



# THE POCKET SCOPE



The Institute of Electrical and Electronics Engineers, Inc.

Volume 56, Number 8

April 2006

## SCOPE NOTES

### April

### Houston Section News

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

**When:**  
Thursday, April 27, 2006  
6:00 - 6:30 p.m. Social  
6:30 - 7:30 p.m. Dinner  
7:30 - 8:30 p.m.

**Cost:**  
\$10.00 - IEEE Members with 48-hour advance reservations.  
\$20.00 - non-members  
\$5.00 - students  
Call (713) 207-IEEE to make your reservations.

See Page 3 for the Continuing Education Schedule!

IEEE WEB ADDRESS  
<http://www.ieee-houston.org>

IEEE Houston Section  
P.O. Box  
460443  
Houston, Texas  
77056-8014



## The Chairman's Message

**Donald G. Dunn**

### The Chairman's Message

The IEEE Houston Section EXCOM is looking for volunteers that are interested in attending the IEEE-USA Career and Workforce Policy Committee May 2006 Careers Workforce Congressional "Fly-In" May 2-3 in Washington D.C. Last year Polo Gutierrez attended this workshop and stated that he had the opportunity to visit with many of the staff of several congressman and that the overall exchange was very positive.

Other IEEE events in March, Ransom Siler and Justin McCaskill – Houston Section Consultants Network Chair and Houston Section Secretary attended the IEEE PACE (The Professional Activities Committees for Engineers) 2006 Leadership Workshop in St. Louis, MO March 3-5. Ransom and Justin attended many seminars on IEEE leadership, programs and other assorted topics.

In addition, April also brings the Region 5 Technical and Leadership Conference which will be in San Antonio April 7-9. I have always found this conference to be a very enjoyable experience and I expect this year to be no different. This meeting is a great opportunity to learn and to network with other colleagues. I am looking forward to meeting as many colleagues from other Sections as possible as well as Region 5 Committee leaders. I will report to you the results of the R5 Conference in May.

As a reminder to all of you, the Houston Section will be manning a booth at the Offshore Technology Conference (OTC) May 1 - 4, 2006 promoting IEEE. We have had a couple of people volunteer to help us man these booths and promote IEEE. This is a great opportunity to meet engineers from other companies and network. We still need more volunteers. If you are interested in volunteering, contact one of your EXCOM members. 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. The IEEE is a volunteer organization and without the active participation and feedback from you the members, the programs and content of the IEEE would be reduced.

Donald G. Dunn  
**Houston Section Chair**

# Houston Section Meeting

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Thursday, April 27, 2006

**Topic: Technology for TransStar  
The Port Authority and Houston's new automated traffic signals**

**Speaker: Pat Bellamy** is the Founding Partner of Houston InfoComm Technology Initiative (HiT). Previously, Mr. Bellamy was Executive Director and Founding Partner of the Houston Area Technology Advancement Center (HATAC). He remains involved with HATAC as the Founding Partner. Similarly, prior to his retirement, Mr. Bellamy was a Regional Vice President and Executive Director with SBC and Southwestern Bell Telephone Company (SWBT). He was responsible for Technical Sales, Support and Planning within Southwestern Bell's traditional five states (Missouri, Oklahoma, Kansas, Arkansas and Texas). In addition, Mr. Bellamy was responsible for technical certification and technology assurance within SWBT.

Mr. Bellamy has been involved with information technology infrastructure deployment for over thirty years. In his various roles, Mr. Bellamy has deployed a variety of "first" technologies in planning the St. Louis, Tulsa, Houston, Paris, Chilean and other networks. Similarly, Mr. Bellamy was involved in the technology coordination efforts for the Rendezvous Houston, Economic Summit and Republican National Convention efforts in the Houston region. He also coordinated and created the Technology Theme document for the Houston 2012 Olympics Project.

