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Official Publication of the Chicago Section • Institute of Electrical & Electronics Engineers • APRIL 1994



TIME SENSITIVE MATERIAL

CALENDAR OF EVENTS

For reservations please call IEEE Office at 1-800-898-4333 before the stated deadline
The meeting details are stated in their relevant announcements inside

April 10 - 15 Sunday through Friday	Power Engineering Society	Introduction to Transmission & Distribution Conference & Exposition	McCormick Place 2301 S. Lake Shore Dr. Chicago, IL.	See Announcement for Details
April 12 Tuesday	Chicago Section	Executive Committee	DeVry-DuPage 1221 N. Swift Rd. Addison, IL.	Food Service: optional Meeting: 7:15 PM
April 13 Wednesday	Communications Society/ Fox Valley Subsection	High-Speed Transmission over Bandlimited Channels: New Techniques	Jerry Sharko's 2225 Ogden Ave. Lisle, IL.	Social: 6:00 PM Dinner: 7:00 PM Meeting: 8:00 PM
April 27 Wednesday	Fox Valley Subsection/Communications Society	Telecommunication Deployment - Choices for the Future	Jerry Sharko's 2225 Ogden Ave. Lisle, IL.	Social: 6:00 PM Dinner: 7:00 PM Meeting: 8:00 PM
April 30 Saturday	Chicago Section	IEEE Recognition Dinner	Avalon Banquets 1905 E. Higgins Road Elk Grove Village, IL.	Social: 6:00 PM Reservations Required Call (708)383-8773
May 10 Tuesday	Chicago Section	Executive Committee	DeVry-DuPage 1221 N. Swift Rd. Addison, IL.	Food Service: optional Meeting: 7:15 PM
May 12 Thursday	LEOS/Electron Device Society/Northwest Subsection	Optical Fiber Amplifiers and the Information Superhighway	Motorola Center 1301 Algonquin Rd. Schaumburg, IL.	Food Service: optional Meeting: 7:00 PM

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For IEEE Members Only . . . the new IEEE Financial Advantage Program

Engineers often have unique financial needs—and now the IEEE has created a new program to help meet those needs. It's called the IEEE Financial Advantage Program. And, it brings members and their families value-added benefits on investments and loans that non-members simply can't get.

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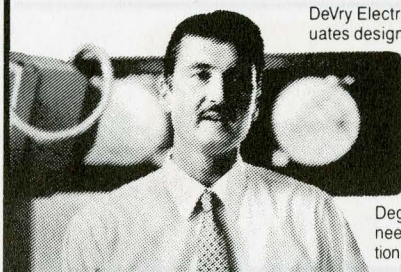


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(708) **953-1300**

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SCANFAX DEADLINES

ISSUE	COPY DUE	MAILED ON
MAY	MAR 25	APR 15
JUNE	APR 28	MAY 15

THESE ARE FIRM DEADLINES FOR ADS AND COPY!!!

From the Chairman of the section

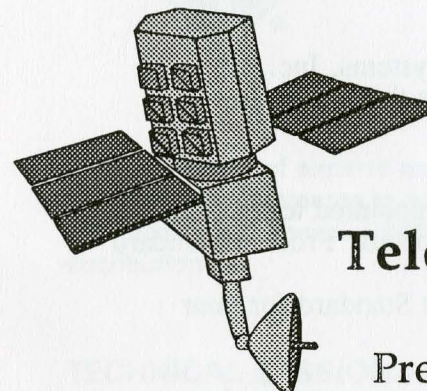
1. Our condolences to Norm Pheonix on the loss of his mother in December. The Section also takes this opportunity to thank Norm for his many years of service to the IEEE. Norm was on the executive committee of the Northwest Subsection for many years and served the Subsection as chairman and held many other offices. Norm is currently active in Electron Devices. We look forward to your continued support and participation in IEEE activities.

2. For our unemployed or underemployed members help from the IEEE-USA Employment Assistance Committee is available. Guidelines for establishing a self-help group for job seeking members is available from William Anderson (202) 785-0017.

