



THE POCKET SCOPE



The Institute of Electrical and Electronics Engineers, Inc.

Volume 53, Number 6

February 2003

SCOPE NOTES

DATE CHANGE

February Houston
Section News

Where:
HESS (Houston Engineering and
Scientific Society)
5430 Westheimer@Yorktown

When: Wednesday, February 26,
2003

6:00 - 6:30 p.m. Social
6:30 - 7:30 p.m. Dinner
7:30 - 8:30 p.m. Speaker

Cost:
\$FREE - IEEE Members with 48-hour
advance reservations.
\$20.00 - non-members
\$5.00 - students
Call (713) 207-IEEE to make your res-
ervations.

See Page 2 for
the Continuing
Education
Schedule!

IEEE WEB
ADDRESS
[http://
\(www.ieee-
houston.org\)](http://www.ieee-houston.org)

IEEE Houston Section
P.O. Box 460014
Houston, Texas
77056-8014

The Chairman's Message



Dwayne Lowry

Our first Section meeting of the year will be held at the Hess Building on February 27. Daleep C. Mohla will make a presentation titled "The IEEE Process for Developing Standards". Mr. Mohla, who just recently retired from Dow Chemical after 27 years, will provide a step by step account of the requirements set by IEEE to generate one of their Standards. It should be an interesting and informative session.

It was mentioned in this column a couple months back that the membership in the Houston Section grew by almost 10% in 2002 to over 4,000. In discussing at our ExCom meeting we believe this growth is due, in no small measure, to the programs that our Chapters and Committees have implemented. These groups have very strong leaders who are dedicated to providing programs and content that is of real value to our membership. But when we submit the reports of our activities back to Corporate (which includes attendance) I'm struck by the number of members who are not taking full advantage of their membership. And I have to wonder why?

The Houston Section has nine (9) Active Chapters: Communications, Computer, Engineering & Medicine & Biology, Industry Applications, Multi-Group Electronics, Power Engineering, Signal Processing, A.M.L.G A&M, and Circuit & Systems. Does your career or interest lie in one of these areas? If it is I urge you to find out what's going on in that area by checking their websites. There are links to almost all of these websites from our website, <http://www.ieee-houston.org>. And if you don't find your interest in this group, go to <http://www.ieee.org/organizations/tab/society.html> and look through the other 28 IEEE Societies. Then come and let us help you start a chapter in the Houston Section. There's money and people eager to help.

It not too early to start making plans to attend the **2003 Region 5 Technical Conference and Leadership Workshop**. The meeting will be held in New Orleans April 11-13. A special reminder to students, the deadline for completing your papers for the paper contest is March 1. Details on all aspects of the the conference are available on the R5 Conference website at <http://www.ieee-neworleans.org/r5conf/index.htm>. It should be another outstanding event.

At a Region 5 Executive Committee meeting I attended the first of February I was amazed to learn that the Central Texas Section nominated 80 senior members last year. They have implemented a program which encourages, and makes it easy for Senior member candidates to complete the process. Your ExCom will look at the possibility of adopting such a program in our Section, but in the meantime, please read the article on Senior Membership on the [News Page](#) of our website and if you're qualified, **contact us now**. The benefits of Senior Membership are many:

Continued on Page 8

IEEE CONTINUING EDUCATION ON DEMAND

2002-2003 REGISTRATION FORM

Name:
 Company:
 Mailing Address: (where certificate will be delivered)
 City/State:
 Zip:
 Email:
 Telephone Voice:
 Telephone Fax:
 IEEE Membership Number:

Mail a copy of your completed registration form along with your check payable to **IEEE CED SEMINARS** at the following address:

IEEE CED SEMINARS
 SANDY CROCKER
 ABB Power T&D Company
 P.O. BOX #42802
 HOUSTON, TX. 77242

Registration receipts will be distributed **at the seminar**.

For a cancellation refund, telephone by the Friday before the seminar:
 Contact Sandy Crocker at (713) 821-4020

IEEE Continuing Education On Demand Completion Certificate with Continuing Education Units (CEUs) is provided after receipt of both nightly questionnaires.