Among his other community involvement efforts, Mr. Bellamy is the Founding Partner of the Houston Area Technology Advancement Center (HATAC). Similarly, Mr. Bellamy has served as the Chairman of the Executive Board for the Gulf Coast Alliance for Minorities in Engineering. This is a volunteer organization that advocates math and science within middle schools. Its membership includes most large businesses in the Gulf Coast area. He also serves on a number of advisory boards (including the University of Houston College of Technology, Prairie View A&M College of Engineering, Houston ISD Career and Technology Department, Alief ISD Career and Technology Department, North Harris Montgomery County College, Houston Community College and others).

**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 \$15.00 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.

## IEEE CONTINUING EDUCATION ON DEMAND

## 2005-2006 REGISTRATION FORM

Name: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Mailing Address: \_\_\_\_\_  
 \_\_\_\_\_ City/State: \_\_\_\_\_  
 Zip: \_\_\_\_\_  
 Email: \_\_\_\_\_  
 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  
 PAT ROGERS  
 SOUTHWEST POWER / HUGHES SUPPLY CO.  
 425 BLUEBERRY STREET  
 HOUSTON, TX 77018  
[patricia.rogers@hughessupply.com](mailto:patricia.rogers@hughessupply.com)

Registration receipts will be available upon request at the seminars.

For a cancellation refund, telephone Pat Rogers by the Friday before the seminar at:

Phone: 713.696.9922  
 Fax: 713.696.9983  
 Email: [patricia.rogers@hughessupply.com](mailto:patricia.rogers@hughessupply.com)

IEEE Continuing Education on Demand Completion Certificate with Continuing Education Units (CEUs) is provided after receipt of both nightly questionnaires and seminar evaluation sheets.

Please direct seminar questions to Paul Barrett at 713.598.0790

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

<http://www.ieee-houston.org>

## IEEE CONTINUING EDUCATION ON DEMAND

The purpose of IEEE Houston Section Continuing Education on Demand is to provide modern 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.

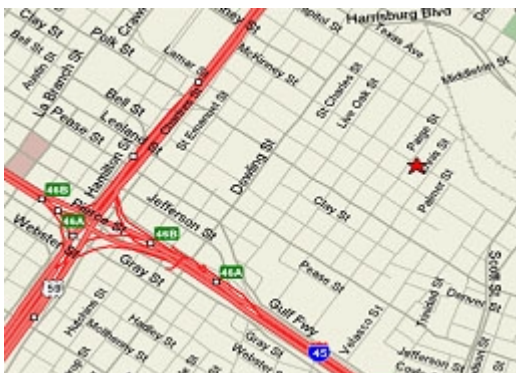
Instructors are application engineers, manufacturing specialists and expert consultants who provide a blend of diverse engineering perspectives.

The cost of each seminar is \$70.00 for IEEE members. Non-members \$140.00. The check must be received the Friday before the seminar start date. "Pay at the door" is discouraged due to many "no-shows". If you have a special situation contact Paul Barrett (713) 598-0790. Signing up the week of the seminar does not guarantee seminar presentation documents or meals.

The following 2005-2006 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 2005 - 2006

**Summit Electric**  
 2929 McKinney  
 Houston, TX. 77003



| Seminar Title                              | Code | Date       | Amount |
|--|------|------------|--------|
| Grounding Techniques, Industrial Power Sys | 402  | Oct. 4 / 5 | \$     |
| Electrical Safety in the Workplace         | 921  | Oct. 18/19 | \$     |
| API Motor Standards Update                 | 620  | Nov. 1 / 2 | \$     |
| Protective Relay 5 ABB Relays              | 315  | Nov 15/16  | \$     |
| HV Substations For Industrial Applications | 125  | Feb. 7 / 8 | \$     |
| MV Cable Considerations Thru 69kV          | 130  | Feb. 21/22 | \$     |
| Protective Relaying for Large Generators   | 306  | Mar. 7 / 8 | \$     |
| IEC Standards for Large Power Transformers | 950  | Mar. 21/22 | \$     |
| IEEE 1584 Arc Flash Calculations           | 340  | Apr. 4 / 5 | \$     |
| Residual Bus Auto Transfer Schemes         | 140  | Apr. 18/19 | \$     |
| Total Paid:                                |      |            | \$     |

