Pittsburgh Section
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Tour of Allegheny Energy Units 3, 4, & 5

This tour will visit the Springdale, PA, facility of Allegheny Energy where large combustion turbines and generators were recently installed. These large turbines burn natural gas. They have higher fuel efficiency than coal fired steam turbines, which means reduced greenhouse gasses. These turbines exhaust virtually no particulates. They further offer the advantages of a low spin up time so that they can be brought on-line quickly for peaking service or response to abnormal system conditions. This is one of the first large combustion turbine installations in this part of the country.

Springdale Power Station currently has five generators, Units 1 through 5. Units 1 and 2 are simple cycle turbines powered by natural gas. They are GE LM6000 units, and are essentially the same as jet engines on a 737. These units were constructed on the site about three years ago and are rated at 44 MW each. Units 3, 4, and 5, which we will visit, are combined cycle units with one boiler that produces the steam for all three units. Startup time for these units is not as fast as units 1 and 2. Total rating for units 3, 4, and 5 is approximately 540 MW.

Place:	Allegheny Energy Units 3, 4 & 5 198 Butler Street Extension, Springdale, PA 15144 (724-274-3602)
Date:	April 22nd
Time:	7:00 PM

The IEEE Pittsburgh section thanks Allegheny Energy for making this tour possible. Allegheny Energy will provide the required safety equipment of hard hats, safety glasses and earplugs. Leather shoes are recommended for walking on gravel and climbing stairs. For more information or to register, contact Keith Sueker at (412) 793-8909 or ksueker@att.net by April 15th.

Directions from the PA Turnpike: Take Allegheny Valley Exit 48. After the tollbooths, keep left and take the Cheswick/Springdale ramp. You will merge on to Old Rt. 28 (Freeport Road). Proceed through Cheswick into Springdale. Pass the Cheswick power station. Almost at the end of the town, turn right onto Butler Street (at a traffic light). Cross the railroad tracks and make an immediate left. Go straight until you come to the Guard Station. The entrance sign reads Allegheny Energy Employees only. The guard will direct you to the AE 3,4,5 Administration Building.

Directions from Downtown: Take Allegheny Valley Expressway (Rt. 28) North toward Etna. Take Exit 11 (Rt. 910/ PA Turnpike) and merge onto Indianola Rd. Turn right onto Freeport Rd (Old Rt. 28) and proceed through Cheswick into Springdale. Follow the directions above.

IEEE Pittsburgh Section
Annual History and Awards Dinner

George Westinghouse – The Forgotten Genius
Ed Reis

Everyone in the group closes their eyes for a moment and drifts back in time… back … back … back to the 1890's. Next, the meet none other that Geoprge Westinghouse… dressed in his black, long tailed jacket and best black top hat. Sit back and listen as Mr. Reis, the Executive Director of the George Westinghouse Museum, does a first person impersonation of George Westinghouse. The program includes a tour of the APICS Castle and museum (www.georgewestinghouse.com/museum.html).

Place:	APICS Castle, Wilmerding, PA
Date:	April 28th
Time:	6:30 PM – Social & Soft Drinks 7:00 PM – Dinner $20/person or $35/couple 7:45 PM – Awards & Fellow Recognition 8:00 PM – Program & Tour

Dinner Menu
Scrod English Style or Chicken Cordon Bleu
Vegetable Medley
Twice-baked Potatoes
House Salad
Roll & Butter
Carrot Cake

For more information, or to make your reservation, please contact Tom McDermott at (412) 650-8491, or t.mcdermott@ieee.org. Advanced payment for dinner is needed by April 24th. Please make check payable to "Pittsburgh Section IEEE", and mail to Tom McDermott, 72 Dutch Lane, Pittsburgh PA, 15236. Be sure to indicate your entree choice, and include a phone number or email address. There is no charge for just attending the awards & program portion.

Tutorial on Variable Frequency Drives

Richard Osman, P.E.

This tutorial will begin with the basic principles of variable frequency AC motor drives of several types as well as the applicable characteristics of both induction and synchronous motors. Some of the topics to be covered are speed/torque characteristics, flux oriented torque control, dynamic and regenerative braking, synchronization and computer representation of system dynamics.

