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

June 6 Monday	Antennas and Propagation/ Microwave Theory and Techniques Society	A Practical Guide to Microstrip Antenna Design	Chinese Garden 754 E. Schaumburg Rd. Schaumburg, IL	Social: 5:30 PM Dinner: 6:30 PM Meeting: 7:30 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
July 12 Tuesday	Chicago Section	Executive Committee Induction of New Officers	Jerry Sharko's 2225 Ogden Ave. Lisle, IL	Social: 6:00 PM Dinner: 7:00 PM Meeting: 8:00 PM

The Chicago Section Welcomes New Members

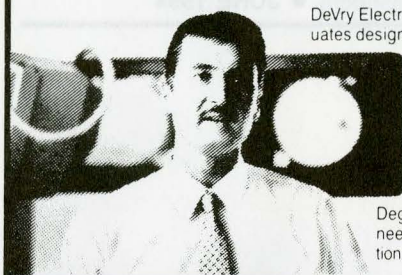
We welcome these new members and encourage each to participate in our Section's activities

Edward Barsotti	Antonio Divenere	Peggy Matson	William Shaw
Itzhak Baruch	J Philip Draughon	Timothy Mauer	Gregory Stebbins
Brye Bonner	Susan Feinberg	Michael McDonald	Steven Tan
Meredith Brooks	Scott Finkle	S Nukala	Tom Thomas
Douglas Ceckowski	Jim Gary	Vladimir Peskov	Tim Tibbals
John Chaput	Gene Gryziecki	Antonio Ransom	Nathan Van Le
Jeff Chen	Viqar Haseeb	Himanshu Sahu	Marcial Villaverde
Michael Coday	Thomas Horgan	Eric Schudy	James Vogel
David Crim	John Janssen	Guido Schuster	Gary Weber
Michael Debellis	Greg Johnson	David Seaton	Sergio Zimmerman
Ramesh Dhingra	William Kirchoff		

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Kevin Hippensteel, GE Medical Systems, 1985 DeVry Graduate



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CONTACT: **Myra Starks**

Associate Director of Career Services Center
3300 N. Campbell Ave. • Chicago, IL 60618

(312) **929-7837**

DuPAGE CAMPUS

CONTACT: **John Petrik**

Dean of Graduate Placement & Student Affairs
1221 N. Swift Road • Addison, IL 60101

(708) **953-1300**

1993 DeVry, Inc.

IEEE LOCAL

ELECTRONIC BULLETIN BOARD

Effective immediately, a local Bulletin Board will carry IEEE local meeting and conferences notices, and news items considered to be of interest to our members.

To access the BB, dial (708) 739-9355.

Log-on using your full name.

This is a read-only service.

There will be no software swaps or personal items.

Meeting notices and news items to be published must be sent via e-mail and are placed at the discretion of the three steering committee sponsors,

j.carroll@ieee.org, t.jurgens@ieee.org,
j.sherman@ieee.org.

You may fax text to Jack Sherman at (708) 576-8221.

The addressees have Internet access via IEEE.

Your local IEEE student branch may be an access possibility.

SCANFAX, (Publication) number (ISSN 0018-1297), June, 1994 Volume 46, Number 10, SCANFAX is published monthly, except July and August by the Chicago Section Institute of Electrical and Electronics Engineers for the information of its members. Business Office is at IEEE Message Center— 2460 Wisconsin Ave., Downers Grove, IL 60515 1-800-898-4333 and Fax (708) 963-2122. Subscription rate for IEEE members collected in dues. \$1.50. Third class postage paid at Glen Ellyn, Illinois.

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

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Change of Address

Send change of address to Roseann Schulz, Member Services, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854-4150. Include your SCANFAX mailing label if possible or phone direct to: 1-800-678-4333. We cannot forward this information for you, so please do not send it to the local office.