Enter amount for each seminar:

IEEE member early signup: \$ 70.00  
 Non-member registration: \$140.00

**Fall of 2005 IEEE Seminar Schedule**  
**Grounding Techniques—Industrial Power Sys (402)**

**Jack Woodham, Jedson Engineering**  
**Tony Locker, Post Glover Resistors**  
 Oct. 4/5, 2005 6:00-8:50PM  
 Reviews and explores the four types of grounding for industrial power systems 480 – 4160 V. [0.5 CEU]

**Electrical Safety in the Workplace (921)**  
**Danny Liggett, E.I. DuPont Co.**  
 Oct. 18/19, 2005 6:00-8:50PM  
 A detailed focus is on electrical workplace safety coupled with comprehensive safety training. [0.5 CEU]

**API Motor Standards Update (620)**  
**David Rains, WEG & Doug Gehring, Siemens**  
 Nov. 1/2, 2005 6:00-8:50PM  
 An overview of large motor design considerations for compliance with latest API 541 and API 546. Review and comparison of IEEE 841 and API 541. [0.5 CEU]

**Protective Relay 5 – ABB Relays (315)**  
**Robert Wilson, ABB**  
 Nov. 15/16, 2005 6:00-8:50PM  
 Review of ABB protective relay design fundamentals and special application considerations. [0.5 CEU]

**Spring of 2006 IEEE Seminar Schedule**  
**HV Substations for Industrial Applications (125)**  
**Allen Xi & Charles Pulay, Burns & McDonnell Engrs**  
 Feb. 7/8, 2006 6:00-8:50PM  
 An overview of industrial substation design considerations, layout, protection, grounding and controls. Testing and commissioning considerations. [0.5 CEU]



# IEEE

## IEEE Houston Section

### 2005-2006

## Continuing Education On Demand



**MV Cable Considerations thru 69 KV (130)**  
**H.R. Stewart HRS Consulting**

Feb. 21/22, 2006 6:00-8:50PM  
 Review of design application considerations related to MV power cable projects. [0.5 CEU]

**Protective Relaying for Large Generators (306)**  
**Wayne Hartman, GE Multilin**  
 March 7/8, 2006 6:00-8:50PM  
 Reviews large generator design characteristics, application problems and reliable protective schemes. [0.5 CEU]

**IEC Standards for Large Power Transformers (950)**  
**Tom Malone & Martyn Hildreth. Areva T&D**  
 March 21/22, 2006 6:00-8:50PM  
 Detailed review of current IEC standards related to large power transformers. [0.5 CEU]

**IEEE 1584 Arc Flash Calculations (340)**  
**Jim Bowen, Powell Electrical Manufacturing Co. & Daleep Mohla, DCM Consulting**  
 April. 4/5, 2005 6:00-8:50PM  
 A two part study focuses on NFPA 70E flash hazard analysis requirements and IEEE 1584 formulas to satisfy 70E requirements. [0.5 CEU]

**Residual Bus Auto Transfer Schemes (140)**  
**Roy Cosse, Powell Electrical Systems Inc. & Robert Spiewak, PolAmex Engineering**  
 April 18/19, 2005 6:00-8:50PM  
 A focused review of the residual bus auto transfer schemes, examples, why they work and do not work. Traditional and modern applications. [0.5 CEU]

# Senior Members

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## 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.

## IEEE-USA 2005 Annual Report

**IEEE-USA IN ACTION: ORGANIZATION'S "2005 ANNUAL REPORT" ON BUILDING CAREERS, SHAPING PUBLIC POLICY PUBLISHED ONLINE**

Last year was a banner year for IEEE-USA as it was building careers and shaping public policy. U.S. IEEE members and others can review online the Washington, D.C.-based organization's efforts, as reported in its "2005 Annual Report."