3. The Chicago Section is pleased to announce that four of its member have advanced to the grade of Fellow. We congratulate: **John R. Cooper**, For leadership in the development and application of interrupter switch technology; **Walton J. Kitchen Jr.**, For leadership in the research and development of leading-edge semiconductor technology; **Joseph C. Osterhout**, For contributions to the development of silicon carbide and metal oxide surge arresters; and **Theodore S. Rzeszewski**, For contributions to the development of frequency-synthesized tuning for television receivers. We look forward to meeting you at the Recognition Dinner in April.



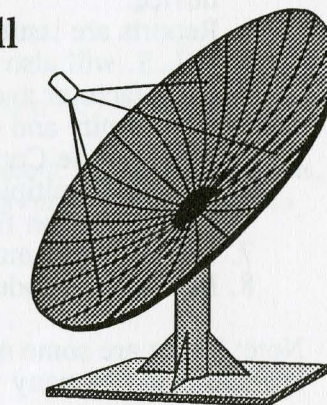
THE INSTITUTE OF
ELECTRICAL AND
ELECTRONICS
ENGINEERS, INC.



Telecommunication Deployment Choices for the Future

Presented by Mr. Pierre Dumay of Westell

Wednesday, April 27, 1994



The global expansion of demand for telecommunication services has posed challenging questions on how to best deploy the desired infrastructure.

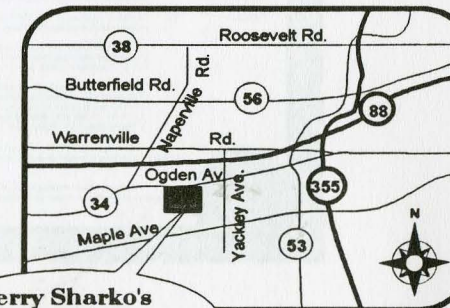
Enjoy a pleasant evening with your fellow IEEE members and explore "Telecommunication Deployment Choices for the Future." Pierre Dumay will talk about the new telecommunication systems under development. Have you heard about the Iridium Project? It's a communication network of satellites around the globe that will directly link your phone to the party you're calling. What about ADSL? ADSL will make "video on demand" in your home a reality just using your existing phone wires! Mr. Dumay will also talk about Global Positioning System (GPS), CATV, and fiber to the curb.

Mr. Dumay is a telecommunications engineer with fifteen years experience. He holds a BSEE from the University of Wisconsin and an MS from IIT.

Make Your Reservation Today!
Bring a Friend!
Call IEEE Message Desk at
(800) 898-IEEE

6:00 PM Social Hour
7:00 PM Dinner / \$15.00*
Family Style Dinner which includes
Garden Salad, Roast Beef, Orange Roughy,
Pasta, Dinner Rolls, Coffee, and Dessert
Dietary and Vegetarian Meals can be requested
when you make your reservation
* Includes Complimentary Cocktails 6:30 to 7:00 PM
8:00 PM Presentation / Free

