



THE POCKET SCOPE



The Institute of Electrical and Electronics Engineers, Inc.

Volume 53, Number 5

January 2003

SCOPE NOTES

February Houston Section News

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

When: Thursday, February 27, 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 reservations.

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

As sure as the sun rises, I knew this time would come and it has. On January 1, with more than just a little apprehension on my part, the responsibilities of the Houston Section Chairmanship passed from Donald Dunn to me. For the past three years I have been closely involved with the Executive Committee and have had the opportunity to learn more about the size and breadth of this expansive IEEE organization. I've had the opportunity of attending two Region conferences and the International Congress last October in Washington DC. It seems, however, that the more I

learn the more I see how much more there is to IEEE. But with the assistance of an extremely strong, talented and dedicated Executive Committee I'm confident we can continue to be one of the leading Sections in the country.

I'd like to pay tribute to Donald Dunn who has led the Section for the past 2 years. Most Section Chairs serve for a single term, and, from what I'm told, they are ready to pass the reins to their successor. But during his first term a situation arose that broke the normal order of succession of Executive Committee leadership, so Donald cared enough about the Section to stay on as Chair for a second term. During his 2-year tenure several key individuals were added to the Executive Committee who quickly caught the enthusiasm, zeal and commitment to carry on the programs that were initiated in the prior years. We're fortunate that Donald will be with us on the Excom for another year in the post of "Past Chair". (I'm thinking that since he served two terms as Chair he should now serve two terms as "Past Chair" -- but I may not prevail in this effort.)

Thanks, Donald, for your visionary leadership and commitment, from all of us in the Houston Section.

Every well run company or organization establishes goals and objectives which guide where they are going and how they are going to get there. The goals we have established each year have been instrumental in helping us achieve what we have over the past several years. During the January Executive Sessions we will be reviewing and finalizing our 2003 goals and they will be published both in the February PocketScope and here on the website. This is YOUR association and we urge everyone to send us your thoughts and ideas so they can be evaluated for inclusion in our Mission Statement and Goals. We have the opportunity to review our goals with our Region 5 Executive Committee on February 1.

2003 promises to be another exciting year for us. We kick off the general meetings with a very interesting and informative session on IEEE standards. Back as a young electronics technician (far too many years ago) my knowledge of IEEE was mostly about the IEEE standards that guided the electronics world I had entered. 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 will also include the time period allowed and the information of the representatives which must be contacted throughout the process. He is uniquely qualified in this area having served on the Standards Board and various Standards committee. The Section meeting is February 27 at the Hess Building. You get the presentation and the dinner FREE if you register at least 2 days prior to the event. ■

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

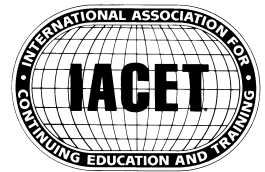
Discusses filter design, implementation, and typical application example concerns. [0.5 CEU]



**IEEE
 Houston
 Section**

2002-2003

**Continuing
 Education
 On Demand**



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

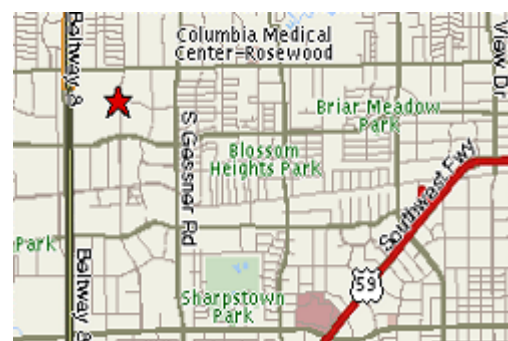
Reviews theory and appl. design basics. [0.5 CEU]

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]



January 9 COMSOC MEETING

The next meeting of the IEEE Communications Society, Houston Chapter will be held Thursday, January 9th, 2003.

Please RSVP via e-mail to [Lee Gaspard](#) by 12:00 Noon Wednesday, January 8th. (Please include your company name.)

Time and date: 11:30 AM to 1:00 PM on Thursday, January 9th, 2003.

Program: "Space Shuttle Cockpit Avionics Upgrade"

Speaker: Todd Smithgall, United Space Alliance

Abstract: The Cockpit Avionics Upgrade (CAU) project addresses these needs with a comprehensive suite of data collection and processing hardware, extensive new access to the vehicle's instrumentation data streams, and new software to recognize, analyze and display vehicle and subsystem performance in such a way as to reduce crew workload during all flight phases and mission scenarios, especially during emergency situations.

Location: Shell Information Center, 1500 Old Spanish Trail Houston, TX

Lunch: Lunch may be purchased at the Shell Information Center cafeteria. We'll plan to eat from 11:30 to 12:00 and enjoy the presentation from 12:00 to 12:45.

PLEASE CHECK THE NEW DRIVING DIRECTIONS!

[\(click here for driving directions\)](#)

Please send e-mail to [Lee Gaspard](#) for more information (including driving and parking directions), or to reserve a seat at the meeting.

February 27 SECTION MEETING

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/2003ElectSaftWkshp_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.

IEEE USA President's Column

Jim V. Leonard, P.E.

2003 IEEE-USA President

President's Column, January 2003

Greetings to U.S. IEEE members. I look forward to serving as your president in 2003.

It looks like our U.S. IEEE membership of about 235,000 is probably only about 25 percent of the market. So my first request is that you join the IEEE Member-Get-A-Member program and sign up at least one new member.

With the terrible events of September 11, 2001, the outlook for the U.S. has drastically changed. We now have a frightful and fanatical enemy. Our government is setting up a homeland security force to help protect us, and IEEE-USA's Technical Policy Council will assist in the effort.

