



# THE POCKET SCOPE



The Institute of Electrical and Electronics Engineers, Inc.

Volume 52, Number 6

February 2002

## SCOPE NOTES

### February Houston Section News

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

**When:**  
Thursday, February 28, 2002  
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

### Donald Dunn

Our first section meeting for 2002 will be Thursday, February 28<sup>th</sup>, and the speaker will be J.R. Seiver, Senior Principle Engineer, Bechtel Corporation. Mr. Seiver will give a presentation on "ELECTRICAL CALCULATIONS - THE EASY WAY" which he developed. His presentation will demonstrate an efficient and easy way of short circuit, load flow, and motor starting calculations. This presentation is free with 48-hour advance registration.

I would like to thank all of the individuals that have attended this years CED program. The Houston Section and the local Industrial Applications Society Chapter work hard to provide timely topics for those that are interested.

On behalf of the Executive Committee, I want to extend our congratulations to three individuals from the Houston Section who were elected to the IEEE Senior Member Grade (**John O. Attia, Ohannes Eknoyan, and Jamal Seyed-Yagoobi**). In 2001 the Houston Section lead Region 5 with the most members upgraded to Senior Member. We would like to hold that distinction again this year. Contact one of the Excom members for more information on upgrading your membership.

We are always interested in new volunteers as the IEEE is a volunteer organization. We have had several people contact one of the Houston Section officers and a few have attended the monthly Excom meeting. If you are interested in becoming active, please take the time to consider volunteering in some capacity; the return on time invested is well worth it. Contact one of the individuals within the section Excom committee and attend one of our planning meetings. We have many opportunities for you to contribute and to develop a larger network of professionals from which to draw.

The Region 5 conference will be held in Clear Lake in April of 2002. We are looking for Corporate Sponsors that may be interested in helping defer the cost of the conference. The Galveston Bay and Houston Sections of the IEEE are hosting it this year. It will have four technical tracks with many distinguished speakers from the Houston area. Visit the Houston section Website <http://www.ieee-houston.org/> for the latest information on this conference. If your company is interested in sponsoring a portion of the event, contact [Zafar Taqvi](#) or [myself](#) for more information.

The Houston Section will be manning booths at the SWEE-May 2002 and OTC-May 2002 Conferences this year promoting the IEEE. We need volunteers to help us man these booths and promote the IEEE. If you are interested contact one of the Excom members.

We are in the process of planning our First Annual IEEE Houston Section Scholarship Golf Tournament. It will be held at the Greatwood Country Club in April of 2002. We have a couple of individuals that have graciously offered to help plan this event, but we are looking for more. We are also seeking corporate sponsorships; if your company is interested please contact [Dwayne Lowry](#) or [myself](#).

As always the Executive Committee and I look forward to your feedback and comments. If you have suggestions and/or are interested in becoming active within the section or a local society chapter, contact one of us. Without the active participation and feedback from you the members, the programs and content of the IEEE would be lacking.

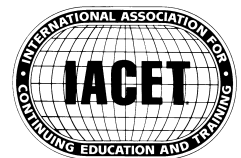
IEEE CONTINUING EDUCATION ON DEMAND

2001-2002 REGISTRATION FORM

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

Seminar Title	Code	Date	Amount
Factory & Field	911	Oct. 2/3	\$
Standby Pwr Systems	115	Oct. 16/17	\$
Induction Motors	601	Oct. 30/ 31	\$
MV & LV Mtr Control	702	Nov. 13/14	\$
Safety by Design	114	Feb. 5/6	\$
Syn Generators	602	Feb. 19/20	\$
Governor Control	607	Mar. 5/6	\$
Excitation Systems	608	Mar. 19/20	\$
MV & HV Cable	113	Apr. 2/3	\$
MV Fuse & Interrupter Switches	315	Apr. 16/17	\$
Applying IEC Standards	801	Apr. 30 / May 1	\$
Total Paid:			\$

**IEEE  
 Houston  
 Section**  
**2001-2002**  
**Continuing  
 Education  
 On Demand**



Spring 2002 IEEE Seminar Schedule

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

IEEE CED SEMINARS  
 BEATRIZ REY  
 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 Beatriz Rey at (713) 821-4027

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 Beatriz Rey at (713) 821-4027.

