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Florida West Coast Section (FWCS)
Please Check the Website Often for **UPCOMING EVENTS** (Front Page Right Column)
<https://r3.ieee.org/fwc/>

The SunCoast Signal

The Institute of Electrical and Electronics Engineers, Inc.

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IEEE Florida West Coast Section (FWCS)

OFFICER ELECTIONS 2022
for the 2023-2024 period
NOMINATIONS NOW ACCEPTED
for the following positions:

1. Chair
2. Vice-Chair
3. Treasurer
4. Secretary

NOMINATIONS ACCEPTED UNTIL
NOVEMBER 28, 2022
SELF NOMINATIONS
NOMINATIONS ON BEHALF OF
SOMEONE ELSE

NOMINATIONS SHOULD CONTAIN:

1. Nominee Name
2. Position applied for
3. Statement of Intent
Why does the nominee want to apply for this position:
e.g., *“Fulfill the IEEE mission and serve the Florida West Coast membership in their professional endeavors.”*
4. Brief Bio (250 words or less)

SEND NOMINATIONS TO:

r.beatie@ieee.org

An eNotice WILL BE SENT AFTER
DECEMBER 1st
PROVIDING A VOTING LINK

ELECTIONS OPEN AT
MIDNIGHT (Start of Day) DECEMBER 1st
AND CLOSE AT
MIDNIGHT (Start of Day) DECEMBER 6th

Next ExCom Meeting
Tuesday, December 6, 2022
Google Meet
Register with vTools

<https://events.vtools.ieee.org/m/331865>

**IEEE FLORIDA WEST COAST SECTION
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PE Corner**Art Nordlinger, PE, Senior Member
Mentoring**

The engineering education that students receive usually prepares them technically for the challenges to come as an engineering professional. However, many do not realize the full extent of what is involved in the practice of engineering. They often express concerns about being in a decision-making position for which they are not prepared due to a lack of practical experience. Those of us who have been around the block a time or two can help provide confidence to younger engineers through mentoring.

Many engineers would be happy to mentor a new engineer if asked, but don't actively seek out the opportunity. Consider looking for a chance to mentor those young engineers in your company who are recent graduates. They will appreciate it, and it will be quite rewarding for both you as a mentor and your company through increased productivity.

An experienced engineer, when faced with the challenge of not having previously done the engineering task at hand, can often fall back on past experiences to extrapolate and arrive at the correct answer. However, many young engineers do not have the same level of practical experience needed to make good engineering decisions. Many of us have experienced situations as a young engineer right out of college, where we had learned the theory of various engineering principles but weren't sure how to best apply what we had learned to solve the problem.

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UPDATE

Robert DeMelo
Chair: IEEE FWCS PES/IAS
Mark Your Calendars
For 2023

IEEE Power & Energy
Society (PES)
General Meeting 2023

Date: 07/16/2023 - 07/20/2023
Venue: Orlando, FL

The IEEE Power and Energy Society General Meeting (GM) will be held in Orlando. The GM attracts professionals from every segment of the electric power industry. It features a comprehensive technical program with paper presentations, poster and panel sessions, a number of technical tours, a student program and companion activities. This year's technical theme is Paving the Way for Grid Modernization.

Website: <https://pes-gm.org>



IEEE Power Systems Relaying and Control Committee PSRC in 2023

IEEE Power System Relaying and Control Committee (PSRC)

In-Person Meeting

Dates: 1/8/2023 - 1/12/2023

Venue: Hyatt Regency
 225 E Coastline Drive
 Jacksonville, FL, United States 32202

The IEEE PSRC is chaired by the Florida West Coast Section's very own: Murty Yalla.

For More information:

<https://www.pes-psrc.org/index.html>

PSRC Resource Center:

<https://www.pes-psrc.org/knowledgebase.html>

Subcommittees of the IEEE PSRC Include:

System Protection,
 Line Protection,
 Relaying Communication and Control,
 Relaying Practices,
 Rotating Machinery Protection,
 Substation Protection

Subcommittee webpages:

<https://www.pes-psrc.org/subcommittees.html>

PES/IAS ExCom Planning Meeting

Saturday, December 17, 8:00 am – 9:00 am

Village Inn, 215 N Dale Mabry Hwy, TAMPA, Florida, United States, 33609

<https://events.vtools.ieee.org/m/292698>



Generator Protection and NERC Compliance

**** IN-PERSON EVENT ****

Date: Friday, December 9, 2022

Time: 9:00am – 3:00pm

Speaker: Dr. Murty V.V.S. Yalla – VP/General Manager of Beckwith Electric (business unit of Hubbell)

Doug Weisz, P.E. – Principle Generation Protection Application Engineer at Beckwith Electric (business unit of Hubbell)

Location: Seminole Electric Cooperative, Inc.

