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WAVE FUNCTION SEMINAR

Friday, February 7, 2022 was the WAVE Function Seminar held at FRCC in Tampa. Richard Kirby, speaker, gave the attendees a great understanding of Wave Function.. Attendees gained insights about performance from recent field events, learned how to analyze travel-wave events and the operation on time-domain protection, and how to perform traveling-wave-based fault locating offline for simple and complex line configurations. Mr. Kirby gave a demonstration of software to view traveling-waves and created Bewley lattice diagrams..



Upcoming Meetings

Tuesday, March 3, 2020 5:30PM EX-
COM Meeting
at TECO Plaza Register online at
<http://time2meet.com/fwcs-excom/>

2020 IEEE EXECUTIVE COMMITTEE - FLORIDA WEST COAST SECTION**CHAIR:** Claude Pitts - claudie.pitts@ieee.org**VICE CHAIR:** Paul Belussi - paul_belussi@selinc.com**SECRETARY:** Sean Denny - venner20@ieee.org, (727) 678-0183**TREASURER:** Jim Howard - jhoward@ieee.org, (863) 834-6585**SIGNAL EDITORS:** Donna Howard - amberdon3133@gmail.com**AWARDS & BYLAWS:** Richard Beatie, PE - r.beatie@ieee.org**MEMBERSHIP:** Jim Howard - j.howard@ieee.org, (863) 834-6585**TEACHER IN-SERVICE:** Sean Denny - venner20@ieee.org, (727) 678-0183Computer / Aerospace & Electronic Systems (**COMP/AESS**) Joint Chapter:
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Art Nordlinger, PE, Senior Member

What Qualifies for Continuing Education Hours (Part 2)

Continuing with last month's discussion of different ways to earn Continuing Education Hours (CEHs), here are some others that are, arguably, applicable to a smaller group of engineers. I will continue my editorial commentary on Sections 61G15-22.003 and .004 of the Florida Board of Professional Engineer's rules that address this.

Authoring published technical engineering papers, articles, or books; or accepted licensee examination items for NCEES. Each published peer-reviewed paper or book in the licensee's area of professional practice is equal to 10 continuing education hours. Each published paper or article in the licensee's area of professional practice is equal to 5 continuing education hours.

Authoring accepted licensee examination items for NCEES is equal to 2 continuing education hours. If you've been thinking about publishing a paper, might be time to dust it off and get it reviewed.

Patents. Each patent developed using engineering principles is equal to 10 continuing education hours.

Active participation in professional or technical societies. Civic or trade organizations do not qualify under this provision. Credit for this activity requires that the licensee serve as an officer of the organization or actively participate on a committee in the organization. Continuing Education credits are not earned until the end of each year of completed service. Active participation in professional and technical societies as described in subsection 61G15-22.003(6), F.A.C. Each hour of participation is equal to 1 continuing education hour, with a maximum credit of 4 continuing education hours per renewal period. Get involved! You could earn up to 4 hours for your participation.

Section 61G15-22.005 discusses non-qualifying activities. Activities that do not qualify as Continuing Education Hours include but are not limited to the following: (1) Self-generated courses, that being courses generated and presented by the licensee to himself or herself for continuing education credit. (2) Personal self-improvement courses. (3) Equipment demonstrations or trade show displays. (4) Enrollment without attendance. (5) Repetitive attendance or teaching of the same course. (6) Tours of buildings, structures, schools, museums and such unless there is a clear objective to maintain and strengthen competency in a technical field. (7) Regular employment. (8) Personal, estate or financial planning. (9) Courses the content of which is below the level of knowledge and skill that reflects the responsibility of engineer in charge.

Finally, I would note that if you have questions regarding qualifying or non-qualifying activities, there are very knowledgeable folks at the Board's offices ready to help.

Whether you are a PE looking to attain required CEHs, or an engineer looking to learn something new or keep current with the latest trends in the profession, IEEE has seminars that will meet your needs. With renewal only 11 months away seminar demand is high. Sign up now!



Tour of Tampa Electric Battery Energy Storage System (BESS)

Date: Friday, March 27, 2020

Time: NOON to 2PM

Tour Guide: To Be Determined
Thomas Blair, PE, Engineering Services, Tampa Electric

Location: Address is 6906 N US Hwy 41, Apollo Beach, Florida 33572

Cost: \$5 IEEE Members & Students, \$20 Non-Members.

RSVP: Online at <http://time2meet.com/fwcs-meetings/> (Select Meeting)

Make checks payable to: IEEE FWCS

Send checks to: Jim Howard, IEEE FWCS Treasurer

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Tampa, FL 33614-5964

Questions: Tom Blair at 813-849-8368, or tom_blair@ieee.org

If you have hardhat and safety glasses, please bring with you. We will have a supply of hard hats and safety glasses for those that cannot bring their own

The IEEE Power & Energy Society (PES) along with Tampa Electric will host a tour of the newly commissioned Big Bend Battery Energy Storage System (BESS) at their Big Bend Solar Power Station on US Hwy 41, just south of Big Bend road. The facility consists of a 12.6 MW lithium-ion BESS that consists of 6 inverters and 6 battery power control centers. The battery storage is closely coupled to the existing 19MW solar facility via the 69KV sub-station at the facility. The maximum designed energy storage capability of the facility is 26.1 MWH.

