



Florida West Coast  
Section (FWCS).  
Serving 2,300 members in  
the following Counties:  
Charlotte, Citrus, DeSoto,  
Hardee, Hernando,  
Hillsborough, Lee, Manatee,  
Pasco, Pinellas, Polk and  
Sarasota



**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.

## Inside the SunCoast Signal

Page 1

◆ Inside the SunCoast Signal

◆ PE Corner

Page 2

◆ FWCS ExCom Members

◆ PE Corner (Cont'd)

Page 3

◆ PES/IAS - Year 2022 Projections

Page 4

◆ Basics of Grounding, Modeling and Design

→Wed. Feb 9, 2022; 12:00 pm - 1:00 pm

Page 5

◆ Current Transformer ("CT") Basics...

→Thu. Feb. 24, 2022; 12:00 pm - 1:15 pm

Page 6

◆ Senior Member Elevation Program

Page 7-8

◆ Engineers Week Banquet

Page 9

◆ PES/IAS ExCom Meeting

→Sat. Feb. 26, 2022; 8:00 am - 9:00 am

◆ Pinellas Regional Science and Engineering...

→Sat. Feb. 5, 2022; 8:00 am - 2:00 pm

◆ Signal Advertising Price List

Page 10

◆ IEEE FWCS Contact & Addressee Space

◆ IEEE FWCS Calendar of Events

## PE Corner

**Art Nordlinger, PE, Senior Member**

### The Steps to Professional Licensure, Part 3

Last month I discussed the experience necessary to qualify to apply to become a Professional Engineer. Now I'll address the last piece of the PE puzzle, the Principles and Practices of Engineering exam, also called the PE exam, and the final steps to licensure.

Recent Florida statute changes "decoupled" the experience requirement from qualifications to take the PE exam, removing the potential four-or-more-year time lag between graduation and taking the exam. That leaves only receiving an accredited degree and passing the FE as a hurdle to sitting for the PE, and paying the \$375 exam fee, of course.

As I discussed previously, the FE exam is now exclusively computer based, given in a designated testing center, and no longer restricted to a twice-per-year schedule. The PE exam is moving that way as well. The exams are being converted to computer-based gradually, with all intended to be so by 2023. The schedule for exams being converted to computer-based is on the NCEES website. The electrical exams are now computer-based. More information may be found on the Board's website at

<https://fbpe.org/licensure/application-process/principles-practice-examination/>

The PE exam is discipline specific, and most disciplines include sub-disciplines. For example, the Electrical and Computer exam includes three sub-disciplines: Computer Engineering, Electrical and Electronics, and Power. The NCEES website includes statistics for each sub-discipline exam, including the number of people who took it and the pass rate, both for first-time examinees and repeat examinees. This may be found at: <http://ncees.org/engineering/pe/>

Continued on Page 2

Next ExCom Meeting  
Tuesday, February 1st, 2022

Google Meet

Register with vTools

<https://events.vtools.ieee.org/m/299422>

IEEE FLORIDA WEST COAST SECTION  
EXECUTIVE COMMITTEE (ExCom)

**CHAIR:** Michael Mayor - michael.mayor@ieee.org (484) 524-3264  
**VICE CHAIR:** Andrew Seely - andrew.seely@ieee.org  
 (813) 368-6002

**SECRETARY:** Chung Seop Jeong, PhD; jeong@ieee.org

**PAST CHAIR:** Paul Belussi; paul.belussi.us@ieee.org  
 (727) 418-5272

**TREASURER:** Serge Beauzile, trea.fwcs.ieee@gmail.org  
 (516) 567-4888

**SIGNAL EDITOR:** Michael Mayor, michael.mayor@ieee.org,  
 (484) 524-3264

**AWARDS & BYLAWS:** Richard Beatie, PE, r.beatie@ieee.org  
 (813) 854-3948

**MEMBERSHIP:** Andrew Lilly, andrew.lilly@ieee.org  
 (813) 853-4049

**TEACHER IN-SERVICE:** Sean Denny, Venner20@ieee.org,  
 (727) 678-0183

**CS/AESS Computer Systems/Aerospace & Electronic Systems,**  
 Co-Chair: Michael Mayor, michael.mayor@ieee.org  
 Co-Chair: Jim Anderson, PhD, jim.anderson@ieee.org