The 9/11 events affected us all. The following week, my aunt and uncle, Anne and Bert Souther, were brutally murdered in their La Habre, Calif., home. The murders are still an unsolved mystery. So, while it's very important for IEEE-USA to plan and support professional careers, it means little if terrorists and other criminals threaten our personal security.

In 2003, we will also look at heroes within IEEE. Our first retreat will be held at the Thomas Edison Museum, named in honor of the man who helped found IEEE. We will also celebrate Pearl Harbor Day there with a visit to meet George Elliott, Jr., an SCR-270B radar operator at the Opana Point (Hawaii) radar site, which first detected the Japanese attack on December 7, 1941. We helped establish the site as an IEEE Historical Milestone during National Engineers Week, 2000.

We hope to hold IEEE-USA Operating Committee meetings at the U.S. Military Academy in West Point, N.Y., and the U.S. Air Force Academy in Colorado Springs, Colo. IEEE has student branches at each one.

In late March, we will hold a Professional Development Conference and IEEE-USA Leadership Workshop at the Seattle Airport Hilton. Please consider sending a PACE representative from each section.

Our CARE program is a grassroots effort to urge U.S. IEEE members to visit their congressional representatives in their home district.

Unemployment among U.S. engineers has climbed steadily over the past several years. We presented our concerns over this and other workforce issues at the National Academies' Pan-Organizational Summit on U.S. Science and Engineering Workforce in November.

We will lobby Congress to restore the yearly 65,000 H-1B visa limit (now 195,000) to help U.S. engineers and computer scientists with increased employment opportunities. And we hope to re-establish IEEE-USA employment assistance at the Section level.

Log on to the IEEE-USA Web site (www.ieeeusa.org) and take a look at our ongoing activities and decide how you, our most valued asset, can help us help you.

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

OFFICERS

Dwayne C. Lowry, D.C. Lowry & Associates, Chairman.....	281-565-2316
Gil Dolor, Lyondell Chemicals, Vice-Chair.....	713-309-2023
Scott Ballew, Lyondell Chemicals, Secretary.....	713-309-7721
Charles Benard, Dow Chemicals, Treasurer.....	713-978-3790
Donald G. Dunn, Equistar Chemicals, Past-Chairman.....	281-452-8809
IEEE HOME PAGE.....	http://www.ieee-houston.org

SOCIETY CHAIRS

Thomas P. O'Brien, United Space Alliance, Communications.....	281-282-5881
Ernst Leiss, U of Houston, Computer.....	713-743-3359
Peri Ktonas, U of Houston, Engr-Medicine & Biology.....	713-743-4429
Julia Dang, Foster Wheeler USA, Industry Applications.....	713-821-5196
Jeffrey Williams, U of Houston, Multi-Group Electronics.....	713-743-4455
John Lucey, Reliant Energy HL&P, Power Engineering.....	713-945-5923
Richard Baraniuk, Rice University, Signal Processing.....	713-285-5132
Dr. Krys Michalski, Texas A&M University, A.M.L.G. A&M.....	979-845-7591
Joseph Cavallaro, Rice University, Circuits and Systems.....	713-527-4719

COMMITTEE HEADS

P.J. Donner, Reliant Energy, Arrangements & Awards.....	713-945-7771
OPEN, Conferences.....	
Raymond Joseph, Aarden Control Engr. & Scien, Consultants Network.....	281-343-1607
Paul Barrett, Fred Oberlander & Associates, Continuing Education-Administration.....	713-680-9659
Roy Cosse, Powell Electric, Continuing Education-Technical.....	713-948-4019
Linda McOmber-Smith, Reliant Energy, Engr Council of Houston.....	713-207-3521
Kristin Morrow, Lyondell Chemicals, GOLD.....	281-862-5138
Ray Schmidt, Lynn Elliott, Membership.....	281-468-2978
John Lucey, Reliant Energy HL&P, Offshore Tech, Conf.....	713-945-5923
John Focke, Powell Electric, PACE.....	713-947-4431
Christy Sweet, ABB, PACE.....	713-821-4019
Justo Benitez, Foster Wheeler USA, Programs.....	713-587-3108
OPEN, Publications and Advertising.....	
OPEN, Student Activities.....	
Jimmy Salinas, SW Bell Telephone, Science Fair Coordinator.....	713-567-8095
Scott Ballew, Lyondell Chemicals, Scholarship.....	713-309-7721

FREEPORT SUBSECTION OFFICERS

Greg Slingerland, Equistar Chemicals, Chairman.....	979-244-7161
Mick Bayer, Dow Chemical, Vice Chair.....	979-238-7911
Larry Williams, Dow Chemical, Secretary/Treasurer.....	979-238-9087

STUDENT BRANCH ADVISOR

Penrose Cofie, Prairie View A&M University.....	409-857-3923
Jim Young, Rice University.....	713-348-4721
Walter Daugherty, Texas A&M University (CS).....	979-845-1308
John Tyler, Jr., Texas A&M University (EE).....	979-845-7508
Rainer Fink, Texas A&M University (ET).....	979-845-5966
Pierre Catala, Texas A&M University (COM).....	979-845-4948
Shahryar Darayan, Texas Southern University.....	713-313-4224
Ovidiu Crisan, University of Houston (EE).....	713-743-4432
Heidar Malki, University of Houston (ET).....	713-743-4075
Tony L. King, University of Houston.....	713-743-4423

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.

Newsletter Staff

Editors: Lisa Nichols-Dunn, 281-426-4784
E-mail:

lknicholsdunn@aol.com

Advertising: 281-426-4784



THE POCKET SCOPE
IEEE Houston Section
P.O. Box 460014
Houston, TX 77056-8014

NON-PROFIT
ORGANIZATION
U.S. POSTAGE
PAID
HOUSTON, TEXAS
Permit No. 6513