



IEEE Pittsburgh Section
Bulletin



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Included in this issue:

- From the Chair
- Remembering John Gallagher
- Robotics Society – March 16
- Consultants Network – March 28
- Computer Society Meeting – March 29
- Grounding & Bonding class – March 25
- Congressional Visits – March 28 & 29
- Science Fair – March 31
- IEEE Conferences in Region 2
- FE (EIT) License Review Course
- MBAs for Engineers – April 6
- Law School for Engineers – April 18
- History Dinner – April 20

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All announcements for publication in a particular month's bulletin are due to the Editor by the 20th of the previous month. The accuracy of the published material is not guaranteed. If there is any error, please bring it to the Editor's attention.

The Section's web site www.ewh.ieee.org/r2/pittsburgh has past issues of the bulletin and lots of other useful information.

• *From the Chair*

In February we celebrated National Engineers Week with several activities. The biggest event was held at the Carnegie Science Center. Our Section supported the Science Center with a monetary gift, by staffing our table with engineers to help visitors with hands-on circuit building, and by sponsoring our 13th IEEE Robot Car Race. Many young (and older) students stopped by to learn a few things, including what IEEE members do at work. We thank our members and the students from the University of Pittsburgh at Johnstown and Geneva College in Beaver Falls for volunteering their time at IEEE Engineers Week activities. Local middle schools competed in the robot race. T-shirts were given to all participants, and 5 winners were awarded prizes.

Another event in February was our joint meeting with the Association of Facilities Engineers (AFE) and the Association of Energy Engineers (AEE). It was hosted by Eaton Electrical, and the topic was the impact of power quality on facility management.

March 16 is our Executive Committee meeting at the University of Pittsburgh - Greensburg Campus. It that will include a presentation by Guy Nicoletti entitled "Robotics: The Next Level". Save April 20 for our annual History and Awards dinner at the Westinghouse Castle in Wilmerding. This may be our last time at the castle as it is being sold.

We thank you for responding enthusiastically to requests for volunteers for our section's activities and Executive Committee positions, and we continue to solicit your participation and ideas. *Dave Vaglia*

• *Remembering John Gallagher*

On Sunday, January 29, 2006, John M. Gallagher, Jr. died at age 78. John was a nuclear I&C engineer at Westinghouse for 39 years, followed by seven years service at the Nuclear Regulatory Commission in Washington, DC. John is considered one of the fathers of the Westinghouse instrumentation and controls (I&C) business. He served on many IEEE Standards committees, heading some that were most influential in dealing with the safety and control of systems in nuclear generating stations. Today those standards are used worldwide.

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- ***Robotics - The Next Level***

Speaker: Dr. Guy Nicoletti
Date: Thursday, March 16, 2006
Place: University of Pittsburgh, Greensburg Campus
RSVP: Dr. Guy Nicoletti at Nicolett+@pitt.edu or (724) 836-9922
Sponsor: Robotics Society

Abstract: New algorithms and accompanying software have initiated a new generation of robotic hardware and mechanisms. From robotic vision to climbing robots, these new wonder machines have found new applications in the industrial, social and medical fields. This presentation will consist of an analytical survey of the state of the art in these fields.

Logistics: This presentation will follow a buffet dinner and immediately precede the Executive Committee meeting of the Pittsburgh Section of IEEE. Contact Dr. Nicoletti or Dave Vaglia for the exact time and building/room. There is no charge for dinner. **RSVP REQUIRED.**

- ***Consultants Network Meeting:***

What you always wanted to ask a lawyer but were afraid to

Speaker: Matt D'Emillio, Lawyer
Date: Tuesday, March 28, 2006
Time: 6:30 PM
Place: Westinghouse Energy Center Directions on page 8
Contact: George Crawford at (412) 675-9164

If you are a consultant offering engineering services or thinking about becoming one, the IEEE Consultants Network (CN) is for you. Network with other consultants and be included in CN's on-line listing of consultants, which is used by companies in need of consultants. Contact George Crawford for details about March's meeting and to be sent CN emails.

- ***Computer Society: Application Modernization - a How-to Guide***

Speaker: Greg Akins, Senior Consultant, Ascent Systems, Inc.
Date: Wednesday, March 29, 2006
Time: 6:00 PM – social with pizza and pop, 7:00 PM – presentation
Place: To be determined
Cost: No Charge
Sponsor: Computer Society IEEE members, guests and students are welcome.
RSVP: By March 28 to John Twigg at (412) 795-4444 or jtwigg@ieee.org
Please provide your name, telephone number, and email address. You will be notified of the location.