These activities cover the gamut — from helping the U.S. Congress enact new energy legislation, to proposing a new legal standard adopted by the U.S. Supreme Court; from introducing new career publications and online courses, to supporting precollege math and science teachers; from promoting engineering in national media outlets, to helping shape TV news spots on IEEE technologies.

Read IEEE-USA's "2005 Annual Report" at [http://www.ieeeusa.org/about/annual\\_report/2005.pdf](http://www.ieeeusa.org/about/annual_report/2005.pdf)

For more information on IEEE-USA, visit <http://www.ieeeusa.org>

# Protective Relay Conference

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59<sup>TH</sup> ANNUAL CONFERENCE FOR PROTECTIVE  
RELAY ENGINEERS  
Texas A&M University  
College Station, Texas  
April 4-6, 2006

The Planning Committee of the 59th Annual Conference for Protective Relay Engineers invites you to attend the conference at Texas A&M University on April 4-6, 2006. 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: \$280 (begins Monday, January 9, 2006)  
After Monday, March 6, 2006: \$320

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

#### Special offerings:

In conjunction with the 59<sup>th</sup> Annual Conference for Protective Relay Engineers special pre-conference offerings are available Monday, April 3, 2006, including a tutorial, ethics seminar, and manufacturers' presentations. Please see the website for more details.

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

**Website:** <http://engineering.tamu.edu/prorelay/>

For Registration: Ms. Sharon Loe  
Conference Registration  
238 WERC, 3128 TAMU  
Texas A&M University  
College Station, TX 77843-3128  
Phone: (979) 845-7912  
Fax: (979)458-1139  
[s-loe@tamu.edu](mailto:s-loe@tamu.edu)

For Information: Dr. B. Don Russell  
Regents Professor  
Department of Electrical & Computer Engineering  
Texas A&M University  
College Station, TX 77843-3128  
(979) 845-7912

# IEEE USA News

**\*\*IEEE-USA IN THE NEWS\*\*** IEEE-USA H-1B Position Highlighted in Washington Post, NBC News Coverage WASHINGTON (31 March 2006) — IEEE-USA’s position on H-1B visas was highlighted in a Washington Post article and a piece on NBC TV this week. The organization was also named in a CNET News piece and an editorial in “Computerworld” magazine.

IEEE-USA President Ralph W. Wyndrum Jr. was quoted in a Post article today on H-1B visas, “Most See Visa Program as Severely Flawed.” He said, “Those who are here on H-1B visas are being worked as indentured servants.” It is available at

<http://www.washingtonpost.com/wp-dyn/content/article/2006/03/30/AR2006033001968.html?sub=AR>

On Thursday night, IEEE-USA Vice President Ron Hira appeared on “NBC Nightly News with Brian Williams” and said that hiring guest workers at a lower cost “undercuts and undermines U.S. workers.” The transcript and video for “Immigrant brain drain in Silicon Valley” is accessible at <http://www.msnbc.msn.com/id/12085007/>.

Also Friday, IEEE-USA was included in a CNET News article, “H-1B visas hit roadblock in Congress”: [http://news.zdnet.com/2100-3513\\_22-6056167.html?tag=sas.email](http://news.zdnet.com/2100-3513_22-6056167.html?tag=sas.email). The article covered a Thursday House hearing in which IEEE-USA will submit a statement against expansion of the H-1B program.

IEEE-USA was also cited for its support of permanent immigration, as opposed to temporary visas, in an online chat that Post reporter S. Mitra Kalita conducted Friday: ( <http://www.washingtonpost.com/wp-dyn/content/discussion/2006/03/30/DI2006033001345.html> ).

