

SCANFAX

May 2006

Volume 58, Issue 5



IEEE

Chicago Section Website:
ewh.ieee.org/r4/chicago

A publication of the
Institute of Electrical & Electronics Engineers
— Chicago Section —

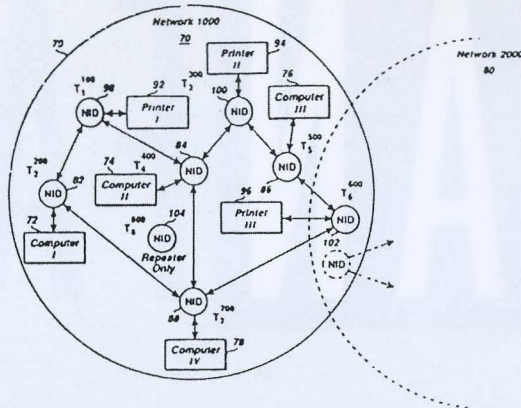
Energy Independence with Mirror Energy

U.S. POSTAGE PAID
Non-Profit ORG
Permit No. 1
Madison, Wisconsin

Representative Clients*

- Abbott Laboratories
- ABN AMRO Bank
- Atari Games Corp.
- Bally Total Fitness Corporation
- Biovail Corporation
- Blue Cross & Blue Shield Association
- B.P. Amoco Corporation
- Compass Bancshares, Inc.
- Fedders Corporation
- General Electric Company
- Hard Rock Hotel & Casino
- Intel Corporation
- Louisville Bedding Company
- Mattel, Inc.
- Monsanto
- Papst Licensing GmbH
- Rockwell International Corporation
- Samsonite Corporation
- The Scripps Research Institute
- Texas Instruments, Inc.
- Time Warner
- Ty Inc.
- The Walt Disney Company
- Xerox Corporation

* These are clients that the firm has represented.



Masters of the Intellectual Property Maze®

Attorneys concentrating in all facets of intellectual property law including litigation, licensing, negotiation, client counseling and corporate identification programs, as well as protecting rights through trade secrets, patents, trademarks and copyrights worldwide.

Welsh & Katz, Ltd.

120 S. Riverside Plaza • 22nd Floor • Chicago, Illinois 60606 • Telephone 312-655-1500 • Fax 312-655-1501

IEEE MEMBER CONTACTS: A. SIDNEY KATZ AND JAMES A. SCHEER

www.welshkatz.com

Washington Office: Crystal Plaza One • Suite 311 • 2001 Jefferson Davis Highway • Arlington, Virginia 22202-3603 • Tel: 703-415-4777

CELEBRATING
50 YEARS
TESTING INNOVATION

TEST LABORATORY

Elite Capabilities.

New and different products demand new and different testing capabilities—and Elite has them.

- Enhanced High-Intensity RF (HIRF) testing 600V/m-CW/AM and 2000V/m pulsed RF
- HALT/HASS accelerated life testing via rapid thermal cycling and six-axis vibration
- Computer simulation of EMI using software modeling consulting services

Visit www.elitetest.com to see how our constantly improving capabilities can meet your constantly changing testing needs.

Elite Electronic Engineering Inc.

1516 CENTRE CIRCLE, DOWNERS GROVE, IL 60515

1-800-ELITE-11 [1-800-354-8311]

www.elitetest.com

FC Canada CE

A2LA Accredited
NVLAP Accredited
ANSI Accredited
DESC Approved
NARTE Certified Engineers

Our Constantly Improving EMC Test Capabilities

• EMC Testing Services

MILITARY AND COMMERCIAL AVIATION

600V/m-CW/AM and 2000V/m pulsed RF, Lightning Testing, Large system capabilities

AUTOMOTIVE

DaimlerChrysler and Ford Approved, GM Correlated, Nissan, Toyota, BMW, others

Whole Vehicle EMC Test Facility; Truck and Ag Equipment Specialists European Union "e-Mark" Testing for ESA's & Whole Vehicle

FCC, CE MARK, TELECOM

Regulatory Experts; Test Experts; EMC Design Experts

FCC Telecommunication Certification Body (TCB)

European Union Conformity Assessment Body for CE Mark Approvals

• Environmental Stress Testing and Electrical Safety Services

Full Environmental Stress Test Laboratory; Temp, Humidity, Vibe, Shock, Rain, Dust, Salt Fog, and many others