Many organizations' bread-and-butter applications are in older legacy platforms which may not meet changing business requirements and may be very expensive to maintain and support. Often these legacy systems cannot simply be abandoned because they still represent a significant competitive advantage. Application Modernization encompasses a wide range of techniques for enabling organizations to make more efficient use of information technology. From migrating legacy applications to service oriented architectures to improving semi-automated business processes, modernization is a challenging task that can benefit from past experiences and the use

of proper architectural patterns. This discussion will include key steps to preserving and renovating existing systems while developing an incremental modernization road map.

About the Speaker: Greg has over 13 years of experience in Information Technology and Software Development for clients such as Sony, Kennametal, University of Pittsburgh, Alcoa, Harris Trust and Savings, and Banc One. Most recently, Greg has been involved in J2EE and Eclipse RCP development.

• *Grounding and Bonding Class*

Presenter: Joe Tedesco
Date: Saturday, March 25, 2006
Time: Registration: 7:30AM Class: 8:00AM – approximately 3:30PM
Place: Westinghouse Energy Center Directions on page 8.
Sponsor: PES/IAS Chapter
RSVP: Register for the class by sending your check to Chuck Urso. Address below

As a service to our community, the Pittsburgh PES/IAS is sponsoring a full day training session on Grounding and Bonding for IEEE members and non-members. The presenter, Joe Tedesco, is a regular contributor to EC&M Magazine. This type of course normally costs \$200 to \$400 per person, so take advantage of our much lower charges. IEEE member cost is \$65; non-member cost is \$85. Certified continuing education credits are available for an IEEE processing fee of \$15. Please send your check, payable to 'IEEE Pittsburgh', to Chuck Urso, 5077 Lougean Ave, Pittsburgh, PA 15207. If you have any questions, contact Chuck at curso@llitechnologies.com or (412) 338-0700.

Objectives of the course: Participants will be provided with an understanding of the difference between grounding and bonding, applications of various grounding methods, code implications, and ramifications for various types of facilities. Joe will be discussing the following: Grounding fundamentals; to ground or not to ground; grounding electrical systems; grounding electrical services; service and main bonding jumpers; the grounding electrode system; grounding electrode conductors; bonding enclosures and equipment; equipment grounding conductors; enclosure and equipment grounding; clearing ground faults and short circuits; grounding separately derived systems; grounding at more than one building or structure; ground fault circuit interrupters; ground fault protection for equipment; grounding and bonding for special locations and conditions; grounding and bonding for electronic equipment; low voltage and intersystem grounding and bonding; and grounding of systems or circuits of 1kV or higher.

Course prerequisites: Participants should bring a 2005 NEC Code Book for their own use and should have an interest in applying IEEE and NFPA grounding standards and requirements.

About the speaker: Joe Tedesco is considered one of the nation's foremost Electrical Code experts. He has published major articles in popular magazines like EC&M and CEE News and authored or co-authored books for the International Association of Electrical Inspectors (IAEI), the National Fire Protection Association (NFPA), and other publishers. Joe has also served as a Codes & Standards Seminar Specialist and Seminar Manager for the IAEI and as an Electrical Field Service Specialist for the NFPA. He is a licensed Massachusetts Master and Journeyman Electrician, IAEI Certified Electrical Inspector, and Provider of Home Inspector and Electrician updates for license renewals.

- ***Congressional Visits Days***

The 11th annual Congressional Visits Days is expected to bring more than 250 scientists, engineers, researchers, educators and technology executives to Washington, DC, on March 28 & 29 to raise visibility and support for science, engineering, and technology. The two-day event culminates with visits to Capitol Hill and opportunities to meet face-to-face with members of Congress and their staff. Members can get more information by contacting Deborah Rudolph at (202) 785-0017, ext 8332 or d.rudolph@ieee.org.

The Pittsburgh Section will send 2 or 3 members to this important event. If you are interested in participating, there may be transportation available to you from Pittsburgh, but you would need to cover your own expenses beyond that. Contact Dave Vaglia at (412) 491-6944.

- ***Volunteer for the Science Fair***

Volunteers are needed to represent the IEEE Pittsburgh Section and act as judges at the Sci Tech 2006 Pittsburgh Regional Science Fair on Friday, March 31, 2006 at Heinz Field. Nearly 700 students from 90 schools in the 12 area counties are expected to compete.

The goal of the Science Fair is to advance science education by presenting examples of scientific research done by some of the best and brightest students in our region. The goal of the Science Fair coincides with one of the missions of the IEEE, that is, to foster an interest in the engineering profession.

