



# Scanfax

OCTOBER, 1997

*Institute of Electrical & Electronics Engineers  
Chicago Section Newsletter*

## Technical Programs

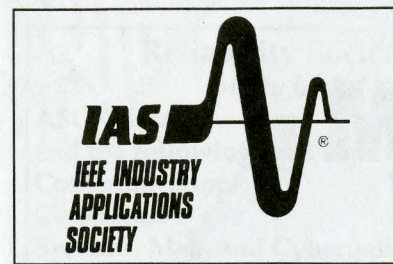
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October 30 to November 2
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Electromagnetic Vector-Sensor Processing  
Wednesday, October 22

**Chicago Section Business Meeting-All Welcome**

**Tuesday October 14 • 7:15 PM**

**DeVry DuPage Campus • 1221 N. Swift Road • Addison, IL**

**Visit the Chicago Section Home Page at <http://ieeefnal.gov>**



## Electrical Distribution System Selection Considerations

Anil Ahuja  
Vice President  
Environmental Systems Design

Wednesday, October 29, 1997

|                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                     |
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| <b>SCANFAX</b> (ISSN 0018-1297) <b>October 1997</b> , Volume 49, No.8. Published by the Chicago Section, Institute of Electrical and Electronics Engineers for its members. Published monthly, except July and August. Third class postage paid at Glen Ellyn, IL. Unless specified, Chicago Section IEEE neither endorses nor sanctions any positions espoused in SCANFAX or at meetings. |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                     |
| <b>BUSINESS OFFICE</b><br><br>IEEE Chicago Section<br>c/o Electric Association<br>1919 Swift Drive, Suite 121<br>Oak Brook, IL 60521-1502<br>800 898 4333<br>630 964 4333<br>FAX: 630 575 8049                                                                                                                                                                                             | <b>CHAIRMAN</b><br><br>Irwin Smiley<br>CTE Engineers<br>303 East Wacker Drive<br>Chicago, IL 60601<br><br>i.smiley@ieee.org                                                                                                                                                                                                                                                                                                                                  | <b>EDITOR</b><br><br>Judy Gemperline<br>20650 Elizabeth Ave.<br>Prairie View, IL 60069<br><br>j.gemperline@ieee.org |
| <b>MEMBERSHIP &amp; CHANGE OF ADDRESS</b><br>IEEE Member Services: 800 678 4333<br>member.services@ieee.org<br>IEEE Service Center,<br>445 Hoes Lane<br>Piscataway, NJ 08854-4150<br><br><b>Scanfax change of address- contact business office</b>                                                                                                                                         | <b>SUBMITTAL DEADLINES</b><br><b>Dec. issue: Oct 21. Jan. issue: Nov 24.</b><br>Submit text of announcements electronically to the editor at scanfax@ieee.fnal.gov. Announcements submitted to this address will also appear on the Chicago section Web site. Announcements not submitted electronically are due 1 week earlier than the above deadlines and will not automatically be posted on the Web.<br><b>ADVERTISEMENTS: Contact business office.</b> |                                                                                                                     |

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### Place

Como Inn  
564 N. Milwaukee Avenue  
Chicago, Illinois

### Time

|           |              |
|-----------|--------------|
| 5:30 p.m. | Social       |
| 6:30 p.m. | Dinner       |
| 7:00 p.m. | Presentation |

Cost: \$20 includes the presentation and your choice of chicken or pasta for dinner.

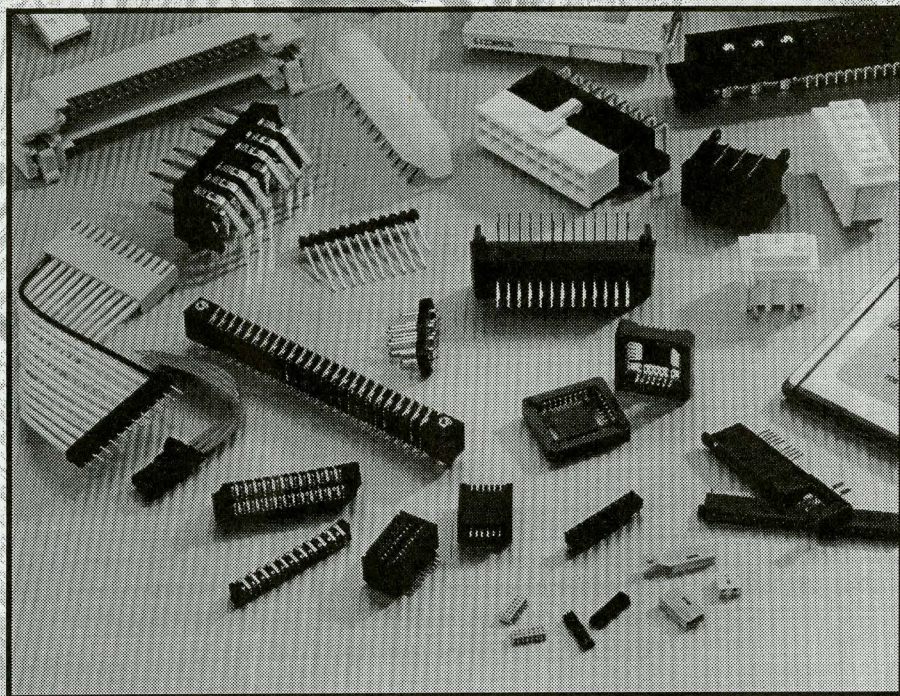
For reservations: Please call the IEEE Business Office at (800) 898-IEEE with your entree preference.