• Engineering Design Consulting Services

FCC/CE Mark Regulatory Experts, EMC Design Analysis and EMI Suppression, EMI Simulation and Circuit Modeling Services



Chicago Section:
ewh.ieee.org/r4/chicago

A publication of the
Institute of Electrical & Electronics Engineers
— Chicago Section —

Chairman
Connie Kelly

Phone: 847-297-6610

Fax: 847-298-1264

E-mail: constance.kelly@comcast.net

Editor
Gerry Ryan

Phone: 708-445-7537

Fax: 708-445-7538

E-mail: gerryr_idcs@ameritech.net

Published for IEEE by
Slack Attack Communications

Publisher
Barbara Slack

Advertising Sales
Beth Vander Grinten

Phone: 608-222-7630

E-mail: bethv@slackattack.com

Art Director
Kristin Mitchell

Printed By
Community Publications
McFarland, WI

SCANFAX (ISSN #0018-1297) is a monthly publication (except June, July and August) of the Chicago Section Institute of Electrical and Electronics Engineers, c/o Western Society of Engineers, 4513 Lincoln Avenue, Suite 213, Lisle, IL 60532, (800) 898-4333 or (630) 493-4333. It is published by Slack Attack Communications, 5113 Monona Drive, Madison, WI 53716, (608) 222-7630. Printing is by Community Publications, McFarland, WI 53558. For advertising information, contact Slack Attack Communications.

Subscriptions included in IEEE membership dues; non-member subscriptions: \$25 per year.

Address corrections should be sent to: IEEE Membership, 440 Hoes Lane, Piscataway, NJ 08854-1331 or by phone (800) 678-4333.

Meeting notices should be sent to graphics@slackattack.com.

©Copyright 2004 by the Chicago Section Institute of Electrical and Electronics Engineers. Permission to reprint must be secured in advance of publication and credit given to author and SCANFAX.

SCANFAX

May 2006
Volume 58, Issue 5

FEATURES

- 4 United States achieves Energy Independence with Mirror Energy

UPCOMING EVENTS

- 5 Chicago Chapter of the IEEE Power Engineering Society Protective Relaying Wednesday, May 10, 2006
- 6 Chicago Chapter of the IEEE EMC Society 6th Annual Chicago EMC MiniSymposium Tuesday, May 16, 2006
- 6 IEEE - Chicago Section Finding Employment by Design May 17 & 24, 2006
- 7 IEEE Chicago/Rockford Consultants' Network ** A joint Affinity Group of the IEEE Chicago and Rock River Valley Sections ** Effective Business Planning Part II: How to Set your Consulting Fees Monday, May 22, 2006

- 10 IEEE Chicago Section 2006 Official Ballot

DEPARTMENTS

- 11 Advertiser Index & Professional and Business Directory

Chicago Section Executive Committee Meeting

Tuesday, May 9, 2006, 7:00 p.m.

DeVry DuPage, Room TBA, 1221 N. Swift Rd., Addison, IL

No Registration Needed

Statements or opinions expressed herein are those of the author's and not necessarily those of the IEEE Chicago Section, its members, officers, or staff, or the editors of this publication. Readers using any information or materials described in this publication do so at their own risk. In no event will IEEE Chicago Section, its members, officers, or staff be liable for any damages resulting from use of this material and hereby expressly disclaim such liability. The publication of any advertisement is not to be construed as an endorsement of the product or service offered unless the advertisement specifically states that there is such an endorsement or approval by the organization.

United States achieves Energy Independence with Mirror Energy

By Norm Hansen, President, Energy USA, Inc.

Humanity is going to make quantum leaps into the twenty-first century with the recent discovery of a new source of energy called *Mirror Energy*. The technology comes from the United States and other countries multibillion-dollar high-energy physics and astrophysics research programs. To understand the future requires a paradigm shift in your thinking on how we use the World's limited natural resources. A hundred years ago, we were burning wood to keep warm until the forests were gone. Coal, oil, and natural became the new sources of energy. Today, we have a similar situation. We are burning billions of tons of coal, billions of barrels of oil, trillions of cubic feet of natural gas and destroying our environment. *Mirror Energy* is going to replace coal, oil, and natural gas as the World's Primary Source of Energy.