On Monday, Computerworld Editor in Chief Don Tennant praised IEEE-USA for the Innovation Institute it is starting this year. “H-1Being Professional” is available at

<http://www.computerworld.com/careertopics/careers/story/0,10801,109859,00.html>

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Chris McManes, Senior Public Relations Coordinator, IEEE-USA  
1828 L Street N.W., Suite 1202, Washington, DC 20036-5104, USA  
PHONE: +1 202 530-8356

E-MAIL: [c.mcmanes@ieee.org](mailto:c.mcmanes@ieee.org) WEB: <http://www.ieeeusa.org>

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**\*\*IEEE-USA IN ACTION \*\*** Senate Staffer Discusses Innovation Legislation with IEEE-USA Research & Development Policy Committee WASHINGTON (31 March 2006) — Jason Mulvihill, staff director for the Senate’s Subcommittee on Technology, Innovation, and Competitiveness, discussed innovation legislation with the IEEE-USA Research & Development Policy Committee on Thursday.

Mulvihill works closely with Subcommittee Chair Sen. John Ensign (R-Nev.), who co-sponsored the National Innovation Act of 2005 with Sen. Joseph Lieberman (D-Conn.) that IEEE-USA supports ( <http://www.ieeeusa.org/policy/POLICY/2005/121905.asp>).

Mulvihill also briefed the committee on the three Protecting America’s Competitive Edge (PACE) bills (PACE-Energy, PACE-Finance and PACE-Education), which IEEE-USA also supports (

<http://www.ieeeusa.org/policy/policy/2006/022106.asp>).

Mulvihill said that current fiscal realities make it unlikely that all the innovation legislative initiatives will be fully funded in 2006. He did say, however, that he expects bills to be passed this year in three areas: basic research; science and math education from kindergarten through graduate school; and innovation infrastructure.

The Subcommittee on Technology, Innovation, and Competitiveness is under the Senate Committee on Commerce, Science & Transportation. Go to <http://commerce.senate.gov> for more information.

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Chris McManes, Senior Public Relations Coordinator, IEEE-USA  
1828 L Street N.W., Suite 1202, Washington, DC 20036-5104, USA  
PHONE: +1 202 530-8356

E-MAIL: [c.mcmanes@ieee.org](mailto:c.mcmanes@ieee.org) WEB: <http://www.ieeeusa.org>

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## IEEE USA News - Cont

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U.S. Citizen Hurt by H-1B Program Testifies before Congress

WASHINGTON (30 March 2006) — The H-1B visa program was intended to give U.S. companies access to foreign workers when qualified U.S. citizens cannot be found. Salaries paid to foreign and domestic workers are supposed to be at the market rate for a given occupation. For many, however, the reality is far from the intent.

“There are thousands of unemployed Americans with the skills, drive and creativity needed to thrive in the current marketplace,” said David Huber in written testimony submitted to the House Judiciary Committee Subcommittee on Immigration, Border Security and Claims. “Yet too many cannot find jobs because companies are turning to H-1B workers as a first choice, before even advertising open positions to American workers.”

Huber, who testified before the subcommittee today, is a former lead network engineer for a NASA space shuttle project who was hurt by the H-1B program twice. First, after being assured in early 2002 that he was within

the salary range for experienced network technologists at Bank One (now JP Morgan Chase) in Chicago, he was told that the job he was applying for actually paid \$30,000 less per year. Meanwhile, around that time, Bank One received permission from the Department of Labor to hire 33 H-1B workers, 14 in Chicago, including for jobs Huber was qualified to perform, according to his testimony.

“At about the same time I was offered a job for \$30,000 less than market rates, Bank One was telling the U.S. government that it couldn’t find qualified Americans to do the type of work I was already doing,” Huber testified. Then, three months after being hired as a network consultant at Commonwealth Edison (Com Ed) in 2003, the company that provides electricity for most of the Chicago area, Huber was replaced by three non-U.S. citizens. None of the three were employed by Com Ed, and two of the replacement workers came from a job shop in Houston. “In both instances — at Bank One and Com Ed — those hired were less qualified than I was,” Huber testified. “They had less experience and had never managed a project before.” Huber’s experience is not unique. Thousands of U.S. citizens have been replaced by H-1B visa holders, often at lower wages. Many have also had to train their replacements if they wanted to receive a severance package.