16313 North Dale Mabry Hwy, Tampa, FL 33624

Cost: \$100 members, \$200 Non-Members, \$20 Students (lunch will be provided)

CEH Credits: Five (5) CEH's provided for this event. Florida provider #0003849.

RSVP: Online at: <https://events.vtools.ieee.org/m/326521>

Questions: Robert DeMelo - Robert.demelo@ieee.org or Ariana McGuirk – amcguirk@ieee.org

An overview of generator protection is presented in this seminar which includes all major protection functions. Detailed protection concepts will be presented for the impedance-based protective functions that are typically used for generator protection. These include backup phase fault protection using phase distance (21), loss of excitation or loss of field protection (40), and out-of-step or loss of synchronism protection (78). Detailed sample setting calculations will be presented for 21, 40 and 78 protection functions. The seminar will also provide details on how to coordinate the protection settings against machine capability and compliance to appli-

cable NERC PRC standards. Specifically, the calculated settings are evaluated against NERC PRC-025 Generator Relay Loadability, PRC-026 Relay Performance During Stable Power Swings, and PRC-019 Coordination of Generating Unit or Plant Capabilities, Voltage Regulating Controls, and Protection. Other protection functions covered include overexcitation (24), over/undervoltage (59/27), stator ground fault (59G), 100% stator ground fault protection (27TH, 5THD, 64S), reverse power (32), negative sequence unbalance (46), inadvertent energization (50/27), over/under frequency (81), and phase differential current (87).

Dr. Murty V.V.S. Yalla has been with Beckwith Electric since 1989 and presently holds the position of Vice President/General Manager. Dr. Yalla is the chairman (2015-2024) of the International Electrotechnical Commission (IEC, Geneva, Switzerland) technical committee (TC95), measuring relays and protection equipment. He leads subject matter experts from 34 countries in the development of international standards in power system protection and control. Dr. Yalla is also the chairman of the IEEE Power & Energy Society (PES) and Power System Relaying and Control (PSRC) committee from 2021 to 2022 where IEEE standards, guides and reports

related to power system protection are developed. He served as a U.S. delegate to the international council on large electric systems (CIGRE, France), working groups on protection of generators and power transformers.

He was a member of the NERC System Protection and Control Subcommittee (SPCS). Presently he is a member of the Industry Technical Support Leadership Committee (ITS LC) of the IEEE PES, serving as a liaison between IEEE PES and NERC.

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He also serves on the planning committee of the Georgia Tech protective relaying conference. Dr. Yalla was the chairman of the working group that developed IEEE Standard C37.102-2006 "Guide for AC Generator Protection." He co-authored an IEEE PES tutorial on the "Protection of Synchronous Generators." Dr. Yalla has published several research papers in IEEE Journals and various conferences. He holds seven U.S. patents in power system protection and control. He was elevated to the IEEE Fellow grade in 2006 "for contributions in computer relays for power systems." He also received various other awards including the IEEE Florida Council Outstanding Engineer Award in 2005 and 2018, the IEC 1906 Award in 2010, and the Indo-U.S. Chamber of Commerce Businessman of the Year Award in 2013. In 2021, Dr. Yalla was elected to the National Academy of Engineering (NAE) "for contributions to digital protection and control devices for the grid."

Doug Weisz, P.E. joined Beckwith Electric in 2017 as a Principal Generation Protection Application En-

gineer. His responsibilities include working with customers to help solve generator, transformer, and power plant protection, setting calculations, application & design questions, and to assist in troubleshooting and post event analysis from trip events at power plants. His previous work experience includes 30 years as a Relay Engineer for Wisconsin Public Service in Green Bay, WI. This experience included protective relaying design for Generators, Power Plants, Substations, Transmission, and Distribution. Responsibilities included relay calculations and settings development, fault study modelling and calculations, 1-lines, 3-lines, and schematics development, NERC PRC standards compliance evaluations, and commissioning assistance. Doug is active with various working groups at IEEE PES PSRC committee and presently the vice chair of WG J15 "Investigation of the Criteria for the Transfer of Motor Buses" and J16 "Revision of C37.101, Guide for Generator Ground Protection". Doug received a bachelor's degree in Electrical Engineering from South Dakota School of Mines and Technology in Rapid City, South Dakota in 1987. He currently holds a Professional Engineer License from the State of Wisconsin.