**EMBS Engineering in Medicine & Biology Chapter:**  
 Sylvia Thomas, sylvia@usf.edu

**MTT/AP/ED Microwave Theory & Techniques/Antennas & Prop-  
 agation/Electron Devices Joint Chapter:** Jing  
 Wang, jingw@usf.edu

**PES/IAS Power & Energy/Industry Applications Joint Chapter:**  
 Chair Robert Demelo, robert.demelo@ieee.org

**RAS Robotics & Automation Chapter:** Sean Denny,  
 venner20@aol.com, (727) 678-0183

**SP/COMM Signal Processing / Communications Joint Chapter:**  
 Chair Michael Ramalho, PhD, mar42@cornell.edu

**WIE WOMEN IN ENGINEERING Affinity Group:** Chair Diana  
 Aristizabal, dianaaristizabal08@gmail.com

**LIFE MEMBER Affinity Group:** Chair Richard Beatie, PE,  
 r.beatie@ieee.org (813) 854-3948

**PACE Chair** Michael Mayor, michael.mayor@ieee.org

**YOUNG PROFESSIONALS:** Chair TJ Ross, a.j.ross@ieee.org  
 (505) 620-7734

**CONSULTANTS NETWORK:** Hermann Amaya,  
 hermann.amaya.us@ieee.org (727) 543-1308

**SENIOR MEMBER COMMITTEE:** Hermann Amaya,  
 hermann.amaya.us@ieee.org (727) 543-1308

**STUDENT BRANCH MENTOR:** Jacob Chacko,  
 jacobchacko@eaton.com

**USF STUDENT BRANCH ADVISORS:**

Dr. Andrew Hoff, Student Branch Co-Advisor, hoff@usf.edu,  
 (813) 974-4958

Dr. Chung Seop Jeong, Student Branch Co-Advisor,  
 jeong@usf.edu, (813) 974-6415

Dr. Srinivas Katkooi, CS Chapter Advisor,  
 katkooi@mail.usf.edu

Dr. Jing Wang, MTT Chapter Advisor, jingw@usf.edu

**Student Branch/Chapters:**

USF Student Branch, Chair: Noah Hamilton,  
 ieeeusfchair@gmail.com

USF Computer Society Chapter: Vishalini Laguduva Ramnath,  
 vishalini@mail.usf.edu

USF Microwave Theory & Techniques Chapter:  
 Enrique Gonzalez, enriquegonza@mail.usf.edu

USF Power & Energy / Industry Applications Chapter:  
 Joe Ghisu, jghisu@mail.usf.edu

**FLORIDA POLYTECHNIC UNIVERSITY / Student Chapter**  
 President, Antonio Hendricks, ahendricks7304@floridapoly.edu

**CONFERENCES:** Dr. Jim Anderson, jim.anderson@ieee.org,  
 (813) 425-2467

**WEB MASTER:** TJ Ross, a.j.ross@ieee.org, (505) 620-7734

**WEB PAGE:** <https://r3.ieee.org/fwc/>

The PE exam format is 8 hours long, given in two 4-hour sessions. Each session has 40 multiple choice questions and you must answer all of them. Like the FE exam, a reference book is provided for use during the exam. No other materials other than an approved calculator are allowed. Only certain calculators are allowed, a list of which is on the NCEES website. Exam grades are typically available about 7-10 days after the exam is taken. Examinees are notified by the Board if they pass, or provided information on retaking the exam if they don't. The Florida Board allows an examinee three tries to pass the exam. If the examinee fails three times, the board will typically require the examinee to take some classes at the college level in the appropriate subject matter before another attempt.