The administration’s Office of Management and Budget concluded in a 2005 report (<http://www.whitehouse.gov/omb/expectmore/detail.10002378.2005.html>) that the H-1B program is “vulnerable to fraud or abuse.” The report recommended adding “an audit function or other anti-fraud protections,” and advocated requiring “employers filing H-1B applications to test the labor market to ensure no U.S. workers are available and willing to fill the position.”

Go to <http://judiciary.house.gov/oversight.aspx?ID=229> for links to Huber’s testimony and that of the three other witnesses. Rather than expanding the H-1B program, as the Senate Judiciary Committee has recommended, IEEE-USA believes the permanent immigration of skilled scientists and engineers is better for our country’s capacity to innovate and meet high-tech workforce demands. IEEE-USA also supports the H-1B reform legislation (<http://www.ieeeusa.org/communications/releases/2005/112105pr.asp>) that Rep. Bill Pascrell (D-N.J.) introduced last November.

IEEE-USA advances the public good and promotes the careers and public policy interests of more than 220,000 engineers, scientists and allied professionals who are U.S. members of the IEEE. IEEE-USA is part of the IEEE, the world’s largest technical professional society with 360,000 members in 150 countries. For more information, go to <http://www.ieeeusa.org>.

Contact: Chris McManes

IEEE-USA Senior Public Relations Coordinator

Phone: +1 202 530-8356

E-Mail: [c.mcmanes@ieee.org](mailto:c.mcmanes@ieee.org)

## IEEE President Message

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Dear Colleague:

I have the distinct pleasure of serving you as the 2006 President of IEEE. Today I am writing to ask for your help and participation in the 2006 drive to help increase our membership.

The foundation and strength of the IEEE is a strong and growing base of members. IEEE does not have a professional sales and marketing force for membership. Rather, we depend on word of mouth to communicate our organization and that means you. To continue to grow and build the IEEE, we need your help. Here's what you can do.

Participate in the [Member-Get-A-Member](#) program. This program is available with incentives for finding new members. You will get a \$5.00 credit voucher for every member that you recruit. But the real reward is more than a credit voucher. It's a stronger, better IEEE with enhanced connections into industry and the community. These connections help to build the IEEE Network that supports our careers and the profession.

There are many tangible benefits associated with membership: career and professional development tools, discounts on products and services (both technical and non-technical), the award-winning Spectrum magazine, reduced conference registration fees, multiple opportunities to network with the leaders of the field, access to top technical information, an ever increasing number of continuing education courses, and much more. The list continues to grow each year. In 2005 we launched a members-only web portal, [myIEEE](#). This portal puts all your membership benefits together in one, easily-accessible place.

In 2006 you will see the launch of IEEE.tv, which, through streaming video, can place conference presentations, technical seminars, and other items of general interest directly on your desktop. We also have plans to launch a new, online member directory to help our members get in touch, and stay in touch with each other.

With all of that, I thank you for maintaining your membership in IEEE this year and hopefully in the future. I also urge you to recommend IEEE to your colleagues and co-workers. Please direct your colleagues to <http://www.ieee.org/join> to become a part of the IEEE Network. Remind them that if they join between now and 15 August 2006, they can join for just one-half the normal dues rate. This is your organization. Help us to grow it and to keep it as vital and vibrant in the future as it has been in the past. Thank you for your participation in the 2006 Membership Drive.

Very truly yours,  
Michael Lightner, Ph. D.  
President and CEO  
IEEE

## IEEE Career Alert

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IEEE CAREER ALERT for 29 Mar 2006

Your weekly report on jobs, education, management, and the engineering workplace, from the editors of IEEE Spectrum

IEEE CAREER ALERT for 29 March 2006

Your weekly report on jobs, education, management, and the engineering workplace, from the editors of IEEE Spectrum

### IN THIS ISSUE:

1. Teaching Engineering & Science to Schoolchildren: Why Not You?
2. Where to Go With What You Know
3. Is HR meeting IT's needs?
4. India's new Silicon Valley for IT?

