**Florida West Coast Section**
Serving ALL Members in the
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**IEEE**
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for Humanity**

# The SunCoast Signal
**The Institute of Electrical and Electronics Engineers, Inc.**

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**Next ExCom Meeting**
**Tuesday, December 3, 2024**
**Google Meet**
**Register with vTools - All are Welcome**
**https://events.vtools.ieee.org/m/447278**

## PE Corner
### Art Nordlinger, PE, Life Senior Member
### Engineering Firms and CAs

Once upon a time the Florida Statutes included an engineering license for engineering companies called a Certificate of Authorization, or CA for short. A firm performing Engineering as defined by statute was required to have a CA and renew that every two years, including paying a fee, just like licenses were renewed.

In 2019 the Legislature changed the Statute (Section 471.023 F.S.), replacing CAs with a business registry maintained by the Florida Department of Business and Professional Regulation. All CAs were moved to the business registry and never need to be renewed. And good news; the registry is free. New firms who don't have a CA register their business with the Board and are entered into the registry.

The registry has some new requirements that went into effect in 2019. The major one is that each registered firm must name one or more qualified PEs for their registration, referred to as the Qualifying Engineer, who must be licensed in Florida. The PE's license is linked to the registry entry. The Qualifying Engineer must notify the Board within 30 days after any change in the information contained in the application upon which the qualification is based.

Additionally, a Qualifying Engineer who terminates an affiliation with a qualified business organization must notify the Board of such termination within 24 hours of the termination; a very short window.

## IEEE FWCS ExCom

**CHAIR:** Michael Mayor, michael.mayor@ieee.org
**VICE CHAIR:** Andrew Seely, andrew.seely@ieee.org
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**TREASURER:** Claude Pitts, Robert DeMelo
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**SIGNAL EDITOR:** Michael Mayor, michael.mayor@ieee.org,
**AWARDS & BYLAWS:** Richard Beatie, PE,
    r.beatie@ieee.org
**MEMBERSHIP:** Hermann Amaya,
    hermann.amaya.us@ieee.org
**TEACHER IN-SERVICE:** Sean Denny,
    Venner20@ieee.org,
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    & Measurement, Chair: Michael Mayor,
michael.mayor@ieee.org
**CS** Computer Society,  Chair: Antra Malhotra,
    antra.malhotra@ieee.org
    Vice Chair: Rajeev Arora, rajeevarora@ieee.org
**EMBS** Engineering in Medicine & Biology Chapter:
    Sylvia Thomas, sylvia@usf.edu
**PES/IAS** Power & Energy/Industry Applications Joint Chapter:
    Chair, Kayla Allemang, kallemang@ieee.org
**RAS** Robotics & Automation Chapter: Chair Sean Denny,
    venner20@ieee.org.
**SP/COMM** Signal Processing / Communications Joint Chapter
Chair, Michael Ramalho, PhD,  mar42@cornell.edu
**WIE** Women in Engineering Affinity Group:
    Chair, Diana Aristizabal, dianaaristizabal@ieee.org
**LIFE MEMBER Affinity Group:** Chair Richard Beatie, PE,
    r.beatie@ieee.org
**PACE** Chair Dr. Jim Anderson. jim.anderson@ieee.org
**YOUNG PROFESSIONALS:** Chair TJ Ross, a.j.ross@ieee.org
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    hermann.amaya.us@ieee.org
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    Dr. Andrew Hoff, Co-Advisor, hoff@usf.edu,
    Dr. Chung Seop Jeong, Co-Advisor, jeong@usf.edu
**STUDENT ACTIVITIES**
    **Student Activities Chair, Ronald Ambrosio**
            ron.ambrosio@ieee.org
    **University of South Florida Chairs**
        Student Branch - Caterina (Cat) Capuozzo,
            ccapuozzo@usf.edu.
        CS  Anzhelika Kurnikova,  akurnikova@usf.edu
        PES Nicole Ouellette, ouelletten@usf.edu
        HKN - Roberto Montero, roberto.montero@ieee.org
    **Florida Polytechnic University Chairs**
        Student Branch, Pedro Seixas,
            pseixas1948@floridapoly.edu
        CS   Zane Wolfe, zwolfe4232@floridapoly.edu
        PES Raymond Walker, rwalker4531@floridapoly.edu
        RAS - Sahil Talwalkar, tsahil@outlook.com
        HKN - Anthony Parrinello, aparrinello1386@floridapoly.edu
**WEB MASTER:** TJ Ross, a.j.ross@ieee.org
            **WEB PAGE: https://r3.ieee.org/fwc/**

