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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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PE Corner

Art Nordlinger, PE, Life Senior Member
Recording Your Continuing Education

I have noted in recent columns that the Department of Professional and Business Regulation, who oversee professional licensing in Florida, is going to require all professional engineers to enter their continuing education hours before renewing their licenses. At the February Board of Professional Engineers meeting some clarity was leant as to how this is to be accomplished. Drumroll please...

The National Council of Examiners for Engineering and Surveying (NCEES), the group that provides all the exams, has a free online tool for recording your continuing education. They call it CPC tracking. CPC stands for Continuing Professional Competency. So I decided to be the guinea pig and try it. I went to NCEES.org and completed all of the steps, so I can accurately report on how it's done. Frankly, it's pretty straightforward.

On the NCEES website, select NCEES Services and then CPC Tracking. It will tell you that if you don't already have an NCEES account, you need to create one. They give you a link to do so. If you took an FE or PE exam since 2010, you already have an account. At least that's what the website says. And some of you may already have one for other reasons. In fact, it turns out that I already have an account, though I have no idea when and why I set it up. I certainly didn't take my exam since 2010. I took my exams on a stone tablet with a chisel. But after resetting the password, I was good to go.

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Next ExCom Meeting
Tuesday, April 2, 2024
Google Meet
Register with vTools
<https://events.vtools.ieee.org/m/411656>

**IEEE FWCS ExCom**

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PES/IAS Power & Energy/Industry Applications Joint Chapter:
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The next thing you do is “Add a Board”. You can add as many as you need. For each Board, you enter the Renewal Period. The current Florida renewal period is March 1, 2023 through February 28, 2025.

After that you just need to add courses. Naturally, you select “Add Course”. For each course you enter the information that you would expect; the course name, date, number of hours, the type of course (technical, ethics...), etc. You can also optionally upload your certificates. I mentioned last month that engineers will need to confirm on the **MyFloridaLicense** site which provider they took their Florida laws and rules course from when renewing. You need to record this course in your NCEES record as well.

Frankly the process was pretty painless. I suggest that you go check it out and enter your continuing education now rather than wait until it’s time to renew. I doubt you’ll have any issues but if you do it would be best to get them resolved now versus when you are trying to renew your license.

You may direct specific questions or issues with the process to the FBPE office.

With less than a year until renewal, better start earning those CEHs now!

THE SUNCOAST SIGNAL, published monthly by the Florida West Coast Section (FWCS) of the Institute of Electrical and Electronics Engineers, Inc. (IEEE). **Please Note that the SUNCOAST SIGNAL is sent each month to ACTIVE members of the IEEE Florida West Coast Section. So to continue receiving the SIGNAL please keep your membership Active, meaning, renew your membership when it becomes due.** 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. Contact: michael.mayor@ieee.org

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Tour – GE/ITI Clearwater Instrument Transformer Facility Tour

- Date:** Friday, April 12, 2024
Time: 9:00AM – 12:00PM (EST/EDT)
Speaker: Ryan Alkire – GE Vernova
Location: GE/ITI Clearwater Factory - 1925 Calumet St, Clearwater, FL 33765
Cost: \$20 Members/\$40 Non-Members/\$10 Students
CEH Credits: No CEH's provided for this event.
RSVP: Online at: <https://events.vtools.ieee.org/m/405984>
 Seats are limited to 30 attendees
Questions: Kayla Allemang - kallemang@ieee.org
 Richard Beatie – r.beatie@ieee.org

The IEEE Florida West Coast Section Life Members Affinity Group (LMAG) and Power Energy Society/Industry Applications Society (PES/IAS), in collaboration with GE Grid Solutions, is bringing to the IEEE community this awesome tour of the GE/ITI Clearwater Instrument Transformer Facility. GE/ITI Clearwater is the main manufacturing facility for all GE instrument transformer <69 kV. GE manufactures over 500,000 dry-type instrument transformers every year for utility and industrial applications out of the Clearwater facility.

This tour event will consist of a 45–60-minute classroom session to cover the basics of what makes an instrument transformer different, types of instrument transformers, applications, nameplate basics and how to apply, and the future of the industry.

