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THE SUNCOAST SIGNAL

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.



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This Month's Meetings

Tuesday, May 1st: EXCOM Meeting
Meeting starts at 5:30PM At FRCC

Register online at <http://time2meet.com/fwcs-excom/index.html>
Open to all FWCS Members

IEEE T & D Conference

May 7 – 10 2012

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PES/IAS White Book Seminar

Speaker: Hank Johnson, P.E. and Curtis Latzo, PhD, P.E.

At the FRCC

May 18, 2012

Time: 9:00 AM to

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**FWCS PES Utility Users Group Meeting
ARC Flash Remediation**

See Page 7 for Details

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Sunday after the 1st Tuesday of the month preceding the issue month.

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Doctor The Virtual Patient Will See You Now

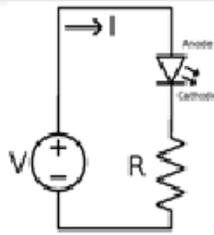
The EMBS chapter held a meeting on March 21st. The meeting was well received by all of the 20 attendees. The topic was "Interactive Systems for Training Medical Professionals and Self-Managing Health". The guest speaker was Dr. Andrew Raij. Dr. Raij is an Assistant Professor in the Department of Electrical Engineering at the University of South Florida and director of the Personalized Interactive Experiences (PIE) Group, which studies how personal temporal data can be transformed into meaningful interactive experiences.

Dr Raij spoke about some of his previous and current research efforts, which involve the creation of immersive virtual reality simulators that allow medical professionals to practice various doctor-patient interaction scenarios. These systems enable medical professionals to train, and to experience virtual patient interactions, without the possibility of any patient harm. In addition to the discussion, Dr. Raij presented video clips of actual doctor- virtual patient interactions. During the doctor-virtual patient interaction, the system records a plethora of information such as the entire verbal dialog between the virtual patient and the doctor, where the doctor is looking, and various video perspectives of the training environment. All of this collected information not only allows the doctor to relive the interaction from his point of view, but also the view of an outsider and even the patient's point of view. Video clips of the doctor's feedback after reviewing the training sessions showed that this type of training was beneficial to the doctor by helping the doctor to become more aware of their bedside manner and where improvements can be made.

Please check the Signal for future meeting announcements. We look forward to seeing you at our next meeting. If you have a meeting topic, or know of someone interested in being a guest speaker, please contact john.west@ieee.org<mailto:john.west@ieee.org> with details

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Tour of Wheelabrator Ridge Energy Inc. (Postponed)

The tour of the Ridge Energy Center has been postponed because the tour facilitator was designated on a temporary assignment. This tour will be scheduled in the near future. We apologize for the inconvenience.

A tour of the Big Bend Power will be coming soon. Please follow the Signal for a future tour and seminar announcement.

Serge Beauzile
PE/IA Chair

IEEE FWCS PE/IA Held a Successful Seminar on NFPA 70E

On Friday, March 30th, 2012 your Power & Energy Society (PES) and Industrial Applications Society (IAS) joint Chapter of the Florida West Coast IEEE Section had a presentation on the National Fire Protection Association (NFPA) 70E Standard and Updates to it. This was an outstanding seminar that covered many of the "key" changes to the Standards. The attendees also were presented with several videos showing the correct procedures as well as results of actual Arch Flashes.

The seminar started with a few "key" facts on the subject, which included:

- Annually, U.S. averages 4,000 non-disabling electrical contact injuries.
- Annually, U.S. averages 3,600 disabling electrical contact injuries.
- Every Day 1 person is electrocuted in the workplace.
- Electrocutions are the 4th leading cause of traumatic occupational fatalities.
- Each year +2,000 workers are sent to burn centers with electrical burns.

The seminar covered the various aspects of the above and how to protect yourself and others from these exposures. The seminar was very interactive with a multitude of excellent questions by the attendees. If you missed this excellent opportunity, brought to you by your local PES/IAS Chapter, you missed a lot of very good information and interaction with your peers. Watch upcoming editions of your Signal Newsletter for opportunities for other Seminars, as well as a possible repeat of this one.

A special thanks to Seminole Electric COOP for hosting the facility for this seminar and to Tom Blair for presenting this seminar.