## PE Corner - Cont'd from Page 1

If that Qualifying Engineer is the only qualifying agent for that business organization, the business organization must name another Qualifying Engineer within 60 days after the termination. Generally, the business organization may not engage in the practice of engineering until it is qualified by another Qualifying Engineer. However, in the event a Qualifying Engineer ceases employment with a qualified business organization and that Qualifying Engineer is the only licensed individual affiliated with the business organization, the Board's Executive Director may authorize another licensee employed by the business organization to temporarily serve as its Qualifying Engineer for a period of no more than 60 days to proceed with incomplete contracts. The business organization is not authorized to operate beyond such period absent replacement of the Qualifying Engineer.

The Engineering Business Registry also applies to out-of-state firms seeking to temporarily perform engineering services in Florida. All of the rules are the same, including that the Qualifying Engineer must be licensed ii Florida.

Hopefully, the details of this change have become more widespread and better understood in the 5 years since it was enacted and the business registry with its Qualifying Engineers will live happily ever after.

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 now open. Don't wait; renew your license now.

# IEEE FLORIDA WEST COAST 2024
# FWCS YEAR END GALA AND AWARDS BANQUET*
# NOVEMBER 16, 2024
# SAINT PETERSBURG YACHT CLUB
# ST PETERSBURG, FL
## Article by Sean Denny (RAS Chair / STEM Champion)

On November 16th, The Third Annual *IEEE FWCS Year End Gala and Awards Banquet* was held at the St Pete Yacht Club. Ron Ambrosio volunteered to take still photos and I took video with my new camera. Students attended from Florida Polytech College in Lakeland and the University of South Florida (USF) in Tampa.

**Dr. Michael Ramalho** was the Master of Ceremonies. The theme was Women In Engineering and opened discussions on Generative Artificial Intelligence (AI). Our MC had Generative AI create his speech with a few edits. **Raul Ortega**, Region 3 Area 3 Chair gave an overview on IEEE progress in our area.





*Dinner consisted of Chicken Picatta or Salmon and came with Butternut Squash Soup, Salad, carrots, green string beans, rice pilaf, and carrot cake.

FWCS Computer Society Chair, Antra Malhotra, introduced the evening's keynote speaker. Mrinal Karvir, from San Francisco, California, spoke on the topic "Building Ethical AI Solutions" also served as Panel Moderator for Women In Engineering (WIE).

FWCS WIE Chair Diana Aristizabal and PES Chair Kayla Allemang gave their perspectives on female leadership in technology. USF Professor Lingling Fan and Student Sofia Mitsuyuki also participated with the discussion.





## Awards were distributed by Dominic Patruno as follows:

1. **Claude Pitts (Not Present)** - OUTSTANDING & DISTINGUISHED CAREER WITH IEEE AND SIGNIFICANT CONTRIBUTIONS THROUGH THE YEARS
2. **Richard Beatie, PE** - OUTSTANDING ACCOMPLISHMENTS AS A LIFE SENIOR MEMBER
3. **Andrew Seely** - OUTSTANDING ACCOMPLISHMENTS IN LEADERSHIP FOR IEEE ACTIVITIES & COMMITTEES

4. **Kayla Allemang -** OUTSTANDING ACCOMPLISHMENTS IN ENGINEERING WITH WOMEN IN ENGINEERING
5. **Muthu Madhu -** OUTSTANDING CONTRIBUTIONS TO INNOVATION & IEEE FWCS
6. **Anzhelika Kurnikova -** STUDENT LEADERSHIP & IMPACT
7. **Sean Denny -** APPRECIATION CERTIFICATE FOR ROBOTICS AND STEM



Ron Ambrosio introduced representative Students Pedro Seixas from Florida Polytechnic University and Anzhelika Kurnikova from the University of South Florida.



**FWCS Chair Michael Mayor, MSE, PE** summed up the accomplishments of Florida West Coast Section over the past year. He highlighted the improvements from meetings and attendance compared to the previous year in addition to stand-out Chapters and their leadership.

