



FEBRUARY 1996



National Engineers Week.

February 18-24, 1996

Chairman's Message

Greetings!

It's February already. We survived the Blizzard of 1996. Time saved from frequent shoveling has been applied to three pressing Section Activities:

1. National Engineers Week Activities,
2. Identify, Select, and Award and
3. Thinking, Understanding, Belief, Conjecture.



Jack Sherman

National Engineers Week

February is devoted by most engineering groups to promoting the understanding of what engineers do, among businesses, academics, schools (elementary through high school), civic entities, and households. Elsewhere in this issue of Scanfax are items describing the activities planned. Please plan now to map their needs onto your plans.

The birthdays of three giants in our culture are celebrated in February. The earliest of the three is the Roman Martyr St. Valentine, who is associated with the dedication of February 14th to love and lovers. Scheduling of technical and business meetings for that day can have far reaching negative consequences.

President Lincoln has the next day to be recognized. Although a lawyer by trade, he showed a remarkable ability to engineer and identify critical variables and optimize the conditions to bring the system under control.

George Washington was a Land Surveyor, from which we have our landed property under control. The registration of Professional Engineers is critical to maintaining efficient control of our daily hazards. We introduce engineering to our students by planning a full week of activities involving them in engineering. There are almost forty engineering societies involved with thousands of students.

Identify, Select, and Award

February is the preparation month for our Section's April 27th Annual Award Banquet. We identify individuals, businesses, and academics who have reached out to further the principles upon which IEEE was founded, and who, by their example, show us how to grow, to learn, and to produce.

A number of special awards are the responsibility of the Section Chair. Please look around where you do your engineering and identify someone. Write a brief explanation of your selection and fax or mail it to our section office.

Thinking, Understanding, Belief, Conjecture

These are the Plato four levels of something. I caught them running through my mind recently. The photo above was taken on the occasion of a discussion at a revered marketplace of ideas. Do the four have any relevance to what is happening with our present analyses of our employment and career utilization?

Regards,

Jack Sherman, IEEE Chicago Section Chair — j.sherman@ieee.org; ieechi@aol.com

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Chicago Section Executive Committee Meeting

February 13, 1996 • 7:15 PM

DeVry • 1221 N. Swift Road • Addison, IL

SCANFAX (Publication) Number (ISSN 0018-1297), **February 1996**, Volume 48, Number 6, SCANFAX is published monthly (except July and August) by the Chicago Section Institute of Electrical and Electronics Engineers for the information of its members. 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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Articles for April '96 Scanfax due February 22.
Articles for May '96 Scanfax due March 28.
Submit articles to Editor.

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Call the Chicago Section Business Office at 800/898-4333.



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IEEE CHICAGO SECTION ANNUAL AWARD BANQUET

Saturday, April 27, 1996

Starlight Inn
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At Mannheim and Lawrence Avenues*

COCKTAILS: 6 P.M.

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DINNER: 7 P.M.

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Wine, Main Entree,
Coffee and Dessert

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Wayne C. Luplow of Zenith Corporation
Majid Sarrazzadeh of Northwestern University
Jeffrey J. P. Tsai of the University of Illinois at Chicago

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IEEE POWER ENGINEERING SOCIETY

Welcomes You
to a
Luncheon
Program

SUBSTATION AUTOMATION TRENDS

Presented by
David Carty of Square-D Company
Wednesday, February 14, 1996

ABOUT OUR TOPIC

With deregulation, electric utilities are being pressured to cut operation and investment costs. At the beginning of the 1990's, studies and pilot systems were commissioned to assess benefits and costs of automating substations. Advances in communication technology and lower hardware prices made solutions more affordable. The pilot system phase continues to extend out, with a breakout of multiple substation projects still somewhere off in the future.

This talk will examine strategies in the early 90's, the changes that brought us to the present and expectations for the remainder of the decade.