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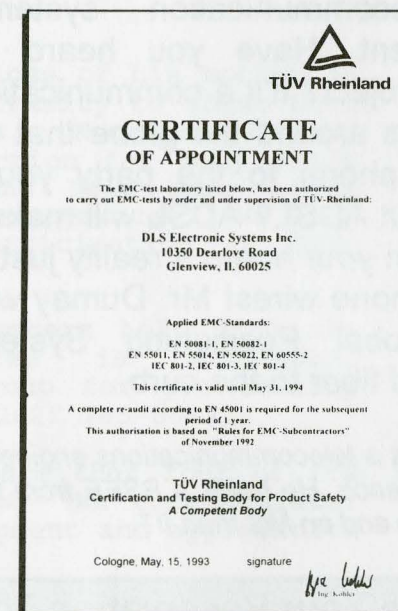
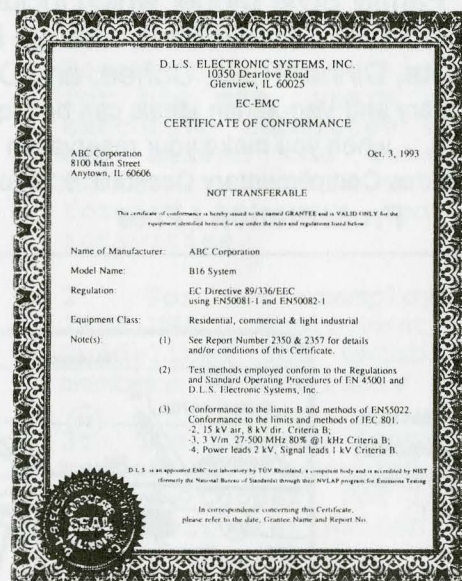
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1. Do the testing at D.L.S. Electronic Systems, Inc., a TÜV Rheinland appointed test laboratory.
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5. D.L.S. will also issue a Certificate of Conformance which lists the requirements you have met.
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7. Manufacturer must put the CE mark on the product with the year tested (the year is required).
8. Market the product in all of Europe.

Note: There are some national deviations in a few countries, such as ergonomics for monitors & keyboards in Germany which must be met before marketing in these specific countries.

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The Power Engineering Society of IEEE presents



1994 IEEE/PES
TRANSMISSION AND DISTRIBUTION
CONFERENCE AND EXPOSITION
APRIL 10 - 15, 1994
McCORMICK PLACE - CHICAGO, ILLINOIS



Join thousands of experts and engineers at the 1994 Transmission and Distribution Conference to learn about the latest developments in transmission and distribution technology and techniques. This is the world's largest and most comprehensive technical conference and exposition devoted to electric power transmission and distribution.

TECHNICAL SESSIONS - McCormick Place East

Monday, April 11, 2:00 p.m. - 5:00 p.m.
Tuesday, Wednesday, Thursday, April 12, 13, 14, 8:30 a.m. - 11:30 a.m. and 1:00 p.m. - 4:00 p.m.
Friday, April 15, 8:30 a.m. - 11:30 a.m.
The world's most respected experts, engineers, educators and theorists will present about 150 paper sessions, panels, and tutorials. Training sessions, a new feature for this event, will contribute a hands-on approach to the direct learning experience.

EQUIPMENT EXPOSITION - McCormick Place East

Monday, April 11, 1:00 p.m. - 5:00 p.m.
Tuesday and Wednesday, April 12 and 13, 9:00 a.m. - 5:00 p.m.
Thursday, April 14, 9:00 a.m. - 3:00 p.m.
See and compare the newest advances in equipment, materials, and services from suppliers around the world. Over 500 of the most influential T & D companies will display their products in 200,000-square-feet of exhibits at McCormick Place East.

TECHNICAL INSPECTION TOURS

During the week, inspection tours of facilities such as a Commonwealth Edison electric substation, the Zion nuclear station, Fermilab, Chicago Tribune Printing Plant, Chicago Deep Tunnel project etc. will be offered for a view of advanced technology at work.

REGISTRATION - McCormick Place East - Lobby Level

Sunday, April 10, 1:00 p.m. - 6:00 p.m.
Monday, April 11 thru Thursday, April 14, 8:00 a.m. - 5:00 p.m.
Friday, April 15, 8:00 a.m. - 10:00 a.m.

FEE SCHEDULE

	Registration at Conference	One Day*
IEEE Member	\$150	\$50
Non-Member of IEEE	\$190	\$65
Spouse	\$ 25	--

*The one-day registration is not available to advance registrants.
IEEE Life members are admitted at no charge.

For complete details about the Transmission and Distribution Conference
call 1-800-PES-IEEE (1-800-737-4333)

IEEE CHICAGO SECTION – PLACEMENT SERVICE APPLICATION FORM

Prospective employers will receive the information on this form on request unless marked "CONFIDENTIAL" at the top of this form. Please notify us immediately if you accept employment to leave space for other search ads.