Using the Internet Model, the United States can achieve Energy Independence within fifteen years; as well as, help other countries move into the twenty-first century. *Mirror Power* plants can convert

matter and antimatter from comets directly into electricity according to Einstein's famous equation of mass times the speed of light squared or $E = mc^2$. Utilizing the present infrastructure, existing electrical power plants can be upgraded to Mirror Power Plants. Off-peak power can be used to make oxygen for commercial applications and hydrogen for motor vehicles. Mirror Power Plants will have two new source of income from selling oxygen and hydrogen. The Hydrogen Economy becomes reality as people use hydrogen to power their cars.

To achieve Energy Independence requires two hundred kilograms (440 pounds) of antimatter that will replace one billion tons of coal, 4 billion barrels of oil (11 million barrels per day), and 6 trillion cubic feet of natural gas. The environment will be cleaner. Carbon dioxide and methane levels will be reduced by 3.8 billion tons or 53 percent from current levels: 2 billion tons or 90 percent from coal, 1.3 billion tons or 49 percent from oil, 0.5 billion tons or 25 percent from natural

gas, and 70 million tons or 19 percent in nitrogen dioxide levels. The coal, oil, and natural gas will be used for making products and providing services. The United States Economy will grow from \$13 trillion today to over \$150 trillion within this century.

With United States leadership, every country can be brought into the twenty-first century without destroying Earth's environment. *Mirror Power* plants can desalt ocean water and produce fresh water that can turn deserts into forests, bountiful farmland, and thriving communities. The World's Economy will grow from \$36 trillion today to over \$3,000 trillion within the next hundred years. Million of businesses will create billions of jobs. However, the real benefits will come from taking billions of people out of poverty, providing them a World-Class Education, and empowering them to live out their dreams. For more information, please visit www.EnergyUSA.net. ■

Dinner Meeting

Chicago Chapter of the IEEE Power Engineering Society

Protective Relaying

Wednesday, May 10, 2006

Greg Kelm, P.E.
ComEd/Exelon Energy Delivery

About the Topic:

Greg will discuss protective relaying with emphasis on utility transmission and substation equipment protection. Specific topics for discussion will include design criteria, types of relays including advantages and disadvantages of each, as well as application of protective relay schemes for protection of transmission and substation equipment.

About the Speaker:

Greg is currently a Senior Engineer in the Protection Services Engineering Department of ComEd/Exelon Energy Delivery. His responsibilities include developing and implementing protective relaying schemes to ensure reliable and secure operation of the ComEd/Exelon Energy Delivery system. He also provides technical support to other departments in support of operations and maintenance. Greg graduated from Purdue University in 1983 with a Bachelor of Science degree in Electrical Engineering.

Location:

ComEd Commercial Center, 1919 Swift Drive, Oak Brook, IL (near the I-290 and I-294 interchange)

Time:

5:30 Social
6:00 Dinner (optional)
6:45 Presentation
8:00 Adjourn

Reservations:

Please call the IEEE Business Office by noon on Monday, May 8, 2006 at (630) 493-4333 or (800) 898-IEEE to make your reservation. Or, submit your data via the Online Reservation Form.

Cost:

The cost of the optional box-lunch style dinner is \$15 for IEEE members, \$20 for non-members, payable at the event. Sorry, we are unable to process credit cards. Checks payable to "IEEE-PES Chicago Chapter" and cash are accepted, and receipts will be provided.

Continuing Education:

IEEE technical meetings may be acceptable as continuing education where required for maintenance of professional engineering licensure. Refer to the individual state's requirements for details.

For more information:

For more information, including the Online Reservation Form, please visit the IEEE PES Chicago Chapter web site: <http://peschicago.org>

Global Compliance Testing EMC and Product Safety



MIL STD 461
MIL STD 810
RTCA-DO 160
FCC
CE
UL
CSA
CISPR

Military and Aerospace
Commercial Aviation
(including complete Lightning Testing)
Medical/Lab Equipment
Appliances
ITE Equipment
Radio/Transmitters
Industrial Equipment
Communication Equipment

For more information call 847-537-6400
or visit us at www.dlsemc.com.

1250 Peterson Drive
Wheeling, IL 60090

DLS

166 S. Carter Street
Genoa City, WI 53128

MiniSymposium

Chicago Chapter of the IEEE EMC Society

6th Annual Chicago EMC MiniSymposium

Tuesday, May 16, 2006

Mike Zimney
ComEd/Exelon Energy Delivery

About the Topic:

The Chicago Chapter of the IEEE EMC Society presents its sixth annual MiniSymposium. The purpose of this event is to offer EMC technical and regulatory information to individuals interested in the field of EMC who would not typically attend one of the national or international EMC symposiums.