Several of the expected project benefits include firming of the solar output during peak times and contribution to contingency reserves. During the tour, we will discuss some of the technical challenges and concerns associated with BESS technology.

This is an industrial facility, **so please wear long sleeve shirts & pants and closed toed shoes for the tour.**



Date: Friday, April 3rd, 2020

Time: Registration & Breakfast Snack 8:30AM - 9:00AM

Seminar 9:00AM – 3:00PM

Cost: \$100 Members, \$200 for Non-Members, \$20 for Students. Includes Lunch

Make checks payable to IEEE FWCS and mail a check in advance to IEEE FWCS

Jim Howard, Treasurer: PES/IAS Chapter

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CEH Credits: 4 Continuing Education Hours will be awarded.

Be sure to enter your name and PE number on the signup website as it appears on your license. IEEE Florida Provider Number is 0003949

Speakers: Rae Dowling, FPL Area Manager

Joe Jancauskas, Senior Project Manager, Mesa Associates

Location: FRCC 3000 Bayport Dr. #600 Tampa Florida 33607

Parking Use parking lot for Hyatt (North side only.)

RSVP: Online at: <http://time2meet.com/fwcs-meetings/> (Select Meeting)

Space limited to the first 45 registrants!!!

Questions: Steve Antman 813.460.5434 or steve.antman@powellind.com

In the first portion of the presentation, you will learn Florida solar snap shop and FPL's current and future plans for solar in Florida. The second portion of the presentation is "Solar 101" which covers everything about solar PV that you were afraid to ask. Topics covered include: is a site good for solar PV, which way to face the solar panels and how much they should be tilted, how much PV can fit onto a site, can the existing electrical system handle the PV generation, what are the economics of an installation, and the basics of solar panels, inverters and panel racking. Because the Internet is so full of information that you can't tell fact from fiction or current information from dated, this is the presentation that the author wishes he could have gone to when he was first getting into solar. By the end of this portion you will know more that most of the door-to-door PV salesmen that have been blanketing Florida lately. Once you've got the basics of PV understood, the third portion of the presentation will cover the numerous methods of connecting PV to the grid, highlighting where practicality often wins over the ideal, which also covering some interesting problems recently encountered in commissioning of PV systems to utility standards.



Battery Energy Storage System (BESS) Seminar

Date: Friday, May 22, 2020

Time: Registration & Light Breakfast: 8:30AM - 9:00AM
Seminar: 9:00AM - 2:00PM (Lunch included).

Speaker: Chris Ruckman, Energy Storage Director at Burns & McDonnell, Kansas City, Missouri

Course Level: Intermediate

Location: FRCC 3000 Bayport Drive., #600, Tampa, FL 33607
Parking: Use parking lot for Hyatt (North side only).

Cost: \$100 Members, \$200 Non-Members,
\$10 IEEE Students, \$20 Non-IEEE Students.
Includes Light Breakfast, Lunch.

CEH Credits: 4 Professional Development Hours will be awarded.

Be sure to enter your name and PE number on the signup website as it appears on your license. IEEE Florida Provider Number is 0003849.

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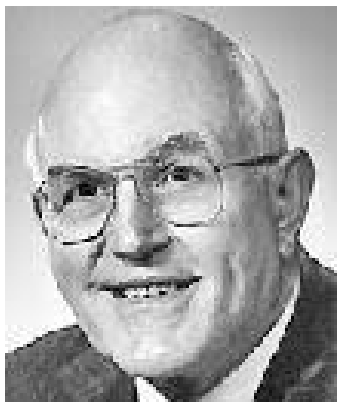
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Questions: Tom Blair at 813-849-8368, or tom_blair@ieee.org

The IEEE Power & Energy Society (PES) along with Tampa Electric is honored to have Mr. Chris Rickman with the engineering firm of Burns & McDonnell as our guest speaker presenting on the topic of Battery Energy Storage Systems (BESS) on Friday, May 22, 2020. The seminar will cover current battery technology and describe the differences between technology platforms (both battery chemistry & packaging). He will describe methods for proper sizing for the design of battery systems and describe how both the method of operation and the condition of the surrounding environment can affect battery health. Mr. Ruckman will also cover various safety strategies concerning BESS and present an overview of the recent installation completed at the Big Bend Solar facility. (We have a tour of the Big Bend BESS facility scheduled for Friday, March 27, 2020 and a signup page is available online at; <http://time2meet.com/fwcs-meetings/>).

Mr. Ruckman is Energy Storage Director with the engineering firm of Burns & McDonnell and has 19 years' experience in the Energy division of Burns & McDonnell. During his tenure, he has gained experience in the areas of electrical design, protective relay setting/coordination, power flow and fault studies, arc flash studies/mitigation, generator protection, and solar power including BESS. He holds a degrees in both Physics (from William Jewell College) and Electrical Engineering (from The University of Kansas).