Please check the IEEE Houston Section website for the latest schedule and course information.

[http://\(www.ieee-houston.org\)](http://(www.ieee-houston.org))

IEEE CONTINUING EDUCATION ON DEMAND

The purpose of IEEE Houston Section Continuing Education On Demand is to provide a two-year repeating program sequence of practical industrial power application topics that supplement the daily work activities of the practicing graduate electrical engineer.

The seminars are intended to stimulate further study and discussion for learning continuance throughout the working career. Topics apply to heavy industries: oil and gas, petro-chem, cogen, pulp and paper, etc.

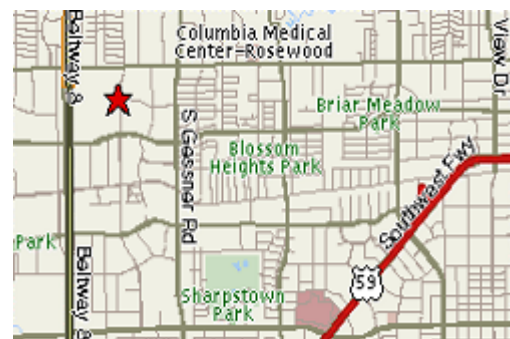
Instructors are application engineers, manufacturing specialists and expert consultants who provide a blend of diverse engineering perspectives.

The cost of each seminar is \$120.00 for IEEE members. "Early Signup" is \$60.00 and the **check must be received the Friday before** the seminar start date. The cost for non-IEEE members is \$200.00. Signup the week of the seminar does not guarantee seminar presentation documents or meals. For IEEE membership application information, contact Sandy Crocker at (713) 821-4020.

The following 2002-2003 seminar schedule defines the topics, dates and times. A course syllabus is available on request. Minimum class size is twenty for each seminar. Seating is limited and filled on an as received basis. Presentation documents are provided. A buffet is served from 5:00PM-6:00PM.

Seminar location:

ABB Power T&D Company
 P.O. BOX #42802
 HOUSTON, TX. 77242
 Contact Sandy Crocker
 (713) 821-4020



| Seminar Title | Code | Date | Amount |
|---|------|-------------|--------|
| Residual Bus Auto Transfer System | 111 | Oct. 1/2 | \$ |
| Symmetrical Components | 202 | Oct. 15/16 | \$ |
| Elect. Safety In Ind. Workplace | 921 | Oct. 29/30 | \$ |
| Harmonics Theory And Applications | 502 | Nov. 12/13 | \$ |
| Harmonic Filters | 503 | Jan. 28/29 | \$ |
| CT/PT Application | 308 | Feb. 11/12 | \$ |
| Directional Power Current Relaying | 307 | Feb. 25/26 | \$ |
| Solid-State Starters | 504 | Mar. 11/12 | \$ |
| Relays and Meters Com. Sys. Integration | 112 | Mar. 25/26 | \$ |
| 51V Gen Relay, Standby Gen. & UPS | 316 | Apr. 8/9 | \$ |
| Substation Design Appl. And Fund. | 312 | Apr. 22 /23 | \$ |
| Total Paid: | | | \$ |

Enter amount for each seminar:

IEEE member registration: \$120.00
 IEEE member early signup: \$ 60.00
 Non-member registration: \$200.00

Fall of 2002 IEEE Seminar Schedule

Residual Bus Automatic Transfer System (111)

James Bowen / Roy Cossé, Powell Elect. Mfg. Co.

Oct. 1/2, 2002 6:00-8:50PM

Reviews fundamentals of a traditional transfer scheme. A modern transfer approach provides guidance for enhanced residual transfer scheme applications. [0.5 CEU]

Symmetrical Components (202)

William Nichols, Siemens Westinghouse Technical Services

Oct. 15/16, 2002 6:00-8:50PM

Reviews basic theory and provides application examples for LL, LG, and LGL faults. Unbalanced voltage concerns are also discussed. [0.5 CEU]

Electrical Safety in Industrial Workplaces (921)

James Bowen, Powell Electrical Mfg. Co.