**Photos by Sean Denny, Ronald Ambrosio, and Andrew Seely**

**Sean P Denny**
**IEEE Senior Member, STEM Champion**
**Chair, IEEE FWCS Robotics and Automation**

**RAUL ORTEGA of IEEE Region 3**
**Topic: Opening Remarks**
Raul is the IEEE Region 3, Area 3 Chair, with responsibilities for supporting the Broward, Canaveral, Daytona, Florida West Coast, Melbourne, Miami, Orlando, and Palm Beach sections.
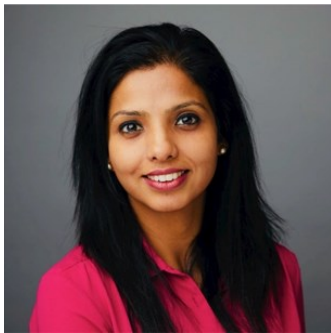
**Biography:** Raul Ortega is the IEEE Region 3, Area 3 Chair, with responsibilities for supporting Broward, Canaveral, Daytona, Florida West Coast, Melbourne, Miami, Orlando, and Palm Beach sections.

Raul Ortega is the managing director of Nuvosource International, a company dedicated to bringing national and international electric utilities, and other key customers, the quality products they require to maintain their effective and efficient working environment.

Raul holds an Electrical Engineering degree from the University of Texas at El Paso and an MBA from the University of Laverne in California. He is a US Navy Viet Nam Veteran with two tours of combat duty service and Honorable Discharge.

**ANTRA MALHOTRA, Chair of the Computer Society of the Florida West Coast Section**
**Topic: Computer Society of the FWCS**

The Chair of the Computer Society of the Florida West Coast welcomes IEEE Computer Society board member and Distinguished Lecturer Mrinal Karvir.

**Biography:** Antra Malhotra is an associate director of software development at Verizon, and the Chair of the Computer Society of the Florida West Coast. Antra has built, coached, and mentored high-performing teams and cross-functional talent and improved software delivery by driving DevSecOps and Agile/SaFe Framework, with over 18 years of industry experience in Telecommunications & Finance with an ability to lead change and effectively problem-solve in a complex and evolving area.

She is a certified AWS Solutions Architect, SaFe And Agile professional, DevSecOps, Domain Drive Design, Software Security and Compliance SME.

**MRINAL KARVIR, DISTINGUISHED LECTURER**
**Topic: AI for Good: A Framework for Building Ethical AI Solutions**
Join us for a conversation that bridges AI technology with ethical foresight. We'll unpack the essentials of responsible AI, focusing on practical measures for ethical development. We'll discuss how to incorporate responsibility into AI systems, champion diversity in development teams, and encourage a human-centric approach throughout the lifecycle of AI projects. Discover how to make AI that not only performs but also respects and enhances our shared human experience, transforming innovation into a force for positive change.

**Biography:** Mrinal Karvir is a Senior AI Software Engineering Manager at Intel Corporation. At Intel, Mrinal leads AI teams, and her work has been recognized with innovation awards at The Consumer Technology Association's flagship technology event, CES, The Edge AI, and The Vision Alliance.

As an Ethical AI Champion, she advocates for responsible AI practices through talks, panel discussions, and mentorship. She frequently serves on judging panels and as a speaker at AI conferences. She received the Pathfinder Award from the Society of Women Engineers (SWE) for her professional achievements and community outreach, and she has been featured in the SWE "Women Engineers You Should Know" special section.

Mrinal is the Vice Chair of IEEE Santa Clara Valley Women in Engineering, Secretary for the IEEE Computer Society, a Member of the IEEE Computer Society Board of Governors, and an IEEE Computer Society Distinguished Lecturer on the topics of GenAI and Responsible AI.

# Leadership in Technology - The Perspective From Women in Engineering

*A moderated discussion on leadership in engineering, featuring female leaders from Industry, Academia, and Student Organizations.*

**Dr. LINGLIN FAN, University of South Florida**



Professor Lingling Fan is an IEEE Fellow and a full professor at the University of South Florida, Tampa, where she has been since 2009. Earlier, Professor Fan received the B.S. and M.S. degrees in electrical engineering from Southeast University, Nanjing, China, in 1994 and 1997, respectively, and the Ph.D. degree in electrical engineering from West Virginia University, Morgantown, in 2001. Before joining the academia, she has been with the power grid operating industry for six years.

She serves as the editor-in-chief for IEEE Electrification Magazine and an associate editor for IEEE Trans, Energy Conversion. She is a member of the IEEE Florida West Coast Section and IEEE Control Systems Society, IEEE Industrial Electronics Society, IEEE Industry Applications Society, IEEE Power & Energy Society, and IEEE Power Electronics Society.