For volunteers the event begins with lunch at noon, followed by judging of Junior and Senior Division projects, and concludes with presentation of two IEEE-sponsored awards to Senior and Junior Division entries at approximately 4 PM.

To volunteer to be an IEEE judge for Sci Tech 2006, just email tom.dionise@ieee.org, and you will be given information on registration and be included in future mailings.

- ***IEEE Conferences to be held in Region 2***

The following IEEE conferences will be held in our geographic area in the near future, meaning your travel costs would be minimal. Don't overlook any conferences so conveniently located.

Washington DC	Mar 13-15	2006 IEEE International Symposium on Secure Software Engineering (ISSSE 2006)
Alexandria VA	Mar 25-26	2006 IEEE Symposium on 3D User Interfaces (3DUI)
Alexandria VA	Mar 25-26	2006 14th Symposium on Haptic Interfaces for Virtual Environment and Teleoperator Systems
Alexandria VA	Mar 25-29	2006 IEEE Virtual Reality Conference (VR)
Easton PA	April 1-2	2006 32nd Annual Northeast Bioengineering Conference
Arlington VA	April 2-4	2006 Distributed Diagnosis & Home Healthcare (D2H2)
Arlington VA	April 6-9	2006 3rd IEEE International Symposium on Biomedical Imaging: Macro to Nano (ISBI 2006)
Washington DC	April 20-21	2006 Wind Power Symposium: Technology, Economics, and Politics
Arlington VA	May 14-18	2006 27th Power Modulator Symposium
Philadelphia PA	June 25-28	2006 IEEE International Conference on Dependable Systems & Networks With FTCS & DCC (DSN)

- ***Presentation Held on the Importance of Obtaining a PE License***

A timely presentation on the topic, “The Importance of Obtaining a PE License”, was given by Joseph M. DeSalvo, P.E. on Wednesday, January 25, 2006 in the evening. Sixteen people attended this presentation sponsored by the PES/IAS Chapter. There were ample opportunities for questions and answers.

- ***The FE Review Course***

As a service to our IEEE community, the Pittsburgh PES/IAS Chapter, in partnership with Penn State New Kensington, plans to sponsor a 26-week long FE Review Course starting in April 2006. Participants will be prepared to take the FE exam in October 2006. To become a PE, one must pass two exams: (1) Fundamentals of Engineering (FE) Exam, formerly referred to as the EIT Exam and (2) Principles and Practice of Engineering (P&P) Exam, referred to as the PE Exam. Our local expert Joe M. DeSalvo, P.E., who has been teaching Penn State Continuing Education classes for over 40 years, will teach this review course. Usually the charge for such a course is over \$1000 per person. Because PES/IAS will be responsible for the publicity and for providing the classroom facilities, we can project that IEEE member cost will be in the range of \$575 per person (or \$500 without books) if we have at least 25 participants. Please indicate your interest by notifying Dr. Kal Sen at senkk@ieee.org or (724) 696-1611. Classes are tentatively scheduled for Wednesday evenings and will be held at the Westinghouse Energy Center in Monroeville. Directions can be found on page 8.

About the instructor:



Joe DeSalvo is a Professional Engineer with degrees in electrical engineering (Pitt) and industrial management (Carnegie Mellon). He is a Senior Life Member of the IEEE and is presently on the adjunct faculty of Pennsylvania State University where he teaches FE (EIT) and P&P (PE) review courses and several engineering and economics courses in the Advanced Power Engineering Program. Mr. DeSalvo is retired from Allegheny Power, where, as Manager of Substation and Methods Standards, he had responsibility for substation designs and industrial engineering studies for three operating companies serving five states.

He has served the IEEE in over 70 positions at all levels during the last 40 years. He was Chairman of the Pittsburgh PES Chapter 1975-76 when it received the “Outstanding PES Chapter” award. He is a past Chairman of the Pittsburgh Section and a past Director of Region 2. He received the IEEE Centennial Medal of Honor in 1984.



• *MBA's for Engineers*

Speaker: Laurie Stewart, Executive Director of Masters Admissions, Carnegie Mellon University's Tepper School of Business
Date: Thursday April 6, 2006
Time: Social 6:30 PM Program 7:00 PM
Place: Westinghouse Energy Center Directions on page 9.
Cost: No charge
RSVP: RSVP is required by April 4 to Dr. Kal Sen, senkk@ieee.org or (724) 696-1611
Please provide your name, telephone number, and email address.
Sponsor: PES/IAS Chapter

Is there an MBA in your future? This session will explore the value of obtaining an MBA for individuals from technical professions, as well as provide details on Carnegie Mellon's FlexTime MBA program at the Tepper School of Business. Specific topics covered include: Who should obtain an MBA? What do you learn in an MBA program? When is the right time to pursue an MBA? Should you study full-time or part-time? What career paths are available to MBAs? How does Carnegie Mellon's FlexTime MBA program work? What do you need to do to get started?