The IEEE Job Site, available exclusively to IEEE members, can help you locate career opportunities easily and confidentially. Just complete a profile of your qualifications and requirements, and you'll be notified via email when a suitable job becomes available. IEEE Job Site was named one of the top online recruitment sites by Weddle's Guide to Employment Web Sites. And top employers know that IEEE members are the most qualified electrotechnology and information-technology professionals in the world. Take a few minutes to register with the IEEE Job Site and check out your career options today! <<http://www.ieee.org/jobs>>

### 1. Teaching Engineering & Science to Schoolchildren: Why Not You?

Most engineers and scientists with advanced degrees who are considering moving into teaching think purely in terms of higher education. But a Science Magazine special report takes a look at a road less traveled: teaching these subjects to children. Articles in the package report on ways to make science more fun and accessible and new programs that help mid-career professionals make the transition to the classroom. Read on at:

<[http://sciencecareers.sciencemag.org/career\\_development/previous\\_issues/articles/2006\\_03\\_24/scientists\\_as\\_schoolteachers\\_feature\\_index](http://sciencecareers.sciencemag.org/career_development/previous_issues/articles/2006_03_24/scientists_as_schoolteachers_feature_index)>

### 2. Where to Go With What You Know

New Scientist has just published a career guide comprising several articles reporting which industries will have the most job openings, what skills are most in demand, and the regions in which the jobs will appear. There is even an article that tells you how to make some of your negative qualities work for you in the workplace. To download the guide, go to:

<<http://www.newscientistjobs.com/insider/article.action?article.id=insider164&focusId=uk>>

### 3. Is HR meeting IT's needs?

Is your company's human resources department trying to manage staffing in the information age using methods developed for the industrial age? Too many are, said technology leaders polled at the

## IEEE Career Alert -Cont

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recent <sup>3</sup>Managing the Information Resource<sup>2</sup> program sponsored by ComputerWorld magazine. The problems most often cited included the failure to update ever-changing job descriptions so IT managers can hire the right people, and the precious little spent on grooming the next generation of IT leaders. Read on at:

<<http://www.computerworld.com/managementtopics/management/story/0,10801,109645,00.html?SKC=careers-109645>>

#### 4. India's New Silicon Valley for IT?

The Indian state of Orissa is working aggressively to make its capital city, Bhubaneswar, a software development hotbed. On 28 March, the state's IT department signed an agreement with MindTree Consulting Pvt Ltd., which makes affordable business technology products for small companies, to set up a software development center on 30 acres in Bhubaneswar's Infocity district. TCS and Wipro, two of India's largest IT firms, have also acquired land in Infocity in recent months. Infosys and Satyam, the other two members of India's Big Four IT firms, have been there since the mid-nineties. For more on Orissa's IT development boom, see:

<<http://www.zdnetindia.com/news/business/stories/135964.html>>

#### ANNOUNCEMENT

##### IEEE Spectrum Hosts Online Career Forum

On 11 April 2006, IEEE Spectrum will host its second online Career Accelerator Forum. It will offer insight and advice on going on for an advanced degree, staying ahead in your field, landing your dream job, and even changing your career. Plus, this interactive event will allow you to ask questions of an expert panel — all from the convenience of your desktop. For more information, as well as a list of panelists, visit

<<http://www.spectrum.ieee.org/caf>>

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## IEEE Career Alert

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IEEE CAREER ALERT for 5 Apr 2006

Your weekly report on jobs, education, management, and the engineering workplace, from the editors of  
IEEE Spectrum

### IN THIS ISSUE:

1. How to Stay In the Running for the Job You Want
2. New UK Initiative Seeks Women In Engineering
3. Engineers Aren't All Work and No Play
4. Beware the Guaranteed Job Scam

### ANNOUNCEMENT

#### Raise Your Sights

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#### 1. How to Stay In the Running for the Job You Want

