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THE SUNCOAST SIGNAL

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

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Robofest World Championship Impresses Tampa Bay

On June 2, the Robofest World Championship was held in St. Pete Beach. The event, which was created by Lawrence Technical University in Michigan, was hosted by Emma Alaba, local organizer, and supported by volunteers from several Tampa Bay area organizations, including the FWCS.

Robofest is a festival of competitions with autonomous robots offering students the opportunity to master principles of Science, Technology, Engineering, and Math (STEM), Computer Science (CS), Information and Communication Technologies (ICT), and problem solving skills while designing, constructing, and programming robots. Teams represented 13 US states, and several countries. All students and teams can compete: K-3, junior, senior, and college divisions in the following broad & challenging categories: Game, Exhibition, BottleSumo, RoboParade, and a Robot Drawing Contest (K-3).

(continued on Page 3)

Beckwith Electric turns 50!

On June 3, 2017, Beckwith Electric celebrated its 50th anniversary with a dual themed event at the Coliseum in St. Petersburg. The Coliseum is a historical ballroom built in 1924. The themes of the event were the 50th anniversary, “Made in America” and 1940’s era big band music by a live 12 piece band.

Over 300 attended, including employees, former employees, customers, guests, and several IEEE Florida West Coast section officers. The evening was kicked off by speeches about the Company’s history, mission, and vision, as well as future endeavors. A dinner that included 1940’s period meal selections were enjoyed before the live music, dancing, and other



good times took us late into the evening. A fun and memorable time was had by all.



Beckwith Electric is a local vertically integrated supplier of advanced distribution volt/VAr controller and protective relays/reclosing controls located in Largo, Florida. It was founded in 1967 by Robert Beckwith, with

Tom Beckwith as owner and CEO and Dr. Murty Yalla as President, with approximately 130 employees dedicated to servicing the electric power industry.

Upcoming Meetings

EXCOM Meeting

Tuesday, July 11, 2017 5:30PM at TECO Plaza

Register online at <http://time2meet.com/fwcs-excom/index.html>

Open to all FWCS Members

Generator / Transformer Protection

Friday, July 14, 2017 8:00AM to 3:30PM

Register online at <http://time2meet.com/fwcs-pes2/index.html>

Details on Page 4

2017 IEEE EXECUTIVE COMMITTEE - FLORIDA WEST COAST SECTION**CHAIR:** Claude Pitts - claudie.pitts@ieee.org**VICE CHAIR:** Jim Cavanaugh - James.A.Cavanaugh@ieee.org**SECRETARY:** Sean Denny - venner20@ieee.org, (727) 678-0183**TREASURER:** Jim Howard - jhoward@ieee.org, (863) 834-6585**SIGNAL EDITORS:** Ralph Fehr - r.fehr@ieee.org,
Donna Howard - amberdon3133@gmail.com, (813) 924-2024**AWARDS & BYLAWS:** Richard Beatie, PE - r.beatie@ieee.org**MEMBERSHIP:** Jim Howard - jhoward@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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paul.belussi.us@ieee.org**WOMEN IN ENGINEERING** Affinity Group: Valerie Tur, (813) 334-2317,
VLT4@cornell.edu**LIFE MEMBER** Affinity Group: Glen Cock - gcock@tampabay.rr.com, 813-689-4765**YOUNG PROFESSIONALS:** T.J. Ross - anthonyross@mail.usf.edu, (505) 620-7734**PACE:** Jim Anderson - jim.anderson@ieee.org, (813) 425-2467**CONSULTANTS NETWORK:** Herman Amaya - hamaya@tampabay.rr.com**STUDENT BRANCH MENTOR:** Jim Howard - jhoward@ieee.org, (863) 834-6585**USF STUDENT BRANCH ADVISORS:**Dr. Paul Schnitzler - Student Branch Co-Advisor - pauls@usf.edu, (813) 974-5584Dr. Andrew Hoff - Student Branch Co-Advisor - hoff@usf.eduDr. Ralph Fehr - PES/IAS Chapter Advisor - r.fehr@ieee.org**STUDENT BRANCH / CHAPTERS:**USF Student Branch - Victoria Leppold - victorialepp@mail.usf.eduUSF Computer Society Chapter - Felipe Souza - fillipe@mail.usf.eduUSF Microwave Theory & Techniques Chapter - Eduardo Rojas - eduardor@mail.usf.eduUSF Power & Energy/Industry Applications Chapter - Jairo Garcia - jairog@mail.usf.edu**CONFERENCES:** Richard Beatie, PE - r.beatie@ieee.org**WEB PAGE:** <http://sites.ieee.org/fwc/>**WEB MASTER:** Herman Amaya hamaya@tampabay.rr.com