Each search ad will run in two consecutive monthly SCANFAX issues; find publication information on page 2 herein. The number of search ads per issue may be limited by space constraints.

(please print)

Name _____ IEEE No. _____ Expir. Date _____

Address _____ IEEE Grade _____

City/State/ZIP _____ Phone (____) _____

Instructions

To better serve our membership, each submission must be complete and adhere to the following:

1. Identify educational qualifications, position being sought, professional experience, and pertinent qualifications.
2. Use industry standard acronyms and abbreviations.
3. Limit your text to the 100 spaces provided.

[illegible]

The IEEE and its Chicago Section waive any responsibility in determining the credibility, accuracy, or qualifications of applicants or employers.
Mail to: IEEE Placement Service, c/o Robert A. Schrage, Commonwealth Edison Co., P.O. Box 767 - SEED 836E, Chicago, IL 60690

What A Difference A Day Would Make...

The University of Illinois at Chicago (UIC) IEEE student branch in cooperation with UIC Career Services has initiated a program called, Engineer For A Day.

The purpose of this program is to provide students with a **one-day informational interview and networking session** with a professional engineer who is working in the student's field of interest (i.e. communication or power transmission).

Participation in this program will give students an opportunity to understand job requirements from the inside and will provide them with essential information that will help them better prepare and develop skills necessary to obtain a job in the field of their choice.

We are searching for Electrical Engineers to help us make this program a success. It will take place in March and April. No transportation to the company will be required. This will be provided by the students.

For more information, please contact:

UIC IEEE Office: (312) 996 2527

e-mail: ieee@eecs.uic.edu

Paul Echavez: (708) 982 0818

UIC IEEE Vice Chair

e-mail: U13672@uicvm.bitnet

...thank you...

VOLUNTEER!!!

THE CHICAGO CHAPTER OF THE IEEE COMMUNICATION SOCIETY

joint with
The IEEE FOX Valley Subsection

High-Speed Transmission over Bandlimited Channels

DATE: Wednesday, April 13, 1994

GUEST SPEAKER: Rajiv Laroia, Ph.D.

PLACE: Sharko's Restaurant, 2225 Ogden Av., Lisle

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

Dinner: 7:00 PM - \$14.00

Speaker: 8:00 PM - FREE

RESERVATIONS: Please call (312) 236-4333 to make dinner reservations no later than 4/11/1994

THE PRESENTATION: Dr. Rajiv will present recently developed advanced modulation techniques for transmission over band-limited channels. Most of these ideas were a product of the evolution of V.fast (now V.34) international standard for high-rate (28.8 kbits/sec) data transmission over voice-band telephone-line channels. He will describe new methods of:

- Constellation shaping to realize shaping gain
- Combined coding and precoding to realize coding gain in the presence of intersymbol interference
- Nonlinear warping to guard against proportional noise.

All these techniques have now made it possible to achieve data rates that were considered impossible only a few years ago. They can also be used for high speed transmission (HDSL) over the local copper loop. Rates of 6 Mbps are possible permitting transmission of existing TV signals via standard phone lines.

ABOUT THE SPEAKER: Rajiv Laroia received the B. Tech degree from Indian Institute of Technology, Delhi, in 1985 and MS and PhD degrees from the University of Maryland, College Park, MD, in 1989 and 1992, respectively, all in electrical engineering. During 1985-86 he was with Siemens Central Research and Development Laboratories, Munich, Germany. During 1987-92 he was a research assistant and Systems Research Center Fellow at the University of Maryland, College Park. Since June 1992 he has been with AT&T Bell Labs at Murray Hill, NJ. His research interests include quantization, channel coding, modulation, transmission and signal processing.

For more information contact Rushdi Muammar at (708)713-1603.

Consultants- Are you considering using or being one?