About the speaker: Ms. Stewart holds an MBA from Carnegie Mellon's Tepper School as well as an undergraduate degree in engineering. She held various technical roles at General Motors and Valeo Engine Cooling. Ms. Stewart has been responsible for MBA admissions at Carnegie Mellon since 1994 and also handles admissions for the MS in Computational Finance (MSCF) program.

• *Law School for Engineers - A Powerful Combination*

Speaker: Joseph P. Campion, Director of Admissions, Duquesne University Law School
Date: Tuesday, April 18, 2006
Time: 5:30 PM-Light refreshments 6:00 PM-Presentation
Place: University of Pittsburgh, Oakland Campus
Benedum Hall, Conference Center Room 1175
Cost: No charge
Sponsors: PACE (Professional Activities Committee) & GOLD (Graduates of the Last Decade)
RSVP: By April 13 to Joe Kalasky at (724) 838-6492 or j.kalasky@ieee.org
Please provide your name, telephone number, and email address.

A law degree (J.D.) in conjunction with your engineering degree could give your resume more clout. If you have the interest, going to law school can make sense whether you are well-along in your engineering career, just a few years into your career, or an engineering student nearing graduation. Mr. Campion will describe various aspects of law school including prerequisites, course material, financial aid, and blending studies with your current job and family life. The presentation will cover both full-time and part-time programs. IEEE members, guests, and students are welcome to attend. Please RSVP as soon as possible.

- ***Annual History Dinner - History of Blackouts***

Speaker: Stan Horowitz
Date: Thursday, April 20, 2006
Place: Westinghouse Castle; Wilmerding, PA
Cost: To be determined

In keeping with our section's tradition, our annual history dinner will be held April 20 at the Westinghouse Castle. Our speaker, Stan Horowitz, will give a presentation on the history of blackouts, and section awards will be presented. It's a great meeting to invite your spouse or significant other to. It's also a great opportunity to get together with your electrical engineering buddies you haven't seen in a while. Call them and make plans for all of you to attend the dinner and catch up with each other. More details about the event will be provided in the April bulletin.

Directions to Westinghouse Energy Center

From Pittsburgh take Interstate 376 East (Parkway East). Take Exit 14A to Monroeville. Cross Business Rt 22 at the traffic light and proceed on Rt 48 South (Moss Side Blvd) approx ½ mile (two traffic lights). The 2nd traffic light is at a 4-way intersection with an Exxon station on the right. Turn left onto Northern Pike. Proceed approx 0.2 miles and turn right at the 1st traffic light onto Westinghouse Dr. Travel 0.7 miles (past the guard stand) to the 3 flags where the building's main entrance is located. Parking in the evening will be plentiful. Use the main entrance and check with the security guards inside. You will be directed to the proper room for your meeting.

From the PA Turnpike, take Exit 57 (Monroeville). After the toll plaza, get in the left lane to get on Business Rt 22 West. At the first light, turn left onto Rt 48 South (Moss Side Blvd) and follow the above directions.

2006 Calendar – Meetings of IEEE Pittsburgh Section

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct
Executive Committee	19 Point Park	16 Point Park	16 U Pitt Greensburg							
Section		18 Engr Week table	31 Science Fair	20 History Dinner						
Communications		24 Random coding bounds								
Computer	18 Tour SunGard	18 Robot Race	29 Applctn Moderniz	20 Offshore Outsourc'g Perils	17 TBD	21 Marketing a Tech Co	19 Embed Syst for Motor control	16 Technol Co stories		
EMBS		15								
EMCS	31 FAQs	1 Path of Least Induc & EMF phobia								
PES/IAS	25 P.E. License	13 Power Quality	25 Grounding & bonding course	6 CMU MBA program 20 History Dinner FE review class starts	FE review class	FE review class	FE review class	Date TBD Pirate game FE review class	FE review class	
Magnetics										
Robotics			16 Next Level							
Signal Processing	9 Sensor Network									
Upper Mon		6 Interconn to Backplan 13 Nano photovolt. 20 Magnet Reson Microscopy								
Consultants Network	24 Expand business	28 Business Mtg	28 Legal questions							
Life Member										
GOLD				18 Engrs as Attys						
PACE				18 Engrs as Attys	Date TBD MBA Programs	Date TBD Personal Finances		Date TBD Resume preparation		Date TBD Transition to mgmt
Student Activities										

TBD means 'to be determined'