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**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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**Next ExCom Meeting**  
**Tuesday, November 2, 2021**  
**Google Meet**  
**Register with vTools**

<https://events.vtools.ieee.org/m/284991>

### PE Corner

**Art Nordlinger, PE, Senior Member**  
**What is FEMC?**

I'd guess that it's pretty-much universally understood, at least among the engineering community, that the Florida Board of Professional Engineers licenses engineers in Florida and regulates the practice of engineering. And it's probably a little less well known that the FBPE operates under the auspices of the Department of Professional and Business Regulation, which is a state agency.

Until July 1998, administrative and investigative functions for the FBPE were performed by DPBR employees. In 1997, the Florida Legislature determined "that the privatization of certain functions that are performed by the department for the board will encourage greater operational and economic efficiency and, therefore, will benefit regulated persons and the public."

Section 471.038, F.S. (97-312, Laws of Florida [L.O.F]), created the Florida Engineers Management Corporation (FEMC), a public-private partnership, for the purpose of performing staff duties for the Florida Board of Professional Engineers (Board). FEMC provides administrative, investigative, and prosecutorial services according to a contract with the Department of Business and Professional Regulation (DPBR).

FEMC is established as a nonprofit corporation with a seven-member board. The FEMC board is composed of five registered engineers appointed by the FBPE, and two laypersons appointed by the Secretary of DBPR. Like many statewide offices, FEMC board members are limited to serving two four-year terms. I currently have the honor of acting as the chair of FEMC.

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FEMC took over the administrative duties for the FBPE on July 1, 1998. As an integral part of the FBPR, FBPR and FEMC share resources including the Board's website. It may surprise many of you that for nearly 20 years the FBPE support staff has been employed by FEMC and not by the State (DPBR) or the Board itself. I would say, though, that this transparency is indicative of the success of the arrangement. As required by statute, the Legislature must review the FEMC's performance and reenact the enabling legislation. To date, this arrangement has received favorable review and the Legislature has continued FEMC's mandate.

Additional information about FEMC and FEMC Board Members is available on the FBPE's website.

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

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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, 10006 Cross Creek Blvd., PMB 140, Tampa, FL 33647, michael.mayor@ieee.org, (484) 524-3264

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## Time Domain Studies for DER Interconnections

- Date:** Wednesday – December 8th, 2021
- Time:** Seminar: 12:00PM – 1:15PM
- Speakers:** **Brayan Macancela, MSEE:** Senior Consultant – Distribution Planning & Grid Modernization in 1898 & Co (division of Burns & McDonnell)  
**Chenxi Lin, PE, PhD:** Senior Consultant – Transmission Planning & Power System Analysis at 1898 & Co (division of Burns & McDonnell)
- Location:** Webinar/Lunch & Learn (lunch is not provided)
- Cost:** Free
- CEH:** No CEH credits provided for this webinar. Florida exempt provider #00015.
- RSVP:** Online at <https://events.vtools.ieee.org/m/283820>
- Questions:** Robert DeMelo at [robert.demelo@ieee.org](mailto:robert.demelo@ieee.org)

**Abstract:** Utilities across the United States are experiencing an increase in distributed energy resource (DER) interconnection applications on their distribution systems. As DER deployment grows, there is a strong need for utilities and regulators to determine the feasibility and potential impacts that the DER may have on the local electric power system. A time domain simulation with detailed DER modeling methodology is widely used in industry to perform a screening or larger evaluation for DER interconnection. The typical time domain studies for DER interconnection may include, but are not limited to, risk of islanding (ROI), transient overvoltage (TrOV), load rejection overvoltage (LROV), ground fault overvoltage (GFOV), low voltage ride through (LVRT), high voltage ride through (HVRT) and underfrequency ride through (UFRT). All analysis will comply with applicable state and utility DG interconnection guidelines, state regulations, utility operating procedures, and relevant IEEE standards (including IEEE 1547 and IEEE 519).

**Brayan Macancela, MSEE:** Senior Consultant – Distribution Planning & Grid Modernization in 1898 & Co (division of Burns & McDonnell). M.S.E.E & B.S.E.E (University of Massachusetts Lowell) - 10 years of power industry experience with a focus on Distribution and Sub-Transmission system planning. Currently leading and performing distribution planning, DER interconnection and Grid modernization system studies. Specializing in developing models in a variety of engineering analysis software programs for distribution and sub-transmission system. Previous experience prior to joining 1898 & Co., distribution planning consultant and distribution system planning engineer for National Grid in Waltham, MA.

**Chenxi Lin, PE, PhD:** Senior Consultant – Transmission Planning & Power System Analysis at 1898 & Co (division of Burns & McDonnell). M.S.E.E (University of Oklahoma), Ph.D.E.E (University of Oklahoma)- 10 years of power industry experience with a focus on transmission planning and power system analysis including steady state, transient stability, and electromagnetic transient analyses. Previous positions include Lead Research and Development Engineer at Elon Energy Inc, Austin, TX.

### So You Are Not A Senior Member Yet:

At the Florida West Coast Section, Senior Member Elevation is a fact of life, and we continue to carry out our process and provide our Members the opportunity to be elevated to the rank of Senior Member, which is being taken by both, Members and Life Members and this last group is doing it in large numbers.

I have recently notified every one of you, eligible readers of this article, by email that Senior Member Elevation Committee (SMEC) has determined that you may be eligible to be elevated to the rank of Senior Member, an honor and distinction that you have earned through your outstanding service to your Profession and to IEEE and those who have responded to my letter have been rewarded with their elevation process being carried out to successful completion. But to those who have not responded, I would like to ask you to provide me the courtesy of a response letting me know that they are not interested, as many have done already, and we will remove your name from the roster, and you will not get this opportunity again. You can also reply indicating that you are interested :80)) in being elevated to the rank of Senior Member and include your properly formatted resumé according to the sample that I will include in my response to you or that I have included in my Eligibility Letter.

