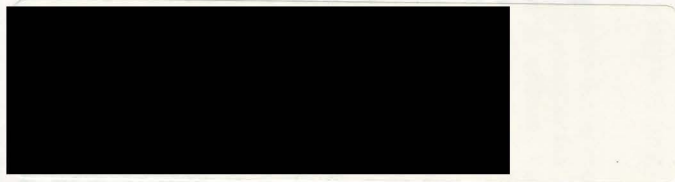
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12th International Conference on Advanced Science and Technology

The University of Illinois at Chicago
Medical Center
833 S. Wood Street
Chicago, Illinois 60612

ICAST 96
April 6-8, 1996

Schedule:

April 6 (Saturday)

- 08:00 - 09:00** **Registration/Continental Breakfast 09:00-09:30**
Opening Remarks
- 09:30 - 10:20** **Keynote Speech Shu Chien, M.D., Ph.D.**
- 10:40 - 12:20** **Parallel Technical Sessions (I)**
(A1,BI-1,BII-1,C1,D1,E1,D2)
- 12:20- 13:4** **Lunch**
- 13:40 - 15:20** **Parallel Technical Sessions (II)**
(A2,BI-2,BII-2,D3,E2,F1,I1)
- 15:20- 15:50** **Break**
- 15:50 - 17:30** **Parallel Technical Sessions (III)**
(A3,BI-3,BII-3,D4,G1)
- 18:00 - 19:40** **Reception/Evening Buffet**
- 20:00-21:00** **Evening Program**

April 7 (Sunday)

Tour of Fermi National Accelerator Laboratory Batavia, IL

April 8 (Monday)

- 11:30 - 12:30** **Special Lecture by Dr. Shu Chien**

Directions: From the North, take the Kennedy Expressway to the Eisenhower Expressway west bound and keep to the right; take the second exit from the Eisenhower Expressway, which is Ashland Avenue; take Ashland Avenue south to Taylor Street; then go west on Taylor Street to the UIC campus.

From the South, take the Dan Ryan Expressway and exit on Roosevelt Road (1200 south); go west on Roosevelt Road to Wood Street; then go north on Wood Street to the UIC campus.

From the West, take the Eisenhower Expressway to the Ashland Avenue exit; take Ashland Avenue south to Taylor Street; then go west on Taylor Street to the UIC campus.

PRE-REGISTRATION FORM

12th International Conference on Advanced Science and Technology

The University of Illinois at Chicago
Medical Center
833 S. Wood Street
Chicago, Illinois 60612

ICAST 96
April 6-8, 1996

Last Name: _____

First Name: _____

Address: _____

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Registration Fees:

Registration	Member	Speaker	Non-member	Student
	[] \$50.00	[] \$30.00	[] \$60.00	[] \$5.00
Proceedings	Included	Included	Included	[] \$15.00
Dinner Reception	[] \$10.00	Complimentary	[] \$15.00	[] \$10.00

Instructions:

Fill out form and fax it to CAPAMA, (708) 983-7403.
Pay registration at the conference.

OFFICIAL VOTING BALLOT IEEE CHICAGO SECTION EXECUTIVE COMMITTEE 1996-1997 SEASON

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Name (print): _____
Signature: _____



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