Jim Howard
IEEE FWCS PE/IA Vice Chair

Making Innovation Work for Tomorrow....From May 7 - 10, 2012

Orlando Utilities Commission and Progress Energy are hosting the 2012 IEEE PES Transmission and Distribution Conference and Exposition (www.ieeet-d.org) at the Orange County Convention Center. This event provides power and energy professionals throughout the United States and around the world with the latest technical information, trends and best practices as well as significant networking opportunities.

Orlando and Orange County will attract hundreds of exhibitors from around the world, host technical presentations, tutorials, panel sessions, student poster sessions as well as a job-fair and numerous other events on nearly every topic of interest in the world of electric energy and power delivery.

All this activity requires the assistance of numerous volunteers to make this conference and exposition a success for the power industry.

We are asking the Florida electric utility community to help support this event and to sign-up to be a volunteer. The dates of the volunteer opportunities are from May 7 - 10. Volunteers are needed for a variety of assignments, including event information, registration, bus monitors, special event staffing, conference and exposition hall greeters and monitors, room monitors, technical tour guides/ chaperones, and others yet to be determined. There will be opportunities to work a morning, afternoon, or all day shift.

Volunteers receive free attendance to the exhibit hall for the amount of time they serve (Volunteering for a half-day shift provides a free half-day of access to the exhibits). If you are an industry professional this is an excellent way to help make this event a success for the Florida electric utility community and to gain some free admission to the event. If you are a student considering a career in this rapidly growing and important field, this is a great opportunity to learn about the industry and even apply for a position at the student job fair.

Please visit the Volunteer Form <http://www.showmanagement.us/ieee/volunteer.html> on the T&D conference website for conference information and to sign-up and participate in this significant event.

2012 IEEE POWER & ENERGY SOCIETY TRANSMISSION AND DISTRIBUTION CONFERENCE AND EXPOSITION

2012

Making Innovation Work For Tomorrow

Experience It!
ORLANDO, FLORIDA
MAY 7-10, 2012



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In four exciting days you will hear significant information from conference and exposition speakers who are well-informed about overhead and underground, substation development, automation systems, load and energy management, Smart Grid and green technologies, safety and training and improved productivity and work procedures.

As an attendee you will:

- Learn the latest technical developments that increase electric utility efficiency, reliability and profitability.
- Improve both individual and utility performance and operation.
- Acquire new skills that will help you to survive and compete in the evolving power-delivery industry.
- Maximize the return on your education and training investment.
- Meet with leading technical experts.
- View the newest products and technologies.
- Get acquainted with industry peers.

Attendees can participate in and choose from the following:

- Super Sessions focusing on the Smart Grid, Renewables, Sustainable Energy and a whole lot more.
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- Panel sessions detailing the latest technological innovations.
- Educational tracks with university professors lecturing on power engineering and operating advancements.
- Info sessions that allow experts to detail the exciting dimensions of their business.
- Collegiate papers that will be judged by a panel of engineers from industry and higher learning.

Your Visit to Orlando

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Watch for updates at:
www.ieeet-d.org





White Book Seminar

Date: May 18, 2012
Cost: \$100 IEEE Members, \$200 Non-Members
Time: 9:00AM - 2:00PM.
Speaker: Hank Johnson, P.E. and Curtis Latzo, PhD, P.E.
RSVP: Online at: <http://time2meet.com/fwcs-pes1/index.html> (Select Reservations)

Location: Florida Reliability Coordinating Council (FRCC)
1408 N. Westshore Blvd. Suite 1002

Cash or checks should be payable to: IEEE FWCS Treasurer, John Stankowich

PDH Credits: 4 professional development hours will be awarded. Be sure to enter you name and PE number on the signup website as it appears on your license. IEEE Florida Provider Number 3849.

Questions: Serge Beauzile at 863-834-6511 or serge.beauzile@ieee.org

Seminar Description Your local IEEE PES/IAS chapter is offering this seminar on IEEE Std 602 - Recommended Practice for Electric Systems in Health Care Facilities, The White Book.