Minisymposium Topics

- Fundamentals of EMC
- EMC Design and Troubleshooting (by Lee Hill)
- Changes in the immunity standard IEC 61000-4-3
- RoHS Directive and its Implications
- Common Problems Measuring EMI in a Non-Compliant Chamber

In addition, the featured presenter this year will be Mr. Lee Hill, an IEEE EMC Society Distinguished Lecturer and member of the Editorial Review Board of Printed Circuit Design Magazine. Mr. Hill will present information on EMC design and troubleshooting.

In addition to the various technical presentations, there will be over twenty vendor exhibits highlighting EMC related products, test equipment, and services. Exhibitors include technical representatives, test laboratories, test equipment manufacturers, component suppliers, EMC modeling vendors, and consultants.

Location:

Holiday Inn - Itasca, IL
860 West Irving Park Rd.
TEL: 630-773-2340

Time:

8:00 am to 5:30 pm

Registration:

Elite Electronic Engineering Inc
630-495-9770

Cost:

Admission for IEEE members is \$35 (\$45 non-members, \$15 students) and includes breakfast rolls, coffee, lunch, and entry into a door prizes raffle.

For more information:

Information on the full technical program, directions, and registration is available at the chapter website www.emcchicago.org or contact Elite Electronic Engineering 630-495-9770 for registration.

Two Day Seminar

IEEE – Chicago Section

Finding Employment by Design

May 17 & 24, 2006

Intended Audience:

IEEE members who are unemployed, underemployed or searching

About the Topic:

A two day seminar designed to enable IEEE members to take control of their future employment using creative and proven job finding techniques. This is a practical, hands-on, seminar that will produce results.

Program Topics

- New realities of work in the US (How to deal with it)
- Developing a career portfolio
- Fundamentals of networking
- Effective resumes and letters
- Tracking your progress
- Increasing your visibility (to potential employers)
- Evaluating the offer

Location:

Harper NEC – 1375 South Wolf Road, Prospect Heights, Illinois

Time: 8:30am to 4:30 pm

Reservations:

See Chicago Section website for details ewh.ieee.org/r4/Chicago. Space is limited to the first 32 that apply, so register early.

Cost:

\$30 – covers registration for both days – lunch included.

Evening Meeting

IEEE Chicago/Rockford Consultants' Network

** A joint Affinity Group of the IEEE Chicago and Rock River Valley IEEE Chicago/Rockford Consultants' Network

** A joint Affinity Group of the IEEE Chicago and Rock River Valley Sections **

Effective Business Planning Part II: How to Set your Consulting Fees

Monday, May 22, 2006

(NOTE: This meeting is earlier than traditionally scheduled to avoid the Memorial Day holiday weekend.)

Joseph A. Auer, Jr.

Director and Secretary / Treasurer of
the IEEE Chicago / Rockford
Consultants' Network

About the Topic:

The Network will be holding its next bi-monthly meeting on Monday May 22, 2006 from 7:30 PM to 9:15 PM at the Palatine Public Library. At our March meeting, we looked at the fundamentals of effective business planning to address the issues of growth, market share, competition, profitability and vision. In this second part, Joe Auer will extend upon the profitability and vision aspects by providing details on how to determine consulting fees. We will look at the elements of cost in a business and how to incorporate them in setting your fees. We will investigate how your fees need to address both your costs and your financial goals. We will look at how to address the competitiveness of consulting fees against direct employee costs, as this issue frequently affects the consultant's ability to land a contract. Finally, we will look at how to assess the reasonableness and effectiveness of a candidate fee structure from various perspectives, including the national IEEE bi-annual salary survey. We will use these perspectives to discuss possible options for adjusting the candidate fee structure to its "final" form and its incorporation into the financial planning section of your business plan, and your enterprise.

About the Speaker:

Mr. Auer has over 35 years of progressively challenging high technology management roles, with expertise in program and engineering project (including software) management, business planning, systems engineering, proposal development and process improvement. He has extensive experience in industry, military, academic and not-for-profit environments. Joe's sole proprietor consulting practice, JAuer Consulting Enterprises, provides timely, world class solutions for program management, engineering management and business planning requirements. His academic credentials include a Bachelor of Science in Earth and Planetary Science from the Massachusetts Institute of Technology, and a Master of Science in Physics from the University of Alabama in Huntsville. Joe has taught physics and astronomy at local community colleges and is also serving as Chairman of the Board of the Planetary Studies Foundation, a science education not-for-profit organization.