The modern variable frequency AC drive will also be described along with a number of applications. These will include the use of two four-quadrant drives to exchange power asynchronously between two power systems. The ASIRobicon "Perfect Harmony" line from 480 V, 100 hp drives to 25,000 hp medium voltage drives will be described in detail and demonstrated.

Mr. Osman graduated with a BSEE from Carnegie Mellon University (then Carnegie Institute of Technology) in 1965. He was employed by the Westinghouse R&D Center before joining Robicon Corporation in 1970. He was the Engineering Manager for AC Drives for many years. Currently, he is the Vice President of Technology for High Voltage Engineering Company, the parent of ASIRobicon Corporation. Mr. Osman is the author of a number of papers on AC motor drives and is a senior member of the IEEE. He has presented a number of seminars on AC motor drives internationally and is a Professional Engineer in the Commonwealth of Pennsylvania.

Place: ASIRobicon, New Kensington, PA
Date: May 12th and 19th
Social: 6:30 PM
Program: 7:00 PM

The tutorial is two evenings and will include the presentation and a plant tour. Attendees who complete both sessions will be granted 0.5 Continuing Education Units (CEU). A bound volume of the material presented will be included.

The deadline for registration is April 22nd, and the fee for the tutorial is $50 for IEEE members, $75 of for non-members, and $25 for student members. If you need a CEU certificate, an additional $10 will be charged. This $10 fee is required by the IEEE to issue the certificate. For more information, or to register, please contact Keith Sueker at (412) 793-8909 or ksueker@att.net. Please make registration checks payable to IEEE Pittsburgh Section, and mail them to Keith Sueker, 110 Garlow Drive, Pittsburgh PA 15235.

Directions from Monroeville: Take Rt. 22 East to Rt. 286 East – Golden Mile Highway. Take Rt. 286 East (past the merger with Rt. 380) to Rt. 780 (9.9 miles). Turn left onto Rt. 780. Turn left into Westmoreland Business and Industrial Park (1 mile). Turn right in ASIRobicon (0.6 miles). Visitor parking is available in the front lot near the main lobby

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The Future of the Artificial Heart

Erin Wacker et all.

Some of the major unresolved problems that still preclude the artificial heart from becoming a viable alternative to the transplant of a human heart will be presented. Better materials, clot free blood flow and electrical signal conduction are just a few of the problems. The present status of the artificial heart is analyzed and summarized.

Internet Security

Steven Kubis

The latest techniques used by hackers and others to invade, manipulate and destroy computer systems both at the wire as well as wireless level will be discussed. Illustrations of the most common methods used are presented. Remedies and countermeasures are also referenced.

Place: Chambers Hall, Fireside Room
University of Pittsburgh, Greensburg Campus
Date: April 8th
Dinner: 6:00 PM
Program: 7:30 PM

Both presentations will be made during the program. For more information, please contact Guy Nicoletti at (724) 836-9922 or nicoletti+@pitt.edu.

Leadership Skills for Engineers in the Workplace

Charles P. Rubenstein, Ph.D.

Overview: The IEEE Pittsburgh Section PACE committee is presenting a workshop on leadership skills for engineers. There will be one section of the workshop as a single all-day session.

Who Should Attend: This course is intended to help engineers and engineering managers achieve advancements for themselves, and successes for the companies they work for.

Key Benefits: This workshop will help participants recognize and develop interpersonal, group, team and individual leadership skills. The format is through interactive participation, also using exercises and case studies. The skills developed are appropriate for application in management or leadership positions in various types of organizations, including business, industry and volunteer activities.

Content: The course will address such issues as: What are the attributes of a leader? What does a leader do? What motivates people? What motivates volunteers? What is the relationship between management and leadership? Holistic communications and active listening. Keys to leadership problem identification and solution techniques. Identification of personal interactive skills (Jungian types). Identifying conflict styles and managing conflict. Brainstorming for building teams and consensus. Coaching and persuasion. Basic presentation skills.