With the PE exam decoupled from the experience requirement, the potential licensee, having obtained a qualified degree, passed both exams, and obtained the required experience will submit all of this information to the Board, along with the required personal and professional references. The Board will then evaluate the submittal and if everything passes muster, the Board will certify that the licensee has completed all the requirements, and issue their license number.

To learn more about the examination and application process for the FE and PE exams go to the *Application Process* page under the *Licensure* section of FBPE's website at [www.fbpe.org](http://www.fbpe.org). Questions regarding licensure may be directed to the Board office at (850) 521-0500. Ask to speak to someone in the *Licensure* department.

Whether you are a PE looking to attain required CEHs, or an engineer looking to learn something new or keep current with the latest trend in the profession, IEEE has seminars that will meet your needs.

**THE SUNCOAST SIGNAL**, published monthly by the Florida West Coast Section (FWCS) of the Institute of Electrical and Electronics Engineers, Inc. (IEEE). THE SUNCOAST SIGNAL is sent each month to members of the IEEE on Florida's West Coast Section. Annual subscription is included in the IEEE membership dues. The opinions expressed, as well as the technical accuracy of authors, advertisers or speakers published in this newsletter are those of the individual authors, advertisers, and speakers. Therefore, no endorsement by the IEEE, its officers, or its members is made or implied. All material for THE SUNCOAST SIGNAL is due in electronic form by the end of day of the 1st Monday after the 1st Tuesday of the month, i.e. the ExCom meeting, preceding the issue month. Address all correspondence to: Michael Mayor

michael.mayor@ieee.org, (484) 524-3264  
**The SunCoast Signal, Copyright © 2022**



## Update for the Year 2022

### IEEE FWCS PES/IAS Leadership:

**Robert DeMelo, Chair // Ryan Copley, Vice-Chair // Kayla Allemang, Secretary**



Looking back at the 2021 calendar year for the IEEE FWCS PES/IAS Chapter, a lot of great work was done in continuing to bring value to the IEEE community even amidst the restrictions surrounding the pandemic. The picture to the left is a glimpse into the planning meeting that occurred this past December as we looked back at what was accomplished in 2021 and what is already in the works for 2022. If you are an IEEE Member and part of the FWCS PES/IAS and want to get more involved in volunteering time for the IEEE community, please email:

[robert.demelo@ieee.org](mailto:robert.demelo@ieee.org)

We would greatly appreciate your willingness to assist and contribute to the chapter. The IEEE FWCS PES/IAS team meets the last Saturday of every month at the Village Inn in Tampa, details/registration available in vTools.

#### 2021 Year-In-Review:

- ◆ 12 in-person FWCS PES/IAS ExCom Meetings
- ◆ 14 webinar events totaling 471 in attendance
- ◆ Partnered with SE Michigan and Orlando chapters, as well as industry

#### Upcoming Events in 2022 – Be on the lookout in future Signal publications and on Vtools:

- ◆ February 9<sup>th</sup> – Lunch & Learn – Free – *Basics of Grounding Modeling and Design*
- ◆ February 24<sup>th</sup> – Lunch & Learn – Free - *Current Transformer (“CT”) Basics for System Protection*
- ◆ March 22<sup>nd</sup> – *Continuous Monitoring of Switchgear and Motors/Tour of Armature Works*
- ◆ April 22<sup>nd</sup> – *Tour of FPL’s 400 MW Manatee Battery Storage Facility*
- ◆ May – date TBD – *Artificial Intelligence (“AI”) for DER Dispatch/Control* – 4 hour – CEUs will be offered
- ◆ June – date TBD – *Arc Flash* – 4 hour – PDHs will be offered
- ◆ July/August – date TBD – *Motor Protection* – 4 hour – PDHs will be offered

***Ever wondered where to look for upcoming events within the Florida West Coast Section or across IEEE, check out the link below and save it to your Favorites!***