Location:

MEETING LOCATION:
Palatine Public Library
700 North Court
Palatine, IL
847-358-1216

DINNER LOCATION:

Bakers Square
270 E. Northwest Highway (at the corner of North Court St.), just south of the library

Time:

6:15 p.m. Optional Group Dinner at
Bakers Square
(Order off the menu -
reservations not required)
7:30 p.m. Meeting - Discussion
9:15 p.m. Adjourn

Reservations:

Members and non-members are invited to both the meeting and the optional dinner. (Reservations are NOT required)

Continuing Education:

Attendance at this meeting will earn 1.0 PDH.

For more information:

Information about the network can be obtained by e-mail to either consultnet@bmillerengineering.com or JAuer-Consulting@worldnet.att.net, or visit our web site at www.drblank.com/coaction.htm

See you on May 22, 2006, and bring consultants and those who aspire to be consultants for a pleasant and informative evening of networking.

Meetings are usually held on the last Monday of odd-numbered months. THE MAY MEETING IS EARLIER TO AVOID THE MEMORIAL DAY HOLIDAY WEEKEND.

SCANFAX

PLAN NOW
for 2006



IEEE

THE MARKET SERVED

SCANFAX magazine is the official publication of the Institute of Electrical and Electronics Engineers (IEEE) Chicago Section. Those in the Chicago area who are influential in the electrical, electronics, and computer industry receive SCANFAX each month (except June, July and August). It provides a forum for manufacturers, consultants, sales representatives, universities, and colleges to exchange ideas and information.

READERSHIP

Approximately 7,000 professionals are members of IEEE Chicago Section. These members represent more than 200 companies in the Chicago area. You can reach this targeted audience with your advertisement in SCANFAX.

From the size and attractive masthead to the full color cover and additional information provided, we intend to make SCANFAX even more of an essential handbook for IEEE Chicago Section members.

SUBMISSION REQUIREMENTS

ELECTRONIC SUBMISSION REQUIREMENTS: All ads must be submitted electronically on Macintosh disks (Zip or CD) and include a hard copy of ad for verification. Ads that bleed need to allow 1/8" for bleed on all sides. Accepted software: QuarkXpress, Adobe Illustrator and Adobe Photoshop. Fonts, linked graphics and laser proofs must be sent with electronic files. PDF files will be accepted, but fonts and graphics must be embedded and/or included. Minimum 300 dpi on graphics and photos. Disks submitted will be returned upon request.

NOTE: Any ads not supplied properly could incur additional charges.

Keep SCANFAX in
your Marketing Plan
for the Upcoming Year!

For advertising information contact:

SLACK ATTACK COMMUNICATIONS

BETH VANDER GRINTEN

P.O. Box 6096, Madison, WI 53716

PHONE (608) 222-7630 ext. 23

FAX (608) 222-0262

E-MAIL: bethv@slackattack.com

WEB: www.slackattack.com

The official publication of the INSTITUTE OF ELECTRICAL &
ELECTRONICS ENGINEERS — CHICAGO SECTION

ADVERTISING RATES

AD SIZE	1X	5X	10X
Back Cover, 4C	\$1,600	\$1,400	\$1,215
IBC or IFC, 4C	1,390	1,270	1,165
Full Page	890	770	665
1/2 Page	650	560	490
1/3 Page	505	435	380
1/4 Page	375	315	270
1/6 Page	260	230	205

Professional Card \$330

One color (PMS) plus black \$300

Four color inside pages \$500

10% premium on b/w position requests, 1/2 page or larger.

15% to recognized advertising agencies on space only.

For information on inserts, contact your account representative.

DIMENSIONS

(Dimensions are width by height)

Full Page8-3/8" x 10-7/8"
(7-3/8" x 9-7/8" recommended print area)

1/2 Page Horizontal.....7-3/8" x 4-7/8"
Vertical4-7/8" x 7-3/8"

1/3 Page Horizontal.....4-7/8" x 4-7/8"
Vertical.....2-3/8" x 9-7/8"

1/4 Page Horizontal.....4-7/8" x 3-5/8"
Vertical.....2-3/8" x 7-3/8"

1/6 Page Horizontal.....4-7/8" x 2-3/8"
Vertical.....2-3/8" x 4-7/8"

EMPLOYMENT OPPORTUNITY ADS

\$275 for two consecutive issues. Send type written copy including mailing address, phone number and check payable to SCANFAX Magazine, P.O. Box 6096, Madison, WI 53716.