The second part of the event will be a 1–2-hour walk-through of the factory floor from the component production, core manufacturing, transformer winding, casting, and then final test. As a bonus, there will also be a brief walk-through of the capacitor production floor which shares the other half the main building

Participants are required to wear safety shoes and safety glasses. The facility does have safety shoe covers available, but supplies are limited, please include during registration if you will need a shoe cover + shoe size. Hearing protection will be provided at the necessary locations. Additional information regarding parking and other instructions will be provided ahead of the event via email to those registered.

Ryan Alkire is the Lead Technical Application Engineer for GE Power Sensing, part of GE Vernova. In this role, he supports all utilities in the US and utilities and industrial customers in Canada for instrument transformer needs. Ryan presents at ten electric meter schools throughout the country providing instruction on instrument transformer ratings and application.

Before his current role, Ryan obtained his Bachelor of Science in Electrical Engineering from the University of South Florida and holds a Master of Science in Engineering Management from USF. Ryan has worked as a design engineer for ABB dry-type distribution transformers, GE instrument transformers and at Espey Electronics and Manufacturing as a magnetics design engineer. Ryan has been an IEEE member for 9 years.



Zero Downtime Architecture, Digital Transformation

Date: Friday, May 10, 2024

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

Speaker: Antra Malhotra – Associate Director, Verizon

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

Cost: Free

CEH Credits: One (1) Professional Development Hour will be awarded

Be sure to enter your name and PE number upon registration as it appears on your license

RSVP: Online at: <https://events.vtools.ieee.org/m/409452>

Questions: Diane Aristizabal, dianaaristizabal@ieee.org

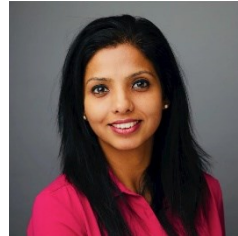
Abstract: In today's digital world, businesses heavily rely on systems for every aspect of their operations and product life cycle. High availability of mission and business critical applications is a necessity as any downtime or poor performance can have a negative impact on the revenue and operations of the organization. One of the promises of cloud platforms is high availability by building redundancy in the application architecture. However, enterprises opting for cloud often struggle to define the right framework for high availability.

For near zero downtime experience, applications should be able to perform automated application and database failover with minimum manual intervention. In this webinar we will talk about a cloud native template architecture that enterprise applications can incorporate to be highly available and evaluate techniques to perform automatic database failover for a near zero downtime experience.

Antra Malhotra, Associate Director - Software Development at Verizon.

Her responsibilities include application development and software delivery for a big data platform that provides intelligent location services,

product availability and business intelligence for



Verizon's Enterprise and Consumer Business groups. In her current role, she is also responsible for the Network Data Ingestion framework and Geospatial solution for the System Performance platform. She has had the opportunity to contribute and lead multiple significant programs, including system modernization, intelligent enterprise network, network virtualization and voice/VoIP transformation.

Antra completed her Masters in Computer Science from Georgia Institute of Technology. Antra is an AWS Certified Solutions Architect with additional program management and delivery certifications.

She is a guest faculty at Hillsborough Community College - ICCE for teaching Cloud concepts and technologies. Her area of research involves cloud technologies, application stability and big data management. Her research work on zero downtime architecture was recently published in IEEE.

Her research work on zero downtime architecture was recently published in IEEE.



Entrepreneurship Series Webinar #5: The Unintentional Business Owner

Date: Friday, May 17, 2024

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

Speaker: Theresa Brunasso – Founder – D&S Microwave

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

Cost: Free

CEH Credits: No CEH's provided for this event.

RSVP: Online at: <https://events.vtools.ieee.org/m/409669>

Questions: Diane Aristizabal, dianaaristizabal@ieee.org

Abstract: Meet an engineer who never intended to start her own business. She often said, “I like working with other smart people and getting paid for holidays, vacations, and sick days! Why would I give that up?” Then a company layoff changed everything. A couple weeks after hearing that she was let go, former colleagues started asking her if she could consult, and she said, “Yes, I can!”

