



IEEE Pittsburgh Section
Bulletin



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Included in this issue:

- From the Chair
- Engineers and Public Policy – Aug 8
- Outstanding Region 2 Section Award
- Pirate Game at PNC Park – Aug 11
- PES Conference 2008
- Electromagnetics Meeting – Sept 20
- Signal Processing Meeting – Sept 27
- President of IEEE-USA's visit to Pittsburgh
- PE Exam Prep Class Starts Nov 1
- Promotions to Senior Member
- IEEE Mentoring Program

Editor of this issue: Jace Cochrane, P.E. jacejc@pghmail.com (412) 390-0718

Contributors: Joe Kalasky, Heung-No Lee, Andy Novotny, Mike Oliver, Kal Sen, Chuck Urso and Dave Vaglia.

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*

Members of IEEE Pittsburgh Section,

In July I had the pleasure of spending two days with Dr. Ralph W. Wyndrum, Jr, current President of IEEE-USA. Dr. Wyndrum visited Pittsburgh to show his support for our Vision 20/10 program and to provide guidance and encouragement. He gave a talk on “The Status and Future of Engineering in the US Today” at the Carnegie Mellon Software Engineering Institute, one of our partners in the Vision 20/10 program. He also informed us about the changes he is making to improve IEEE USA member benefits.

Also last month our PES/IAS group jointly sponsored a meeting with the American Coaster Enthusiasts on “A History of Thrill-Roller Coasters”. Presenters David Markus and David Altman were well received by over 50 attendees, who enjoyed a Chinese buffet, movie clips of famous coasters, and the presentation.

Great News!!! Our Pittsburgh Section was chosen the Best Large Section in Region 2 for 2005, beating 20 other large sections. Thanks go to all members who volunteered and/or participated in our events in 2005. Special thanks go to Kal Sen, our Section’s Immediate Past Chair for his tremendous job as Chair in 2005 and for preparing our award application.

On August 8, our Professional Activities Committee (PACE) and Graduates of the Last Decade (GOLD) will host Erica Wissolik, who will speak of her work in the IEEE-USA Government Activities Department.

Friday, August 11 is our night at PNC Park. Get a bobblehead doll! See page 4 for details.

Mark your calendars for our Saturday, September 16 Gateway Clipper Dinner Cruise for members and guests. There will be a buffet dinner and a band for dancing. We will be reserving a limited number of seats on a cruise that is also open to the public. Our members and their guests will receive preferred pricing. Full details will be in the September bulletin, but please email in advance your interest in attending to Ralph Sprang at rsprang@ieee.org. We need a rough count to help determine the cost of the event.

Our section is still accepting nominations for candidates to fill the Executive Committee positions of Chair, Vice Chair, Treasurer, and Secretary for 2007. Please contact me if you are interested for details about responsibilities and the nominating process.

We are still in need of more volunteers. Please attend our next Executive Committee meeting or call me if you can help our section.

Dave Vaglia

Section

Chair & Awards Co-Chair – David J. Vaglia, P.E.
davevaglia@ieee.org (412) 491-6944

Vice Chair – John Twigg
jtwwg@ascent-systems.com (412) 795-4444

Secretary – Charles Urso, P.E.
cursos@ieee.org (412) 338-4871

Treasurer – Harold Hagerty, P.E.
hhagerty@ieee.org (412) 492-0943x226

Webmaster – Andrew Novotny
andrewnovotny@ieee.org (412) 351-4954

Immediate Past Chair – Dr. Kalyan Sen (Kal)
senkk@ieee.org (724) 696-1611

UpperMon Subsection
Chair: Dr. Dimitris Korakakis
Dimitris.Korakakis@mail.wvu.edu
(304) 293-0405 x2512

Chapters

Communications Society
Chair: Phil Cox
p.e.cox@ieee.org (724) 443-0566

Computer Society – Chair: John Twigg (see above)

Engineering In Medicine & Biology Society
Co-Chair: Bob Brooks
rbrooks@medrad.com (412) 767-2400 x3506
Co-Chair: Dr. Zhi-Hong Mao
maozh@engr.pitt.edu (412) 624-9674

Electromagnetic Compatibility Society
Chair: Michael J. Oliver
emi@mair.com (814) 763-3211

Power Engineering & Industry Applications Societies
Chair: Charles Urso, P.E. (see above)
Vice Chair: Andrew Novotny (see above)

Magnetics Society – Chair: Dr. Ganping Ju
Ganping.Ju@Seagate.com (412) 918-7046

Robotics Society – Chair: Dr. Guy Nicoletti
Nicoletti+@pitt.edu (724) 836-9922

Signal Processing Society – Chair: Dr. Heung-No Lee
hnlee@engr.pitt.edu (412) 624-9677