From the Editor's Desk:		
FOR YOUR ARTICLE TO APPEAR IN THE SCANFAX ISSUE FOR —	YOU MUST SUBMIT IT BY —	
1994	SEPTEMBER	JULY 29
	OCTOBER	AUGUST 25
	NOVEMBER	SEPTEMBER 29
	DECEMBER	OCTOBER 27
1995	JANUARY	NOVEMBER 22
	FEBRUARY	DECEMBER 15
	MARCH	JANUARY 26
	APRIL	FEBRUARY 23
	MAY	MARCH 30
	JUNE	APRIL 27
Please submit all articles for the September Issue to:		
Martin Lake		
AT&T		
Dept. NA6012400		
2600 Warrenville Rd.		
Lisle, IL 60532		
Voice (708) 224-6626		
FAX (708) 224-3405		
Email mel@ihlpm.att.com		

ANNOUNCEMENT AND CALL for PAPERS



IEEE

45th IEEE Vehicular Technology Conference

"Count-down to the Wireless 21st Century"

Hyatt Regency Chicago O'Hare
Rosemont, Illinois, USA

July 26 - 28, 1995

Cellular radiotelephone systems worldwide have provided a rapidly growing and useful service for over a decade and are continuing to evolve with a greater variety of service offerings, digital implementations and capacity potentials. Personal Communication Systems are being introduced that offer ubiquitous communication capabilities. Wireless LAN's and MAN's portend the future of fully-interconnected portable computing and information services. Fired by the allocation of new spectrum for these services in the U.S, the count-down to the wireless 21st Century has begun.

VTC '95 is the place and the time to examine the plans for the future and the progress that has already been made along the various paths that will lead to the future we are building.

VTC '95 is sponsored by:

- IEEE Vehicular Technology Society
- IEEE Chicago Section

The program will consist of 30 sessions, with 6 sessions running concurrently, covering the two-and-a-half days of the conference.

The location of the conference is convenient to the O'Hare airport serving Chicago, Illinois and offers ready access to the central downtown area of the city of Chicago with its shopping, lakefront parks and museums, and sporting events as attractions. July offers weather that will make partaking in these offerings truly attractive. Plan on attending and participating as an author now.

Papers are invited over the full range of the areas of interest to the Vehicular Technology Society; wireless communications, automotive electronics and rail transport. Examples of such areas are:

- Digital Radio and Cellular Technology
- PCS Trial Implementations and Experience

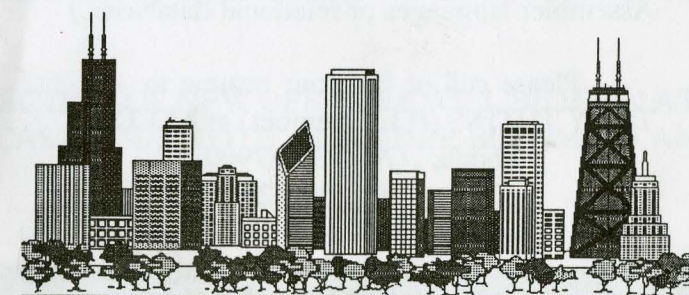
- Wireless Data Services and Systems
- PDA's and Communication Applications
- Receiver and Transmitter Technology
- Mobile Satellite Systems
- In-building Wireless Systems and Technology
- Modulation, Coding and Multiple Access
- RF Propagation and Antenna Technology
- Intelligent Vehicle Highway Systems
- Automotive Electronics

Abstracts and full papers should be submitted according to the schedule shown below:

Abstracts: October 1, 1994
Full papers: November 1, 1994
Acceptance Mailed: December 15, 1994
Camera-ready copy: March 15, 1995

Submissions or Further Information:

VTC-'95 Technical Program Committee
Chairman: Dr. James J. Mikulski
Motorola, Inc.
1301 E. Algonquin Rd.
Schaumburg, IL 60196 USA
e-mail: vtc95@ukraine.corp.mot.com



Announcing

The Newly Elected Chicago Section Executive Committee for the 1994 - 1995 Term of Office Beginning July 12, 1994

Chair	Ed Capouch
Vice-Chair	Jack Sherman
Treasurer	Tom Jurgens
Secretary	Jim Carroll
Publications	Martin Lake
Professional Services	John Waters
Program	Don Harris
Student Activities	Betty Bajana
Finance	Tom Jurgens
Special Events	Frank Lakowski
Awards	Carl Kannewurf
SGAC	Norbert Orszula
Member Services	to be announced
Conferences	to be announced

Current openings available for full time or contract: Electrical Engineers, Mechanical Engineers, Engineering Management, Hardware or Software Engineers (C, C++, OOP, UNIX, WINDOWS, Motorola or Intel Assembler languages or relational databases.)

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TONY TUTINS (IEEE member) at ACCORD
Phone: (708) 345-7900
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Blue Large: TT0135-4-PPY
Gray Large: TT0137-0-PPY

NEW!