## Future meetings:

|                   |                                                                                                                                 |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------|
| November 19, 1997 | Circuit Breaker Selection and Application:<br>Comparison of Molded Case, Insulated Case and Power Circuit Breakers Applications |
| January 28, 1998  | Transformer Selection and Application:<br>Comparison of Liquid, Dry and Cast Coil Type Transformer Applications                 |
| March 25, 1998    | Application Considerations for Variable Frequency Drives (Low Voltage)                                                          |
| April 22, 1998    | Application Considerations for Variable Frequency Drives (Medium Voltage)                                                       |
| May 13, 1998      | Stand-By, Co-Generation and Peak Shaving Power Applications                                                                     |

Note: Attendance at IEEE Technical Meetings are acceptable as one P.D.H. (Professional Development Hour) per meeting, where continuing education is required for renewal of the P.E. License.

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## Reliability Society

*jointly with*

ASQ Chicago  
and the following IEEE entities:  
Communications  
Computers  
Systems, Man, and Cybernetics  
Engineering Management/Professional  
Communication  
Components, Packaging, and  
Manufacturing Technology  
Northwest Subsection  
Fox Valley Subsection

## Enhancing Operational Reliability in Complex Systems

**David Metschke**  
Senior Project Engineer  
Northrop Grumman Corp.

**Thursday, October 9, 1997**

### About the Topic

Modern defensive electronics systems for military applications are driven by conflicting requirements. Specifications call for increasing functionality, architectures that enable future growth, and enhanced diagnostics capabilities - all of which increase complexity and failure rates. Concurrently, the military wants higher reliability and lower life cycle costs. Cutting the Gordian knot requires a fresh look at operational usage of circuits, understanding physics of failures and applying that understanding to one's advantage, and different system configurations to enhance thermal performance. This presentation looks at some new approaches to improving reliability performance.

### Place

Wyndham Garden Hotel  
1200 North Mittel Blvd.  
Wood Dale, IL.

### Time

|         |                          |
|---------|--------------------------|
| 6:00 PM | Social Hour /Cash Bar    |
| 7:00 PM | Dinner (\$16)            |
| 8:00 PM | Presentation (no charge) |

**Dinner entree:** Chicken Sesame or Top Sirloin Beef Brochette or Vegetarian. All entrees include salad, dessert, etc. The \$16 dinner cost includes gratuity.

**Directions:** Exit I-355 (IL53) at Thorndale Road, go East 2 miles and turn left onto Mittel Blvd. (Don't go to the Wyndham Hamilton Hotel, which is on Thorndale Road immediately East of I-355.)

**For Reservations:** Reservations are required. Call the IEEE Business office at (800) 898-IEEE by noon, Monday, October 6, 1997 and indicate your entree preference. Bring a friend!

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## Fox Valley Subsection and the Society of Automotive Engineers joint meeting

### Designing Chrysler's 2.7L V6 Engine

Al Coopland

Manager, Engine Assembly Plant  
Kenosha, WI

**Tuesday, October 14, 1997**

#### Place:

Itasca Country Club  
400 East Orchard Street  
Itasca, IL  
(630) 773-1800

#### Time:

Social: 5:00 p.m.  
Dinner: 6:00 p.m.  
Presentation: 6:45 p.m.

#### Cost:

SAE Members: \$17.00/ IEEE Non-Members: \$20.00. for dinner.  
Presentation is free.

**Coffee Talk Topic:** Reverse Engineering in Automotive Applications  
Speaker: Adam Szczotka, Gaspardo Engineering

Computer Society  
and  
Fox Valley Subsection  
jointly with  
The Society of Women Engineers  
present

## SAP R/3: Benefits, Challenges and Future Directions

Ms. Kristen Cruther  
Waterstone Consulting

**Wednesday, October 29, 1997**

#### About the topic

With their flagship R/3 System, SAP Inc. has grown to become the world's largest supplier of business application software. What has made SAP so successful? What does the future hold for R/3? Our session will provide a comprehensive discussion of these issues and will use recent case examples to focus on:

- Definition of SAP R/3
- Benefits of using R/3
- Challenges of implementing R/3
- R/3 trends and directions

#### About the speaker

Kristen Cruthers is a manager in Waterstone Consulting's enterprise resource planning practice. She focuses on SAP integration projects and has been helping clients implement SAP R/3 since its initial release. Ms. Cruthers specializes in the customization of SAP R/3 including the incorporation of third-party software.