PROFESSIONAL CARDS

Include your business in the "Professional Card" section of each issue of SCANFAX throughout the year, for the low cost of \$330.00 (includes production). Dimensions of a Professional Card are 3-5/8" wide x 7/8" high. Your advertisement can include your logo, slogan and key information about your business. Ads will be listed alphabetically. Sign up today!

EDITORIAL SCHEDULE*

2006	January Issue	Editorial Focus: Circuits and Devices
	Space Reservations and Camera Ready Materials Due: Nov. 25, 2005	
	February Issue	Editorial Focus: Industrial Applications
	Space Reservations and Camera Ready Materials Due: Dec. 25, 2005	
	March Issue	Editorial Focus: Communications Technology
	Space Reservations and Camera Ready Materials Due: Jan. 25, 2006	
	April Issue	Editorial Focus: Electromagnetics and Radiation
	Space Reservations and Camera Ready Materials Due: Feb. 25, 2006	
	May Issue	Editorial Focus: Education/Universities
	Space Reservations and Camera Ready Materials Due: March 25, 2006	
	September Issue	Editorial Focus: Energy and Power Engineering
	Space Reservations and Camera Ready Materials Due: July 25, 2006	
	October Issue	Editorial Focus: Computers
	Space Reservations and Camera Ready Materials Due: Aug. 25, 2006	
	November Issue	Editorial Focus: Signals and Applications
	Space Reservations and Camera Ready Materials Due: Sept. 25, 2006	
	December Issue	Editorial Focus: Systems and Control
	Space Reservations and Camera Ready Materials Due: Oct. 25, 2006	

*Features subject to change without notice

IEEE Chicago Section 2006 Official Ballot

Show your interest in section activities by voting.

ELIGIBILITY REQUIREMENTS:

- All members of the IEEE Chicago Section who are FULL members for 2006-2007 are eligible to vote.
- Student members and Associate members are not eligible to vote.

VOTING INSTRUCTIONS:

- Vote for a candidate by checking the box immediately to the left of the candidate's name.
- Write-in candidate's are accepted for any office. Write-in candidates must be full members as defined above.
- To enter a write-in candidate, place the official title, candidate name, and member number in the area provided. Additional write-in candidates may be submitted on a separate piece of paper (please sign).
- You may vote for only one candidate for each office.

Ballots must be postmarked by May 20th.

CHICAGO SECTION NOMINATIONS 2006-2007

OFFICERS:

- | | | |
|---------------|--------------------------|------------------|
| Chairman | ☐ | John Zulaski |
| Vice Chairman | ☐ | Ron Kollman |
| Treasurer | ☐ | Bernie Sander |
| Secretary | ☐ | Marilyn Woessner |

COMMITTEES:

- | | | |
|--------------------------------|--------------------------|-----------------|
| Awards | ☐ | Safoora Fatima |
| Conference | ☐ | Param Nair |
| Government Activities | ☐ | M. Imtiaz Ahmed |
| Member Services | ☐ | Jack Sherman |
| Professional Activities (PACE) | ☐ | Jim Fancher |
| Program | ☐ | Marcellin Diha |
| Publications | ☐ | Doug Staszkeski |
| Special Events | ☐ | Bill Nartker |
| Student Activities | ☐ | Patricia Hutson |

Signature (required):

We have several open positions and are looking for volunteers. Please help keep this organization strong by becoming involved as an IEEE Chicago Section officer or committee chair. We need you! For more information contact Connie Kelly at ckelly@megsnet.net

BALLOT INSTRUCTIONS:

- Enter your name, membership number, and mailing address in the space provided.
- After voting, sign the ballot on the line at the bottom.
- Ballots must be mailed to:
Attn. Laura Conn
OWP/P Engineers
111 W. Washington,
Suite 2100
Chicago, IL 60602
Please mark "Ballot" on the envelope.