Blue X-Large: TT0136-2-PPY
Gray X-Large: TT0138-8-PPY



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 IEEE 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

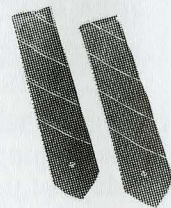
IEEE Carry-On Totebag

Ingenious and practical, our durable nylon totebag folds small and carries big, a roomy 22 x 17 x 7 inches! Adjustable, removable shoulder strap makes it a great carry-on. Navy blue with white logo. Suggested retail: \$34.95
Tote: TT0132-2-PPY



IEEE Ties

Your choice of handsome silk ties - blue or burgundy with contrasting stripes - and a single IEEE logo at the bottom center. Suggested retail: \$29.95
Blue Tie: MH0071-1-PPY
Burgundy Tie: MH0070-3-PPY



IEEE Women's Scarf

Available in either blue or burgundy, each scarf is handsomely patterned with miniature logos in ivory against the background color. Suggested retail: \$29.95
Blue Scarf: MH0073-7-PPY
Burgundy Scarf: MH0072-9-PPY



Also available...

IEEE Lapel Pin (or Tie Tac)

There's a different one for each member grade, just \$18.00 (\$3.00 for students). To order, call Customer Service: 1-800-678-IEEE (1-800-678-4333) or 1-908-981-0060.



The Institute of Electrical and Electronics Engineers, Inc.

IEEE JOINT CHAPTER of the ANTENNAS AND PROPAGATION SOCIETY, and MICROWAVE THEORY AND TECHNIQUES SOCIETY

JUNE 1994 MEETING NOTICE

Topics: Election of Officers

A Practical Guide to Microstrip Antenna Design

Date: Monday June 6, 1994

Speaker: Professor David M. Pozar - University of Massachusetts

Abstract: Microstrip antennas have been one of the most exciting developments in the antenna field in the last ten to fifteen years. The advantages of microstrip antennas has led to a substantial amount of work in this area by researchers around the world. A review of the current state of microstrip antenna design will be given through a discussion of various topics such as material considerations, feeding techniques, and cost concerns. Numerous practical examples and antenna design case studies will be given.

Professor Pozar is Professor of Electrical and Computer Engineering at the University of Massachusetts. He received the BSEE degree in 1975 and the MSEE degree in 1976, from the University of Akron, and the Phd degree in 1980 from Ohio State University. Professor Pozar is a fellow of the IEEE, belonging to the Antennas and Propagation Society and the Microwave Theory and Techniques Society. He has published over 100 papers on printed antennas and phased arrays.

Place: Chinese Garden Restaurant
754 E. Schaumburg Rd.
Schaumburg, Il.

Time: Social 5:30 PM
Dinner 6:30 PM
Meeting 7:30 PM

Exit I53 at Beisterfield Road. Travel west to Meacham Road. Turn North to Schaumburg Road and then east to Plum Grove Road. The Chinese Garden is at the corner of Schaumburg and Plum Grove Roads.

Call the IEEE Message Center at 1-800-898-4333 by noon Thursday June, 2 1994 to make your reservations. The dinner is optional. Dinner selections will be available from the full menu and billed individually.

--- IMPORTANT! THE NOMINATION AND ELECTION OF NEW OFFICERS WILL BE HELD AT THIS MEETING. BE SURE TO ATTEND AND CAST YOUR VOTE. CONSIDER BECOMING AN OFFICER.

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.

Name _____ (please print) 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

IEEE CHICAGO SECTION – SCANFAX PLACEMENT SERVICE

The Chicago Section provides a free placement service for its *unemployed* members of Member Grade or above. If you want additional information about the applicants listed below, contact our section's business office.

(If marked "confidential", our office will inform this applicant about the prospective employer's inquiry).

No.	Description
-----	-------------

321 Licensed Professional Engineer – 13 yrs Experience Industrial and Commercial Facilities - Power, Control, and Lighting.
322 BSEE – Seeks Entry Level Position in Communications. Recent Graduate from Marquette University.
323 MBA – Seeks Employment, Financial Modeling, Quantitative Analysis, Decision Support Systems.
324 BSEE,MA – 15 yrs ATE Systems Design, Strong Tech., Systems, MGT, Seeks SR TECH/PE SYS Engr.
325 Electrical Engineer – 5 yrs Engr/Const Experience. Power Controls. Seeks Position in Power, Manf., or Utility.
326 BSEET – 4 yrs Power Plant Experience. CAD & PLC Knowledge. Looking for Entry-Level Design Position.
327 BS Elect/Mech, MBA Project Engr. – 18 yrs Expr. in Elect. RF & Microwave, Telecomm, PWR Distr, HW/SW Dev & Proj Mgt.