1. A Consultant's Bureau steering committee is being formed to develop a strategy, mission statement, and support proposal to be presented to the Chicago Section Executive Committee at the May meeting. Relations among licensed professional engineers, independent consultants, and their clients and prospective clients, as well as marketing, intellectual property controls and areas of interest are to be considered. Several IEEE Sections nationwide have already established such Bureaus. The Chicago Section will consider promoting the development of the group endeavor if a number of interested members respond.

2. A number of student activities are being considered in order to raise funds for projects and to support attendance at conferences. An interest group steering committee is under consideration to direct their efforts from washing cars and selling T shirts to developing engineering projects that businesses are understaffed to do, or to answer sophomore-like engineering questions that you have long since lost the skills to do. Responding to your needs would be expected to augment their engineering skills as well as their treasuries. As with the Consultant Bureau above, the steering committee will meet to develop a proposal to be submitted to the Chicago Section.

To establish your interest in either or both of these, please call the Chicago Section office, 1 800 898 4333 and ask to be logged onto the 'Consultant 1, Consultant 2 roster'.

Report of the 10th Annual DuPage Area National Engineer Week Program Illinois Institute of Technology, Rice Campus, Wheaton More than 2000 attended the three days of activities

On Thursday evening Feb. 24, Dr. Leon Lederman, Fermilab Past Director, Nobel Laureate, and presently a Professor at IIT led a community forum at Fermilab. An audience of 350 were drawn to this no charge event. Dr. Lederman first traced the development of experiments leading to the desirability of the "Super Collider", then commented on reasons for withdrawal of federal support.

He then reached out to the audience for comments and questions, engaging queries on scientific research in general, and comparing strategies used by physics, chemistry, and biology teachers and researchers. The teaching of science starts with Biology, continues with Physics, and ends with Chemistry. If the sequence started with Physics, students would learn atoms, forces, and mathematics first. Chemistry would bring them to molecules, Biology, to systems concepts.

The following day, despite the blizzard of '94, 290 stalwarts and early arrivers out of 740 registrants from 26 junior high and middle schools engaged in field trips and competitions designed and staffed by engineers from Amoco Research, Amoco Pipeline, and Bechtel Corp. Special features included a Girl Scout Workshop by the Society of Women Engineers and the Girl Scout Council, a Boy Scout Workshop organized by two Councils, and an ASME Rube Goldberg contest.

A record attendance of over 1400 middle and high school school students and their families were joined by curious, novice, and old timer members of the community of scholars who came the third day to exhibits, discussions, and interactive toys. The program was staffed by 28 volunteer professionals who represented their employers as well as the societies of which they are members.

The Steering committee members and their areas of interest are listed in a resource booklet available for teachers and interested organizations from Ruth Sweetser, Program Chair. (708 682 6000) Additions are invited. Please call for info.