Affinity Groups

GOLD – Chair: Andrew Rydholm
andrew_rydholm@yahoo.com (412) 261-3200 x281

Life Member – Chair: Bob Grimes, P.E.
r.d.grimes@ieee.org (412) 963-9711
Vice-Chair: Wally Raisanen
wraisanen@ieee.org (724) 986-4467

Committees

Consultants Network
Co-Chair: Dr. George Crawford, P.E.
gwc2@psu.edu (412) 675-9164
Co-Chair: Peter Mantzouridis
Coolpetros1@yahoo.com (412) 780-0201

Professional/Career Activities (PACE)
Chair: Joe Kalasky, P.E.
j.kalasky@ieee.org (724) 838-6492

Student Activities – Chair: Ralph Sprang
rsprang@ieee.org

Membership Development
Chair: Dr. Karl F. Muller, P.E.
karlmuller@compuserve.com (412) 374-6051

Awards – Co-Chair: Ray Valentine, P.E.
r.d.valentine@ieee.org (724) 733-5083

Publicity – Chair: Thomas Dionise, P.E.
ThomasJDionise@eaton.com (724) 779-5864

• ***Patent Reform, Immigration, Innovation and IEEE Government Internships***

Speaker: Erica R. Wissolik, Program Manager, Government Activities, IEEE-USA
Date: Tuesday, August 8, 2006
Time: 6:00 PM
Place: Room 360, Benedum Hall University of Pittsburgh Oakland Campus
Cost: No charge. Light refreshments included.
Sponsors: Professional Activities Committee (PACE) & Graduates of the Last Decade (GOLD)
RSVP: By August 4. Give your name, phone number and email address to Joe Kalasky at (724) 838-6492 or j.kalasky@ieee.org.

Miss Wissolik, a native of the Pittsburgh area, has agreed to return here to speak of her work in the IEEE-USA Government Activities Department. This special event will edify how IEEE-USA follows, comments on, and lobbies for federal legislation crucial to the vitality of IEEE members in the USA. Current hot legislative items for engineers that will be covered are (1) patent reform, commonly known as intellectual property rights, and (2) immigration reform and innovation programs such as the President's American Competitiveness Initiative. Also covered will be ways that we can influence legislation and how to participate in the renowned IEEE government internships such as WISE (Washington Internships for Students in Engineering) and IEEE Fellowships for practicing engineers. These interns and fellows assist either Congress or the Department of State with reliable technical and engineering career information which affects legislation and policies.

• ***Pittsburgh Wins Region 2 Best Large Section Award***

The Director of Region 2, Thomas Tullia, and the Director-Elect, John Dentler, were very impressed by the comprehensive set of technical meetings, programs, tutorials, and social activities that our section provided for our members in 2005. As a result, we were chosen to receive the Region 2 Best Large Section Award.

Pittsburgh beat other Region 2 sections including, Baltimore, Cincinnati, Cleveland, Columbus, Northern Virginia, Philadelphia, and Washington, DC. Many of these sections have larger membership pools and 2 to 3 times our number of Technical Society Chapters and Affinity Groups. Your participation put us over the top! Thank you IEEE Pittsburgh members!

Some highlights of our section's activities in 2005 include:

- Over 84 separate event reports were submitted to IEEE headquarters.
- Our Power Engineering Society (PES) Chapter and our Industry Applications Society (IAS) Chapter each received the Outstanding Large Chapter Award from their Society in 2005.
- The PES Chapter won the second best web site award among the 172 chapters in the world.
- A chapter of the Electromagnetic Compatibility Society (EMSC) was established in our section.
- Our section sponsored, during Engineers Week at the Carnegie Science Center, the 12th annual Robot Car Race for seventh and eighth graders. We also provided a hands-on activity booth about electricity.
- We awarded four \$500 book scholarships to local college-level engineering students.

- ***Bobblehead Night and Pirates at PNC Park***

Date: Friday, August 11, 2006
Time: Game starts at 7:05 PM vs St Louis Cardinals
Place: Section 323, PNC Park, North Shore, Pittsburgh
Cost: \$16.00 per ticket
Sponsors: PES/IAS Chapter
RSVP: By August 1, 2006 by contacting Andy Novotny and sending your check payable to "IEEE Pittsburgh Section" to Andrew Novotny
514 Price Ave
North Braddock, PA 15104

Come out and enjoy an evening at PNC Park with the IEEE Pittsburgh Section. It will be Satchel Paige Bobblehead Night and Heritage Weekend with the Pittsburgh Pirates hosting the St Louis Cardinals. Join other IEEE members and their guests for a fun-filled evening. Section 323 is on the third base side of the park. Contact Andrew Novotny at (412) 351-4954 or andrewnovotny@ieee.org to reserve your seats or if you have any questions.