IEEE-USA Announces New Job Referral Service

In conjunction with one of the nation's premier employment data base companies, IEEE United States Activities (IEEE-USA) is introducing a new, inexpensive job referral service for members and their families. JOB BANK USA's Career Advancement Service combines a state-of-the-art computerized data base with a large, national client base of employers.

To join, members submit a one-page enrollment form and up to two current resumes, creating a personalized electronic career record. When JOB BANK USA receives employment openings, its computer identifies qualified applicants; then the Service telephones to inform them of the available position. If applicants are interested in the opening, their resumes are forwarded directly to the employer.

The Career Advancement Service includes maintenance of the personalized career record for one year, a newsletter, a toll-free telephone number for updates and changes to the record, and unlimited referrals to JOB BANK USA clients. For more information and costs, call (800) 296-1872 and indicate IEEE affiliation.

SGAC Report Available

If you would like a copy of the latest State Governor's Activities Center (SGAC) Report, please call the IEEE Chicago Section Office at 1-800-898-4333 and ask for the *Legislative Report Package*. Be sure to leave your name and full address with the office to guarantee you receive a copy. — Norbert R. Orszula, SGAC Chairman

Electron Devices Society—Request for Program Topics

The Executive Council of the Electron Devices Society for the Chicago Chapter will hold its annual meeting in June. If anyone would like to contribute suggestions for program topics or attend the meeting, please call the Council Chairman, C. R. Kannewurf at (708) 491-8163 or Secretary/Treasurer Norm Phoenix at (312) 829-2525 (Ext. 8525).

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.

IMPORTANT FCC LEGAL NOTICE

If your company sells or plans on selling any product with an FCC label you should read the following!
1989 Grandfathering expires soon (June 94)!

June 1989, FCC changed Part 15. Several changes were made to the law and label information.

1. Computer products are now Part 15 Subpart B (not J). "J" should no longer be on your labels. The wording has also changed (see 15.19 or ask Maxine to fax a sample label).
2. Testing effecting computer product. If you product has the highest frequency generated of 108 MHz or higher and your product was tested before June 1989 or if tested improperly since 1989, you must retest to 2 - 5 GHz or the 5th harmonic, whichever is higher.
3. If your computer product was "certified" under the old rules of Subpart J, you must notify the commission to update your file or your certification will be dropped as of June 1994.
4. If your transmitter was certified under old rules of Part 15 Subpart D & E, you must retest to the more stringent limits before June 1994.
5. If your receiver was tested to old rules, you have until June 1999 before you must test to the more stringent rules.

If you have questions concerning these changes or simply need us to fax the new label format to you, be sure to give us a call at 708-699-9060. Ask Maxine to fax the label to you or talk to Arnie or Paul about any questions you might have.

If you sell a computer product in Canada, you should be aware that Canada's regulations are the same as the FCC except for the labeling. The label is changing and we recommend you update your Canada label now (or add it to your product if you want to market in Canada today). Call and we will fax the label to you.



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UPCOMING IEEE SPONSORED, COSPONSORED AND TOPICAL CONFERENCES TAKING PLACE IN CHICAGO AREA

June 21-23

**1994 IEEE International Conference
on Consumer Electronics (ICCE)**

Westin Hotel O'Hare

Rosemont, IL

INFORMATION:

Ms. Diane D. Williams

67 Raspberry Patch Dr.

Rochester, NY 14612-2868

(716) 392-3862

(716) 392-4397 (FAX)

IEEE SPONSORS: CE

Aug. 22-26

**1994 IEEE International Symposium
on Electromagnetic Compatibility**

Palmer House Hotel

Chicago, IL

INFORMATION:

Mr. H. R. Hofmann

1210 Lawn Meadow Lane

Naperville, IL 60540

(708) 979-3627

(708) 979-5755 (FAX)

IEEE SPONSORS: EMC, Chicago Section

Sept. 25-28

**1994 Visual Communications and
Image Processing Conference**

Bismark Hotel

Chicago, IL

INFORMATION:

SPIE

P.O. Box 10

Bellingham, WA 98227-0010

(206) 676-3290

(206) 647-1445 (FAX)

IEEE SPONSORS: CAS

OTHER SPONSORS: EURASIP SPIE

Oct. 17-19

**1994 IEEE Holm Conference on
Electrical Contacts**

Holiday Inn, Chicago City Centre

Chicago, IL

INFORMATION:

Holm Conference Registrar

IEEE Technical Activities

P.O. Box 1331

Piscataway, NJ 08855-1331

(908) 562-3895

(908) 562-1571 (FAX)

IEEE SPONSORS: CPMT

CONGRATULATIONS

to the Student award recipients at the
1994 Recognition Awards Dinner

You certainly deserved it!!