The following 2001-2002 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 Beatriz Rey  
 (713) 821-4027



Enter amount for each seminar:

IEEE member registration:  
 IEEE member early signup:  
 Non-member registration:



2001-2002 IEEE CED Seminar Schedule

**Factory & Field Transformer Testing (911)**  
**Waldemar Ziomek, Pauwels Transformers, Inc.**  
 Reviews Techniques and Industry Standards  
 Oct. 2/3, 2001 6:00-8:50PM  
**[0.5 CEU]**

**Standby Power Systems (115)**  
**Brad Roberts, S&C Electric Company**  
 Reviews Theory and Practical Applications  
 Oct. 16/17, 2001 6:00-8:50PM  
**[0.5 CEU]**

**Induction Motors (601)**  
**Charlie Pounds, LBS Engineers**  
 Reviews Practical Applications  
 Oct. 30/31, 2001 6:00-8:50PM  
**[0.5 CEU]**

**Medium & Low Voltage Motor Control (702)**  
**James Bowen, Powell Electrical Mfg. Co.**  
 Reviews Applications and Design  
 Nov. 13/14, 2001 6:00-8:50PM  
**[0.5 CEU]**

**Safety By Design (114)**  
**James Bowen, Powell Electrical Mfg. Co.**  
 Discusses Various Safety Issues  
 Feb. 5/6, 2002 6:00-8:50PM  
**[0.5 CEU]**

**Synchronous Generators (602)**  
**Charlie Pounds, LBS Engineers**  
 Reviews Theory and Techniques  
 Feb. 19/20, 2002 6:00-8:50PM  
**[0.5 CEU]**

**Governor Control (607)**  
**Peter Evjen, Solar Turbines, Inc.**  
 Reviews Theory and Applications  
 Mar. 5/6, 2002 6:00-8:50PM  
**[0.5 CEU]**

**Excitation Systems (608)**  
**Fred Wolf, Basler Electric**  
 Reviews Applications  
 Mar. 19/20, 2002 6:00-8:50PM  
**[0.5 CEU]**

**Medium and High Voltage Cable (113)**  
**Wayne Madden, Okonite Co.**  
 Theory, Applications, Field and Factory Testing  
 Apr. 2/3, 2002 6:00-8:50PM  
**[0.5 CEU]**

**Medium Voltage Fuse & Interrupter Switches (315)**  
**Neville Parry, Cutler Hammer**  
 Reviews Applications and Design  
 Apr. 16/17, 2002 6:00-8:50PM  
**[0.5 CEU]**

## Protective Relay Engineers Conference

CONFERENCE FOR PROTECTIVE RELAY ENGINEERS  
TEXAS A&M UNIVERSITY  
College Station, Texas  
April 9-11, 2002

The Planning Committee of the 55th Annual Conference for Protective Relay Engineers invites you to attend the conference at Texas A&M University on April 9-11, 2002. 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 19, 2002 \$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: [engineering.tamu.edu/prorelay/](http://engineering.tamu.edu/prorelay/)

For Information: Dr. B. Don Russell  
Associate Vice Chancellor  
College of Engineering  
Texas A&M University  
College Station, TX 77843-3126  
(979) 845-8912

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 55<sup>th</sup> Conference for Protective Relay Engineers

A

PRE-CONFERENCE SPECIAL OFFERING

### **"Tutorial on Application and Protection of Shunt Capacitor Banks"**

In Cooperation with the Power System Relay Committee of PES

Monday, April 8, 2002.....1:30 - 5:00 p.m.....College Station Hilton – Brazos Amphitheater

Presenters: Simon Chano, Hydor Quebec; Roger Hedding, ABB Automation; Pratap Mysore, Xcel Energy

Tutorial, based on recently revised IEEE guides, is intended to provide basic understanding of various capacitor bank designs such as externally fused, internally fused and fuseless banks. Since the protection is influenced by the bank design, commonly used protection methods associated with each design, will be presented. System consideration and transients due to capacitor switching and its effect on other power system equipment will also be discussed.

## FEBRUARY 28 SECTION MEETING

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# J.R. Seiver "Electrical Calculations- The Easy Way!"

J. R. Seiver, Senior Principle Engineer, Bechtel Corp. will give a presentation on "ELECTRICAL CALCULATIONS - THE EASY WAY" developed by him. J. R. Seiver's presentation will demonstrate an efficient and easy way of short circuit, load flow, and motor starting calculations.

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### *Freeport Subsection*

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#### *Freeport Seubsection Meeting*

Freeport subsection meeting Feb 12 at 6:00 PM, at the Warren Electric Facility in Clute, TX (303 Commerce).

Title: Digital Photography

Summary: Michael Bayer will discuss digital photography technical details, review relevant digital photography web sites, and provide guidance on purchasing a digital camera and how to make prints from digital files.

Michael is a professional photographer and a member of Professional Photographers of America, the Texas Professional Photographers Association, and the Professional Photographers Guild of Houston.

For questions call [Greg Slingerland](#) at 979-244-7161.