ABOUT OUR SPEAKER

David Carty is a Marketing Manager of Substation Automation with Square-D Company, responsible for marketing strategies driving the future direction of substation automation. His most recent project work has been that of Coordinator of Automation on the Commonwealth Edison "Concept Substation" project.

David is a registered PE in the State of Pennsylvania and holds BSEE and MBA degrees from the University of Virginia and Temple University, respectively. He is an IEEE member, and recently participated in an EPRI (Electrical Power Research Institute) project task force charged with defining application program interfaces used in control center energy management systems.

PLACE

Chicago Bar Association
321 S. Plymouth Court
Chicago, IL
(Near Jackson and Dearborn)

TIME

Social 11:30 AM
Lunch..... 12:00 PM
Presentation 12:30 PM

NOTES

Lunch tickets can be purchased in the Chicago Bar Association Shop on the first floor for \$8.50.

FOR RESERVATIONS

Please call the IEEE Business Office at (800) 898-IEEE to make your reservation no later than noon, Monday, February 12th.

Contact Sam Peach at (815) 942-2920 x3866.

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COMMUNICATIONS STANDARDS FOR MEDICAL INSTRUMENTATION AND COMPUTERS

Presented by
Dr. Connie Kelly of Eagle Innovations, Inc.

Monday, February 19, 1996

ABOUT OUR TOPIC

With the evolution of computers and intelligent medical devices has come a need for efficient communication among hospital systems of all types. The development of medical data communication standards is integral to the success of these efforts. Such standards allow a modular approach to be used, enabling the interconnection of disparate systems at a reasonable cost to the user.

Dr. Kelly will provide an overview of the process for defining standards and some of the standards currently being developed for medical information systems. In addition, she will discuss the unique challenges of the hospital computing environment and the implications for design engineers.

ABOUT OUR SPEAKER

Dr. Kelly is currently Manager of Product Services and Development for Eagle Innovations, Inc., where she develops resilient adaptive interface systems for hospital computer systems. She has been involved with hospital computing for 25 years, and with the creation of medical standards for the past fifteen.

As a founding member and subcommittee chair of IEEE project 1073 (Medical Information Bus), she has worked with both vendors and users to define medical computing interface standards. She has also worked on the IEEE 1157 (MEDIX-Medical Data Model and Interchange specifications) since its inception.

PLACE

Northwestern University
Technological Institute
2145 Sheridan Road
Evanston, IL

TIME

Presentation 7:00 PM

FOR RESERVATIONS

Please call the IEEE Business Office at (800) 898-IEEE to make your reservation no later than 5:00 PM, Thursday, February 15th. Travel directions and meeting room number will be provided by the office.

**Twelfth Annual
DuPage Area
Engineers' Week Program**

**Community Forum on
Science & Technology**

**"Entrepreneurship
and
Security"**

by Jack L. Bishop, Jr.
consultant to governments and businesses

**Thursday, February 22, 1996
7:30 P.M.**

*Daniel F. and Ada L. Rice Campus
Illinois Institute of Technology*

*201 East Loop Road
Wheaton, IL
by reservation: 708.682-6008*

The Community Forum

Shakespeare wrote that "it is not in our stars, but in ourselves if we are underlings," suggesting individual accountability for one's fate. In past years, people looked to the lord of the manor or the prince for security. In recent time, employment with a major corporation provided lifetime economic security in the United States. The decade of the 80's ended with the destruction of the insecurity born of the cold war, while destroying the security offered by the state (in the Soviet Union) and the megacorporation (U.S.).

Security is an absence of doubt, anxiety, or fear. . . Many people around the world are finding security not in the skirts of a corporation or government, but in the strength of their own skills and intellect. Entrepreneurism, long associated with risk, is becoming the bedrock of security.

Join Jack L. Bishop in a provocative discussion about business, technology and the risk-taker. With thirty years experience of developing technology-based businesses from China to the Middle East and eastern Europe, Jack brings a unique perspective which challenges the illusion of job security common to most American workers.

