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TIME SENSITIVE MATERIAL

CALENDAR OF EVENTS

For reservations please call IEEE Office at (708) 963-3828 before the stated deadline
The meeting details are stated in their relevant announcements inside

April 6 Tuesday	Power Engineering Society/ Calumet Section	Power Concerns with Superconducting Magnets	Gino's Steak House E. 163rd and Wallace Harvey, IL.	Social: 6:00PM Dinner: 7:00PM Meeting follows Dinner
April 7 Wednesday	EMC Society	Ground Conditioning	AT&T Bell Laboratories 2000 N. Naperville Rd. Naperville, IL.	Social: 7:15PM Meeting: 7:30PM
April 13 Tuesday	Chicago Section	Executive Committee	Motorola Center 1295 East Algonquin Rd. Schaumburg, IL.	Meeting: 7:15 PM
April 14 Wednesday	Communications Society	Telecommunications and the Information Infrastructure	Sharko's Restaurant 2225 Ogden Ave. Lisle, IL.	Social: 6:00PM Dinner: 7:00PM Meeting: 8:00PM
April 14 Wednesday	Power Electronics Chapter	An Update on Smart Power ICs	Motorola Center 1295 East Algonquin Rd. Schaumburg, IL.	Social: 6:00PM Meeting: 7:00PM
April 20 Tuesday	Fox Valley Subsection/ LEOS	Free-Space Optics for Interconnects in High Speed Processing Systems	Jerry Sharko's 2225 Ogden Ave. Lisle, IL.	Social: 6:00PM Dinner: 7:00PM Meeting: 8:00PM
April 22 Thursday	IEEE Videoconference	POSIT - Impacts of New Standards	Location To Be Determined	Starting: 11:00AM Call (708)576-8222 or (708)963-3828 for Details
April 24 Saturday	Chicago Section	IEEE Recognition Dinner	Avalon Banquets 1905 E. Higgins Rd. Elk Grove Village, IL.	Social: 6:00PM Call for Details (708)505-9100 x277
April 29 Thursday	Antennas & Propagation/ Microwave Theory & Techniques Societies/Northwest Subsection	Progress and Change in Microwave Radio Communications	Motorola Center 1295 E. Algonquin Rd. Schaumburg, IL.	Social: 5:30PM Buffet: 6:00PM Meeting: 7:00PM
May 5 Wednesday	Electron Devices/CHMT Societies/ Northwest Subsection	Next Generation Semiconductor Materials for High Performance Optoelectronic Devices	Motorola Center 1295 E. Algonquin Rd. Schaumburg, IL.	Meeting: 7:00PM

The Society of Women Engineers in cooperation with the Northwest Subsection

April Meeting: Wednesday, April 21, 1993 at 6:30 pm

The Hubble Space Telescope: Probing the Big Bang and the Origins of the Universe

Douglas Duncan, Ph. D., Director of Astronomy at the Adler Planetarium and Associate Professor of Astronomy at the University of Chicago, will present his ongoing involvement with the Hubble Space Telescope Program. He will discuss his responsibility while at Space Telescope Science Institute at Johns Hopkins University for developing one of the instruments of the Hubble Telescope, a three-photomultiplier tube spectrometer. In addition, he will discuss the results of his spectroscopy research using this instrument to measure trace elements present in the oldest stars and the conclusions that can be drawn about the Big Bang and the origins of the universe. His presentation will also include a live demonstration. Finally, Dr. Duncan will describe the current status of the Hubble Telescope program and the continuing efforts to improve its performance.

The meeting will be held at Northrop ESD Corporation, Room 5027, 600 Hicks Road, Rolling Meadows. Cost is a \$5.00 donation to the SWE CRS scholarship fund. Please RSVP to Elizabeth Eckmann at 312-769-1944 x337 by Wednesday, April 14. All are invited.

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taught by Guillermo Atkin from
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Call Faith Kancauski
at 312 567 3400
for registration forms
or more information.

Electrical and Computer
Engineering Department

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

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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.