What knocks job applicants out of contention? A Chronicle of Higher Education article describes how one academic search committee picked a candidate out of 300 applicants. Among the early missteps made by also-rans were mentioning the <sup>3</sup>fine graduate students at the university<sup>2</sup> when the hiring department had no graduate students, and addressing cover letters with <sup>3</sup>Dear Sir,<sup>2</sup> which was seen as an indication that the person might not respect women as peers at the mostly female college. In-person meetings further whittled down the group: during guest lectures, meetings with students, and dinner with faculty, an inability to admit mistakes or some telling comment doomed some candidates. For more on how to stay in the running, read on at:

<<http://chronicle.com/jobs/news/2006/04/2006040401c/careers.html>>

#### 2. New UK Initiative Seeks Women in Engineering

In March, an initiative was launched in the UK to encourage women to become engineers. Former NASA engineer Mary Inman, who conducted research into the lack of female engineers in the UK fears that <sup>3</sup>a demographic time bomb is ticking<sup>2</sup> because senior engineers are now retiring, and without women the pool of available workers may not be large enough to meet demand. The initiative comes in the wake of a recently released report from the UK's Women in Work Commission which recommended that girls should receive career advice on jobs that are usually male dominated.

<<http://www.telegraph.co.uk/money/main.jhtml?xml=/money/2006/03/02/cnengin02.xml>>

#### 3. Engineers Aren't All Work and No Play

One reason it is increasingly difficult to get kids to take up science and engineering is the belief that people in these professions never have any fun. But a Science Magazine article discusses the after work activities of

## IEEE Career Alert -Cont

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technologists such as an observational astrophysicist who is into hiking, rock climbing, and caving; a molecular geneticist who has taken up swing dancing; and a product engineer who plays in a local band. They all say

their hobbies bring balance to their lives and provide a social outlet. Most agree with the musician, who says <sup>3</sup>it inspires me to do great work and guides me through stressful situations.<sup>2</sup> Read on at:

<[http://sciencecareers.sciencemag.org/career\\_development/previous\\_issues/articles/2006\\_03\\_31/the\\_secret\\_passions\\_of\\_scientists](http://sciencecareers.sciencemag.org/career_development/previous_issues/articles/2006_03_31/the_secret_passions_of_scientists)>

#### 4. Beware the Guaranteed Job Scam

Have you ever seen an ad from a firm promising that it can find you a job with a guaranteed minimum salary because of its <sup>3</sup>extensive network of exclusive contacts<sup>2</sup> that can give you <sup>3</sup>access to the hidden job market<sup>2</sup>?

Beware: it's probably a scam. The State of New Jersey's Division of Consumer Affairs is the latest government agency to uncover companies preying on job seekers<sup>1</sup> desperation by demanding thousands of dollars in up-front fees for services that they never render. New Jersey's Attorney General discussed the problem in a Wall Street Journal article. Read on at:

<[http://www.careerjournal.com/jobhunting/strategies/20060403-capell.html?cjpos=home\\_whatsnew\\_major](http://www.careerjournal.com/jobhunting/strategies/20060403-capell.html?cjpos=home_whatsnew_major)>

#### ANNOUNCEMENT

##### IEEE Spectrum Hosts Online Career Forum

On 11 April 2006, IEEE Spectrum will host its second online Career Accelerator Forum. It will offer insight and advice on going on for an advanced degree, staying ahead in your field, landing your dream job, and even changing your career. Plus, this interactive event will allow you to ask questions of an expert panel — all from the convenience of your desktop. For more information, as well as a list of panelists, visit

<<http://www.spectrum.ieee.org/caf>>

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**Newsletter Staff**

Editors: Lisa Nichols-Dunn, 281-426-4784  
E-mail: [lnicholsdunn@aol.com](mailto:lnicholsdunn@aol.com)

Advertising: 281-426-4784



THE POCKET SCOPE  
IEEE Houston Section  
P.O. Box 460443  
Houston, TX 77056-8014

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