#### Place

Lucent Technologies  
2000 N. Naperville Rd  
Naperville, IL 60566

#### Time

7:00 p.m. Networking Social  
7:30 p.m. Presentation  
Presentation is free.

#### Directions

Lucent Technologies is located at the northwest corner of Warrenville and Naperville Roads. When you enter the building, company security will provide you with a visitor's badge and directions to the meeting place.

#### For reservations

Please call the IEEE Business office at 1-800-898-IEEE.

#### For more information

Contact Adrienne Novick, Chair of Computer Society, at (630)713-4362.

## M.S. in operations and technology management

This graduate program, designed to advance the careers of experienced working engineers and other technical professionals, applies business and management concepts directly to the areas of operations, manufacturing, TQM, logistics, R&D, new product development, and MIS.

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The program consists of 12 courses offered on Saturdays, over an 18 month period, in Great Lakes, Illinois. Applications now being accepted for the next entering class.

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- Logistics & Supply Chain Management
- Modeling & Simulation for Business Decisions
- Managerial Accounting
- Probability & Statistics for Business Decisions
- Financial Management & Control

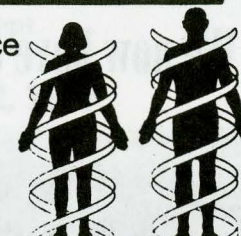
### Stuart School of Business Illinois Institute of Technology

565 West Adams Street, Chicago, Illinois 60661-3691

For additional information, contact Professor Joel Goldhar,  
312-906-6526.

On October 30, 1997, the Biomedical Engineering Community will gather in Chicago

## 19th Annual International Conference IEEE/EMB SOCIETY Chicago USA



EMBS'97

30 October to 2 November 1997

"Magnificent Milestones and Emerging Opportunities in Medical Engineering"

Plan now to attend EMBS'97. The venue for the conference is the Chicago Marriott Downtown, located along Chicago's Magnificent Mile, in the middle of world class shopping, restaurants, and cultural events.

The technical sessions will include both poster and platform sessions. Posters will be prominently displayed in the Grand Ballroom, along with the Exhibits and Coffee Break Areas. Meeting topics include:

- Cardiovascular System
- Imaging/Image Processing
- Clinical Engineering
- Medical Informatics
- Neuromuscular Systems
- Physiological Systems
- Instrumentation, Sensors, Devices
- Signal Processing
- Electromagnetic Issues
- Developing Areas

A number of mini-symposia will be held in parallel with the technical sessions and over the lunch hours. In addition to the technical sessions, many pre-conference workshops are being planned, which will be held on October 28 and 29.

Students, please note there will be an IEEE/EMBS Whitaker Foundation Student Paper Competition, and an Undergraduate Student Design Competition.

Web Update: <http://www.eecs.uic.edu/~embs97>

email: [embs97@ieee.org](mailto:embs97@ieee.org)

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**Antennas & Propagation  
and  
Microwave Theory &  
Technique  
joint chapter**

**Electromagnetic Vector-  
Sensor Processing**

**Prof. Arye Nehorai**  
University of Illinois at Chicago  
Electrical Engineering/ Computer  
Science Dept.

**Wednesday, October 22, 1997**

**About the topic:**

A new approach for identifying electromagnetic sources using sensors that measure the complete EM field will be presented. The unknown source parameters include its direction and polarization. Quality measures for analyzing estimates of these parameters, including mean-square angular error and covariance of wave-frame error will be introduced. The advantage of using vector sensors is highlighted. A simple algorithm for estimating the source direction will be proposed and its statistical performance discussed. Identifiability results for multiple sources are shown.

**About the speaker:**

Arye Nehorai received the Ph.D. degree in Electrical Engineering from Stanford University in 1983. From 1985 to 1995 he was a faculty member with the EE department at Yale University. In 1995 he joined the EECS department at UIC as a full professor. Dr. Nehorai has been an Associate Editor of several journals, including the IEEE Transactions on Acoustics, Speech and Signal Processing, and the IEEE Transactions on Antennas and Propagation. He is a Fellow of the IEEE and of the Royal Statistical Society.

**Place**

Northrop Grumman  
600 Hicks Road  
Rolling Meadows

**Time**

|         |           |
|---------|-----------|
| Social  | 6:00 p.m. |
| Dinner  | 6:30 p.m. |
| Meeting | 7:00 p.m. |

Please arrive between 6:00 and 6:30 PM. You can purchase hot entrees, pizza, and beverages in the cafeteria.

**For reservations**

Please email, call, or fax Professor Feinerman at feinerma@uic.edu, 312-996-2313, or 413-0447 (fax) by Friday, October 17. Northrop security will need your citizenship, spelling of your name, and a phone number. Directions and admission procedures will be provided. **If you don't RSVP security will not allow you into the building !!!**

Contact Prof. Feinerman, if you want your name added to the APS/MTT electronic mailing list.



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and other information or call the  
IEEE Chicago Section Business  
Office at 630 964 4333.**