The format of the *Community Forum on Science & Technology* offers an uncommon opportunity to learn, ask and debate issues fundamental to the well-being of the United States.

The Forum Leader

President of Bishop Associates in Chicago, Jack Bishop has held positions in economic planning and technology applications, including presidency of the Nebraska Research & Development Authority and Director of the Northwestern University Technology Innovation and Commercialization Center.

Among his many accomplishments are a program for business strategy development to support privatization in Uzbekistan and design of entrepreneurial development programs for Egypt, Thailand, Slovenia and Korea. A computer software business grew from concept to \$2.5million in venture financing under his leadership.

Jack received a B.S. in Chemical Engineering from the University of Colorado and has a Ph.D. in Business from the University of Illinois.

Spotlight on National Engineers Week in Chicago • February 18 - 24, 1996

IEEE Chicago joins with the IEC, the Illinois Engineers Council, ISPE, the Illinois Society of Professional Engineers, NEW, the National Engineers Week, and lots of local schools and colleges, to bring engineering activities to the minds of our elementary and secondary school students, their teachers and their parents. These efforts are supported by forty different engineering disciplines, in hands-on activities, presentations and discussions.

If you know of a school that is not involved this year, leave a message at our Section Business Office and we will see what can be done for next year.

The activities gather to commemorate the birthday of George Washington, our country's first "engineer". They represent the work of hundreds of volunteers as presenters, arrangers, discussants, parents, teachers, and administrators.

Future Cities had forty-seven schools signed up, competing by presentation of their concepts of a future city using software called Sim City. This year it was held at the University of Illinois at Chicago on Saturday, January 20th. Winners go on to a presentation in Washington, DC.

ISPE sponsors Discover "E" campaign. It conducts hands-on activities by visiting classrooms to show students how math, science, and engineering create the world around them, as well as introduce them to emerging technologies. For information, call Jim McLean at (312) 368-3745.

IEC will have its annual Engineers Week Luncheon at the Hyatt Regency, 151 East Wacker, Chicago, on Friday, February 23rd. Emcee is Anne Kavanaugh, FOX News, Chicago. Dr. Leon Lederman will speak on Leadership and Creativity. For information, call Walt Linzing at (312) 831-3023.

In the DuPage area, the Illinois Institute of Technology will be holding a National Engineers Week Program at IIT Rice Campus in Wheaton. On Thursday, February 22nd at 7:30 PM at the campus, Jack Bishop will talk about "Entrepreneurship and Security". See the announcement in this issue on page 8.

On Friday, February 23rd, IIT will host a student field trip. And on Saturday, at the campus, IIT will feature an open house for your family, where there will be exhibits and talks on the Interactive Sessions on Earthquake Engineering, Cryogenics, Wind Tunnel Testing, Biomedical Engineering, Design for the Environment, Integrated Telephone and Cable Options, Robots and Toys, Smart Cars and Smart Highway Systems, Geiger Counter Hunt, a Rube Goldberg contest, Rubber Band Launchers, Boat Build and Load Challenge, and a Commemorative to the late Marvin Camras' Work on Magnetic Audio and Video Recording. Call IIT to register for their free program at (708) 682-6008.

From Jack Sherman, Chicago Section Chair

IEEE
CHICAGO
SECTION

Invites You
to the
Washington
Awards
Dinner
Banquet

WASHINGTON AWARD DINNER BANQUET WILSON GREATBATCH TO RECEIVE THE WASHINGTON AWARD

Founded by John W. Alvord
Administered by the Western Society of Engineers
Sponsored by the IEEE

Tuesday, February 20, 1996

ABOUT OUR EVENT

Wilson Greatbatch, the inventor of the implantable cardiac pacemaker, and President and CEO of Greatbatch Ltd., has been elected to receive the 1996 "Washington Award", one of engineering's prized national awards.

Mr. Greatbatch has registered over 150 patents.