PE Corner - Continued from Page 2

Rather than to figure it out on our own, many of us had the opportunity to consult with engineers we worked with who took the time to explain the best and most efficient solutions, both technically and administratively, to solve various aspects of engineering projects. This is the type of mentoring where a more experienced engineer can have a positive influence on the career of a younger engineer.

Supervisors of younger licensed engineers should also take care to not place them in a position of making engineering decisions they are not qualified to make. This could lead not only to a problem with the project but could possibly lead to a disciplinary case against the licensed supervising engineer and the licensed younger engineer. Additionally, the mentoring you do today could help eliminate some bad habits the younger engineer might otherwise carry with them for the rest of their career.

If you aren't already doing so, I encourage those of you who are the more experienced engineers to seriously consider being a mentor to a younger engineer. In the end, I believe you will end up with better projects and you will have an employee who will be an engineer ready to lead our profession in the future

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. Renewal is only 3 months away. Sign up now!



Protection Systems of Solar Collector Substations

** Virtual Event **

Date: Friday, January 27, 2023

Time: 10:00am – 2:00pm

Speaker: David Bousot, PE - Fellow - Supervisor of System Security, Relay and Control - TECO

Location: Virtual

Cost: \$50 members, \$75 Non-Members, \$10 Students

CEH Credits: Four (4) CEH's provided for this event. Florida provider #0003849.

RSVP: Online at: https://events.vtools.ieee.org/tego_/event/manage/331216

Questions: Robert DeMelo - Robert.demelo@ieee.org

Abstract: High penetration of substation grade solar generation fields, during the last few years, have imposed over the electrical power system the need to reevaluate or redefine, in some instances, protection systems. In this seminar, we will present a síntesis of typical substation protection schemes and its related equipment. We'll also review some of the technical particularities of Inverter Based Resources (IBR) and how they interact with the power system. We'll be exploring NERC PRC standards that regulate over solar generation protection and its interconnection with the power system. Finally, some bullet points will be discussed about solar generation at the distribution feeder level, and what its operational particularities are in comparison to the substation grade solar facilities.

- ◆ System protection review. Principles, and equipment: CTs, PTs, relays, DC system, telecommunication and SCADA.
- ◆ Solar generation vs traditional rotating machine generation
- ◆ Solar Stations typical designs and protection schemes
- ◆ NERC PRC standards overseeing solar substations

Biography: David Bousot, PE is a Fellow Engineer and currently the Supervisor of System Security, Relay and Control for Tampa Electric (TECO). David has 20 years in the industry and is currently mainly involved with relay settings and system operation troubleshooting in transmission networks 69 kV through 230 kV and generation. Additionally, David worked in substation relay and control design engineering for a total of 3 yrs. Ample experience with fault event recorder operation and fault records analysis. Strong involvement in the technical calculation and compliance documentation for NERC PRC 019-2 and PRC-024, also involved with PRC 001, 002, 004, 023 and 025. Licensed by the Florida Board of Professional Engineers. IEEE member and participant of PES PSRC, including groups D36, C18 and H22. Besides relay and control, David has solid experience with substation power equipment maintenance engineering, and some exposure with distribution maintenance engineering.



DEMYSTIFYING IMPEDANCE CALCULATIONS Lunch-N-Learn

Date: Thursday, Feb 16, 2023
Time: 11:45am – 1:10pm (Eastern Time - New York)
Speaker: Thomas Blair, P.E., Engineering Fellow, Tampa Electric Company
CEH Credits: None
Course Level: Intermediate
Cost: Members: \$FREE Non-members: \$FREE
RSVP: Register at <https://events.vtools.ieee.org/m/330806>
Location: On-Line (Virtual)
Questions: Tom Blair - tom_blair@ieee.org or Robert DeMelo robert.demelo@ieee.org

This IEEE lunch and learn will cover the basics of performing impedance calculations and converting quantities from the P/Q plane to the R/X plane. The level of difficulty of this material is Intermediate. A background in power system analysis and the per unit system will be beneficial.

This lunch and learn will cover:

- ◆ Converting quantities from the P/Q plane to the R/X plane
- ◆ Converting P/Q and R/X quantities from primary to secondary values (as seen from PT and CT)
- ◆ Converting S and Z from one base to another base.
- ◆ Plotting generator P/Q diagram in excel format
- ◆ Plotting generator R/X diagram in excel format
- ◆ Develop 21 & 40 functions for generator protection
- ◆ Plotting 21 & 40 settings in excel format
- ◆ Comparing 21 & 40 settings to generator capability

A PowerPoint and excel file with example calculations will be provided as part of this lunch and learn session.