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



## Basics of Grounding, Modeling and Design *Lunch and Learn*

**Date:** Wednesday, February 9, 2022

**Time:** Webinar: 12:00PM – 1:00PM (EST/EDT)

**Speaker:** Biren Patel, PE, MBA, PMP – Biren Patel Engineering

**Keith Wallace, PE - Director and Principal Engineer for Safearth Americas**

**Location:** Online – meeting invitation will be emailed to attendees prior to seminar

**Cost:** Free

**CEH Credits:** No CEH's provided for this event. Florida provider #0003849.

**RSVP:** Online at: <https://events.vtools.ieee.org/m/294841>

**Questions:** Robert DeMelo - [robert.demelo@ieee.org](mailto:robert.demelo@ieee.org)

**Abstract:** The Basics of Grounding Modeling and Design - lunch & learn - will go over the basics of grounding design for substations applications. The webinar will review what happens during a fault, the risk to personnel, what goes into a typical grounding model, and how to interpret the results. The lunch & learn will also introduce the various types of testing techniques to serve as inputs for grounding models as well as post installation verification of models and safe touch and step potentials. While this lunch & learn presentation isn't supposed to be a complete how-to guide to complete a design or test, it will introduce utility engineers about the grounding study process, and how to interpret the results of a grounding report, and help them understand the often underrated importance of testing.

### Speakers:

**Biren Patel, PE, MBA, PMP** - Biren is a Substation Design Engineer with 16 years experience working on high voltage transmission substations for electric utilities. Biren graduated with a BSEE from Ga Tech in 2005 and an MBA from UGA in 2012. He is a PE in 15 states, a certified PMP, and an IEEE member since 2003. In 2011, he left his first substation engineering job at Burns & McDonnell to start the poorly named company, Biren Patel Engineering.

He, his wife, and two kids live in Macon, GA. According to his wife, the only reason he does these presentations is because he loves to hear himself talk and thinks he's a lot funnier than he really is.

**Keith Wallace, PE** - Director and Principal Engineer for Safearth Americas, a specialized electrical engineering company providing world-recognized expertise in safe power system grounding and lightning protection systems. Keith's professional history includes 28 years with Southern Company, having risen to the position of Principal Grounding Engineer. There, he developed programs for utility management of Substation Grounding, Temporary Protective Grounding, Lightning Protection, Arc Flash and Minimum Approach Distance, including implementation of training across multiple operating companies and staff at all levels. During his career he has been an industry leader in the field of power system grounding, live line work rules, and safety. He has led the industry having contributed to IEEE standards 80, 81, 1048, 516 and 998 for over 30 years. Keith was an integral part of the development of the 2012 and the 2017 National Electric Safety Code. He is an engaging speaker who has delivered training domestically and overseas.



## Current Transformer (“CT”) Basics for System Protection *Lunch and Learn*

**Date:** Thursday – February 24th, 2022

**Time:** Seminar: 12:00PM – 1:15PM

**Speaker:** Mallur Satyanarayan, PE: Lead Engineer - System Protection Engineering & Design  
Seminole Electric Cooperative, Inc.

**Location:** Webinar/Lunch & Learn (lunch is not provided)  
Link will be provided to registrants

**Cost:** No Cost

**PDH Credits:** No PDH’s provided for this webinar. Florida exempt provider #00015.

**RSVP:** Online at <https://events.vtools.ieee.org/m/294046>

**Questions:** Robert DeMelo at [robert.demelo@ieee.org](mailto:robert.demelo@ieee.org)

**Abstract:** Are you new to the field of system protection or have you ever been curious as to the difference between your typical “step-up” or “step-down” transformers used in substation/switchyard utility applications as compared to current transformers used for metering and relay inputs?

