

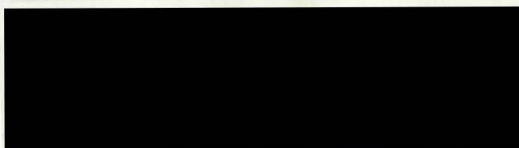


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Official Publication of the Chicago Section • Institute of Electrical & Electronics Engineers • MAY 1994



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

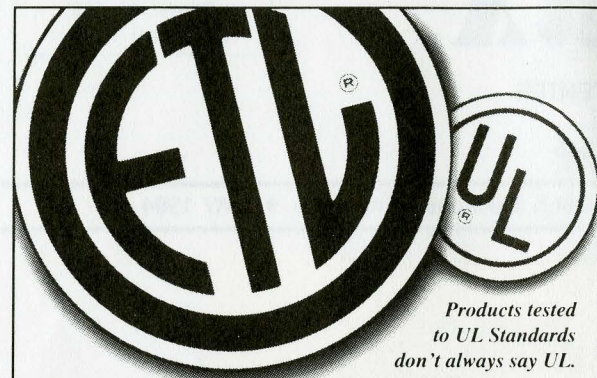
May 10 Tuesday	Chicago Section	Executive Committee	DeVry-DuPage 1221 N. Swift Rd. Addison, IL	Food Service: optional Meeting: 7:15 PM
May 11 Wednesday	Computer/Engineering Management & Professional Communications Society	PC Shareware	Wilton Manor 2200 N. Main St. Wheaton, IL	Social: 6:00 PM Dinner: 6:30 PM
May 11 Wednesday	Power Engineering Society	Recent Environmental Qualification (EQ) Issues	Chicago Bar Association 321 S. Plymouth Court Chicago, IL	Social: 11:30 AM Lunch: 12:00 noon Meeting: 12:30 PM
May 12 Thursday	Electron Devices Society/ Northwest Subsection/ LEOS	Optical Fiber Amplifiers and the Information Superhighway	Motorola Center 1301 Algonquin Rd. Schaumburg, IL	Food Service: optional Meeting: 7:00 PM
May 18 Wednesday	EMC Society	Properties of Metals Used for RF Shielding	AT&T Bell Labs 2000 N. Naperville Rd. Naperville, IL	Social: 7:15 PM Meeting: 7:30 PM
May 25 Wednesday	Fox Valley Subsection/ ASQC	Quality Improvements in Electronic Manufacturing: Case Study	Jerry Sharko's 2225 Ogden Ave. Lisle, IL	Social: 6:00 PM Dinner: 7:00 PM Meeting: 8:00 PM
June 8 Wednesday	Power Electronics/ IA/IE Chapters	A New Switched Reluctance Starter/ Generator	Motorola Center 1301 Algonquin Rd. Schaumburg, IL	Social: 6:00 PM Dinner: optional Meeting: 7:00 PM
June 14 Tuesday	Chicago Section	Executive Committee	DeVry-DuPage 1221 N. Swift Rd. Addison, IL	Food Service: optional Meeting: 7:15 PM

The Chicago Section Welcomes New Members

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

New Members		New Student Members	
William Holt	Sheausong Yang	Cole Morgan	Giuseppe Papavero
Gregory Skrobisz	Mark Woodford	Seongsin Kim	Peter Nielsen
J. E. Davidow	Robert Pulse	Aslam Sahid	Dolma Bhaskaran
Alan Blair	Richard Seeder	Anthony Docimo	James Beaucaire
Michael Boehle	Wesley Nuppenau	Ben Yu-Min Young	Mark Shay
Paul Simunek	Scott Steele	Michael Kane	Juris Shibayama
Glen Rogalla	Herbert Berg	Kevin Brady	Chris Dardo
P.E. Pidcoe		Ashan Sahid	

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The International Conference on Advanced Science and Technology — A Success

The 10th annual International Conference on Advanced Science and Technology (ICAST) broke previous attendance records, provided technical material in the best of IEEE traditions, and showed us how to organize and produce a very worthwhile conference using mostly local talent.

If you missed ICAST on Saturday, March 26, watch for it next year. You may send a note to CAPAMA P.O. Box 1725 Oak Brook, IL 60522, and ask for announcements of future conferences, or call the IEEE office. Although copies of the proceedings are gone and a new printing may not be forthcoming, you may obtain a copy of the program from the IEEE Chicago office.