Learn how this former team player started her own company, got plenty of work, and discovered the joy of running her own business. You'll learn the steps she used to start her business, and how she got plenty of work to keep it going.

Theresa Brunasso Founder of D&S Microwave, is a 30-year veteran in the field of Electrical Engineering. Prior to starting D&S Microwave, she spent more than 20 years at EMS Technologies. At EMS, Theresa served as Microwave Engineering Manager, Director of Technology Development, and provided inno-



native design and development expertise for numerous programs, including JSTARS, XM Radio, DirectTV, DarkStar, NSTAR, Milstar, Advanced EHF, IntelSat and the Mars Science Lab.

Theresa holds an Engineer's Degree and M.E. in Electrical Engineering from the University of Utah, and a B.S. in Physics from the University of West Florida. She has served as the IEEE Atlanta Section Secretary, Vice Chair and Chair, and currently serves as the Director for the Southeastern US Region.

Leading in Engineering

An Interview with Mr. Hemanth Volikatla, IEEE Senior Member and Senior Technical Service Manager By Deniz Ozdemir, IEEE Student Member and Third-year Industrial Engineer student at the University of South Florida

Mr. Hemanth Volikatla, a seasoned professional with an extensive 20-year background in SAP technologies, has been contributing his expertise as a senior technical service manager at SAP for the past year. SAP, a global leader in software solutions, plays a crucial role in helping businesses of all sizes and industries run profitable, adaptive, and sustainable operations. In his capacity as a senior technical service manager, Mr. Volikatla is dedicated to ensuring customer satisfaction through a driven mindset and a wealth of experience.

In his role, Mr. Volikatla takes charge of million-dollar projects for a diverse clientele.

Each project presents unique challenges, whether it's driving sales, transforming business processes, or enhancing overall operational efficiency. His commitment to delivering seamless processes has not gone unnoticed, earning him recognition and multiple awards from SAP for consistently exceeding expectations. Notably, his significant contributions were highlighted in 017 when he played a pivotal role in a collaborative project between SAP and HP. His involvement included substantial contributions to the development and testing of a groundbreaking service, showcasing his technical prowess and collaborative skills. The impact of Mr. Volikatla's work extends beyond the confines of SAP. He has received accolades from various companies he has collaborated with, underscoring the positive influence he brings to each organization. These awards serve as a testament to his dedication and the value he consistently provides in every project and engagement throughout his illustrious career.

Reflecting on the broader professional landscape, Mr. Volikatla emphasizes the crucial role of organizations like IEEE in supporting engineers. IEEE provides a platform for professionals to connect, communicate, and enhance their skills, offering valuable opportunities for growth and development. The collaborative environment fostered by IEEE contributes significantly to the continuous im-

provement of engineers, enabling them to stay ahead in an ever-evolving industry. Looking ahead, Mr. Volikatla predicts a future heavily influenced by artificial intelligence (AI) and machine learning, especially within companies like SAP.

Anticipating changing business needs and advancements in cloud operations systems, he stresses the importance of staying abreast of evolving technologies. His advice to up-and-coming engineers is to remain focused, adaptable, and open to embracing emerging technologies, ensuring they can not only survive but thrive in the dynamic landscape of the tech industry.

Reflecting on his own career journey, Mr. Volikatla acknowledges the importance of avoiding certain pitfalls. He regrets moments of losing focus, not being adaptable to change and lacking a deeper understanding of alternative approaches. Recognizing the significance of leadership skills, he advises aspiring engineers to develop strong leadership qualities to navigate the complexities of their careers successfully.

In conclusion, Mr. Hemanth Volikatla's journey in the realm of SAP technologies serves as a compelling narrative of dedication, adaptability, and a profound passion for driving positive change in the organizations he serves. His wealth of experience and insights stand as an inspiration for aspiring engineers, underscoring the critical importance of staying attuned to industry trends and continuously evolving to meet the challenges of the future. With a solid foundation built on two decades of experience, Mr. Volikatla stands as a beacon of success, showcasing the transformative power of dedication and innovation in the ever-evolving field of SAP technologies.