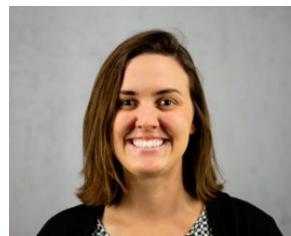**DIANA ARISTIZABAL, Chair of the Florida West Coast Section Women In Engineering**



Diana Aristizabal is a Sr. Principal Engineer with Raytheon Technologies with over 15 years of experience in RF/microwave hardware development in the Aerospace/Defense industry. Diana is a graduate of the University of South Florida.

She is a Senior Member of IEEE and the Chair of the Women in Engineering (WIE) Florida West Coast Section for 3 years. Under her leadership, WIE developed an international outreach program called WIE International Network Connections, a multi-regional outreach program for engaging professional women and young professionals, expand networking, provide professional development, and raise awareness of IEEE, WIE, and Young Professionals. Diana was the recipient of the 2023 Engineer of the Year Award at the Tampa Bay Engineers Week Banquet for her service and contributions to IEEE.

**KAYLA ALLEMANG, Chair of the Florida West Coast Section Power and Energy / Industry Applications Joint Chapter**



Kayla Allemang is a Senior Engineer in the Transmission Services department at Seminole Electric Cooperative Inc. In this role she coordinates Member projects, oversees Seminole's generation and transmission interconnection process, evaluates distributed solar, and assists with the transmission rate process. Kayla has a Bachelor of Science degree in Electrical Engineering from the University of South Florida, Go Bulls!

**SOFIA MISUYUKI, Sophomore in Computer Engineering at the University of South Florida**



She serves as the Vice-Chair for the USF IEEE Computer Society Student Chapter and is part of the organizing committee for Computer Society TechX Florida. Originally from Brazil, Sofia is also a USF Ambassador and a member of the Honors Choir. She works as a Full-Stack Web Developer for the Judy Genshaft Honors College, applying her technical skills to support digital initiatives within the college.

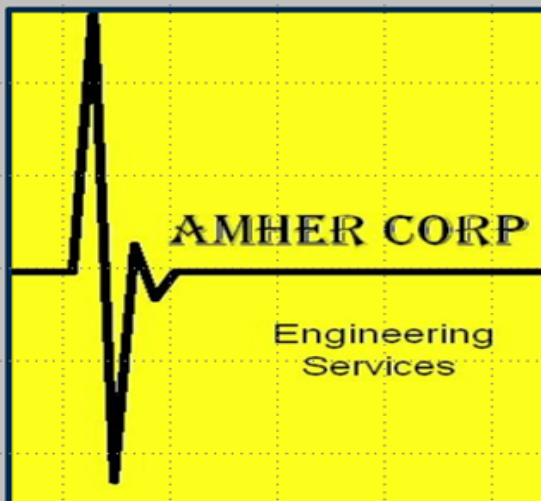## FWCS Year End Gala, Banquet and Awards - SPONSORS

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# INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
# FLORIDA WEST COAST SECTION
# IEEE FWCS LIGNELL AWARD
# OUTSTANDING TEACHER RECOGNITION PROGRAM

For some years now the IEEE Florida West Coast Section (FWCS) has sponsored the Lignell Award Outstanding Teacher Recognition Program to recognize and honor outstanding contributions by Public High School teachers to pre-college education in Mathematics and/or Science pre-college education in Charlotte, Citrus, DeSoto, Hardee, Hernando, Hillsborough, Lee, Manatee, Pasco, Pinellas, Polk, and Sarasota Counties.

This program is open to all individuals teaching classes in Mathematics and/or Science in the public high schools during the current school year. We are presently seeking nominations for this year's awards that will be presented at the Tampa Bay Engineers Week Banquet 2024 at Jewish Community Center in Tampa on **February 20ᵗʰ, 2025**. The Banquet Center is at **522 N Howard Ave, Tampa, FL 33606**. Please call (813) 575-5900 for more directions.

There will be three best recipients of this award from the twelve counties and the winners will be invited to attend the banquet, with a guest, to be presented with the award and an honorarium. *Please make certain that we will pay for the winner and one guest. Any additional guests must pay their own.*

If there is a teacher at your school who you think should be considered for this prestigious award, please complete the enclosed nomination form and return it to the above address no later **than December 20, 2024**. It is important to submit your nomination form and any supporting materials in digital format through your email account (in lieu of a signature).