This lunch and learn presentation will cover the following as it relates to current transformers, also known as “CTs:

- a. A basic introduction to Current Transformers,
- b. How Current Transformers are different from “Regular” Transformers,
- c. A brief overview of the characteristics of Current Transformers as applied to a relay protection scheme, and
- d. Selection of Current Transformers with respect to core saturation for relay/protection scheme applications

**Speaker:** Mallur Satyanarayan – “Satya” – obtained his Bachelor’s degree in Electrical Engineering from Bangalore University, India and an MS in Physiology and Biophysics from the University of Kentucky.

He is a PE and has more than 30 years of experience in the electrical power industry in India, the Middle East and the USA in Utilities and Consulting Engineering.

His area of expertise is power system protection and he has also taught protection courses in industry and academia.

He is presently with Seminole Electric Cooperative in Florida.

## Senior Member Elevation Program

Greetings to all Members and welcome to the 2022 year of Senior Member Elevations for FWCS-SMEC

So we came to the end of the 2021 year with a very successful closing at the Senior Member Elevation Committee (SMEC) of the Florida West Coast Section and we have some very impressive achievements to talk about.

To begin with, we closed the year with an unprecedented elevation of 269 new Senior Members comprising R3 Life Senior Members, R3 Young Professionals, Florida West Coast Members, Women in Engineering and FWCS Life Members. Considering that the Admissions and Advancement Committee Review Panel regular meetings receive an average of 800 worldwide applicants from all 10 regions, SMEC contribution to each submittal accounted for anywhere from 5% to 10% of the worldwide A&A Senior Member Elevations, a very impressive achievement, wouldn't you think?

In our January Signal P.5-Senior Member Article, Sharlene Brown, R3 2021 Senior Member Elevation Coordinator reported that the goal of Region 3 was to elevate 220 members to the rank of Senior Member for the year 2021 but this goal was surpassed, and 428 members were elevated to the rank of Senior Member, the equivalent of 194.5% of the goal set for 2021 and our Senior Member Elevation program had a big part to play in this effort. It is worth noting that all the participants in this program came from all sections in Region 3 but additionally, I am very proud to inform you all that we had the participation of at least fifteen countries from around the world who came to be part of the elevation process at FWCS-SMEC.

In an additional effort the month of October 2021 was proclaimed "Women in Engineering Month" by SMEC and we invited all Women Engineer Members to submit their documentation for advancement to the rank of Senior Member receiving a very good response, encouraging us to do this again in cooperation with the FWCS Women in Engineering group during the current year 2022.

As you may expect, we still have hundreds of Senior Member Candidates to elevate to the rank. Many of them do not know that they are eligible to advance so we offer the opportunity to do so. Just ask yourself: "Why have I not requested Senior Member Advancement?" And the answer would be that many do not know three Senior Members or Fellows who would support their nomination, but we are providing this opportunity in a 30 minute interview with your assigned Reference Providers.

The Admissions and Advancement Committee Review Panel meets only six times a year and they have already issued their schedule for 2022, and the A&A Review Panel will meet on February 19<sup>th</sup>, 23<sup>rd</sup> April, 25<sup>th</sup> June, 13<sup>th</sup> August, 1<sup>st</sup> October and 19<sup>th</sup> November to review the applications of all IEEE Candidates that request advancement and I hope yours will be there.

The Senior member Candidate Interviews will be programmed based on these dates and will be published in the next issue of the Signal

We wish to extend our appreciation to everyone for your contributions to the Elevation Process. To the Senior Member Reference Providers Team goes our recognition and thanks for without their support our program could not serve the members the way it has done it to this date.

# DISCOVER ENGINEERS WEEK Tampa Bay E-Week Banquet

**DATE:** Thursday, February 24, 2022

**TIME:** 4:30 – 6:30 PM Networking & Exhibition  
6:30 - 9:00 PM Dinner Program & Awards



This premier event brings together local leaders and engineering professionals to recognize the outstanding achievements of Engineers, Science Teachers, Math Teachers, and Students in our community. Additionally, awards will be presented to outstanding engineers, as well as local engineering students excelling in their engineering related studies and Young Professionals. The banquet also features the Lignell Awards. These awards, named after a former Chairman for the Institute of Electrical and Electronics Engineers (IEEE), are given to local High School educators who are performing outstanding work in the instruction of the STEM topics (science, technology, engineering and math). The organizers of the event recognize the important role these individuals play in encouraging students to pursue technological degrees in college.