In 1983, the National Society of Professional Engineers chose the pacemaker as one of societies ten greatest engineering contributions during the past fifty years.

In 1988, Mr. Greatbatch was inducted into the National Inventors Hall of Fame in Akron, Ohio.

A feature article in the March 1995 Issue of IEEE Spectrum details the life and professional accomplishments of Mr. Greatbatch.

The Washington Award will be presented to Mr. Greatbatch during National Engineers Week.

The IEEE is a sponsor of this annual event.

The IEEE Chicago Section, in showing support of this prestigious award, is arranging tables for our members so we can be seated together.

PLACE

Union League Club
65 W. Jackson Blvd.
Chicago, IL

TIME

Social	5:30 PM
Dinner	7:00 PM

NOTES

Tickets are \$60.00 each.

FOR RESERVATIONS

Please call Dennis Lamont at (708) 398-4510.

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EMC TALES FROM THE TRENCHES

Presented by
Society Chapter Members

Wednesday, February 21, 1996

ABOUT OUR TOPIC

EMC Society chapter members said they wanted it, so here it is!

— EMC TALES FROM THE TRENCHES —

These have been popular meetings in the past, in which our peers get up and discuss actual EMC episodes involving unusual, difficult, or just downright interesting problems and how they were solved.

These presentations have come both from our chapter membership and from consulting colleagues. This meeting will feature speakers from our chapter relating their tales.

Come and hear, we think you will find it interesting, entertaining, and even useful!

PLACE

AT&T Bell Laboratories
2000 N. Naperville Rd.
Naperville, IL
(708) 979-2000

TIME

Social	7:15 PM
Presentation	7:30 PM

NOTES

Refreshments will be served at 7:15 PM.

DIRECTIONS

Bell Labs is located at the northwest corner of Warrenville Rd. and Naperville Rd. To enter, go west on Warrenville Rd. to the first turn on the right. Enter the drive and again take the first right into the parking lot. To enter the building, go to the center of the southeast side near the flag poles.

FOR RESERVATIONS

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AN UPDATE ON PCS: BUSINESS AND TECHNOLOGY ISSUES

Presented by
Prakash Panjwani of Motorola
Wednesday, February 28, 1996

ABOUT OUR TOPIC

This presentation will introduce the audience to the world of Personal Communications Services (PCS). Starting with a definition and what PCS means to various industry players, the presentation will focus in on some of the key aspects pertaining to PCS. These include the frequency auctions, air interface technologies, and network architectures.

A significant amount of PCS-related activities are focused in standards bodies (national as well as international) as a precursor to PCS becoming a reality. This presentation will cover these activities, providing insights on relationships between the standards bodies. In addition, the presentation will provide the latest information available on how the PCS market is developing in the United States (e.g., who are the major PCS players, which technologies they are choosing, etc.) and how it may impact the wireless industry in the future.

ABOUT OUR SPEAKER

Prakash Panjwani is currently Senior Systems Engineer with the Cellular Infrastructure Group at Motorola, Arlington Heights. He is an active participant in standard bodies, such as T1S1 and TR45. He has played a key role in defining "Generic C" (a potential network architecture solution for PCS) industry standards. He holds a BSEE from Columbia University, New York and a MS in Information Networking from Carnegie Mellon University, Pittsburgh.

PLACE

Jerry Sharko's
2225 Ogden Ave.
Lisle, IL

TIME

Social 6:00 PM
Dinner 7:00 PM
Presentation 8:00 PM

NOTES

Dinner costs \$15.00 per person and the presentation is free. Dinner menu includes Garden Salad, Dinner Rolls, Family Style Entree, Coffee, and Dessert. Dietary and vegetarian meals can be requested when you make your reservation.

FOR RESERVATIONS

Please call the IEEE Business Office at (800) 898-IEEE to make your reservation.

FOR FURTHER INFORMATION

Contact Dr. Weider Yu at (708) 224-4511.