Oct. 29/30, 2002 6:00-8:50PM

Modern industrial facility safety concerns and NFPA70E are discussed. [0.5 CEU]

Harmonic Theory and Applications (502)

David Rice, GE Engineering Services

Nov. 12/13, 2002 6:00-8:50PM

Introduces basic harmonic concepts and typical industrial applications. [0.5 CEU]

Spring of 2003 IEEE Seminar Schedule

Harmonic Filters (503)

David Rice, GE Engineering Services, and Richard Harlow, Phaseco, Inc.

Jan. 28/29, 2003 6:00-8:50PM

Discusses filter design, implementation, and typical application example concerns. [0.5 CEU]

CT / PT Application Seminar (308)

Tony Zhao, Powell Electrical Mfg. Co.

Feb. 11/12, 2003 6:00-8:50PM

Discusses CT and PT ratings, selection criteria, ANSI Std. Ref. and typ. appl. considerations. [0.5 CEU]

Directional Power/Current Relaying & Meters (307)

William Nichols, Siemens Westinghouse Technical Services

Feb. 25/26, 2003 6:00-8:50PM

Reviews typical industrial directional power and directional current relaying applications. Directional metering topics are also included. [0.5 CEU]

Solid-State Starters (504)

Harold Haggarty, Benshaw Inc.

Mar. 11/12, 2003 6:00-8:50PM

Discusses traditional mtr. starting appl. and modern "soft-start" theory, appl. and selection. [0.5 CEU]

Relays and Meters

Communication Systems Integration (112)

Martin Hildreth / Roy Cossé, Powell Elect. Mfg. Co.

Mar. 25/26, 2003 6:00-8:50PM

Reviews modern concepts and reasons for integrating diff. mfg. meters and relays into one communicating system. [0.5 CEU]

Generator 51V Relaying, Standby Generator and UPS Selectivity (316)

Roy Cossé, Powell Electrical Mfg. Co.

Apr. 8/9, 2003 6:00-8:50PM

Reviews MV/LV gen. 51V and stdb. gen. concerns. UPS dist. sys. selectivity is discussed. [0.5 CEU]

Substation Design and Application Fundamentals (312)

Donald Sevcik, Reliant Energy HL&P

April 22/23, 2003 6:00-8:50PM

Reviews theory and appl. design basics. [0.5 CEU]

Guidelines for Applying IEC Standards to Electrical Distribution Systems (801)

Terence Hazel, Schneider Electric France

April 30/ May 1, 2002 6:00-8:50PM

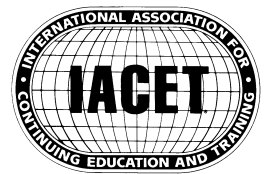
[0.5 CEU]



IEEE
 Houston
 Section

2002-2003

Continuing
 Education
 On Demand



February 19 Freeport Subsection

When: Wednesday, February 19, 2003 6:00 to 8:00 PM

Where: Summit Electric (formally Warren Electric) Clute, TX

What: Recruiter Perspective on the Job Market

Who: Larry Robinson, Senior Consultant

Fortune Personnel Consultants

Summary:

An informal discussion of the current job market, applicable trends in the future, maintaining marketable skills, and other pertinent information shared by an industry headhunter.

Dinner will be provided. Please RSVP to me by Tuesday morning, February 18th by e-mail at gsling@sbcglobal.net or call me at (281) 862-5338 if you will be attending so I can have a headcount for food.

Thanks,
Greg Slingerland, P.E.
Chairman IEEE Freeport Subsection

February 26 Section Meeting "DATE CHANGE"

See the Houston Section web site to conform your reservation.