- ***Power Engineering Society Meets in Pittsburgh***

The international Power Engineering Society of IEEE will meet in Pittsburgh in 2008 from July 20 through 24. Having the PES General Meeting here is probably a twice-in-a-lifetime opportunity, so don't miss it. The meeting is expected to have more than 1500 attendees and will be held at the David L. Lawrence Convention Center and Westin Convention Center Hotel. It promises to be an exciting event with a comprehensive technical program comprising paper and panel sessions, a poster session and reception, technical tours, short courses and tutorials with CEUs, as well as a full student program, PES awards luncheon, social events, networking opportunities, and a wide variety of companion activities. Pittsburgh Section members who are interested in volunteering to work on this conference and giving it a Pittsburgh flavor are asked to contact Chuck Urso, Pittsburgh PES Chapter Chair, at cvurso@ieee.org or Dave Vaglia, Pittsburgh Section Chair, at davevaglia@ieee.org. A poster announcing this PES General Meeting can be seen at http://www.ewh.ieee.org/r2/pittsburgh/event1/Pes_pgh_2008.pdf.

- ***The New Electromagnetic Compatibility Directive***

Speaker: Gary Fenical, NARTE Certified EMC Engineer, Laird Technologies
Date: Wednesday, September 20, 2006
Time: 6:30 PM Reception 7:00 PM Presentation
Place: Westinghouse Energy Center, Monroeville *Directions in the September bulletin*
Cost: No charge
Sponsor: EMCS Chapter
RSVP: **Required** to Mike Oliver at emi@majr.com or (814) 763-3211

Abstract: The European Parliament and the Council of the European Union have adopted the new EMC Directive 2004/108/EC. Effective July 20, 2007, the current EMC Directive 89/336/EEC will be repealed. There is a transitional period until July 20, 2009, at which time apparatus compliant to 89/336/EEC can no longer be sold in the European Market. The goal of the presentation is to discuss the changes in the Directive that will affect your products going to the European Economic Community (EEC) market. Don't wait until the last minute to deal with the changes that have been mandated. Now is the time to become familiar with the new Directive and its implications for your manufacturing process and products. There are likely to be major changes in your documentation, especially documentation for ISO 9000.

About the speaker: Gary Fenical has over 40 years of experience in the operation and maintenance of RF and digital systems for both military and commercial applications. He is the EMC Technical Sales Representative at Laird Technologies in Delaware Water Gap, PA. He has been responsible for the design and/or measurement and quality control of hundreds of large-scale shielded enclosures and was instrumental in the design and construction of Laird Technologies' state-of-the-art World Compliance Centers.

- ***Ubiquitous Multimedia Computing and Communication: Challenges and Future Trends***

Speaker: Professor C. C. Jay Kuo, University of Southern California
Date: Wednesday, September 27, 2006 *See September bulletin for time and place.*
Sponsor: Signal Processing Society Chapter
Questions: Heung-No Lee, PhD at hnlee@engr.pitt.edu or (412) 624-9677

Abstract: With recent flourishing of embedded media applications such as MPEG-2, H.264, and VC-1 encoders/decoders and wireless broadband communication infrastructures such as 3G, WiMax and Wi-Fi, real-time multimedia computing and communications on embedded systems becomes a major focus for both software and hardware designers. The tradeoff between several design choices will be analyzed, including the RISC processor, the SIMD processor and the dedicated ASIC. Then three emerging R&D efforts will be highlighted. More details will be given in the September bulletin.

About the speaker: Dr. Kuo received his PhD degree from MIT in 1987. He is now a Professor of EE, CS, and Mathematics at USC. His research interests are digital media processing, multimedia compression, communication and networking technologies, and embedded multimedia system design. He is a Fellow of IEEE and SPIE and has co-authored more than 100 journal papers.

- **Dr. Ralph Wyndrum, Jr., Fellow. IEEE, 2006 President IEEE-USA's Pittsburgh Visit**

On July 18th and 19th, 2006, Dr. Ralph Wyndrum, our IEEE USA president came to Pittsburgh to support our Vision 20/10 Initiative and discuss improving the state of Engineering in the United States. Vision 20/10 is a collaborative regional campaign supported by key leaders from universities and industry with the aim to re-industrialize the greater Pittsburgh region.