VTS LAND TRANSPORTATION DIVISION

INVITES YOU TO ATTEND THE

1996 ASME/IEEE JOINT RAILROAD CONFERENCE

Oak Brook Hills Hotel and Resort
Oak Brook, Illinois
April 30 - May 2, 1996

The Joint Railroad Conference has been an important technical forum for the presentation of American railroad and rail transit technology for the last 37 years. This historic conference is sponsored jointly by the American Society of Mechanical Engineers Rail Transportation Division and the Institute of Electrical and Electronics Engineers Vehicular Technology Society Land Transportation Division. Its focus is on new technologies, design concepts and maintenance practices to improve the quality, reliability, safety and cost effectiveness of rail transportation. The two/three day format of technical paper presentations in a world class, yet moderately priced resort provides a low cost solution to keeping abreast of technical issues and developments in the industry.

In addition, the Conference provides an ideal environment to exchange ideas and experiences with engineers and maintenance personnel of rail transit authorities and rail transportation properties. Subjects include train control and signaling, traction power systems, vehicle/wheel/rail interaction, vehicles design, drive systems, trucks and suspension systems, communications and systems integration. Manufacturers and consultants are well represented, presenting papers on the emerging technologies that will enable rail service providers to offer more cost effective rail transit and transportation in the coming decades.

The Conference will be held at the Oak Brook Hills Hotel and Resort, which features an 18-hole championship golf course, tennis and racquetball facilities, jogging path and fitness center. A block of rooms has been reserved for the Conference at special rates of \$110 single and \$120 double. Contact the hotel directly at 708-850-5555 no later than April 10, 1996 to make room reservations.

The Full Conference Fee is a bargain at \$225, which includes the technical tour, two luncheons, refreshments and a copy of the proceedings. Contact Bob Moore, De Leuw, Cather, 525 West Monroe St., Chicago, IL 60606, (Phone) 312-930-5100, (FAX) 312-930-0018 for copies of the registration form and preliminary program. Paper abstracts are printed in advance in the January issue of VTS News.

**IEEE
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*with Fox Valley
Subsection, VTS,
CMPT, SMC, and
Communications
Societies*
Welcomes You
to an Evening
Program

BAYESIAN RELIABILITY ANALYSIS

Presented by
Dr. Leonard Lamberson of
Western Michigan University

Thursday, February 29, 1996

ABOUT OUR TOPIC

Bayesian analysis has been applied in business decisions for several years and is becoming an acceptable way to incorporate subjective belief into the decision making process. This bayesian approach has also been applied to product reliability evaluation and estimation. The attraction is less testing and related costs; however, risks are still present.

This talk will introduce bayesian analysis in reliability estimation and will point out the advantages and shortcomings.

ABOUT OUR SPEAKER

Dr. Leonard Lamberson is Professor and Dean of the College of Engineering and Applied Sciences at Western Michigan University in Kalamazoo, Michigan.

PLACE

Jerry Sharko's
2225 Ogden Ave.
Lisle, IL

TIME

Social 6:00 PM
Dinner 7:00 PM
Presentation 8:00 PM

NOTES

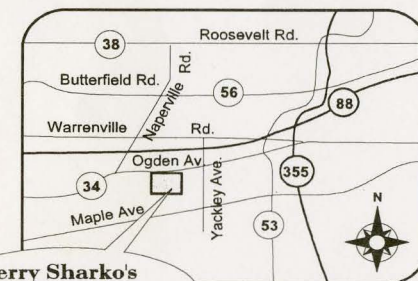
Dinner costs \$15.00 per person and will include an entree, plus dinner rolls, salad, coffee, and dessert. Complimentary beverages will be available from 6:30 to 7:00 PM. Dietary and vegetarian meals can be requested when you make your reservation.

FOR RESERVATIONS

Please call the IEEE Business Office at (800) 898-IEEE to make your reservation.

FOR FURTHER INFORMATION

Contact Ed Walbridge at
(708) 445-0117.



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