An electronic version of the form can be downloaded from the Tampa Bay Engineering Week Banquet website www.tbewb.org and returned to me via mail or e-mail to venner20@ieee.org. We also encourage an additional narrative along with the nomination form that justifies the individual receiving this honor as the "Outstanding Teacher of Math and Science" in the entire county where they teach.

We would like to receive several of nominations of "deserving and qualified" candidates throughout the county. Please do not have a narrow screening process before the nominations are forwarded to me. If you have any questions, please do not hesitate to give me a call.

**Sean P Denny**
venner20@ieee.org
**IEEE Senior Member/ STEM Champion**
**R3 Florida West Coast Section**
**Chair, IEEE  FWCS Robotics and Automation**

**IEEE**

**INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS**
**FLORIDA WEST COAST SECTION**

**IEEE FWCS LIGNELL AWARD**
**OUTSTANDING TEACHER RECOGNITION PROGRAM**

*Nominators shall provide the following information with respect to the nominee's achievements and qualifications by filling in the Nominee's Information in Section A below and answering the questions in Section B. All information in Section B shall be limited to four (4) pages and shall be submitted electronically in a MS Word Document in essay style for submission to the selection panel. It is also encouraged to supply letters of recommendation and/or awards. Please scan these documents and submit electronically. This form inclusive of Section A shall also be submitted.*

<u>**Goal**</u>

To recognize and honor outstanding contributions by teachers for pre-college education in Mathematics or Science.

<u>**Qualifications**</u>

Individuals teaching classes in Mathematics or Science in the public high schools during the current school year.

### A. Nominee's Information

Nominee's Name:

Nominee's Position:

Phone Number:

Email:

School System:

School:

School Address:

Nominated by:

Nominator's Phone Number:

Nominator's Email:

Nominator's Position:

Nominator's Address:

### B. Mandatory Qualification Information

1) Qualifying Class(es) taught by the nominee and number of year(s) each class was taught.
2) How long has the nominee been teaching the qualifying subject(s) for which he/she is being nominated?
3) Other activities the nominee has participated in, such as, sponsoring/coaching JETS, MATHCOUNTS, SCIENCE FAIR, etc.
4) Other Classes Taught by the nominee.
5) Why should the nominee be considered for special recognition?
6) What sets he/she above their peers teaching the same subjects?
7) How long has the nominee been teaching at his/her present School Assignment?
8) From which Universit(ies) did the nominee graduate, what degree(s) were earned and in which year(s)?

Please return all information to: Sean Denny, 5545 Dartmouth Avenue N, St. Petersburg FL 33710
Or to **venner20@ieee.org** no later than December 20, 2024.
Questions please call Sean Denny at (727) 678-0183

## Florida West Coast Section - Upcoming Events Summary
## Year 2025

| Date / Location | Organization | Description / Location Link | V and/or P* | Contact email |
|---|---|---|---|---|
| Year 2025 | | | | |
| Thursday, May 1st | IEEE | The Conference application for 2025 IEEE 19th International Conference on Automatic Face and Gesture Recogniton. | | Shaun Canavan scanavan@usf.edu |
| Friday, April 25 University of Tampa | IEEE FWCS CS Chapter | Fob and Mobile Edge Computing Intelligent Cybersecurity Conference Modern Computing and Network Applications | P | Muhammad Al-Abdullah mal-abdullah@usf.edu |
| *Attendance: V: Virtual --- P: In Person - V & P: Virtual and In Person* | | | | |

| SunCoast Signal Advertising Rates | | | | | | |
|---|---|---|---|---|---|---|
| | 1 Month | | 6 Months | | 12 Months | |
| Size | Member | Non-Member | Member | Non-Member | Member | Non-Member |
| Business Cards | $25 | $35 | $120 | $150 | $210 | $252 |
| 1/4 Page | $40 | $52 | $190 | $380 | $335 | $402 |
| 1/2 Page | $75 | $98 | $360 | $450 | $630 | $756 |
| 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 |

**IEEE FWCS**
**P. O. Box 7067**
**St. Petersburg, FL**
**33734-7067**

*Florida West Coast Section Tampa*

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## December 2024 - Calendar of Events *(For more information see "Inside the SunCoast Signal" → Page 1)*

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 **\*FWCS ExCom →Page 1** | 4 | 5 | 6 | 7 |
| 8 | 9 **\*Signal Inputs Due End of Day** | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 22 | 23 | 24 **Christmas Eve** | 25 **Christmas Holliday** | 26 | 27 | 28 |
| 29 | 30 | 31 **New Year Eve** | | | | |