TOPICS; PRESENTER - Affiliation

Testing Materials to Destruction; John Way - Mechanical & Aerospace Engineering, IIT.
Biodegradeable Polymer Products; Ted Shutov - Chemical Engineering, IIT.
Bio-Medical Engineering; A. Patwardhan, M. Satori, R. Harvey - Hines VA Hospital.
Traffic Engineering; George Brown - Metro Transportation Group.
The Importance of Polymers in your Life; Nolan Edmunds - Novacore Chemicals.
The Mississippi River Rehabilitation Program; John Kincaid - US Army Corps of Engineers.
The IRIDIUM System; Ann Miller, Suzane Garner - Motorola.
Uncloaking the Invisible Engineer; Bob Johnson - Alfred Benesch Company
Fire Dynamics: Finding the Cause and Origin; Kim Mniszewski, Tom Miller - Varley Campbell & Associates.
Computing in the Palm of Your Hand; Bobbie Stryzak - Dauphin Technologies.
Cryogenics, the Real Cool Science; Mike Orso - Fermilab.
Energy Conservation in Illinois Schools; James Hartnett, K. Hauseman, M. Chinak, A. Roso - Energy Resource Center, IIT.
Refrigerants and the Environment; Brian Bidwell - Allied Signal Company.
The Art of Electronics Manufacturing at Motorola; Susie Yarling, Grace O'Malley - Motorola
Quality: A way of Doing Things; Praveen Gupta - Quality Technology Company.
SciTech Exhibits; Mark Tischler - AT&T.
Rube Goldberg Contest; Ron Selberg - ASME
Geiger Counter Hunt; Jeff Boyar - American Nuclear Society.
Energy Conservation for Lighting; Elaine Dillon, Howard Wolfman - Motorola
AutoGyro Design and Test; AFROTC.
Aerotecture; Charles Owen, - IIT Institute of design.
Boat Load Design Challenge; Diane Hinterlong - IMSA, Diane Deering - ISPE DuKane.
Rubber Band Gun, Spool Crawlers; Tom Miller - ISPE Salt Creek
Film Clips of Engineers and Engineering Societies Doing Their Things; Jack Sherman - IEEE, Motorola.
Multi-Media Technology; Louise Hewitt - IIT
Software On Hand; Dushyant Shrivastav - IIT
*ACERS-ACS-AIHA-AICHe-ANS-ASAE-ASCE-ASHRAE-ASM-ASME-ASSE-ASQC-ASVE-ASEE-CATS-IPLSA-IEEE-IE-IIE-ISPE-NTA-SAE-SAME-SFPE-SEA-SHPE-SME-SPE-SWE-WSE-WISE-JETS-FLSC-ANL-IVSN-COD-MVCC-NSPE- -- ADD YOURS HERE NEXT YEAR!!

National Engineer Week Future Cities Competition Chicago Area Seventh and Eighth Grade

Lakeview Junior High, Downers Grove, students won the Chicago Regional Future City Contest and represented our area in the National Future City Competition at Washington DC. Julie Mitchell, 13, Alan Bouley, 13, and Christopher Konopasel, 14 created "Great 3", the name of their entry that competed against 70 seventh and eighth grade students from 23 Chicago area schools. They also took home a computer system awarded by Digital Equipment Corp.

All contestants used "SimCity Classic" software to generate a blueprint computer printout and then built a scaled model of a section of their city. The contestants were also required to prepare an essay entitled "Space Exploration and its Practical Application to Our City". Each group of students were assisted by volunteer engineers from various Chicago area professional societies. Volunteers judged the scale models and essays at the regional competition held January 22 at the Motorola Schaumburg campus. The software was installed and demonstrated by Kevin Owens, UIC senior. "The contest brings hands-on, practical applications of science and mathematics to students in a fun and interesting way", said Donald R. Beall, Chairman and CEO of Rockwell International, 1994 National Engineer Week Honorary Chairman.

The Second Place students attend Percy Julian Junior High School, Oak Park. They received a plaque and \$250 for their school from Conestoga-Rovers and Associates of Rosemont. The Third Place students attend Stone Scholastic Academy, Chicago. They received a plaque and \$100 for their school from Avila and Associates of Chicago. Prizes were awarded to all teams by a variety of local government and private sector companies.

"There was a lot of stiff competition, a great diversity of creative city layouts, innovative energy distribution and transportation solutions." said Angela Spoden, Motorola Engineer and co-coordinator with Janine Moderndorfer of Commonwealth Edison. Rockwell, Motorola, Bechtel, Chevron, Fluor Daniel, GE, IBM, 3M, and Lockheed, are corporate sponsors.