With Eaton's Power Quality Lab Engineers.



At the Westinghouse Energy Center.



Ralph, Dave & Student, and Pittsburgh Leadership Foundation President John Stahl-wart.



John Twigg, Leader of Vision 20/10 Initiative.



Attendees at the Software Engineering Institute presentation.



Dr. Wyndrum talking about Engineering in US compared to other countries.



Core Team members of Vision 20/10



Thank you Dr. Wyndrum

Dr. Wyndrum’s visit included the Westinghouse Electric Company in Monroeville and Eaton - Cutler Hammer in Warrendale to visit and see demonstrations at the Power Quality Experience Center

Pittsburgh Supercomputing Center and met with the Executive Director Beverly Clayton

Pittsburgh Technology Council for interview by Jonathan Kersting, Editor of TEQ magazine

Meeting with Brain Gain Team member Phil Lichtenfels. The Brain Gain Team is made up of PA academic institution advisors whose goal is to stop the erosion in enrollments of students majoring in IT curriculums.

Meetings at the Software Engineering Institute (SEI) with Linda Schooer, the Executive Director of Training and Richard Cox, the Executive Director of Licensing and Partnering.

SEI Program meeting - The grand finale event of Dr. Wyndrum’s visit. Dr. Wyndrum spoke on the “Status and Future of Engineering in the US Today”. His talk addressed how U.S. engineers can succeed in the new global environment in which technology has opened up challenges and opportunities for engineers worldwide. Dr. Wyndrum discussed specific IEEE and IEEE-USA programs to provide continuing education for IEEE members, as well as covered pre-college education programs to help maintain U.S. leadership in innovation by preparing future generations.

Prior to Dr. Wyndrum’s presentation at this meeting, Dr. John Stahl-Wert, a local entrepreneur, speaker, and author of the book, “The Serving Leader”, stood up and said a few motivational words about the importance of the type of work that the Section’s Vision 20/10 Initiative has undertaken.

Richard Cox, Director of Licensing and Partnering for the Software Engineering Institute (SEI), also stood up and announced that SEI has partnered with the IEEE Pittsburgh Section to bring low-cost CMMI (Capability Maturity Model Integration) and TSP (Team Software Process) training to the Region’s information technology firms and their customers expected to begin in 2007.

John Twigg, the Section Vice-Chair stood up and announced another significant achievement of the Vision 20/10 Initiative, which is it’s partnership with the Brain Gain Team to increase technology enrollments in PA universities.

Dave Vaglia, the Section Chairman, presented Dr. Wyndrum with a plaque to commemorate his visit to Pittsburgh. Dr. Wyndrum expressed that the work of this Initiative may be a model for other middle-Atlantic states.

• *The PE Electrical Exam Review Course*

As a service to our community, the IEEE Pittsburgh PES/IAS Chapters plan to sponsor a 24-week (72-hour) long PE Review Course on Wednesdays (6:00-9:00 PM) starting on November 1, 2006 and ending on April 18, 2007. The trainees will be prepared to take the PE Electrical Exam in April 2007. To become a PE one must pass two exams: Fundamentals of Engineering (FE) Exam – referred to as the EIT Exam and Principles and Practice of Engineering (P&P) Exam – referred to as the PE Exam. Joe M. DeSalvo, P.E., who has been teaching Penn State Continuing Education classes for over 40 years, will teach these classes. This type of course normally costs over \$1200 per person. Because IEEE Pittsburgh PES/IAS will be responsible for the publicity, securing the participants, and obtaining the classroom facilities, we can project that the cost will be \$750 per person (IEEE member or non-member) if we have at least 25 participants. This cost includes course materials: four (4) textbooks and handouts with instructor's notes, problems, and sample exams. The classes will be held at Westinghouse Energy Center in Monroeville. Please indicate your interest by notifying Dr. Kal Sen at senkk@ieee.org or (724) 696-1611.

About the speaker:



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 in

1975-76 when it received the "Outstanding PES Chapter" award. He is a past Chair of the Pittsburgh Section and a past Director of Region 2. He received the IEEE Centennial Medal of Honor in 1984. In addition to IEEE activities, Mr. DeSalvo is a senior member of the Institute of Industrial Engineers and a member of Eta Kappa Nu and Sigma Tau honorary societies.