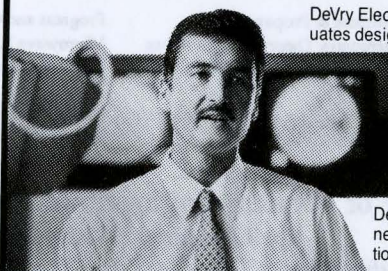
SCANFAX DEADLINES

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

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JOINT MEETING - ANTENNAS AND PROPAGATION and MICROWAVE THEORY AND TECHNIQUES SOCIETIES, AND THE NORTHWEST SUBSECTION

Topic: Progress and Change in Microwave Radio Communications

Date: Thursday April 29, 1993

Speaker: Dr. Ferdo Ivanek - MTT Distinguished Lecturer Communications Research

ABSTRACT: Terrestrial and satellite based radio communications continue to represent the major commercial segment of the microwave market worldwide. The variety of applications is increasing as a consequence of technological progress, and the growing diversification and deregulation of communications services. Vehicular and personal mobile radio services and their derivatives, i.e., wireless PBX, LAN and local loop, represent the next major microwave application area.

The lecture will cover relevant communications trends and standardization progress for sound business and technical decision making. Hardware development trends, with emphasis on MMICs for hand-held terminals, will be presented. Finally, the impact of "consumerization" on the microwave industry and its implications for the MTT-S will be examined.

PLACE: Motorola Center
1295 E. Algonquin Rd.
Schaumburg, IL

TIME: Social 5:30 PM
Dinner 6:00 PM
Meeting 7:00 PM

Use entrance 13 for building 1301. (See map on page 12 for details.)

Cafeteria style dinner is about \$4.00. All attendees for the dinner and/or meeting must make reservations by noon, on Monday April 26, 1993 to conform to Motorola's security guidelines. Call the IEEE message center 708-963-3828 to make your reservation.

FLASH!!! MTT/APS election is approaching. Consider becoming an officer.

IEEE EMC SOCIETY MEETING

DATE: WEDNESDAY - APRIL 7, 1993

TIME: 7:15 p.m. SOCIAL 7:30 p.m. MEETING

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

SPEAKER: NORM MUELLEMAN
POWER INTEGRATION EQUIPMENT ENTERPRISES INC. (PIEE)

TOPIC: GROUND CONDITIONING

The next meeting of the Chicago Area IEEE EMC Society will be held on April 7, 1993 at AT&T Bell Labs at 7:30 p.m.

Those wishing to attend may make their reservations by calling: 708-963-3828. A presentation will be given by Norm Muellemann, President of Power Integration Equipment Enterprises Inc. This presentation describes a new power line conditioner that filters the ground line as well as the hot and neutral line of a 3-wire power feed. PIEE's filtered ground is a ground impedance that breaks up ground loops, attenuates power line ground noise caused by erroneously wired neutral to ground bonds, and blocks surge currents from surge diverters from propagating into electronics' system ground.

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POWER ENGINEERING SOCIETY

JOINT MEETING WITH THE CALUMET SECTION

SPEAKER: Mr Paul C. Czarapata, MSEE
Electronic Engineer
Fermi National Accelerator Laboratory

PLACE: Gino's Steak House
E. 163rd and Wallace
Harvey, Illinois

TOPIC: Power Concerns with Superconducting Magnets

DATE/TIME: April 6, 1993 -- 6:00pm cash bar, 7:00 dinner
(order from menu), Presentation follows dinner

BACKGROUND:

Paul C. Czarapata is currently the Department Head for the Research Division Electronics/Electrical Department. Mr. Czarapata has worked at Fermilab since 1972 and was involved with the quench protection systems for the early superconducting dipoles. Mr. Czarapata received his Bachelor of Science Degree in Physics from Illinois Benedictine College in 1976 and his Master of Science Degree in Electrical Engineering from Illinois Institute of Technology in 1979.

ABSTRACT:

Superconducting magnets have been in use for a decade now at Fermilab. The new magnets that have been jointly developed for the Superconducting Super Collider laboratory in Texas offer a series of new challenges for engineers. Stored energy levels, ramp rates, quench clauses, and quench propagation are but a few. This presentation will examine several of these challenges, the causes and the proposed solutions. Topics involving quench detection and quench protection will be discussed.