WRITE-IN CANDIDATES:

Office

Name

IEEE Memb. #

Office

Name

IEEE Memb. #

Office

Name

IEEE Memb. #

BALLOT SUBMITTED BY:

Name

IEEE Memb. #

Address

Phone

Professional AND Business Directory

Transportation Engineering • Water Resources Engineering

CTE ENGINEERS
CONSOER TOWNSEND ENVIRODYNE ENGINEERS, INC.
303 East Wacker Drive, Suite 600, Chicago, Illinois 60601
(312) 938-0300 www.cte-eng.com

ELECTRONIC INSTRUMENT ASSOCIATES

<http://www.electronicinstrument.com>
Manufacturer's Representative - Main office: 630.924.1600

Electromagnetic Compatibility

Power Amplifiers, Transient Generation Equipment, RF Shielded, Anechoic, and Sound Rooms, EMC Antennas, Turntables, Antennas

Electrical Parameter Measurement

Current Voltage, Watt, VAR, etc. Transducers & Sensors, Energy Management, Demand metering, Signal Conditioning, Submetering



Automation and Controls
www.panatrol.com
info@panatrol.com

7481 S. Sayre Ave. • Bedford Park, Illinois
Phone: (708) 496-3080 • Fax: (708) 496-0426

- Engineered Factory Automation
- PLC and Computer Programming
- Electrical Design and Drawings
- Custom Control Panels
- Motor Controls

U/L Listed
CSA Certified

Joseph L. Bolsinger
Territory Manager

S&C ELECTRIC COMPANY
Specialists in Electric Power Switching and Protection

Chicago Sales Office
(630) 516-9076
Fax: (773) 381-4849
E-mail: jlbolsinger@sandc.com
Web: www.sandc.com

S&C Inside Sales
6601 North Ridge Boulevard
Chicago, Illinois 60626-3997
(888) 762-7700
Fax: (773) 381-4893

T&D Products, Inc.

Manufacturers Representatives - Transmission & Distribution Electrical Equipment

1979 N. Mill Street Suite 103
Naperville, IL 60563
Web: www.tdproducts.com

Phone: (630) 305-9704
Fax: (630) 305-9708
email: info@tdproducts.com

Transformers, Switchgear, Breakers, Relays, Capacitors, Harmonic Filters
Electrical Buildings, Resistors, Non-Seg Bus, Iso Phase Bus, Batteries,
Chargers, UPS Systems, Substation Design and Supply, TVSS

ABB, Alpha, Atkinson/EPRI, Calvert, Carter & Crawley, Central Electric,
CGIT, Colt Atlantic, Danaher, GE-TVSS, Hamby Young, Post Glover,
Phoenix Electric, Power Assets Recovery, Southwest Electric, Tierney

Advertiser Index

DLS Electronic Systems	5
Elite Electronic Engineering Inc	IFC
Elmhurst College	BC
Midwest EMI Associates	11
Welsh & Katz	IFC