Title: Presentation on the IEEE Standards Association

Abstract: This presentation will cover an overview of the IEEE Standards Process, including the following: Project Approval, Develop Draft Standards, Ballot Draft, IEEE-SA Standards Board Approval, Publish Standard and Resources

Speaker: Daleep C. Mohla, Dow -Technical Support Group Member with Dow /Union Carbide - 27 years (retired at end of January 2003 to start his own consulting business), BSEE - West Virginia Institute Of Technology , WV, **IEEE/PCIC CONTRIBUTIONS:** Member of IEEE & IAS, IEEE Alternate representative on National Electrical Code Panel No. 5, Member IEEE Standards Board, Chairman IEEE NesCOM (New Standards Committee), IEEE Standards Board Appeal Panel, Member of IEEE grounding Sub- committee and IEEE 142 Green Book , IEEE 141 Red Book, Joint Author of IEEE Prize Paper award on Risk of Ignition due to Transition Currents in Medium Voltage motors, Joint Author IEEE prize paper on Electrical safety By Design, **NFPA CONTRIBUTIONS:** Member NFPA 70 - CMP 5, Member NFPA task Force on Cathodic Protection Committee, Member NFPA task Force on Non-Linear Load Committee, **OTHER PROFESSIONAL MEMBERSHIPS:** National Fire Protection Association (Electrical Section), Process Industry Practices, **LICENSES:** Registered Professional Engineer in the State Of Texas and Province of Alberta (Canada)

Where: HESS Building, 5430 Westheimer at Yorktown

Time: 6:00 - 6:30 PM Social - 6:30 - 7:30 PM Dinner - 7:30 - 8:30 PM Presentations

Cost: Dinner Free for members who register 48 hours prior to the event, \$20.00 for members who do not register 48 hours prior to the event and for non-members; \$5.00 for students (**see the website for more information**)

10th Annual Safety Workshop

***10th
Annual
Electrical
Safety
Workshop***
February 4 – 7, 2003
Westin Galleria Hotel
Houston, Texas

**Electrical Safety Works !
Principles and Practices for
Incident-Free Performance**

Workshops, Tutorials, Exhibits & More...

Founded & Organized by
Petroleum and Chemical Industry Committee
Co-organized by
Power Systems Engineering Committee
and
Pulp and Paper Industry Committee

For More Information Visit the following Website:

http://www.ieee-houston.org/Meetings/2003ElectSoftWkshp_r1.pdf

56th Annual Conference for Protective Relay Engineers

CONFERENCE FOR PROTECTIVE RELAY ENGINEERS
TEXAS A&M UNIVERSITY
College Station, Texas
April 8-10, 2003

The Planning Committee of the 56th Annual Conference for Protective Relay Engineers invites you to attend the conference at Texas A&M University on April 8-10, 2003. The Protective Relay Conference provides a forum for engineers to discuss protection technology and related subjects. Both tutorial presentations on fundamental concepts and papers on new technology are included. The program will include the following:

- ◆ New protection equipment descriptions
- ◆ Relay application ideas and new concepts
- ◆ Case Studies and "Horror Stories"
(When the relays worked - and when they didn't!)

Registration Information: Pre-Registration: \$185 (begins January 2, 2002)
After March 14, 2003 : \$210

Manufacturers: For hospitality suites, please contact Lydia Godfrey at the College Station Hilton and Conference Center at (979) 694-4903

*This conference offers **Continuing Education Credits***

Web site: <http://engineering.tamu.edu/prorelay/>

For Information:

Dr. B. Don Russell
Regents Professor
College of Engineering
Texas A&M University
College Station, TX 77843-3126
(979) 845-7912

For Registration:

Ms. Jacque Hand
Conference Registration
2nd Floor Rudder Tower
Texas A&M University
College Station, TX 77843-1232
(979) 845-7692

In Conjunction with the 56th Conference for Protective Relay Engineers

A

PRE-CONFERENCE SPECIAL OFFERING

"Tutorial on Distributed Generation"

Monday, April 7, 2003...1:30 - 5:00 p.m...College Station Hilton – Brazos Amphitheater

Moderator: Gerald Dalke, Basler Electric

Presenters: Ken Behrendt, Schweitzer Engineering Labs; Dale Finney, GE Power Management; Don Hornak, Basler Electric; Chuck Mozina, Beckwith Electric; and Bob Pettigrew, SGS Witter

This three-hour tutorial will resolve mysteries of Distributed Generation (DG), even if you have limited knowledge of protective relaying. Topics to be presented are: Why DG is a popular yet sometimes controversial topic; Distributed Generator Operating Technologies; P1547 Interconnection Draft Standard progress of approval and it's "Who, What, When and Where" features plus, REC Implementation of DG; Basics of Interconnect Protection and Islanding Detection Methods; Grounding of the Intertie Connection and Real World Application Cases.