Instructor: Charles Rubenstein is a tenured professor of Engineering and Information Science at the Pratt Institute graduate School of Information and Library Science. He has an earned doctorate in Bioengineering from the Polytechnic Institute of New York and master's degree in Library and Information Science from Pratt Institute.

Dr. Rubenstein is a senior member of the IEEE. He has been a member of the IEEE-USA PACE Committees since 1999, currently serving as Vice-Chair, and a member of the Engineering Management Society Board of Governors since 1988, currently serving his fourth term as Vice President, Member Relations. Dr. Rubenstein has been an Engineering Management Society Distinguished Visitor since 1997.

Place: Engineering Society of Western PA. (ESWP)
Blvd of the Allies – Downtown
Date: April 17th
Program: 10:00 AM to 6:00 PM (Lunch and Snacks served)

Registration Fees

Member	$75
Non-Member	$125

Seminar Coordinator: Harry Hagerty is the Past Chairman of the IEEE Pittsburgh Section. For more information, please contact Harry at (412) 492-0943 x226 or hhagerty@ieee.org. Reserve your spot now. Space is limited to 25. This program is hosted by the IEEE Pittsburgh Section, and PACE.

Registration Form

Leadership Skills Workshop, April 17th, 2004

Make checks payable to "IEEE Pittsburgh Section". Submit check and registration form to Harry Hagerty, 1659 E Sutter Road, Glenshaw Pa 15116

Mr./Mrs./Ms. _____

All-day session Apr 17: _____

Home Address: _____

City and Zip: _____

Phone: _____ E-mail: _____

Member #: _____ Grade: _____

Amount enclosed: $ _____

Section News

Electronic Distribution of the Bulletin

The Pittsburgh Section ExComm is moving forward with the electronic distribution of the Bulletin. Last month, all members of the section should have received an electronic copy of the issue. If you have been getting the paper version of the Bulletin, you will continue to receive that through May of this year. All issues after May will be electronic only. This change in distribution medium will save the section a considerable amount of money in both printing and postage.

To be prepared for this change, please visit services1.ieee.org/membersvc/coa/intro.htm and update your membership information. Be sure to check all contact information, including your e-mail address. This would be a good time to get an IEEE e-mail alias as well. Information on how to obtain an alias is included on that page. An e-mail alias will provide you with virus scanning on all attached documents, as well as a permanent e-mail address as long as you are an IEEE member. An additional free service just added to the IEEE email alias is unsolicited commercial email (UCE or SPAM) filtering. This is an optional service that the user must subscribe to, and set the level and type of filtering. Messages can be flagged as suspect and the users email software can deal with them, or the messages can be blocked (appears as an invalid address) and returned to the sender. Each of these options has 3 levels of sensitivity to select the amount of filtering applied to the incoming mail.

Power Quality: An Overview

Chris Sermon, P.E.
Power Quality Systems, Inc.

With the growth of residential, commercial and industrial users, the quality of the electric power delivered and utilized has come under greater scrutiny. Suppliers, direct users and indirect users can feel the effects of poor power quality. This presentation provides an introduction to power quality - its origins, its level of importance and how it can be improved.

Chris Sermon, a member of the IEEE, is a Senior Engineer with Power Quality Systems, Inc. in Pittsburgh. He is a Registered Professional Engineer in the Commonwealth of Pennsylvania.

Place: Westinghouse Energy Center, Monroeville
Date: May 6th
Social: 6:30 PM
Program: 7:00 PM

For more information, or to register, contact Harry Hagerty at (412) 492-0943 ext. 226 or hhagerty@ieee.org by April 29th.

Directions: From downtown Pittsburgh, take the Parkway East Outbound to Exit 14A (Monroeville). Cross the traffic light (Business 22) and proceed on Rt. 48 South for two traffic lights. Turn left onto Northern Pike. Proceed East ~ 0.2 miles and turn right at the first traffic light onto Westinghouse Drive. Travel 0.7 mile to the three flags where the main entrance is located. Parking in the evening will be plentiful in the large area in front of the building. Enter the main entrance. Check with the security inside. You will be directed to the proper auditorium for the presentation.

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