Insights for Students Interested in Engineering Management

Addressing topics which concern engineering students

Interview with Amr Aly as part of a series of interviews with professionals addressing topics that are of a concern for engineering students at University of South Florida, by Khalid Alosaylan, Student Project Lead at IEEE

Amr Aly, a PMP certified and Construction Manager at WSP, one of leading engineering services companies in the world, has a background deeply rooted in Civil Engineering and Consulting, having started his journey at Alexandria University in 2003. Contrary to familial expectations, Amr deviated from the path of health sciences and pursued a career exploring the world of civil work. During our interview, it became apparent to me that his passion extends beyond technical leadership; Amr possesses a passion as an educator.

Amr's first advice to aspiring engineers in power and civil fields emphasizes the importance of grounding oneself in the practicalities of the field before thinking to management. He advocates for starting on-site to acquire fundamental knowledge from hands-on experiences with technicians. "Going to the work site is a must" he insists. Additionally, Amr underscores the significance of humility, cautioning against the detrimental effects of ego. He emphasizes the need to learn from everyone, including labor workers and technicians, recognizing that egos could be a significant obstacle for engineers sometime.

Looking ahead, Amr identifies key trends and opportunities within the construction industry. Foremost among these is sustainability. He urges professionals to take a look into the topic of sustainability, including associated standards and technologies. Furthermore, Amr highlights the growing importance of Building Information Modeling (BIM) as a critical technical skill for the future, which he realizes it growing day by day. Those who master BIM stand to differentiate themselves in a competitive landscape. Lastly, Amr points to the rising prominence of green energy within the industry, presenting a promising avenue for those looking to make a meaningful impact.

In conclusion, my conversation with Mr. Amr Aly provided valuable insights into the construction industry. His emphasis on practical experience, humility, and a forward-looking mindset has opened doors for me and possible others aspiring to thrive in this field

Senior Member Roundup

Saturday, November 4, 12:00 pm - 4:00pm

<https://events.vtools.ieee.org/m/401161>

Contact / Questions:

andrew.seely@ieee.org

hermann.amaya.us@ieee.org



Tampa Bay Engineers Week Banquet 2024

By Sean P. Denny,

*IEEE Senior Member, Teacher in Service, R3 Florida West Coast Section,
Chair/Secretary, IEEE FWCS Robotics and Automation,
STEM Champion*

I attended the 2024 Tampa Bay Engineers Week Banquet on Thursday, February 22, 2024. We returned to the Bryan Glazer Family Jewish Community Center. I arrived early at 5:00pm to attend the pre-dinner networking. I greeted the guests while enjoying the food, drink, and engineer vendors during the pre-dinner networking in the ante-room lobby.

I welcomed each Lignell Teacher, IEEE Members, and School Officials. I interviewed the Lignell Teachers Sarah Rhine and Shalini Rajpaul. RoboFest Chair Emma Alaba attended at my request and helped take photographs at the dinner. After 6:30pm, we were invited into the ballroom for the Banquet.

Don Germaise took the position of Master of Ceremonies to announce the theme “Welcome To The Future” and calling everyone to take a seat. Eight Engineering Organizations worked together to organize the 43rd Engineers Banquet. The students from six Engineering Organizations won Student Engineer Awards first. IEEE Student was Roberto Montero from USF.

Mr. Germaise announced the Lignell winners individually as I photographed them on the stage. The committee under the leadership of Robert Andrew and Michelle Navar chose two Hillsborough County teachers for the Lignell Award this year which included: Sarah Rhine (Durant High School Math) and Shalini Rajpaul (Simmons Career Acceleration Academy Math). Hillsborough County Schools Math Supervisor Dr. Gail Stewart volunteered to present the Lignell Awards. We took group pictures with the winners. Then we enjoyed dinner. I had chicken, mashed potatoes, carrots, salad, and chocolate cake. The Keynote Speaker: SaLisa Berrien CEO from COI Energy. She described how she worked her way out of “energy poverty” to being inspired by teachers at USF to leading a company that helps reduce energy waste.

Regan Sink won the IEEE Young Professional Award and Dr. Christos Ferekides was our IEEE Engineer of the Year. Emma won the centerpiece. The committee took a bow and had a group picture on the stage before going home.