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Address all correspondence to:

Donna Howard

3133 W Paris Street Tampa, FL 33614-5964

Home Phone: (813) 876-1748 E-mail: amberdon3133@gmail.com

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Electrical Rules Committee Report

As I have recently noted, the Board is currently looking at a number of rule changes, including the rules relating to The Design of Electrical Systems, Chapter 61G15-33 FAC. The Board formed a committee last year to perform a comprehensive review of these rules and suggest changes. The committee consists of three Board members and several public advisers. Two local members of IEEE, myself and Ralph Painter, are participating as public advisers. The committee met a number of times between the summer of 2016 and May, 2017.

Notice of this effort was published in several different places, including the Board's quarterly newsletter and on the Board's website, soliciting comments from engineers or from the public. A number of suggestions were submitted, all of which were reviewed by the committee. Additionally, rule changes were suggested by committee members.

The electrical rules are divided into nine sections; General Responsibility, Definitions, Certification of Electrical Systems of Public Interest, and six "system specific" sections. These include the design of Power Systems, Lighting Systems, Communication Systems, Alarm, Control, and Signaling Systems, Lightning Protection Systems, and Grounding Systems. Changes were suggested to all of these sections.

Suggested changes fall into three groups; language clarification, applicability clarifications, and consistency changes. Practically every section has changes suggested to clarify its meaning or intent. For example, the phrase "Load computations" has been suggested to be changed to "Feeder and service capacity calculations". Next, language was included to help clarify when certain documentation and analysis is required. For example, the need to include "Instrument and control" information on electrical drawings is clarified to be "when necessary for safe operation or to show intended function". And last, the six sections were rewritten so that their format is consistent to the extent possible.

The work of the committee is just the first step, however, in getting the rule changed. The committee will now report back to the Board with their report. The Board will discuss the suggested changes, possibly suggest changes themselves, and ultimately vote on and approve a set of changes. These changes are then published for public comment and reviewed by an attorney for the state who reviews rules proposed by Boards for consistency with the Florida Statutes and laws. All of the comments received as part of this process are then reviewed and either adopted or rejected by the Board. If changes are made, there is a second iteration of posting the proposed rule changes for review. Ultimately, the Board votes on and approves a final rule change that becomes part of the Florida Administrative Code (FAC).

I will report in this space as the rule changes progress to final adoption. In the meantime, if the rule changes suggested by the committee are approved by the Board for publication, you will be able to view the suggested changes in the Board's minutes, which are published on their website.

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. Better start earning those CEHs now!

36th Digital Avionics Systems Conference Coming to St. Petersburg

The 36th AIAA – IEEE AESS Digital Avionics Systems Conference (DASC) is coming to St. Petersburg this September (17-21) and will be held at the Hilton Bayfront hotel on the Tampa Bay side of the city. The DASC offers speakers and technical paper sessions on avionics, systems and air traffic management.

The conference theme for the 36th DASC is the design of technologies, procedures, and regulations to safely and efficiently accommodate a diverse spectrum of platform types into space and into modern civil airspace systems, including civil aviation (large passenger aircraft), commercial aviation (cargo), general aviation (small passenger aircraft), military platforms, and unmanned systems that occupy many of these categories.