The winners:

	ADVISOR	IEEE Chicago Section Student Awards for: LEADERSHIP	SCHOLARSHIP
DeVry-Chicago	Syed N. Akhter	Edward C. Whiteside	Natalie R. Sotelo
DeVry-Dupage	Warren R. Foxwell	Maria J. Babiarz	Elizabeth A. Jennings
IIT	David B. Patterson	Jeffrey E. Majka	Richard Lam
U of I at Chicago	Roland Priemer	Kevin J. Owens	Gregory MiTrenka
Northwestern	Alan V. Sahakian	Ellen K. Fong	Elizabeth W. Cheng

On behalf of IEEE Chicago Section, we congratulate you on your accomplishment!!

We hope you will continue your active membership in the IEEE. Not only are you informed of the latest technology, but you also achieve personal satisfaction as serving an IEEE officer, member and advisor.

To those of you who are graduating, we wish you the best of luck with your new careers.

A special thanks goes out to all the officers, members and advisors of the student branches for their efforts and supports. Let next year be even more of a challenging year for all the student branches!

Any comments, suggestions, requests; please contact
Betty Bajana, IEEE Chicago Section Student Activities Chair, at (312) 394-3766.

Second Wireless/PCS Symposium of the IEEE Communications Society (Chicago Chapter)

The Chicago Chapter of the IEEE Communications Society in co-operation with the Chinese Academic and Professional Association in Mid-America will host its second Wireless/PCS Symposium in October 1994. This Symposium will provide an update of wireless technology as presented by industry leaders.

Topics will include:

- Keynote presentation: **The Personal Communications Revolution** by Ira Brodsky
- PCS Services Issues - Service Provider Point of View
- PCS Standards and Regulatory Activities
- Technologies for PCS (AIN, Air Interfaces, Systems)
- Wireless Data Applications and Technologies
- Personal Communications Via Satellites

Information on registration will be included in the September issue of Scanfax.

FURTHER INQUIRIES: For further information, contact Janusz Hyziak at (708)576-8426 (Phone) or (708)576-0892(FAX).

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Please contact Ed Barrett at (708) 773-4864 to place your advertisement in Scanfax.



**Can YOU
help us find
the missing
pieces?**

Fox Valley Subsection needs your help in completing a library of all the Fox Valley meeting announcements published in SCANFAX. Since its first meeting, November 1960, Fox Valley has held approximately 250 meetings. Channing Brown has spent many long hours rummaging through boxes of Fox Valley records to find and sort past meeting announcements. If you have any announcements for the months shown below, please mail them to:

Channing Brown
919 Dearborn Circle
Carol Stream, IL 60188
(708) 260-9631

Your help will be recognized in the future. Thank you.

1960 Nov
1961 Mar Apr Sept
1962 Sept Oct Nov Dec
1963 Feb Mar Apr May Sept Oct Nov Dec
1964 Feb Apr May Sept Oct Nov Dec
1966 Sept Oct Nov
1967 Mar Apr
1968 May

1969 Feb Mar Apr Dec
1970 Feb Apr Dec
1971 Apr Sept Oct Nov
1972 Feb
1976 Oct Dec
1977 Feb Mar Apr May
1978 May Sept
1979 Nov

1980 Mar
1981 May
1983 Feb Sept Oct Nov
1984 May Sept Oct May Feb Sept
1985 Feb Sept
1991 May Sept
1992 Feb Mar May Oct

Through the efforts of IEEE-USA's Employment Assistance Committee, IEEE members are eligible for a 10% discount on most Kinko's copying services, such as resume creation and printing. To receive the discount, members must show their IEEE membership card. Telephone (800) 743-COPY for Kinko's locations.

For a **FREE** IEEE Membership Information-Kit use this coupon.