Tampa Bay Engineers Week Banquet Committee

**Jessica McCrory, David O’Brien, Frank Wyche, Sean Denny, Carissa Gudenkauf,
Keynote SaLisa Berrien, Suzy Folsom, Banquet Chair Bob Andrew and Graham Zoeller**



Regan Sink, IEEE Young Professional Award



Roberto Montero, Student Engineer of the Year



**Lignell Teachers with their spouses
Sarah Rhine, Hillsborough County Schools Math Supervisor
Dr. Gail Stewart, & Shalini Rajpaul**

Lignell Awards 2024

Shalini Rajpaul currently serves as a Mathematics High School teacher at Simmons Career Acceleration Academy. She earned her bachelor's degree from Herbert H Lehman College, one of The City Universities of New York, and her master's degree in educational leadership from the American College of Education.



With a career spanning 17 years in the public-school systems of New York City and Florida, Shalini has taken on diverse roles such as Department Lead for Mathematics, Math League Coach, Team Leader, and Coach for new teachers. Notably, she is recognized for welcoming students from the University of South Florida into her classroom to support their education internships.

Mrs. Rajpaul received the Teacher of the Year award from her peers in both 2016 and 2023 and was invited to join The Cahn Fellowship as an Ally, collaborating with leaders on a national level.

Sarah Rhine is a Mathematics Teacher at Durant High School. She received her Secondary Mathematics Education degree from the University of South Florida in 2007. Sarah obtained her Florida Professional Educators certificate in 2007 and is certified to teach mathematics in grades 6 – 12.



Currently, she leads the Algebra 1 professional learning community, hosts the on-campus Bible-based group First Priority, and serves on the cross discipline Steering committee to help voice and solve school-wide concerns. Sarah deeply values each student and prioritizes making connections beyond the curriculum. As the 2023-2024 Durant High School's Teacher of the Year, she hopes to continue educating with integrity, compassion, and excellence.

IEEE FWCS ROBOTICS AND AUTOMATION

TOUR OF THE

ADVANCED MANUFACTURING AND ROBOTICS CENTER (AMROC)

FRIDAY, APRIL 5, 2024 3:00 PM - 3:45 PM

<https://events.vtools.ieee.org/m/405702>



IEEE Florida West Coast Section STEM CONSTRUCTION EXPO EVENT March 5, 2024

St Petersburg College Campus

Douglas L. Jamerson, Jr. Midtown Center, 1300 22nd St. S. St. Petersburg, FL 33712

Article by Sean Denny (STEM Champion/RAS Chair),
Carol Dekkers (IEEE Member) and
Emma Alaba (RoboFest Chair and RAS Photographer)

After bestowing the title of STEM Ambassador, the IEEE elevated my appointment as STEM Champion. The Florida West Coast Section Executive Committee (EXCOM) members supported my efforts and posted in the Signal Newsletter. I had already participated in STEM Explorer Fest on January 20, 2024. I worked with Dr Sidney Martin IEEE Member from St Pete College to arrange IEEE Florida West Coast Section’s involvement.

We announced it through V-Tools and the Signal Newsletter to invite those who wished to participate. Dr. Martin said “Our collective goal is to inspire the next generation by showcasing the diverse career opportunities available in the Construction industry. Given the focus on the new stadium development, this is a unique chance to share your company's story and highlight the distinctive careers you offer.”

Carol Dekkers found the lesson plan “3D Printing By Hand” on TryEngineering.org and provided scraps of cardboard and inflatable Sport balls. Emma Alaba, Retired Robofest Chair offered to co-present and brought cups, rulers, tennis balls, and pencils. I brought pipe cleaners, glue, and more cardboard

Emma and I arrived at the school by 8am to setup in Room 207. A class of 20 High School students arrived for a 40 minute activity. After our brief introduction, we asked students to read a paragraph from the Background Concepts Page and then played a video from PBS Learning on the advantages of 3D Printing.