IN REMEMBRANCE—JOHN W. LUCE June 1, 1928—January 2, 2020

LUCE, John Wharton 91 years old, died peacefully January 2, 2020, at his home in Aston Gardens. He was born June 1, 1928 in Fountain Hill, PA, to Alexander Walker Luce and the former Gladness Irene Wharton. He married the former Nancy Harriet Armstrong January 26, 1963 in Annapolis, MD. She died after nearly 50 years of marriage. He graduated from Vermont Academy in 1946, and earned a BSEE degree from Norwich University in 1950. He was a designer of the world's first controlled nuclear power reactor and subsequent nuclear submarines, frigate, aircraft carrier and electric generating station. He also designed Naval sonar, plastics machinery, and neutron generators. He taught at Hillsborough Community College and the University of South Florida and held nine U.S. patents. He was a life member of the Institute of Electrical and Electronic Engineers, the American Watchmakers Institute, the Mason Lodge, the Scottish Rite, the Grange (Patrons of Husbandry), the National Rifle Association, and Tau Beta Pi, the National Engineering Honor Society. He was a licensed Professional Engineer, watchmaker, and Commercial and Amateur radio operator. He was a champion rifle shot, and avid water skier, and cruising sailor. He and Nancy built the yacht "Lucinda," a 33 foot ocean going sailboat and cruised for two years. He was active in the National Association of Watch and Clock Collectors, and the United States Power Squadrons. He was a Captain in the Army signal Corps Reserve. He was a 32nd degree Mason and Past Master of Palma Ceia Lodge No. 290 F&AM, Tampa, FL. He is survived by a brother, David W. of Pacific Palisades, CA; a sister, Mary L. Wellington of Tucson, AZ; and a stepdaughter, Barbara E. Gavaghan of Salisbury, MD. He was predeceased by a brother, Philip B. and a sister, Judith L. Reynolds. He moved to Tampa in 1976 from Maryland. Interment will be in Cedar Bluff Cemetery, Annapolis, MD. John was a dedicated IEEE volunteer and taught many courses to the IEEE Florida West Coast PE/IA Chapter.

IEEE WOMEN IN ENGINEERING (WIE) SPRING EVENT

IEEE WIE FWCS Event: Spring Social

Location: Tampa Armature Works – 1910 N. Ola Avenue, Tampa, FL 33602

Gathering area: Outside between the Heights Public Market building and the river

Date: Friday, March 6, 2020

Time: 7:00PM to 9:00PM

Who: IEEE members, friends and family

Event Description:

Join us to celebrate our first anniversary since the rebirth of the IEEE WIE FWCS and the International Women Day at the Spring Social event. This event aims to connect IEEE student members with Young professionals for strong networking and collaboration. Your presence helps show support for women in engineering. We look forward to seeing you, your family and friends there.

LIGNELL AWARD WINNERS—2020



Daniel Rice is a mathematics and physics teacher at Middleton High School, a secondary school serving Seminole Heights in East Tampa. Middleton also serves as a STEM hub offering four magnet programs: Engineering, Game Design, Biomedical, and CSIT. Daniel teaches AP statistics, Honors physics, and AP physics C: mechanics. Daniel earned his BS in Mathematics in 2009, and MA in Teaching (MAT) in 2010, both from Frostburg State University (Frostburg, Maryland). He started his career at Cambridge South Dorchester HS (Cambridge, Maryland) from 2010 - 2015. Daniel taught mathematics at Thomas Jefferson High School for Science and Technology (Alexandria, Virginia) from 2015 - 2017. In 2016 TJHSST was ranked #1 public school in America by Newsweek. Daniel is currently a Science Education Fellow at USF working with K-12 science educators across three counties.



Tiffany Johnson, a Southern Florida and California native, is a Biology and Anatomy & Physiology teacher, Professional Learning Community Lead, and Senior Class Advisor at Howard W. Blake High School. Ms. Johnson attended the University of Redlands, where her love of the sciences, psychology, the arts, and children translated to degrees in Chemistry and Biology, with an original career aspiration of Pediatric Dentistry. Ms. Johnson fosters a positive student-teacher relationship within her classroom, which has translated to an educational culture where positivity, wittiness, and self-accountability are the key components to fuel her students to be, “the best version” of themselves. This combined with exciting engaging activities, and the integration of social and pop-cultural use of technology promotes an exciting classroom where students receive instruction resulting in high academic achievement and a newfound thirst for knowledge.



Katherine Cutro is the science department head at Gaither High School. Katherine received her bachelors degree in chemistry from the University of South Florida. Katherine spent her first 34 years after graduation working as a bench chemist and worked up to laboratory manager for an environmental engineering firm. Katherine transitioned to teaching 14 years ago where she brought her industry experience to life in the classroom teaching chemistry and physics. She focuses on encouraging females and minorities in the math and science fields. She encourages students to pursue their dreams and gives them opportunities to discover areas in science/math (especially chemistry, physics & engineering) where they can excel. She excites and motivates through her own experiences and hands on laboratory activities.



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March Calendar of Events (For more information see P. 1) in this Signal...

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