Name _____

Title _____ () _____

Firm _____ Phone _____

Address _____

City _____ State/Country _____ Postal Code _____

Mail To: IEEE MEMBERSHIP DEVELOPMENT
The Institute of Electrical and Electronics Engineers, Inc.
445 Hoes Lane, P.O. Box 1331
Piscataway, N.J. 08855-1331, USA • (908) 562-5524



Membership Distribution of Chicago Section: Chicago (CH), Fox Valley (FV) and Northwest (NW) Subsections as of April 1994																																												
SOCIETY	CH			FW			NW			CH			FV			NW			CH			FV			NW			CH			FV			NW			TOT	FV	NW	TOT	TOT	TOT	W	TOT
	LF	NF	WF	LS	NS	WS	LM	SM	WM	LS	NS	WS	LM	SM	WM	LA	NA	WA	LA	NA	WA	LA	NA	WA	LA	NA	WA	LA	NA	WA	LA	NA	WA	AF	TOT	TOT								
NONE	8	5	1	3	2	0	47	33	39	13	22	26	68	47	62	552	577	636	6	4	5	87	59	87	161	26	56	0	953	784	927	2664	156											
SP-01	1	0	0	1	1	1	3	6	1	6	3	0	3	67	57	107	1	0	0	5	4	7	32	4	5	1	127	74	141	342	24													
BT-02	1	1	0	1	2	0	1	4	0	0	1	0	3	21	10	13	0	0	1	7	3	0	2	0	3	0	38	18	25	81	0													
AP-03	0	0	0	5	0	1	1	2	6	3	1	2	0	1	42	19	40	0	0	0	5	2	2	11	0	7	0	68	25	53	146	4												
CAS-04	1	0	0	4	0	0	1	2	3	2	0	2	2	63	54	85	1	0	1	8	6	6	4	8	10	0	102	73	107	192	14													
NPS-05	0	0	0	0	1	0	1	0	4	2	0	0	1	13	18	10	1	0	0	2	3	0	3	0	0	4	26	27	11	64	2													
VT-06	0	0	0	1	1	2	3	0	3	0	4	5	0	1	28	30	79	0	2	0	1	2	3	7	2	1	1	41	43	95	179	4												
R-07	0	1	0	0	0	0	3	2	3	1	1	1	2	10	15	25	0	0	0	2	1	0	0	0	0	1	14	22	33	398	5													
CE-08	3	0	3	0	2	0	7	1	8	1	1	5	2	3	14	33	22	57	0	0	0	5	6	4	6	1	0	1	59	38	91	108	3											
IM-09	0	0	0	0	0	1	0	2	1	1	2	1	4	20	13	16	0	0	0	3	6	5	4	1	0	0	32	22	30	84	1													
AES-10	0	0	0	1	0	0	0	0	0	0	1	0	0	1	14	5	13	0	0	0	2	1	2	0	3	3	0	23	11	23	0	0												
NNN-11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												
IT-12	1	0	0	1	0	0	0	0	7	0	2	1	0	0	16	13	18	0	0	0	2	1	0	10	1	1	0	38	16	21	75	6												
IE-13	0	0	0	0	0	0	1	2	0	2	3	0	3	33	23	45	0	0	0	2	6	5	2	0	0	0	35	34	57	126	3													
EM-14	2	0	0	0	0	2	0	1	4	3	5	2	3	4	40	65	69	0	0	0	3	9	5	8	1	4	4	64	82	89	235	14												
ED-15	1	0	1	0	0	1	1	0	1	3	3	5	0	2	3	16	10	24	0	0	0	3	1	0	7	0	0	31	16	34	81	4												
C-16	1	2	1	4	3	2	8	5	5	15	14	10	9	5	8	286	350	307	2	0	1	61	40	38	91	19	16	754	800	663	610	2073	162											
MTT-17	0	0	0	4	0	0	2	1	2	5	2	5	3	0	3	33	17	46	0	0	0	5	3	2	6	4	0	59	26	60	145	4												
EMB-18	0	0	1	3	0	1	2	0	5	1	1	1	1	3	64	19	46	0	0	0	4	3	3	22	5	8	4	105	28	66	199	21												
COM-19	1	1	3	3	2	5	2	5	6	22	12	5	5	1	143	233	260	0	1	1	33	30	22	32	5	10	40	241	330	334	905	58												
UFC-20	0	0	1	0	0	0	1	2	0	1	4	1	0	2	5	11	0	0	0	0	0	0	0	1	1	1	0	7	5	19	38	0												
CHM-21	0	0	0	0	0	1	1	0	4	1	3	3	1	0	2	8	17	19	1	0	0	2	1	0	0	2	17	23	34	74	5													
OE-22	0	0	0	2	0	0	0	1	1	0	0	0	1	6	2	2	1	0	0	0	1	0	0	1	1	2	0	7	4	6	17	1												
CS-23	1	0	0	2	1	0	0	0	1	2	1	0	1	53	39	40	1	0	0	5	6	7	19	3	4	0	42	50	54	146	12													