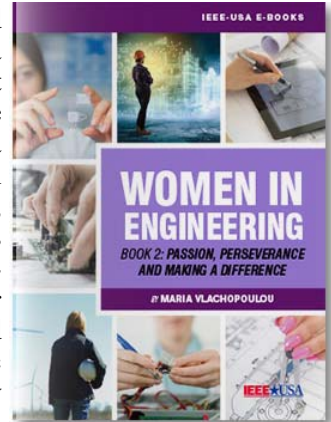
Details are available at 2017.dasconline.org. If you are interested in volunteering to support the DASC please contact Douglas Abernathy at douglas@aiaadatc.org.

Free E-Book

Women in Engineering - Book 2: Passion, Perseverance and Making a Difference by Maria Vlachopoulou

Now through 15 July, IEEE members can download at no charge this eBook. To download your free eBook, sign in with your IEEE web account, add the book to your cart and use promo code JUNFREE17 at checkout.

Book 2 in the IEEE-USA WIE series is the thought-provoking and inspiring story of Maria Vlachopoulou who overcame great obstacles and challenges to pursue her engineering career. A data analyst/program manager with Microsoft Corporation in Redmond, Washington, Vlachopoulou was honored as the 2013 IEEE/IEEE-USA New Face of Engineering for her contributions to Smart Grid research, while employed by Pacific Northwest National Laboratory (PNNL) in Richland, Washington, Vlachopoulou has two M.S. degrees: in Electrical and Computer Engineering, and in Industrial Engineering, from Purdue University, West Lafayette, Ind.; and a Bachelor of Electronic and Electrical Engineering from the University of Sheffield, Sheffield, United Kingdom.



Robofest World Championship (continued from Page 1)

Fans unable to attend the festivities were able to view the action on Spectrum cable channel 642, courtesy of Nielsen Media. The USF Electrathon racing team also had a display including two of their cars and a video showing the driver's perspective of a recent race in Orlando. RoboParade, based on a beach theme, also took place, raising visibility of the festival. Educational presentations known as World Conference on Integrated STEAM Education (W.I.S.E.R.) were presented by Robofest founder Dr. C.J. Chung and Dr. Sabrina Collins from Lawrence Tech. Florida Polytech's Dr. Dean Bushey made a presentation on autonomous cars. Several Florida Poly students demonstrated how autonomous cars can detect and avoid obstacles. Even R2D2 made a guest appearance, courtesy of volunteer David Steele. If you missed this exciting event, keep watching the Signal for future Robofest activities!



Sean Denny and Emma Alaba take advantage of a photo op at the Robofest World Championship

 IASA IEEE INDUSTRY APPLICATIONS SOCIETY	 IEEE	 IEEE PES Power & Energy Society™
FWCS PES UTILITY USERS GROUP MEETING GENERATOR / TRANSFORMER PROTECTION		

Date: Friday, July 14, 2017 Registration: 8:00AM – 8:30AM Time: 8:30AM – 3:30PM
Speaker: Wayne Hartmann VP, Protection and Smart Grid Solutions Beckwith Electric
Location: 13031 Wyandotte Road, Apollo Beach, FL 33572
CEH Credits: 6 Continuing Education Hours (CEH) 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 3849.
Cost: \$50 Members, \$100 Non-Members, \$10 Students. Includes Breakfast, Lunch.
RSVP: Online at: <http://time2meet.com/fwcs-pes2/index.html>

Make checks payable to: IEEE FWCS

Send checks to: Jim Howard, IEEE FWCS Treasurer; 3133 W. Paris Street; Tampa, FL 33614-5964

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

Your IEEE PES West Coast Chapter Utility Users Group is meeting in July and will cover generator and transformer protection systems. The course will cover aspects of IEEE C37.102, IEEE Guide for AC Generator Protection and IEEE C37.91, IEEE Guide for Protecting Power Transformers.

Our distinguished speaker will be Mr. Wayne Hartmann VP, Protection and Smart Grid Solutions Beckwith Electric. Mr. Hartmann provides customer and industry linkage to Beckwith Electric's solutions, contributing expertise for application engineering, training and product development. Before joining Beckwith Electric, Wayne performed in application, sales and marketing management capacities with PowerSecure, General Electric, Siemens Power T&D and Alstom T&D. During the course of Wayne's participation in the industry, his focus has been on the application of protection and control systems for electrical generation, transmission, distribution, and distributed energy resources.