More than 400 people attended the full day session, 25 peer-reviewed papers on the theme: Entering the 21st Century - Multimedia Information Systems.

- Best paper of a member was awarded to Douglas Riecken, AT&T Bell Labs; Intelligent Agents Applied to the Design of Multimedia User Interfaces.
- Best paper by a student was awarded to Wu-Chun Feng, UI Urbana-Champaign; Using Handwriting & Gesture Recognition to Correct Speech-Recognition Errors.

Dr. John S. Mayo, President AT&T Bell Labs, and Dr. Shih-Chien Yang, Senior Vice Minister, Ministry of Economics Affairs, Taiwan, ROC provided the keynote addresses. Prof. Thomas A. DeFanti, UIC was the featured afternoon speaker.

- Dr. Mayo's address was: "The Revolutionary Thrust of Networked Multimedia Communications".
- Dr. Yang's address was: "Industrial and Technological Development of the ROC on Taiwan".
- Prof. DeFanti's address was: "Scientific Visualization and Virtual Reality Research".

We commend Dr. Morimi Iwami, VP & former Chief Technical Officer for Switching Systems, AT&T Bell Labs, Naperville, and the AT&T Indian Hill facility staff for their gracious hospitality. Credits and rewards for the delighted conference planners came with the almost overwhelming attendance. Scanfax June issue will profile the planning committee.

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SCANFAX DEADLINE

ISSUE	COPY DUE	MAILED ON
JUNE	APR 28	MAY 15

THESE ARE FIRM DEADLINES FOR ADS AND COPY!!!

IEEE Chicago Centennial, Addendum to Centennial Book

Thank you all for the numerous thank-you notes for our Centennial book. The Section wants to include the many anecdotes and remembrances from those who were not able to submit materials for the original publication, in an update to be published as a special Scanfax issue or as an additional book of comments. For contributions of any kind, photos, ramblings, comments, please mail them to our Section Office. Do not send items of irreplaceable or personal value. For these kinds of items, tell us what you have and we will have someone contact you. We can photo copy printed materials and photograph your artifacts.

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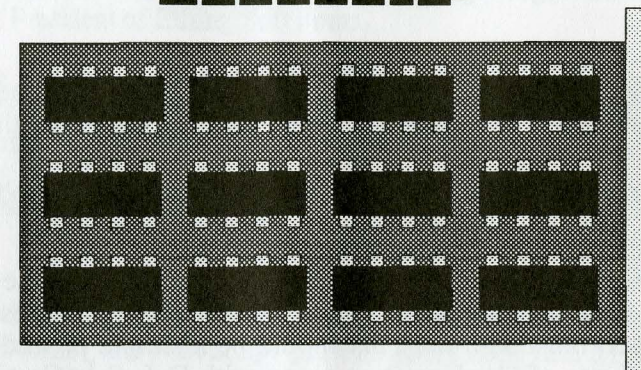


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Quality Improvements in Electronic Manufacturing: Case Study

Presented by Praveen Gupta of Quality Technology Company

Wednesday, May 25, 1994

Praveen presents what successful companies have done to implement the Total Quality Management (TQM) process. He shares his experience of implementing quality systems in various companies. He'll briefly discuss how to implement a TQM process that will meet ISO 9000 certification requirements. Finally, Praveen will also share with us the results of recent quality improvements activities of several Chicagoland area companies.

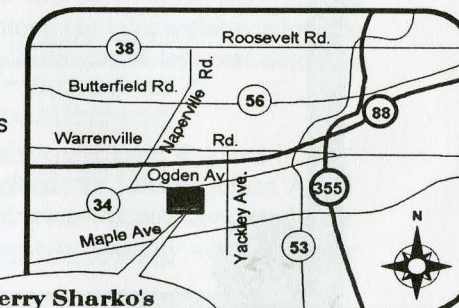
Praveen holds a MSEE from IIT and is both a Licensed Professional Engineer (PE) in Illinois and a Certified Quality Engineer (CQE). As a TQM/ISO 9000 consultant, he has helped companies throughout the ISO 9000 certification process. Praveen has taught TQM/ISO 9000 seminars in the U.S. and abroad. Praveen has implemented TQM/ISO 9000 compliant quality systems mainly in the electronics industry.