Presenter: Tom Blair, PE is an Engineering Fellow with Tampa Electric. He performs electrical system analysis and uses the results to specify electrical equipment ratings, protective relay settings, and electrical system arrangement. Tom has also been adjunct professor in the past at the University of South Florida and has presented courses at the university on topics such as Electrical Machines and Drives, Energy Production Systems Engineering, and the FE and PE (power) exam preparation course at USF. Mr. Blair is a Senior Member of IEEE.

Touch-a-Truck!
10am-2pm

FREE

ALL AGES

STEM EXPLORER FEST

Presented by Pinellas County Schools and the City of Largo

Saturday • January 21 • 10am-1pm

The City of Largo is teaming up with Pinellas County Schools to bring you a hands on event that shows families the STEM skills used in the professional field. Enjoy crafts, games, demonstrations and more!

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STEM Science, Technology,
Engineering, Mathematics

STEM Summit Registration Open!

*You are Invited to the free 2nd Annual IEEE
Virtual STEM Summit*

Start Time: Tuesday, December 6 @ 12:00 PM
End Time: Sunday, December 11 @ 6:00 PM

Are you a pre-university STEM educator in the classroom or engaged in informal education, an IEEE member interested in pre-university STEM outreach, an active volunteer already engaged in STEM outreach, or a STEM enthusiast? The IEEE STEM Summit is for you!

Let's build our STEM community by coming together to encourage, support and inspire each other. Join us as we share and learn from one another on all things STEM! Sessions included topics on STEM pedagogy, engineering education, best practices in STEM outreach, inspirational talks and resources to empower our STEM community!

Together we are Building Tomorrow's Technical Community Today!

More information:

<https://tryengineering.org/>

Registration:

<https://tryengineering.org/news/you-are-invited/>

Insights towards a Meaningful Career by an Experienced Technical Manager An Interview by Saad Almutairi with Eduardo Palma

Getting to know Mr. Eduardo Palma on a professional and a more personal level was a pleasure of mine which has inspired me greatly. Our conversation took about an hour during which we discussed many topics that are relatable and valuable to up-and-coming engineers such as myself.

Mr. Palma has had an impressive career within his nearly 20 years of experience. Mr. Palma is a Senior Member of IEEE and graduated from USF in 2003 and started his career in Electrical Engineering at Schweitzer Engineering Laboratories as an Integration Application Engineer. After 7 years, he was promoted to the District Sales Manager for around 5 years to be then raised to the position of a Regional Manager. I discussed with him why he chose to remain at SEL. Mr. Palma said that he aims to serve humanity through the tool of innovation, and the work he is doing now fulfills that purpose.

Out an interest of mine, I wanted to discuss with Mr. Palma the mechanics of how to handle an interview successfully. He mentioned two interesting insights that I think are far-reaching. One, do not let the employer interview you only. You also should interview them. Two, ensure that the job you are seeking and being interviewed about aligns with your values and ethics.

We then dived into how to have and sustain a healthy yet meaningful career. Again, Mr. Palma gave two thoughtful ideas. Firstly, personalize your skills and own learning method so that you become culturally fit for the company and industry you pursue. Secondly, make some small habits that in the long term could transform your success, simply, such as reading. Thirdly, engineers should make themselves flexible to the opportunity regardless of whether it is in their technical field or not.

An example from his career is that he was promoted to Sales Manager which did not require much technical knowledge but more commercial skills. I personally think this is a conception that we students lack understanding as we overthink our technical abilities and miss the interpersonal aspects and skills.

I am highly interested in power engineering. Based on Mr. Palma's experience, he advised me on that there exists an astonishing opportunity now for integrating artificial intelligence in the applications of power engineering. He himself has recently gotten certification in cybersecurity.

We end the interview by talking about IEEE as I have personally observed that the IEEE has had a direct impact on the success of a sheer number of engineers. Mr. Palma confirmed that to me by informing me about his involvement with the IEEE. He has been an IEEE member since he was at USF in 2003. For him the IEEE has enabled him with a space to present his ideas at conferences, build effective interactions with other people in the profession, and create long-term connections at both the national and international levels.

I would like to say I am very thankful for such an opportunity. Being able to talk comfortably and network with an expert like Mr. Palma who is in an area I am seeking has had a profound impact on my perspective and career journey. Thank you, Mr. Palma, and thanks to both the IEEE FWCS and the IEEE USF Branch, for allowing me to do it.

**GREAT SUCCESS!!!
Senior Member Gala Banquet
St. Petersburg Yacht Club**

*We Thank All Senior Members and Students for Supporting this
Event*



The first annual *IEEE FWCS 2022 Senior Member Gala* was held at the St. Pete Yacht Club on November 5, 2022. **Hermann Amaya and Andy Seely** organized this event after elevating 200+ IEEE members over the last three years.