RESERVATIONS MUST BE MADE BY FRIDAY 4/02/93, 12:00 PM. RESERVATIONS MAY BE MADE BY CALLING THE IEEE CHICAGO MESSAGE CENTER AT (708) 963-3828. PLEASE LEAVE NAME(S) AND COMPANY NAME(S) FOR THOSE WISHING TO ATTEND.

Meeting of the IEEE Communications Society (Chicago Chapter)

DATE: Wednesday, April, 14, 1993

GUEST SPEAKER: Dick Jaeger, IEEE Congressional Fellow

TOPIC: Telecommunications and the Information Infrastructure.

PLACE: Sharko's Restaurant, 2225 Ogden Avenue, Lisle, IL

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

Dinner: 7:00 PM - \$13.00

Speaker: 8:00 PM - FREE

RESERVATIONS: Call (708) 963-3828 to make dinner reservations by Monday, April 12, 1993

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

ABOUT THE TOPIC: There is a growing and widespread interest in the need for a comprehensive Information Infrastructure to meet the needs of society in coming years. A key element in such an infrastructure is telecommunications. To help the process, IEEE will hold an "Information Interchange" in Washington in early May at which key people involved with telecommunications as providers, designers, manufacturers, users, and policy makers will discuss their views of what is needed for full exploitation of evolving technical capabilities. The objective is to identify key issues and seek consensus on what is needed for enlightened public policy. The complexities and possible difficulties will be discussed.

ABOUT THE SPEAKER: Dick Jaeger retired from AT&T Bell Labs in Naperville in 1987 concluding a career in switching system and network services development. Prior to and following retirement, he has been active in IEEE in the Communications Society, the Technical Activities Board and the United States Activities Board. He was elected Div. III Director for 1990-91, serving on the Institute's Board of Directors. An IEEE Fellow, he just concluded a year in Washington as an IEEE Congressional Fellow for Science and Technology.

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TA-93

A message from the President of the United States

Engineers have always been major contributors to our nation's prosperity and quality of life. Now, as our country embarks in a new direction, engineers will be key players in finding solutions to many of our challenges ahead. From environmental cleanup to international competitiveness, from rebuilding our infrastructure to assuring a reliable energy supply, it is engineers who'll be called upon for the creativity to move our country ahead.

It is fitting that you mark your annual observance with visits to our nation's classrooms to inspire the leaders and workers of tomorrow with the wonders and opportunities of technology. A technically literate workforce is essential to our future success.

I am pleased to join all Americans in saluting our nation's engineers during National Engineers Week. I look forward to the opportunity of working with you to ensure a bright future for our nation.

Rui Clinton

April IEEE Videoconference

- April 22, 1993 POSIX - Impact of New Standards by Jim Isaak of the Digital Equipment Corporation.

This presentation will begin at 11:00AM and will take nearly 2 hours. Expect a modest charge for your participation. Further details can be obtained either from Jack Sherman or from our Section's business office by mid April.

✉ The Chicago Section is preparing a loan service for segments of previous Videoconference tapes. Details to be announced in the next SCANFAX issue.



Beware . . . New Tax Rules Affect 401(k) Funds

Planning a job change in 1993? Be aware that new tax rules will affect your 401(k) funds distribution. Under the new rules, if you change jobs or retire and take a lump sum distribution, instead of leaving the funds with your old employer or doing a trustee-to-trustee transfer into a new Individual Retirement Account or new 401(k), 20 percent of your funds will be withheld.

Why the new rule? The Government's official word is that the new taxes collected will be used to extend jobless benefits and that discouraging spending will ensure that an individual's pension is protected. The unofficial word is that this rule may be an easy way to raise taxes. Many people will not even be aware of the rule change. If job changes are involuntary, workers may overlook the new rule while trying to deal with lay-offs or forced retirements. The rule could lead to more people losing pensions instead of saving them.

Many employers are establishing procedures to handle trustee-to-trustee transfers. If you are changing jobs or retiring, consult a financial adviser about the best way to handle your 401(k) funds.