Who Should attend this course? Power plant and substation protection engineers and technicians, as well as power plant operators and protection generalists who desire a deeper background on the subject of generator & transformer protection at utility generation and substation locations. Topics to be covered will be:

Generator & transformer construction and operation - Grounding and connections - IEEE standards for generator and transformer protection - Generator and power system interaction - Generator & transformer protection element review - Internal faults vs External faults - Tripping considerations and sequential tripping - Discuss tactics to improve reliability - Redundancy concepts - Lessons learned from NE Blackout (2003) - Explore Setting, Commissioning and Event Investigation Tools

Should You Be a Senior IEEE Member?

The Florida West Coast Section is looking to assist Members in elevating their grade to Senior Membership. If you know of someone who you feel is qualified then please encourage them to contact Claude Pitts (claudio.pitts@ieee.org) or Herman Amaya (hamaya@tampabay.rr.com). If you have desired to become a Senior Member but not sure what to do or need references, then please know your Section can help you in making the next steps towards Senior Membership.

To be eligible for application or nomination, candidates must:

- * be engineers, scientists, educators, or technical executives;
- * have experience reflecting professional maturity;
- * have been in professional practice for at least ten years;
- * show significant performance for at least five years.

Senior member is the highest grade for which IEEE members can apply. IEEE members can self-nominate, or be nominated, for Senior member grade. Have you been in engineering for over 10 years? If so, you may qualify for Senior Level membership in IEEE. There is no additional fee to apply for senior member grade.

Advertising Section

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Settings are programmed using the OLED multi-line display and "smart" buttons that change their function according to the information displayed. All of the settings are entered using simple parameters (no percentages or multipliers required).

OLED Multi-Line Display

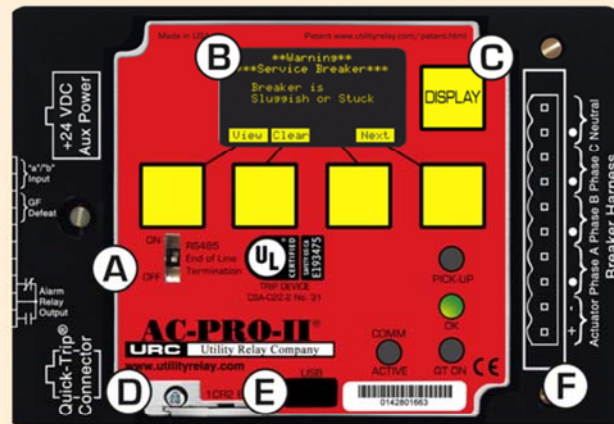
The easy to read multi-line display provides real time monitoring of 3-phase, neutral, and ground fault currents. The display unit can be rotated to allow the trip unit to fit in a variety of different breaker configurations.

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The trip units retain all of the trip data for the last 8 trip events. This data includes the date, time stamp & waveforms of each event using the integrated real-time clock.

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- B** EASY TO READ OLED MULTI-LINE DISPLAY
- C** DISPLAY CAN BE ROTATED FOR VARIOUS INSTALLATION OPTIONS
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- E** ELECTRICALLY ISOLATED USB CONNECTOR
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The green LED indicates that the trip unit is operating properly. This feature:

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- Verifies that the actuator is connected
- Monitors the software routines
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The AC-PRO-II® is user selectable for 50 Hz or 60 Hz applications.

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¾ Page	\$110	\$143	\$530	\$663	\$925	\$1,110
Full Page	\$140	\$182	\$670	\$838	\$1,175	\$1,410
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July 2017 Calendar of Events (For more information see P. 1) in this Signal...

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3	4  Independence Day	5	6	7	8
9	10	11 <i>EXCOM Meeting</i> 5:30 <i>TECO Plaza</i>	12	13	14 <i>Generator/Xfmr</i> <i>Protection</i> Details—Page 4	15
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