Chair Address - Continued

- Professional recognition of your peers for technical and professional excellence.
- An attractive fine wood and bronze engraved Senior Member plaque to proudly display.
- Up to \$25.00 gift certificate toward one new Society membership.
- A letter of commendation to your employer on the achievement of Senior member grade (upon the request of the newly elected Senior Member.)
- Announcement of elevation in Section/Society and/or local newsletters, newspapers and notices
- Eligibility to hold executive IEEE volunteer positions
- Can serve as Reference for Senior Member applicants
- Invited to be on the panel to review Senior Member applications.

And a final thought. The Houston Chapter has a worldwide renowned (inside the IEEE circles) Continuing Education Seminar program with presentations every month. The next one is **CT / PT Application Seminar (308)** on February 11/12. Full details are on our website. And remember, you get .5 CEU for each course

New Senior Members

Congratulations to the recently elected Senior Members from the Houston Section. For a complete list of the new Senior Members see the attached link. www.ieee.org/organizations/rab/md/smupdates.html

**Charles J. Benard
Avery L. Howell, Jr
Mohammed T. Hussein
Duy-Loan Le**

Looking for Senior Member Nominations

READ THIS SECTION TO BECOME A SENIOR MEMBER IN THE IEEE.

A goal of our Region is to sponsor as many Senior Members as possible and I am asking your help. The IEEE criteria for Senior Member status is ten years of professional practice including five years of significant performance, and references. (See the nominator letter and application form for clarification on the IEEE website.) If you know an IEEE member who qualifies for Senior Membership, I would like you to nominate him or her by forwarding their nomination to one of the Houston Section Excom members. If you qualify and are not a senior member please reply to one of the Section Excom members. If your are retired and have met the criteria at one time lets get you nominated. Section meetings are the best networking tool to achieve Senior membership. As an alternative process, you can direct the prospective Senior Member to one of the Houston Section Excom Members. We have a list of several Fellows and Senior Members which we can use for references. The Section will nominate all those qualified who provide a resume and significant performance vita.

Senior Membership in IEEE promotes the value of membership and enhances the status of the member. The is an achievement award lets honor our deserving members.

2003 "Engineer of the Year"

PRESS RELEASE

Release Date: December 13, 2002, 11:30 AM

***"The Houston Engineering Community Has Selected
Mr. Kenneth E. Arnold, P.E. as the 2003 "ENGINEER OF THE YEAR"***

Mr. Kenneth E. Arnold, P.E. has been selected as the 2003 Houston Area "Engineer of the Year". The selection was made by representatives of various Houston engineering organizations and is based on Mr. Arnold's outstanding educational, professional, technical, civic, and humanitarian achievements and contributions. Mr. Arnold will be honored during the nationwide celebration of Engineers' Week and at a formal presentation banquet on Friday, February 21, 2003, to be held at the Doubletree Hotel on Post Oak.

Mr. Arnold graduated from Cornell University in 1964 with a Bachelor of Science degree in Civil Engineering, and from Tulane University in 1967 with a Master of Science degree in Civil Engineering.

Mr. Arnold is the founder, Chief Executive Officer (CEO), and chairman of the Board of Paragon Engineering Services, which serves the oil and gas production and pipeline industries. The company grew from an initial office in Mr. Arnold's house to the current size of 450 staff members with \$57 Million in revenue. Mr. Arnold is also the CEO of Paragon-Litwin in Paris, which employs 450-500 staff members with \$75 Million in revenue, providing both offshore and onshore engineering services.