• *Congratulations New Senior Members*

The following four members of the IEEE Pittsburgh Section were promoted to Senior Members of IEEE in June 2006:

P. Chrysanthis
Caroline Graettinger
James Sanford
Jill Rae Schaumloeffel

• ***IEEE Mentoring Connection***

Beginning July 14, 2006, IEEE is starting an online mentoring program for its membership (except student members). IEEE members will mentor other IEEE members. By volunteering as a mentor, individuals use their career and life experiences to help other IEEE members in their professional development. As a mentee, you lead your partnership by selecting your mentoring partner from among those who have volunteered to serve in this capacity. Both potential mentors and mentees should consider the time commitment necessary to ensure a successful mentoring partnership.

Mentors are entering the program first. IEEE has partnered with The Training Connection, a vendor that has developed a web-based mentoring program to facilitate the process. If you are interested, go to <http://www.ieee.org/mentoring> for information on the roles and responsibilities of each mentoring partner and information on the time commitment. To access the online program site, visit the IEEE Membership Benefits page listed under Core Benefits “New for 2006” at <http://www.ieee.org/web/membership/benefits/index.html>.

• ***Advertise in the Pittsburgh Bulletin***

Reach over 2000 members of the IEEE Pittsburgh Section every month. The bulletin is issued on or about the 1st of the month, 12 months a year. Ads must be submitted in an electronic format compatible with Word. The ad and payment must reach the newsletter editor by the 20th of the preceding month to be included in a particular bulletin.

<u>Ad size</u>	<u>Business</u>	<u>University</u>	<u>IEEE Member</u>
Full page (8-1/2 x 11)	\$250	\$190	\$190
½ page	\$130	\$100	\$100
1/3 page	\$85	\$65	\$65
¼ page	\$65	\$50	\$50
Business card size	\$40	\$30	\$20

• ***Keep Receiving the Bulletin***

Sometimes members of the IEEE Pittsburgh Section report that they are not receiving their Bulletins via email. Here are some troubleshooting tips.

- Is your IEEE membership still current? If not, you will not receive the Bulletin. (If you are still getting Spectrum magazine every month, your membership is current.) Please renew your membership via the IEEE web site, www.ieee.org, or 1-800-678-4333.
- Does IEEE headquarters have you in the Pittsburgh Section or another section? If you aren't in the Pittsburgh Section, you will not receive the Bulletin. If you know your IEEE member number and PIN, you can revise your section on the IEEE web site. Otherwise call IEEE at 1-800-678-4333 to check on your section.
- Does IEEE headquarters have your current email address? Many people frequently change their email addresses because they change jobs or change ISP providers. (Consider a free IEEE email alias to avoid this problem.) If you know your IEEE member number and PIN, you can update your email address on line. Otherwise call IEEE at 1-800-678-4333 to give them your latest email address.
- Is your spam blocker blocking the Bulletin? You'll have to fix this yourself.

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	27 Point Park	18 Panera Monroeville	15 Panera Oakland	20 Panera Oakland	24 Panera Oakland		
Section		18 Engr Week table	31 Science Fair	20 History Dinner			19 Future of Engring in USA		16 Dinner Gateway Clipper	
Communications		24 Random coding bounds								
Computer	18 Tour SunGard	18 Robot Race	29 Applctn Moderniz	19 <u>Outsourc'g America</u>	17 Vision 20/10	21 Vision 20/10	19 Improvg State of Engring in US			
EMBS		15 Transm data: body as cable								
EMCS	31 FAQs	1 Path of Least Induc & EMF phobia			11 EMC Overview				20 New EU EMC Directive	12 Testing for EMC Compliance
PES/IAS	25 P.E. License	13 Power Quality	25 Grounding & bonding course	6 CMU MBA program 20 History Dinner 26 FE review class starts	31 HV ckt brkr design 3, 10, 17, 24 & 31 FE review class	14 & 21 2005 NEC course 28 Inverters & motor insulation 7, 14, 21 & 28 FE review class	12 Roller coasters 5, 12, 19 & 26 FE review class	11 Pirate game 2, 9, 16, 23 & 30 FE review class	6, 13, 20 & 27 FE review class	4, 11 & 18 FE review class
Magnetics				28 Beyond mag record limits						
Robotics			16 Next Level							
Signal Processing	9 Sensor Network		22 Temporal role-based access control	12 Gene reg networks					27 Multi-media Computing & Commun	
Upper Mon		6 Interconn to Backplan 13 Fingerprint please 20 Magnet Reson Microscopy								
Consultants Network	24 Expand business	28 Business Mtg	28	25 Neural Networks	23 Legal questions	27				
Life Member				11 Intellectual Propty					14 Ansoft business & technol.	
GOLD				18 Engrs as Attys				8 Govt activities		
PACE				18 Engrs as Attys				8 Govt activities		
Student Activities										

TBD means 'to be determined'