The banquet is a combination of efforts by all the Engineering Societies of West Central Florida. This event brings together professionals in all fields from all around Tampa and Florida's west coast.

## REIMAGINING the POSSIBLE



### REIMAGINING THE POSSIBLE

#### KEYNOTE SPEAKER: DR. TRACY FANARA

Dr. Tracy Fanara is an environmental engineer, scientist, public speaker and television host with a BS, ME, and PhD from the University of Florida's College of Environmental Engineering. In research, Tracy has developed water treatment technology, strategies for sustainable design, aquaponics for space travel, and citizen science programs with over 1.6million users to obtain publicly available environmental data. Tracy has international media recognition due to her expertise and science communication efforts during the Florida Water crises. Tracy is now the Coastal Modeling Manager for the National Oceanic and Atmospheric Administration (NOAA) where she manages US coastal ocean modeling efforts to gain a better understanding of our earth systems and threats to human lives and livelihoods in a changing world. You may have seen Tracy on Science Channel, Weather Channel, Fox or CBS; in Marvels Unstoppable Wasp, or on the recent cover of Xylem YSI's Mission Water.

**SPONSOR and SOCIETY REGISTRATION**

**INDIVIDUAL REGISTRATION**

For More Information visit:  
[www.tbewb.com](http://www.tbewb.com)





### Speaker Level Sponsorship \$2000 Donation

- ◆ Front Row Center Table with Speaker at Your Table
- ◆ Company logo displayed on signage and Display Table in Reception Area at the event.
- ◆ Receives up to 10 tickets
- ◆ Presents the Lignell Award.
- ◆ Receives recognition at Speaker Sponsor level on event slideshow & program.
- ◆ Receives recognition and link to website on the TBEWB website. Information about company and special acknowledgement will be made on the website.

### Platinum Level Sponsorship \$1,500 Donation

- ◆ Display Table in Reception Area, Company logo displayed on signage at the event.
- ◆ Receives up to 10 tickets to the awards banquet
- ◆ Receives recognition at Platinum Sponsor level on event slideshow & program.
- ◆ Receives recognition and link to website on the TBEWB website. Information about company and special acknowledgement will be made on the website.

### Gold Level Sponsorship \$1200

- ◆ Display Table in Reception Area, Company logo displayed on signage at the event.
- ◆ Receives up to 5 tickets to the awards banquet.
- ◆ Company logo displayed at Gold Sponsor level on event slideshow & program.
- ◆ Receives recognition and link to website on the TBEWB website.

### Silver Level Sponsorship \$900

- ◆ Company logo displayed on signage at the event.
- ◆ Receives up to 2 tickets to the awards banquet.
- ◆ Company logo displayed at Silver Sponsor level on event slideshow & program.
- ◆ Receives recognition and link to website on the TBEWB website.

### Bronze Level Sponsorship \$600

- ◆ Receives display table to present company products during the Pre-Dinner Social.
- ◆ Receives recognition at Bronze level in program and on the TBEWB website
- ◆ Receives up to 1 ticket to the awards banquet

### Vendor Level Sponsorship \$400

- ◆ Receives display table to present company products during the Pre-Dinner Social.
- ◆ Receives recognition at Vendor level in program and on the TBEWB website

### Early Bird Society/Company Table \$800 (\$900 after 1/14/22)

- ◆ Receives 10 tickets and dedicated table to the awards banquet

**SPONSOR HERE**

Note that all donations may be tax deductible.