SCHOOL, CITY; TEACHER; CONSULTANT(Affiliation); 3 STUDENTS(Several have an alternate.)
Holy Family, Chi; Sr.Mary Therese Freymann; Grace Kim-Skidmore Owings; Carmen Hernandez, Antonio Fabian, Calvin Bell. Edwards, Chi; Geraldine Harcacz; Richardo Davalos-IITLife; Cindy Yau, Shannon Evans, William Lauer, Ruth Ann Miller. St Bruno, Chi; Judy Banasiak; Andrea Starsiak-Midwest Consulting Engrs; Kristen Stupka, Dorothy Sidor, Karen Lewsader. John Spry, Chi; Leon Harris, Colleen Leahy; Paul Eschavez-UIC; Patricia Martinez, Leticia Alday, Manuel Bermudez, Nancy Herrera. Healy, Chi; Shirley Kaczanowski; NA; Carmelo Barbaro, Kent Lau, Brian Vazzana. Lakeview Jr High, Downers Gr; Becky Foellmer; Peter McGing-1st Office Mgmt; Julie Mitchell, Chris Konopasel, Alan Bailey. Clinton, Chi; Beth Locallo, Betsy Foxwell; Jim McLean-Fluor Daniel; Helen Chronopoulos, Amy Patel, Nancy Zawagta. Percy Jillian Jr. High, Chi; Margaret Farmar; Kevill Kell-Louis Berger & Assoc; Maura Conway, Liz Dunne, Deidra Stockman. Stone Academy, Chi; Bill Starling; Randy Lansberg-Argonne; Asif Daya, Younggil Park, Paul Valente. Queen of Angels, Chi; Shaun Marusek; Eliz Gallagher-Consour Townsend; Eliz Fackler, Mark Thornton, Maria Cherone, Mark Peon. Bethune, Chi; Corla Wilson-Hawkins; Wil Darden-Motorola; Kennie Atkins, Roshawn Sims, Kiya Bolds. St Simon the Apostle, Chi; Maureen Kennedy; Elsa Madrigal-IIT; Steve Sala, Tracy Nowakowski, Michael Hickey. Funston Elem., Chi; Christine Dutzi; Jeff Simmons-Comm.Edison; Jose Colon, Jesenia Latorre, Jonathon Torres, Francisco Roman. Jose De Diego, Chi; Les Jorges; Kevin Owens-UIC; Silvester Delgado, Takila Gregory, Liliana Reyes. Bryan Jr High, Elmhurst; Maureen McNulty, Amy Osland; Jeff Victorin-Fluor Daniel; Daniel Hartsig, Daniel Blonder, Philip Kurby. Alexander Graham Bell, Chi; Mark Klein; Bob Piccirilli-Perfoemance Innovations; Toby Gaster, Paul Geidraitis, Mike Karasch. Bethel, Chi; Connie Taylor; (NA); Trisha Shaw, Aveath Owens, Andae Evans, Faith Holifield. AJ Katzenmaier, N Chi; Steven Applebaum; Pat Dumsdorf-Motorola; Wesley Sisson, Vincent Tirill, Christopher Andoule. Lundahl Jr High, Crystal Lake; Jody Nichols; Chuch Stenzel-Triton Consulting; Jim Gilmore, Dave Gavle, Kirk De Jonge. Franklin Middle, Wheaton; Nina Koelpin; Robert Johnson-Johnson & Assoc; Bobby Johnson, David Chong, Chris Roman. Jefferson Jr High, Naperville; Nancy Thirkield; Yusuf Koita-Amoco; David Shih, Ibrahim Koita, Vincent Hammond. Gompers Fine Arts, Chi; Yvonne Hannet; (NA); Lakeya Johnson, Donny Clay, Lawrence Campbell. Hubble Middle, Wheaton; Bruce Munsson; (NA); Martin Skup, Brendon Kirby, Adam Jacobs. LaSalle Language Academy, Chi; Joseph Rodriquez; Jeffrey Price-Jeffrey Price & Assoc; Matthew Litke,Michael Narea, Andrew Price.

UIC The University of Illinois at Chicago

The University of Illinois at Chicago offers the Off-Campus Program to working engineers seeking an advanced degree through evening study, people with an undergraduate or graduate degree in a discipline compatible with engineering who desire training in engineering, and professionals who want to improve their skills by enrolling in classes as a nondegree student.

One important restriction of the **Off-Campus Program** is that *all* post master of science courses must be live taught. No credit toward the PhD will be given for video courses taken after the MS degree has been earned, and registration in residence for all dissertation research work plus one regular course is required.