Previous to Paragon, Mr. Arnold was employed with Shell Oil Company from 1964-1980, serving in various managerial positions including, Offshore Mechanical Engineering Manager, Research Department Manager, and Engineering Manager.

Mr. Arnold is a registered professional engineer in Texas, New York, Louisiana, and New Mexico. His most significant engineering achievements include developing flowsheets and layout for a typical offshore facility which formed the basis for all of Shell Oils' facilities in the Gulf of Mexico for over 15 years; supervised and developed Shell's first set of standard quality specifications and design guidelines for offshore facilities and developed a standard approach to project management of offshore facilities; and developed the technique codified in API Recommended Practices and Minerals Management Service regulations for designing offshore safety shutdown systems.

In addition, in late 1980's through late 1990's, Mr. Arnold helped lead an effort to get the offshore industry to focus on safety management through implementation of hazard analysis and operating Safety and Environmental Management Programs (SEMP). This was accomplished through a series of technical publications and presentations at technical conferences, and instructing several workshops sponsored by API.

In the past 20 years, Mr. Arnold has established and helped nurture one of the 100 largest design firms in the U.S. In 2002, the Houston Business Journal named Paragon as one of the 40 best companies to work for in Houston.

Throughout his career, Mr. Arnold has devoted his time to various engineering and technical organizations. He has been an active member of Texas Society of Professional Engineers, the National Society of Professional Engineers, and Society of Petroleum Engineers. He has also served as an instructor at the University of Houston, teaching Masters Level Petroleum Engineering courses, chaired Technical Subcommittee of the Offshore Operator's Committee, which supervised the writing of the first edition of the API Offshore Safety and Anti Pollution Equipment Standards and Recommended Practices. Mr. Arnold is also the author of two chapters of the *SPE Petroleum Engineering Handbook* and co-author of two textbooks on *Surface Production Operations*. In addition, he has written numerous technical papers on project management, general facility design, produced oil and water treatment, and process safety management. He also has six patents, including the "Subsea Flow Enhancer", "Method for Separating Immiscible Liquid", two for "Water Treating Using a Series Coalescing Flume", and two for "Water Treating Using a Vertical Series Coalescing Flume".

Mr. Arnold's civic and social contributions include serving as a member of the Advisory Boards of Cornell University School of Engineering, Tulane University School of Engineering, and Spring Branch Independent School District Partners in Education. He is also a Group Chair of United Way of Texas Gulf Coast, Premier Division. In addition, he has served as an officer and a board member of various synagogues in Houston and New Orleans including Chair of Education, Ritual, Youth, New Building, and Rabbi Search Committees and is currently on the Board of the Jewish Federation of Greater Houston.

Mr. Arnold has been married to his wife, Ruth, for 25 years and has six children. Mark, 36, is a partner in the Houston law firm of Andrews and Kurth, Mayor, Day, Caldwell and Keeton. David, 34, is a technical writer and proposal manager for Paragon Engineering Services. Zev, 22, is a computer science student at Washington University in Saint Louis and Sarah, 20, is a liberal arts student at Cornell University. Harry, 14, is a freshman in Spring Woods High School and Rebecca, 8, is in second grade at School of the Woods.

The Houston Engineering Community is extremely proud to bestow upon Mr. Kenneth E. Arnold the honor of Houston Area "2003 Engineer of The Year" in recognition of his life long service and contributions to the engineering profession and his community.

EXECUTIVE COMMITTEE HOUSTON SECTION IEEE

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The **Pocket Scope** is the newsletter of the Houston Section of the Institute of Electrical and Electronics Engineer (IEEE). The Houston Section address is: IEEE Houston Section, P.O. Box 460014, Houston, Texas 77056-8014.

The **Pocket Scope** is published eight times a year (monthly, September to May, except December). It is distributed to over 3000 professionals in the electrical engineering field in the greater Houston area.

Advertising rates are listed on the IEEE Houston Section website and include publishing in The Pocket Scope, ad on the website, and within the monthly e-mail update.

IEEE members make change of address notices via the IEEE website: www.ieee.org.

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THE POCKET SCOPE
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