Florida IEEE c/o Serge Beauzile

Please send checks Payable to:

2314 Marseille Ct., Valrico, FL 33596

**Celebrate amazing engineers and  
inspire the next generation.**



**PES/IAS ExCom Meeting – Last Saturday of the Month  
Village Inn, 215 Dale Mabry Hwy, Tampa, FL 33609  
Saturday, February 26, 8:00 am – 9:00 am**



*"Somewhere, something incredible is waiting to be known." Carl Sagan*

**The Pinellas Regional Science and Engineering Fair will be held at the:  
Countryside High School Saturday, February 5, 2022  
from 8:00 a.m. until approximately 2:00 p.m.**

You are invited to serve as a judge at our fair. We will evaluate projects from public and private middle and high school students. Twenty-four projects may be chosen to represent the Pinellas Region at the State Science and Engineering Fair in Lakeland. Of course, many projects will be selected to receive "special awards" and category awards ranging from 4<sup>th</sup> Place to Best of Fair! Won't you please consider sharing your expertise by helping us make these very important decisions? The added dimension of the interaction the students will have with a professional of your prominence will prove to be a valuable experience for their individual growth in academic studies as well as assisting them in future career decisions. It is our hope that you will share our enthusiasm regarding the quality of research being accomplished by our students.

If you are able to participate as a judge please email Ms. Pamela Himmel to request the 2022 Judging Category Form. You can then fill it in and send it back to Ms. Himmel. Also, please tell us if your firm or organization would consider offering a "special award" at our fair. After receiving your affirmative reply, judging criteria and further information will be emailed to you. I thank you for your consideration and help in encouraging an investigative spirit among our young citizens. I hope to see you in February!

**Ms. Pamela Himmel**  
**PRSEF Fair Director**  
**8th Grade Honors & 8th Grade Advanced Science**  
**NJHS Advisor**  
**Carwise Middle School**  
**[himmelp@pcsb.org](mailto:himmelp@pcsb.org)**

<b>SunCoast Signal Advertising Rates</b>						
<b>Size</b>	<b>1 Month</b>		<b>6 Months</b>		<b>12 Months</b>	
	<b>Member</b>	<b>Non-Member</b>	<b>Member</b>	<b>Non-Member</b>	<b>Member</b>	<b>Non-Member</b>
<b>Business Cards</b>	\$25	\$35	\$120	\$150	\$210	\$252
<b>1/4 Page</b>	\$40	\$52	\$190	\$380	\$335	\$402
<b>1/2 Page</b>	\$75	\$98	\$360	\$450	\$630	\$756
<b>3/4 Page</b>	\$110	\$143	\$530	\$663	\$925	\$1,110
<b>Full Page</b>	\$140	\$182	\$670	\$838	\$1,175	\$1,410
<b>Insert / Sheet</b>	\$200	\$260	\$800	\$1,000	\$2,000	\$2,400

**IEEE FWCS**  
**P. O. Box 2610**  
**Valrico, FL 33595-2610**



*Florida West Coast Section Tampa*

**NON-PROFIT ORG**  
**U.S. POSTAGE PAID**  
**TAMPA, FL. PERMIT**  
**No. 1197**

**DATE SENSITIVE MATERIAL DO NOT DELAY**

Change of address? IEEE Web Contact Update: <http://www.ieee.org/membership/coa.html>  
 Or send address changes including your name, IEEE Member number and all pertinent information to:  
 IEEE, 445 Hoes Lane, P. O. Box 1331, Piscataway, NJ 08855-1331 or call (800) 678-4333  
 Or Fax your address changes to (732) 562-5445

**February 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
		*ExCom →Page 1				*Pinellas County Science and Eng... →Page 7
6	7	8	9	10	11	12
	*Signal Inputs Due End of Day		*Basics of Grounding... →Page 4			
13	14	15	16	17	18	19
20	21	22	23	24	25	26
				*Current Transf... →Page 5 *Engineers Week... →Page 7		*PES/IAS ExCom →Page 7
27	28					