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(800) 898-IEEE**

6:00 PM	Social Hour
7:00 PM	Dinner / \$15.00*
	Stir Fry Chicken Entree with Ceasar Salad, 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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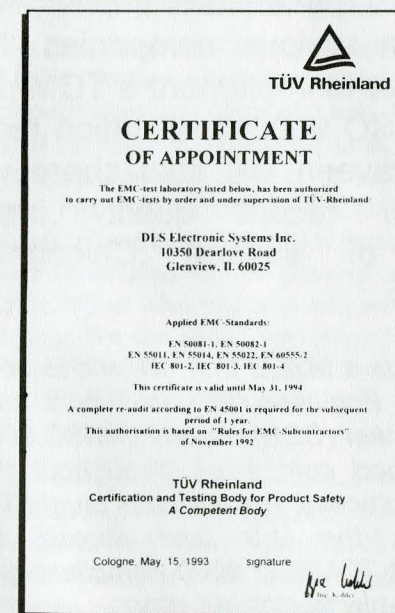
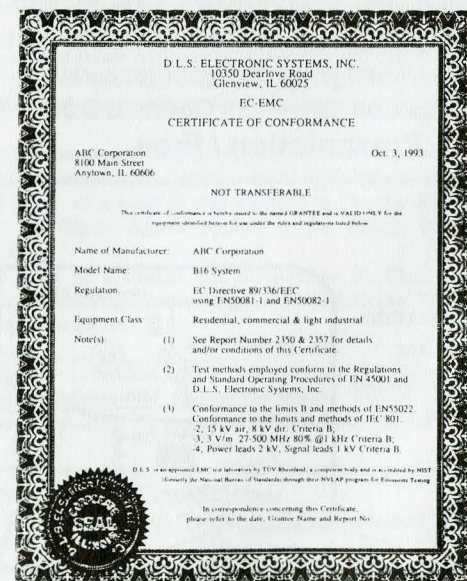
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5. D.L.S. will also issue a Certificate of Conformance which lists the requirements you have met.
6. Manufacturer and importer (legal representative in Europe) must issue a Declaration of Conformity and each must sign it. This should be a simple procedure since you can show the importer the Certificate of Conformance along with D.L.S.'s Certificate of Appointment. (Note: if multiple importers are being used, it is recommended they each have a Declaration of Conformity on file.)
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The Engineering Professional and the Computer Society Chapters of IEEE Chicago invite you and your friends

DATE: Wednesday, May 11, 1994
PLACE: Wilton Manor, Main Street & Geneva Road, Wheaton, IL
TIME: 6:00 PM - Social Hour (Cash Bar)
6:30 PM - Full Course Dinner (\$14.00 per person) - Reservations required by 5/6/94 to IEEE Office
7:30 PM - Presentation: IBM PC SHAREWARE - **GRATIS**
•• (meeting reservations at IEEE Office are strongly suggested to ensure adequate seating) ••
SPEAKER: Mr. Gary Elfiring, President of Elfiring Soft Fonts

During this return visit, Mr. Elfiring will discuss the role of Shareware and their suppliers, and "Freeware", as well as the sources for getting these products (e.g., BBS systems, vendors, user groups, etc). He will then offer us the chance to copy a series of selected shareware program onto pre-formatted diskettes supplied by our audience.

As before, please bring your PC and Laptops to minimize our attendees' waiting times for copying diskettes.

About our Speaker:

This talk is brought you by Elfiring Soft Fonts, PO Box 61, Wasco, IL 60183 (708.377.3520), who offer a wide variety of soft fonts for TrueType, LaserJet, DeskJet, and Post Script printers. Gary is the firm's President and the author of several best-selling software packages, of several published books, and of numerous magazine articles.

For more information or detailed travel directions contact Joe Feitler at 708.383.8773.
Please make all required meal reservations and meeting-only reservations with our Office at 800-898-4333.



IEEE ELECTRON DEVICES SOCIETY

Northwest
Subsection

LEOS SOCIETY

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.

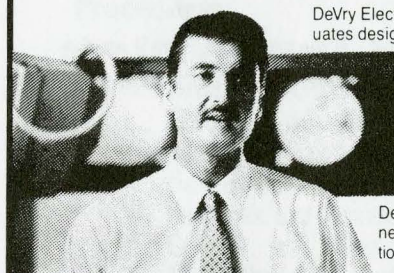
Richard Smart received the B. Sc degree in physics from the University of Birmingham, England in 1987 and the Ph.D. degree in physics in 1990 from the University of Southampton, England. In 1991 he joined AT&T Bell Laboratories in Holmdel, New Jersey where he carried out the development of erbium-doped 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.