## **MAY 2002 OTC SHOW**

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# **CALL FOR VOLUNTEERS**

**The Houston Section will be manning a booth at the Offshore Technology Conference (OTC) May 6-10, 2002 at the Reliant Arena. We need volunteers to help us man this booth, promote the IEEE, and sign-up new members.**

**If you are interested contact John Lucey at 713-945-5923 or Donald Dunn 281-452-8809.**

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## **MAY 2002 SWEE SHOW**

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# **CALL FOR VOLUNTEERS**

**The Houston Section will be manning a booth (527) at the Southwest Electrical Exposition (SWEE) May 7-8, 2002. We need volunteers to help us man this booth, promote the IEEE, and sign-up new members. The Houston Section will also be presenting a seminar on "Grounding" at the show.**

**If you are interested contact Donald Dunn 281-452-8809.**

## DG Conference 2002

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### The IEEE Kansas City Section hosts A National Engineers Week 2002 Conference

Distributed Generation:  
February 20 & 21, 2002  
Double Tree Hotel  
Overland Park, Kansas  
913-451-6100  
Benefits & Challenges

Keynote Speaker: Ron Oligney  
Co-Author of the Best Selling Book "The Color of Oil"

A global political and economic view of the future of hydrocarbon fuels and a look forward towards a potential hydrogen based energy economy.

Wednesday, February 20 — DG Tutorials. Discover design pros/cons of each DG option.

- Grid Interconnection: Automation and Controls
- Reciprocating Engines
- Industrial Turbines
- Fuel Cells
- Microturbines
- National DG Electrical Installation Standards (NEIS) for DG

Wednesday Evening

Vendor displays and hosted reception. DG demonstrations.

Dinner Speaker: Edward Tirello, Wall Street Energy Analyst

The Role of DG in the Energy Marketplace.

Thursday, February 21 — Conference Presentations

- Welcome & Introductory Remarks
- Keynote: Ron Oligney, "The Color of Oil"
- Case Study: Reciprocating Engines
- Case Study: Industrial Turbine Combined Heat and Power
- Luncheon Speaker: Tom Basso "Status of IEEE DG Interconnect Standard 1547"
- Case Study: Microturbines
- Case Study: Fuel Cells
- Panel: DG From the Utilities Perspective

Conference Information site ..... [www.ieee-kc.org/dg/](http://www.ieee-kc.org/dg/)

Registration Information

Call Kim Good ..... (913) 967-1865  
Fax ..... (913) 967-1898  
E-mail at ..... [kgood@primediabusiness.com](mailto:kgood@primediabusiness.com)

Register: By January 15, 2002 After January 15, 2002

Wednesday: \$180 \$240

Thursday: \$180 \$240

Combined \$300 \$400

Register early to win a color Palm M505

## IEEE USA Career Focus

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### WHAT'S NEW @ IEEE FOR GOLD (Graduates Of the Last Decade)

VOLUME 3 NUMBER 2 FEBRUARY 2002

An HTML version of this newsletter can be viewed on our online archive at <http://www.ieee.org/products/whats-new/wngold0202.htm>

#### CONTENTS:

1. Job Market for Electrical Engineers Remains Strong
2. Gauge Your Worth with New IEEE-USA Salary Calculator
3. IEEE Membership Grows to All-Time High
4. Asian Americans in High Tech Have Highest Incomes
5. Book Offers Strategies to Help Advance Your Career
6. Tunable Lasers Enable Truly Broad Broadband
7. Congressional Visits Day: 5-6 March
8. China Wants its Talent Back
9. Legislation Proposes Deferral of Mutual Fund Capital Gains Taxes
10. High-Tech Visionaries Lend Some Insight Into the Future
11. IEEE International Conference on Communications Comes to NYC in April

### WHAT'S NEW @ IEEE IN POWER

VOLUME 3 NUMBER 2 FEBRUARY 2002

An html version of this newsletter can be viewed on our online archive at <http://www.ieee.org/products/whats-new/wnpower0202.htm>

#### CONTENTS:

1. Village-Based Power Infrastructure Envisioned in Afghanistan
2. IEEE Transactions on Nanotechnology Released in March
3. Study: Mandated Renewable Fuels Use Would Ease Taxpayer Burden
4. Ireland Plans World's Largest Power-Generating Wind Farm
5. UK Site of First IEE Power, Electronics and Drives Conference
6. Congressional Visits Day: 5-6 March
7. Dutchmen Win World Solar Challenge: An IEEE Spectrum Special Feature
8. IEEE Email Alias Detects 158,000 Viruses In 2001
9. New Title Covers Large Electric Power Systems
10. A-C-T N-O-W: A Strategy For Effective Crisis Communication
11. IEEE Industry Applications Society Meeting Papers Published
12. New Handbook Offers Strategies in Power Electronics

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## Region 5 Conference Corporate Sponsors

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The IEEE Region 5 Conference is seeking Corporate Sponsors for the upcoming event in April of 2002. If your company may be interested in financially supporting this technical conference please contact Zafar Taqvi, Ph.D. or Donald G. Dunn. For more information see the attached weblink.

[www.ieee-houston.org/Reg5Conf/Default.htm](http://www.ieee-houston.org/Reg5Conf/Default.htm)

We are seeking Corporate Sponsors as follows: Bronze (\$1000), Silver (\$2000) or Gold(\$3000) sponsors.

We are also seeking sponsors of certain events breakfast, lunch, banquet, hospitality program. We will provide acknowledgement of each sponsorship in the brochure, website and recognize them formally.

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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](http://www.ieee.org).

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