<https://ny.pbslearningmedia.org/resource/b9194612-d6e7-4307-b08c-9c2857956713/will-3d-printing-change-the-world/>

We started the class on the Engineering De-



sign Challenge in which teams of two used everyday materials to construct a model object.

After 20 minutes, each group had the opportunity to defend their object with the following questions:

How does the model you created compare to the object you based it on?

What changes to the process or materials do you think would lead to a more detailed and accurate reproduction of the original object?

In what ways are the process you used to create your 3D model similar to the actual process used by a 3D printer?

How do you think the thickness of the layers you created here compare to the layers created for a 3D printer?

What challenges did you run into in creating your 3D model? What other tools or materials might have helped you make your measurements and construct your layers?



Florida West Coast Section — Upcoming Event Summary

- ◆ **3 April:** 69th State Science and Engineering Fair of Florida STEM Competition. Contact **Sean Denny Venner20@ieee.org**
- ◆ **Call for judges:**
<https://ssefflorida.com/judging-3/>
- ◆ **5 April: Tour of AMROC Maker Center at University Mall.** 45 minute tour starting at 3pm. Address is 2154 University Mall, Tampa, FL 33612. Please Register at <https://events.vtools.ieee.org/m/405702>
- ◆ **April 9th, 5 PM:** Software Workshop – Python Workshop: Discord Bot. Contact **Nick Nechaiev mnehcaiev@ieee.org**
- ◆ **April 6th:** Hardware Workshop – Smart Plug Hacking. Contact **Nick Nechaiev mnehcaiev@ieee.org**
- ◆ **April 12:** Tour of GE instrument transformer factory in Clearwater (joint event with Polytechnic, reaching out to USF & LMAG as well), <https://events.vtools.ieee.org/m/405984>
- ◆ **April 17th, 6:30 PM:** Hardware Workshop – IoT Workshop: Build a Clock. Contact **Nick Nechaiev mnehcaiev@ieee.org**
- ◆ **April 22nd,** Kappa Xi Spring Induction Ceremony, IEEE-HKN, IEEE-HKN@usf.edu
- ◆ **May 10:** Zero Downtime Architecture webinar. <https://events.vtools.ieee.org/m/409669>
- ◆ **June 10:** PES/IAS day at the FECA Engineer conference in Clearwater. The first half (4 hours) will be a NERC compliance overview by the SERC Outreach team, second half (4 hours) is TBD but it will be either Substation Design Practices or Distribution Protection topics. Contact: **Kayla Allemang kalletrang@ieee.org**.
- ◆ **September 28th:** Tech Horizons Summit which will be on. Contact **Nick Nechaiev mnehcaiev@ieee.org**
- ◆ **TBD AESS/IMS Industrial Applications.** Contact **Michael Mayor michael.mayor@ieee.org**
- ◆ **November 16, 2024 from 6pm to 10pm:** FWCS Annual Awards Banquet. Contact hermann.amaya.us@ieee.org
- ◆ **May 2025:** The conference application for 2025 IEEE 19th International Conference on Automatic Face and Gesture Recognition (FG) has been approved! This event is scheduled to be held in Tampa/Clearwater, FL, US on 2025-05-12 to 2025-05-16, and will be sponsored by IEEE Biometrics Council, IEEE Computer Society.
- ◆ **September 2025:** Intelligent Cybersecurity Conference <https://www.icsc-conference.org/2024/>. Contact **Muhammad Al-Abdullah mal-abdullah@ut.edu**

SAVE THE DATE

FWCS Year End Gala Banquet and Awards

Saturday, November 16, 2024, 5 pm - 9 pm

St. Petersburg Yacht Club

Inviting ALL Active Members and Guests to Participate

TestRack

TestRack.com

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**Bradenton FL
*sales@testrack.com***



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Contact: Michael Mayor michael.mayor@ieee.org

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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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April 2024 - 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
		*FWCS ExCom →Page 1			*AMROC Tour →Page 10	*Sr. Member Roundup →Page 9
7	8	9	10	11	12	13
	*Signal Inputs Due End of Day				*GE/ITI Tour →Page 3	
14	15	16	17	18	19	20
21	22	23	24	25	26	27
24/31	29	30				