Due to the increasing size and complexity of health care facilities, they have become more and more dependent upon safe, adequate, and reliable electrical systems. The IEEE White Book aids electrical system designers in achieving safety of life and preservation of property through operational considerations to reduce electrical failures; maintenance with a minimum need for specialized services; design considerations that recognize the flexibility of electrical systems in terms of layout and placement and fulfill the requirements for proper electrical installation; and coordination of design with professional associates.

Speaker Bio: With over 40 years combined experience in electrical design and system studies, the speakers will present the foundation and principles of the White Book. Furthermore, the seminar will include some specific electrical engineering requirements in the State of Florida due to The Agency for Health Care Administration (AHCA). Additionally, the aspects of paralleled generator sets in large hospital electrical systems will be presented and discussed. Founded in 1989 by G.L. (Hank) Johnson, The GL Johnson Company is a consulting engineering company providing design and expertise in Electrical Engineering. The company grew throughout the 1990's from a single person company to a seven person design firm. Several years ago the company was acquired by Latzo Industries, Inc., founded in 1998, to form Arc Flash Study Pro. It has returned to a three person company where the registered principles have limited their practice to a choice group of clients. The focus of the Company's practice is with critical electrical systems where generators, UPS systems, and reliable power distribution systems are necessary. Arc Flash Hazard Analysis, Short circuit and coordination studies at medium and low voltage for health care, institutional, industrial, telecommunication and municipal clients are the core segment of the business.





FWCS PES UTILITY USERS GROUP MEETING

ARC FLASH REMEDIATION



Date: Wednesday, July 18, 2012

Time: 9:00AM – 1:00PM

Speaker: Thomas Blair, P.E., Senior Consulting Engineer, TECO
George Bolos, P.E., Consulting Engineer, TECO

Location: 13031 Wyandotte Road, Apollo Beach, FL 33572

Cost: FREE (a snack will be provided)

RSVP: Online at: <http://www.ewh.ieee.org/r3/floridawc/>
(Select Reservations)

Questions: Tom Blair at 813-228-1111, ext 48179 or tom_blair@ieee.org

Your IEEE PES West Coast Chapter is starting a local utility users group where we plan to meet once every few months and discuss current topics of interest to local utilities. We hope to share our lessons learned with other fellow utility engineers and provide an additional benefit of IEEE membership for utility engineers.

Currently, the following topics will be scheduled for discussion in future meetings.

- Arc Flash Labeling and Remediation
- NERC/CIP Compliance Efforts
- Substation / Generation Station Upgrade Efforts
- Substation / Distribution System Automation
- Generation Station Relay Upgrades
- Distribution Monitoring Equipment Upgrades.

If there are other topics of interest, please email us and let us know what topics would be beneficial for the group.

Our first meeting will be Wednesday, July 18 at the Tampa Electric Big Bend Power Station where TECO will present their work on Arc Flash Remediation. Tampa Electric Engineers will present a case study of an arc flash remediation project at a utility electrical generation facility. We review the engineering technologies and safe work practices utilized to reduce the arc flash incident energy values at an existing electric utility generation facility. An initial engineering study was performed of a 40 year old facility to determine the arc flash incident energy values at various pieces of equipment at the station. After the initial engineering study was completed, a second phase of the project was undertaken to reduce these values. Several technical challenges unique to the electric utility industry had to be overcome to substantially reduce incident energy levels. Examples of such challenges were how to address incident energy values on electrical equipment directly connected to large generators such as station service breakers and how to address the substantially large values of arcing current due to the size of onsite generation (about 1500 MW of generation capacity) all of which lead to large values of incident energy levels at some locations at generation facilities. This meeting will present the engineering design solutions and the safe work practices that were implemented to address these and other challenges at the electric utility generation facility to reduce incident energy levels and improve electrical safety at the station. The result of the arc flash remediation project was that final arc flash values were substantially reduced. At one location, after the initial engineering study performed in phase 1 of the project, the electrical distribution system for one unit was found to have 69% of the electrical equipment with incident energy levels greater than 8 cal/cm². After the completion of phase 2 of the arc flash remediation project, all of this equipment had the incident energy levels reduced to values below 8 cal/cm².



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May 2012 Calendar of Events (For more information see P. 1) *inside this Signal...*

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