RA-24	0	0	0	1	0	0	1	0	3	2	0	0	0	1	24	14	19	0	0	0	5	5	4	21	5	5	1	55	25	34	114	2												
E-25	0	0	0	2	0	0	0	1	2	1	0	1	0	1	10	3	5	0	0	0	2	0	0	1	0	0	17	4	7	28	6													
PC-26	0	0	0	0	0	1	0	2	1	1	3	1	0	1	11	8	16	1	1	0	3	2	2	3	1	1	6	23	16	27	66	2												
EMC-27	0	0	1	2	0	0	0	5	2	3	4	1	3	4	17	21	19	0	0	0	2	1	4	2	1	1	0	26	30	37	93	6												
SMC-28	0	0	0	1	0	0	3	0	1	3	0	0	0	0	14	3	12	1	0	0	1	2	1	11	0	0	1	35	6	14	55	1												
GRS-29	0	0	1	2	0	0	0	0	0	0	0	0	0	0	5	2	2	0	0	0	0	0	0	1	0	0	1	9	2	6	17	0												
SIT-30	0	0	0	0	1	0	0	1	0	1	0	1	0	1	13	13	14	0	0	0	2	0	0	1	1	0	1	18	16	17	51	4												
PE-31	8	0	3	1	0	1	13	14	14	23	18	25	9	14	8	152	138	114	0	0	0	14	12	6	6	3	1	0	226	200	173	599	18											
DEL-32	0	0	0	0	0	0	0	0	2	0	0	3	0	1	0	1	11	4	5	0	0	0	1	3	4	0	0	15	11	15	41	2												
MAG-33	1	0	0	0	0	0	0	1	3	2	0	0	1	1	0	2	7	6	12	0	0	0	2	2	2	0	0	1	15	9	24	48	0											
IA-34	2	0	0	0	0	0	6	6	6	6	9	15	7	2	6	48	57	68	0	0	0	4	4	4	1	1	0	74	78	100	252	2												
PEL-35	1	0	0	0	0	0	1	0	1	1	1	3	1	0	1	21	23	46	0	0	0	2	2	3	6	1	2	6	33	27	56	116	4											
LEO-36	0	0	1	2	0	0	0	0	6	2	0	1	1	1	0	19	22	19	0	0	0	3	7	3	12	3	2	0	43	39	27	109	7											
SSC-37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												
SUBTOTAL	15	2	5	16	6	6	37	29	41	66	62	67	40	34	50	814	896	978	5	3	3	125	107	97	216	42	50	815	1677	1444	1540	4661												
TOTAL	8	5	1	3	8	6	84	62	80	79	84	93	108	81	112	1366	1473	1614	11	7	8	212	166	184	377	68	106	815	2630	2228	2467	7325	300											
WOMEN	0	0	0	0	0	0	0	0	0	3	3	1	0	0	0	95	79	66	0	0	0	16	13	15	47	8	11	100	206	126	456	456												

Profile of the IEEE Chicago Section by member grade and society.

LF = Life Fellow
LM = Life Member
S = Student
W = Women The

F = Fellow
 M = Member
 AF = Affiliate (not an IEEE member, but a member of a recognized society)
 LS = Life Senior Member
 LA = Life Associate
 SM = Senior Member
 A = Associate Member
 Technical Activities Board has identified a focus "Women In Engineering"

The Totals relate the number of members. Many members belong to several societies. If you wish to meet to discuss attributes or uses of this profile, call 800 898 4333 & cite 'Profile'

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April 30, 1994

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Storm Products
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Motorola

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Cherry Electrical Products
United Chemi-Con, Inc.

Individual

George Thomas
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Illinois Institute of Technology

Northwestern University

DeVry Institute of Technology
(Chicago)

DeVry Institute of Technology
(DuPage)

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Richard Lam

Elizabeth Cheng

Natalie Sotelo

Elizabeth Jennings

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