USAB Chairman Promotes U.S. Competitiveness

USAB Chairman Charles K. Alexander recently wrote a letter to the U.S. Department of Commerce (DOC) endorsing DOC's investigation into the national security implications of U.S. dependence on foreign imports of integrated circuit (semiconductors) ceramic packages. The investigation is being conducted in accordance with Section 232 of the *Trade Expansion Act of 1962*.

Alexander urged efforts to promote the competitiveness of the U.S. ceramic packaging industry. "Ceramic packaged semiconductors are incorporated in almost every U.S. defense system employing modern electronics and play a critical role in ensuring our national security," he said. Further, Alexander expressed IEEE-USA's belief that national security in the technological age requires the maintenance of strong, competitive domestic capabilities to meet U.S. defense needs in the event foreign supplies are disrupted.

USAB Approves Position Statements

IEEE's United States Activities Board recently approved these position statements. Copies are available from the IEEE-USA Office in Washington, D.C.

• **Human Exposure to Radio Frequency Fields from Portable and Mobile Telephones and Other Communication Devices**—Recognizing public concern about the safety of exposure to radio frequency (RF) energy, IEEE and such organizations as the American National Standards Institute, the National Council on Radiation Protection and Measurements, and the International Radiation Protection Association, have published guidelines outlining safe limits for human exposure to RF fields. Based on present knowledge, prolonged exposure to RF fields from portable and mobile telephone devices at or below the recommended levels is not hazardous to human health, according to IEEE-USA and its Committee on Man and Radiation.

• **Engineering Manpower Policy in the United States**—Recognizing that members of the engineering community operate within an increasingly complex national economy, IEEE-USA believes that business and government can and must do more to prevent major fluctuations in the demand for scientific, engineering, and technical resources. Further, IEEE-USA believes that decision-makers must improve the utilization and productivity of these resources and support the improvement of engineering education programs, in order to produce and maintain competent engineers.

• **Energy Efficiency**—IEEE-USA concludes that energy efficiency must form an integral component of a comprehensive national energy policy designed to ensure a reliable, economical, and environmentally sound energy supply. Further, IEEE-USA recommends that the Government and the energy-consuming public give a high priority to promoting aggressive research, development, commercialization, and use of efficient energy conversion technologies.

IEEE-USA Office, 1828 L Street, N.W., Suite 1202, Washington, DC 20036-5104, USA (202) 785-0017

IEEE-USA telephone hotline recording: (202) 785-2180

James A. Watson, Editor—Georgia C. Stelluto, Associate Editor

MEMBERS BY SOCIETIES BY MEMBER GRADE BY SUBSECTION

The table below lists the number of members in the entire Chicago section arranged in rows numerically by the identification code of the society, and in columns by the member grade.

The membership is additionally grouped by subsection, to give an idea of mailing addresses. Totals are shown for societies and for members not members of societies. The totals for each grade and subsection are given in each column.