Fall 1994 applications and credentials for degree admission must be complete **by June 17**. The following graduate-level course are scheduled to be offered fall semester 1994:

Fall 1994: August 22 - December 9, 1994

ME 429	Internal Combustion Engines	EECS 480	Database Systems
ME 494	An Introduction to Finite Element Methods	EECS 516	Optimal and Adaptive Digital Filters
ME 528	Numerical Heat Transfer	EECS 534	Principles and Practice of Communication
EECS 410	Network Analysis	EECS 571	Software Engineering Environments
EECS 450	Automatic Control I	EECS 588	Computer Graphics II
EECS 476	Programming Language Design	CEMM 404	Bridge Design

Contact the Off-Campus Engineering Programs Office at (312) 996-2311 for complete details.

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IEEE Sweatshirt

These comfy sweatshirts are made of NuBlend™, the first virtually pill-free poly-cotton mix with a full cut for ultimate comfort and fit, and superior color fastness. Your choice of two colors (royal blue with gray IEEE logo and gray with navy logo).

Suggested retail: \$21.95
Blue Large: TT0135-4-PPY
Blue X-Large: TT0136-2-PPY
Gray Large: TT0137-0-PPY
Gray X-Large: TT0138-8-PPY
IEEE Member Price: \$17.95
(\$14.00 on minimum order of 12)



IEEE T-Shirt

This great-looking IEEE-T is available in two attractive colors in 100% combed cotton: navy with gold IEEE logo and gray with navy logo.

Suggested retail: \$15.00
Navy Large: TT0131-3-PPY
Navy X-Large: TT0130-5-PPY
Gray Large: TT0133-9-PPY
Gray X-Large: TT0134-7-PPY
IEEE Member Price: \$12.00
(\$8.00 on minimum order of 12)



IEEE Carry-On Totebag

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JOINT MEETING OF THE ELECTRON DEVICES
SOCIETY, THE NORTHWEST SUBSECTION AND LEOS SOCIETY

Thursday, May 12, 1994

"OPTICAL FIBER AMPLIFIERS and the INFORMATION SUPERHIGHWAY"

by Dr. Richard Smart

Amoco Technology Company

Optical fiber amplifiers have gone from being a laboratory curiosity to become a key enabling technology for the proposed "information superhighway" in a little over five years. This talk will describe the basic science behind fiber amplifiers, and then give examples of how these devices are revolutionizing telecommunications by allowing, for example, higher speed transmission systems to operate over longer distances at less cost than any comparable technology.

Richard Smart received the B. Sc degree in physics from the University of Birmingham, England in 1987 and the Ph.D. degree in physics in 1990 from the University of Southampton, England. In 1991 he joined AT&T Bell Laboratories in Holmdel, New Jersey where he carried out the development of erbium-doped fiber amplifiers. In 1993 he moved to the Amoco Technology Company, Naperville, Illinois where he is currently working on the development of high power fiber amplifiers and lasers.

Meeting Location: The Motorola Center, Algonquin Rd (Route 62), Schaumburg, IL

Time: 7:00 p.m. (Coffee and rolls will be available)

Register by calling the IEEE Office by May 10, 1-800-898-4333, Reservations are required

Your attendance will be confirmed.

See a recent issue of SCANFAX for MOTOROLA map.

The Chicago Section Welcomes New Members

We welcome these new members and encourage each to participate in our Section's activities.

Florence Appel
Steven Davies
David Hasegawa
Andrew McCartney
Glenn Sogge

Lois Biciste
Jill Devine
Chris Hillman
T C Munks
Michael Sosnoski

C J Boebel
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7:00 PM — DINNER, FOLLOWED BY PROGRAM
TICKETS: DONATION — \$30.00 PER PERSON

PRESENTATION OF AWARDS BY THE CHICAGO SECTION

1994 IEEE Fellow Awards

Dr. John R. Cooper	Consultant
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Dr. Theodore S. Rzeszewski	Matsushita TV Company

1994 Student Awards

(Names to be announced)

1994 Student Advisor Awards

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