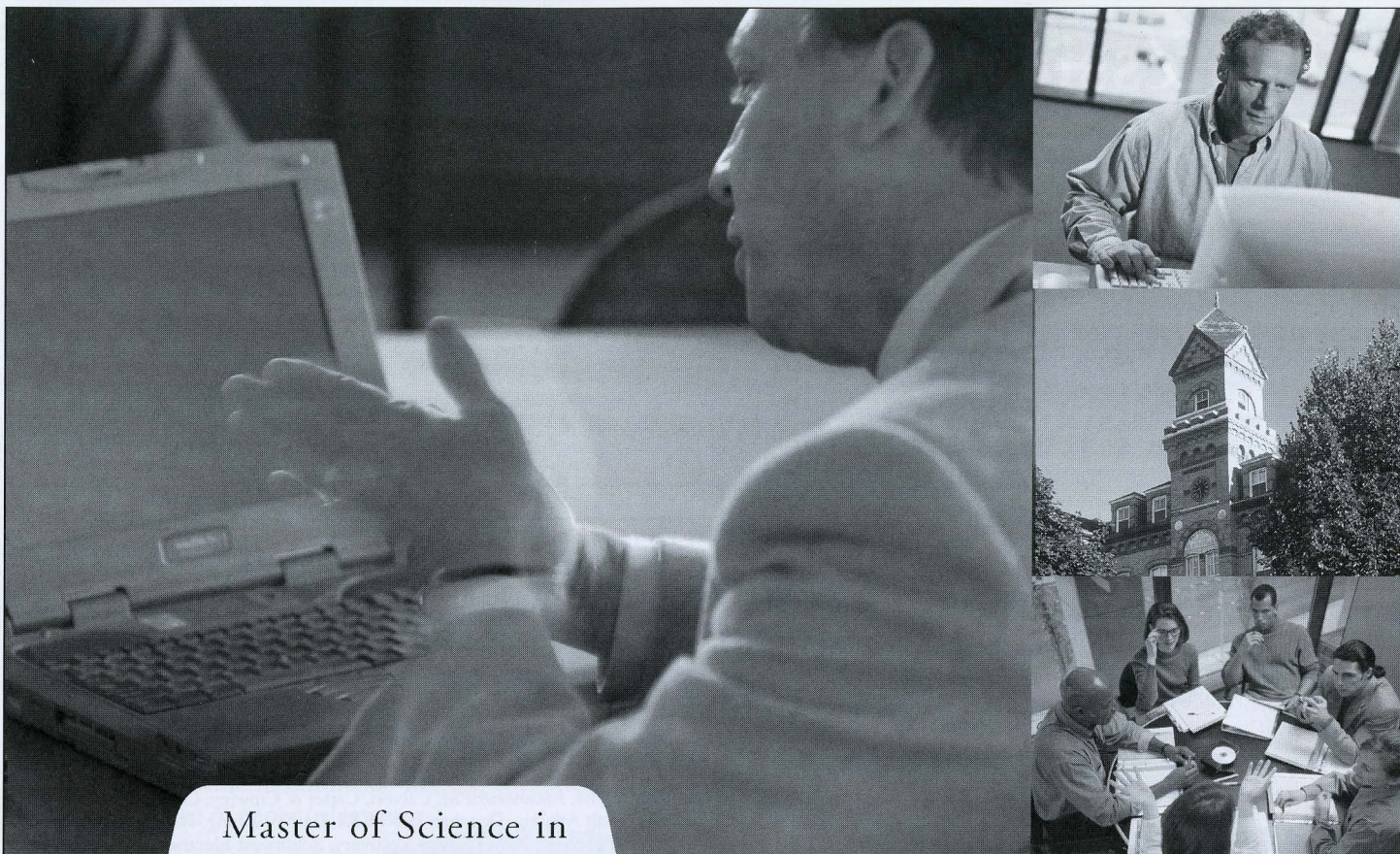
Midwest EMI Associates
21234 West Commercial Drive
Mundelein, Illinois 60060
(847)-918-9886
Fax: (847)-918-9719
Web: www.midemi.com

Your Key to the CE Mark

Seeking Help with Medical, Low Voltage or Machinery Directives?

- Capabilities - CE Mark, EN 61000-4-2, 3, 4, 5, 6, 8, 11,13,14
- Military Standard 461, ETSI, Flicker, Harmonics, Bluetooth, WiFi
FCC Certified 10/30 Meter OATS Site, Indoor 3 & 5 Meter
Nate Certified Engineer, NIST qualified equipment
Safety Equipment available, 2500 square foot modern facility
- Midwest EMI specializes in IEC 60601-1-2 Medical and
EN 61326 Laboratory Equipment Test Regimens Offering a
Competitive Alternative to OEMs with Wide Product Lines
- Dedicated Workstations, Automated Antenna Mast and Turntable
- Expert Advice, Diagnostics and Prequalification Testing Available
- Audio Noise and Component Measurements, fully networked office
- Single and Three Phase Power Available, 40-500 Hz, 5000 watts
- Customized Care for Professional Engineers, IEEE Supporter/Member
- Our 15th Year of Service to Medical and Commercial OEMs
- Measurements Range, DC-60 Ghz, Dual Screen Rooms





Master of Science in

Computer Network Systems

ATTAIN TECHNICAL MASTERY—AND SO MUCH MORE

- Learn WANs, LANs, JAVA programming and more
- Develop your understanding of management fundamentals
- Analyze—and meet—the technical needs of organizations
- Master the theory and practice of team building
- Enhance your critical thinking and communication skills
- Complete your master's degree in two years—in evening classes—on a beautiful, easy-to-access suburban campus

Learn more about Elmhurst College:
The School for Advanced Learning
190 Prospect Avenue, Elmhurst, IL 60126
(630) 617-3300 or (800) 581-4723
sal@elmhurst.edu www.elmhurst.edu