MEMBERS BY SOCIETIES BY MEMBER GRADE BY SUBSECTION																
ID	#	SOC	AF	S	LF	F	LS	SM	LM	M	LA	A	CGO	FV	NW	TOT
SP	1	Signal Proc	1	48	1	2	4	12	6	120	1	18	126	60	126	312
BT	2	Broadcast	0	6	1	4	6	1	3	40	1	7	33	11	24	68
AP	3	Antennas	0	22	0	5	3	9	3	87	0	8	60	25	52	137
CAS	4	Ckts & Sys	0	41	1	4	3	5	5	199	2	17	111	63	104	278
NPS	5	Nuclear	4	3	0	1	1	7	2	36	0	7	25	27	9	61
VT	6	Vehicular	1	10	0	4	6	7	3	49	2	9	48	39	103	191
R	7	Reliability	1	2	0	0	3	3	4	52	0	5	16	19	35	70
CE	8	Consumer	0	10	5	3	14	12	15	129	1	24	71	140	104	215
IM	9	Instr & Meas	0	5	0	0	3	9	6	57	0	19	38	19	36	93
AES	10	Aerospace	0	19	0	2	1	4	2	47	0	8	38	17	28	83
IT	12	Info Theory	3	20	1	2	0	10	1	52	0	0	45	16	28	89
IE	13	Ind'l Elex	0	7	0	0	5	9	4	96	0	17	48	32	59	139
EM	14	Eng'g Mgmt	6	8	2	0	2	14	5	187	0	19	66	78	99	243
ED	15	Elect Devices	0	14	2	0	1	11	3	52	0	4	34	15	38	87
C	16	Computer	756	165	3	8	16	42	18	1022	3	897	803	709	628	2140
MTT	17	Microwave	0	21	0	4	4	9	5	91	0	7	66	25	57	150
EMB	18	Eng Med Biol	4	39	1	5	4	7	6	137	0	10	110	27	69	206
COM	19	Communicat.	36	114	4	10	10	52	8	684	2	92	291	339	334	964
UFFC	20	Ultrasonics	0	1	2	0	2	6	3	25	0	2	11	6	26	43
CHMT	21	Mfg Technol	2	3	0	1	5	11	3	56	1	8	22	25	43	90
OE	22	Oceanic	0	10	0	2	2	0	1	11	1	1	14	6	9	29
CS	23	Control Sys	0	30	1	3	0	5	1	129	0	17	88	39	54	181
RA	24	Robotics	0	29	0	1	4	2	0	54	1	14	51	23	34	108
E	25	Education	0	3	0	2	3	0	1	22	0	4	18	6	11	35
PC	26	Prof Commun	4	6	0	0	2	2	1	33	1	7	25	11	20	56
EMC	27	Elm Compat	0	2	1	2	6	12	6	62	0	7	28	31	39	98
SMC	28	Sys Man Cyb	1	15	0	2	4	4	0	30	1	3	34	10	16	60
GRS	29	Geoscience	0	3	1	2	0	1	1	7	0	1	7	3	6	16
SIT	30	Soc Implicat.	0	9	0	1	3	6	2	44	0	4	24	20	25	69
PE	31	Power Eng'g	0	17	11	2	43	62	0	427	0	33	245	196	185	626
DEI	32	Dielectrics	0	0	0	0	2	6	4	25	2	4	18	12	15	45
MAG	33	Magnetics	1	6	1	0	4	4	4	30	0	4	19	10	25	54
IA	34	Ind'l Appl	0	4	1	0	21	30	18	184	1	13	75	85	112	272
PEL	35	Power Elex	0	16	1	0	2	6	3	88	0	6	43	23	56	122
LEO	36	Lasers	1	28	1	2	0	10	2	62	0	8	55	38	21	114
SOC			813	316	22	25	107	201	100	2840	11	346	1762	1476	1565	4803
NO SOC			0	258	16	4	116	65	163	1792	14	229	983	785	896	2264
CGO			329	397	25	15	88	77	99	1482	10	209	2745			2745
FV			262	67	7	8	59	91	67	1495	7	189		2261		2261
NW			222	110	6	6	76	98	97	1655	8	177			2461	2461
TOTAL			813	574	38	29	223	266	263	4632	25	575	2745	2261	2461	7467

There are 574 student members in our section. There are 31 IEEE recognized schools. 72 of the students attend schools outside of Chicago, but use their home addresses, so they are members of our section. 437 students attend 5 schools which have IEEE student branches. Suggest what can we do to assist the 65 students who attend the 26 schools without branches - call 708 576 8222

Joint meeting of the FOX VALLEY SUBSECTION and the LASER & ELECTRO OPTIC SOCIETY

Free-Space Optics for Interconnections in High Speed Processing Systems

presented by
Mr. Tom Cloonan

Free-Space Digital Optics is a new technology which uses beams of light instead of metallic traces to route signals between active device substates. The discussion will focus on the fundamentals of the emerging digital interconnection field which promises to overcome many of the problem of associated with high-speed electronic circuit design.

Our speaker for the evening is Mr. Tom Cloonan. Mr. Cloonan is a Distinguished Member of the Technical Staff with AT&T Bell Laboratories in Naperville. He received his BSEE from IIT in 1982 and a MSEE from Purdue in 1983.