The meeting was hosted by the meeting organizers, **Hermann Amaya, chair of the Senior Member Elevation Committee and Andy Seely, R3 Senior Member Coordinator**, who was also the Master of Ceremonies. It was a Great Success with 95 guests attending.

IEEE Region 3 Director Theresa Brunasso commended the efforts of the Florida West Coast Section on Hermann and Andy's "Pilot Program" which has been adopted as the standard for giving quality to our professional membership.

Keynote speakers included Mario Guerrero who happened to be involved in designing the space suits worn by early astronauts like the first American Astronaut John Glen in 1962!

Two more Keynote Speakers Dr. Bhuvan Unhelkar (Envisioning Digital Leadership in the Data Driven Age) and Dr. John Grant (Early career studies of semiconductor surfaces) spoke during the dinner.

Awards were given out to those who have been instrumental in helping with Senior Member elevations. Andrew Seely, John Grant, Bhuvan Unhelkar, Kanwal Gagneja and Stephen Skrzykowski were all honored with a plaque for their service to Senior Member Elevation Committee.





Dr. C. S. Jeong & Yahya Alhasan



Michael Mayor & Dr. John Grant



Hermann Amaya



Andrew Seely receiving Section Recognition Award



Hermann Amaya



Michael Mayor & Khalid Alosaylan



Theresa Brunasso & Dr. John Grant

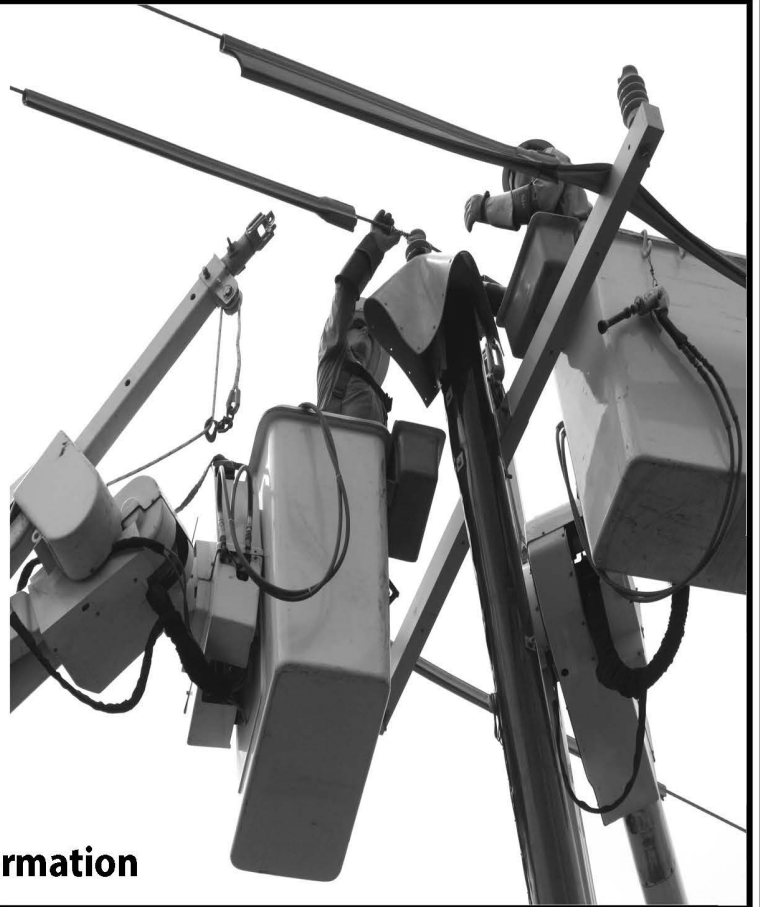


Dr. C. S. Jeong, Khalid Alosaylan & Ron Ambrosio



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3/4 Page	\$110	\$143	\$530	\$663	\$925	\$1,110
Full Page	\$140	\$182	\$670	\$838	\$1,175	\$1,410
Insert / Sheet	\$200	\$260	\$800	\$1,000	\$2,000	\$2,400

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 Or Fax your address changes to (732) 562-5445

December 2022 - Calendar of Events (For more information see "Inside the SunCoast Signal" → Page 1)						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5	6	7	8	9	10
		*FWCS ExCom →Page 1 *STEM Virtual	*STEM Virtual	*STEM Virtual	*STEM Virtual	*STEM Virtual
11	12	13	14	15	16	17
*STEM Virtual	*Signal Inputs Due End of Day					*PES/IAS ExCom →Page 3
18	19	20	21	22	23	24
25	26	27	28	29	30	31