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IEEE MEETING NOTICE

CHICAGO CHAPTER - IEEE EMC SOCIETY

DATE: WEDNESDAY - MAY 18, 1994
Refreshments 7:15 P.M.
Meeting 7:30 P.M.

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

SPEAKER: JOE WEIBLER
LINDGREN RF ENCLOSURES

TOPIC: PROPERTIES OF METALS USED FOR RF SHIELDING

This recently published paper deals with the fundamentals of material selection for RF shielding applications. This talk is directly applications oriented.

FOR RESERVATIONS & DIRECTIONS: CALL IEEE OFFICE 800-898-4333

POWER ENGINEERING SOCIETY



SPEAKER:

Mr. James E. Sundergill
Engineering Supervisor
Bechtel Power Corp.

TOPIC:

Recent Environmental Qualification (EQ) Issues

ABSTRACT:

Mr. Sundergill will discuss several pertinent EQ issues that have recently evolved. Some examples are issues and current topics related to the environmental qualification of electrical equipment and controls/instrumentations for use in harsh environments. Mr. Sundergill plans to allow ample time for discussion and questions.

BACKGROUND:

Mr. Sundergill has a BSEE from the University of Maryland and an MS Management from Frostberg (MD) State University. Mr. Sundergill has been with Bechtel for over 24 years. He has worked on and supervised many phases of the electrical design of nuclear power plants with concentrations in equipment qualification and fire protection. Mr. Sundergill is a registered Professional Engineer in four states and has achieved Member grade in the Society of Fire Protection Engineers.

PLACE:

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

DATE:

May 11, 1994

TIME:

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

Reservation must be made by noon, Monday, May 9, 1994 by calling 312-236-4333. Please leave name(s) and company name.

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JOINT MEETING

POWER ELECTRONICS and INDUSTRIAL APPLICATIONS/ INDUSTRIAL ELECTRONICS CHAPTERS

A New Switched Reluctance Starter/Generator

Caio A. Ferreira, Principal Engineer
Applied Research, Sundstrand Aerospace

Switched reluctance, variable speed drives offer the advantages of simple machines capable of operating at very high speeds driven from simple converters. A new switched reluctance starter/generator (SR S/G) is being developed for an aircraft engine application. The system consists of a SR machine directly coupled to a gas turbine engine, an inverter/converter unit, and an electronic controller. As a generator the system is rated at 30KW, 270 V DC, **52,000 RPM** maximum operating speed. The system also provides 17 HP peak power to start the engine. The system is designed to meet unique requirements such as power quality per MIL-STD-740E, 30% (9KW) step loads, and -51 to +121 degrees C temperature range. The presentation discusses the design and analysis of the system, the test results, and some of the lessons learned during testing. Photographs of the hardware will also be presented.

Mr. Ferreira is a senior member of the IEEE and has a BSEE from the University of Missouri-Columbia and a MS in Systems Engineering from Case Western Reserve. His industrial experience includes work at both General Electric and Sundstrand and encompasses a wide range of solid state power conversion systems, motor drives, electrical generating systems, and magnetic bearings. He holds two patents and has presented technical papers at IAS, APEC, and SAE conferences. Mr. Ferreira is Section Chairman of the IEEE Rock River Valley Section and is also chairman of the IAS Chapter which received the IEEE/IAS Outstanding Small Chapter Award for 1993.

Meeting Information June 8th -- Motorola Schaumburg Campus, corner of Algonquin and Meacham roads (directions below) -- Social hour (coffee and donuts) 6:00 to 7:00 PM -- Meeting 7:00 - 8:00 PM -- Dinner may be purchased at low cost in the cafeteria starting at 5:30 PM if desired. -- Please register by calling the IEEE Message Center by noon, June 6th -- 1- (800) 898-4333. -- Call George Studtmann with any questions - (708) 392-7189.

Directions Use westmost gate labelled "A GATE, VISITORS" on Algonquin road. Push button at entry gate and tell guard "IEEE meeting in building 1301". Park in first lot on your left and enter door 13 (under MOTOROLA sign) of the 6 story building adjacent to parking lot. A guide will be at the reception desk in the lobby.