Date: Tuesday, April 20, 1993

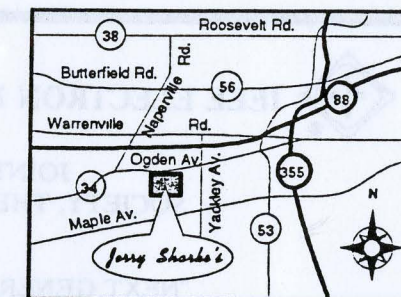
Place: Jerry Sharko's
2225 Ogden Ave.
Lisle, IL

Time/Cost: Social: 6:00 PM / Cash Bar
Dinner: 7:00 PM / \$13.00*
Speaker: 8:00 PM / Free

Reservation: Call (708) 963-3828
by Friday April 16, 1993

Attire: Casual * \$11.00 with student ID

NOTICE: Topic, Date & Location have been changed from
the Fox Valley Subsection Program of Events 1992-1993.



POWER ELECTRONICS CHAPTER

"An Update on Smart Power ICs"

Talk An introduction to Smart Power ICs will be given followed by a description of automotive and consumer applications, high voltage Smart Power, and high current Smart Power with integral protection.

Speaker Randy Frank, Technical Marketing Manager for Motorola's Semiconductor Products Sector in Phoenix, Arizona. He has a BSEE, MSEE, and MBA from Wayne State University and over 25 years experience in automotive and control systems engineering. For the past 10 years he has been involved with semiconductor sensors, power transistors, and smart power ICs. He has written over 100 papers and has several patents issued and pending.

Meeting Information April 14 -- Motorola Schaumburg Campus, Door #13 -- Social hour (coffee and donuts) 6:00 to 7:00 PM -- Meeting 7:00 - 8:00 PM - Tour of Motorola's communications factory after meeting -- Dinner may be purchased at low cost in cafeteria starting at 5:30 PM if desired. -- Registration required, call IEEE Message Center by noon, April 12th -- (708) 963-3828. -- Call George Studtmann with any questions -- (708) 392-7189.

(see map on page 12)

OUR IEEE CHICAGO SECTION'S 100TH ANNIVERSARY YEAR
IEEE RECOGNITION DINNER — 1993

DATE : SATURDAY, APRIL 24 1993
PLACE : AVALON BANQUETS
1905 EAST HIGGINS ROAD (AT BUSSE ROAD),
ELK GROVE VILLAGE, IL

TIME : 6:00 PM — COCKTAILS & HORS D'OEUVRES
7:00 PM — DINNER, FOLLOWED BY PROGRAM

TICKETS: DONATION — \$30.00 PER PERSON PLEASE ORDER YOUR TICKETS

- by mail — Joe Feitler, Box 5072, River Forest, IL 60305 (no later than April 16, 1993)
- by phone — Joe Feitler at ISC: (708) 505-9100, x277 (no later than April 20, 1993)
- Please tell us about your groups — We will have tables seating 10 people
- You may request a fish or vegetarian dinner no later than April 16, 1993



IEEE ELECTRON DEVICES SOCIETY

CHMT SOCIETY

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

Wednesday, May 5, 1993

"NEXT GENERATION SEMICONDUCTOR MATERIALS FOR HIGH
PERFORMANCE OPTOELECTRONIC DEVICES"

by Dr. Manijeh Razeghi
Northwestern University

There is a growing interest in utilizing semiconductor direct energy gap heterojunctions, quantum wells and superlattices for photonic and electronic devices for high speed interchip and intrachip communications for silicon-based systems. It is important to determine whether III-V semiconductor multilayers and Si processing technologies are mutually compatible to enable the fabrication of reliable optical and electrical devices on Si substrates. The use of such techniques as MOVPE, CBE and Gas MBE for this purpose will be discussed.

Dr. Manijeh Razeghi is Walter P. Murphy Professor of Electrical Engineering and Computer Science and the Director of the Center for Quantum Devices at Northwestern University. Before joining the Northwestern faculty in 1991, she was Head of the Exploratory Materials Laboratory at Thomson-CSF, Orsay, France. She has authored more than 350 technical publications including the book The MOCVD Challenge.

Register by calling the IEEE Office By May 3, (708) 963-3828, Reservations are required.
Your attendance will be confirmed.

Meeting Location:

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

Time:

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

Enter at Gate A, park
in lot close to Number
13, enter door at the
location of Number 13.

**Northwest
Subsection**