This process is carried out efficiently given the actual format that we have established at FWCS allowing for multiple interviews to be carried out online for our candidates who can be assured to have their nomination completed by the end of this meeting. As you know, we provide you your three References of one Nominator and two References as required by IEEE and because of this, you as the candi-

date, do not have to do anything at all (please, do not fill out an online application, we will do this) except attend your 30 minute Interview meeting (we will schedule it and let you know) and submit to me your properly formatted Resume. Just keep your jobs and education listed with Start(mm/yyyy)-End(mm/yyyy) dates and include a paragraph titled "Significant Performance" where you discuss a five-year period of your career. In this paragraph, you are requested to consider what you consider to be significant to you and it could be a one five year period or any number of periods for several projects that add up to five years with dates Start(mm/yyyy)-End(mm/yyyy) . It is very important that you place month-year dates in your Significant Performance, positions, and education because this will impact the decisions when the time comes for the evaluation of your career Experience at the A&A Review Panel Meeting when they need to be able to accurately judge your time in service so this must be clear to opinion that the A&A Review Panel will have on your evaluation when they verify your Professional Experience.

Let us not forget our new Senior Members. At the recent Admissions and Advancement (A&A) Review Panel on October 2<sup>nd</sup> 2021 when 561 worldwide applicants were elevated to the rank of Senior Member, 68 of them were from FWCS accounting for 12% of the total submissions worldwide and comprising Life Members 43 (63.25%), Young Professionals 9 (7.6%) and FWCS 17(25%) and we are fortunate that all of them were approved and elevated to Senior Member rank.

Please join me in congratulating the following new Senior Members of IEEE and extending to them our warmest wishes for a continued successful career under their Senior Member Rank:

**We will be interviewing candidates at the November 6<sup>th</sup> meeting,**

**Start: 12:00 pm - End: 5:00 pm**

**for the A&A Review Panel of November 20<sup>th</sup> 2021**

**Register Here:**

**<https://events.vtools.ieee.org/m/285409>**

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|------------|--------------|--------------------------------|---------|------------|-------------|--------------------------------|-------|
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| Nicholas   | DeSantis     | FWCS                           | FWCS-LM | Martin     | Oksenhorn   | Daytona Section                | R3-LM |
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| Brad       | Jenkins      | FWCS                           | FWCS-LM | Eugene     | Parker      | Central Virginia Section       | R3-LM |
| Angela     | Nicols       | Daytona Section                | FWCS-LM | Hans       | Polzer      | Coastal South Carolina Section | R3-LM |
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| Robert     | Broadwater   | Eastern North Carolina Section | R3-LM   | Stan       | Thompson    | Charlotte Section              | R3-LM |
| Michael    | Brooks       | Canaveral Section              | R3-LM   | Michael    | Turner      | Huntsville Section             | R3-LM |
| Robert     | Burke        | Palm Beach Section             | R3-LM   | William    | Weiss       | Charlotte Section              | R3-LM |
| Paul       | Casto        | Virginia Mountain Section      | R3-LM   | Willam     | Whittenburg | Northwest Florida Section      | R3-LM |
| Richard    | Coppins      | Richmond Section               | R3-LM   | William    | Wilson      | Lower Cape Fear Subsection     | R3-LM |
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| Mark       | Davis        | Charlotte Section              | R3-LM   | John       | Wolf        | Canaveral Section              | R3-LM |
| Paul       | Desmarais    | Atlanta Section                | R3-LM   | Christine  | Addlery     | R3 Young Professionl           | R3-YP |
| David      | Dorfmueller  | Huntsville Section             | R3-LM   | Luther     | Behringer   | R3 Young Professionl           | R3-YP |
| Don        | Dziubakowski | Lexington Section              | R3-LM   | Jose       | Castro      | R3 Young Professionl           | R3-YP |
| Alain      | Farhi        | Miami Section                  | R3-LM   | Kristina   | Chapman     | R3 Young Professionl           | R3-YP |
| Rego       | Frank        | Gainesville Section            | R3-LM   | Debraj     | De          | R3 Young Professionl           | R3-YP |
| Helmuth    | Freericks    | Palm Beach Section             | R3-LM   | Arup Kumar | Ghosh       | R3 Young Professionl           | R3-YP |
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| John       | Hoffman      | East Tennessee Section         | R3-LM   | Layla      | Marshall    | R3 Young Professionl           | R3-YP |
| George     | Hummert      | Central Savannah River Section | R3-LM   | Haytham    | Saeed       | R3 Young Professionl           | R3-YP |
| Jim        | Jones        | Miami Section                  | R3-LM   | Saman      | Sargolzaei  | R3 Young Professionl           | R3-YP |
| Walter     | Katz         | Daytona Section                | R3-LM   | Aleksandra | Scalco      | Coastal South Carolina Section | R3-YP |
| Ollie      | Killough     | Alabama Section                | R3-LM   | Hsiuhan    | Yang        | R3 Young Professionl           | R3-YP |
| William    | Lentz        | Eastern North Carolina Section | R3-LM   | John       | Zehnpfennig | Huntsville Section             | R3-YP |
| Laurence   | Lyons        | Mobile Section                 | R3-LM   | Lei        | Zhu         | Charlotte Section              | R3-YP |

The **International Space Station (ISS)** is a modular space station (habitable artificial satellite) in low Earth orbit. It is a multinational collaborative project involving five participating space agencies: NASA (United States), Roscosmos (Russia), JAXA (Japan), ESA (Europe), and CSA (Canada). The ownership and use of the space station is established by intergovernmental treaties and agreements.

The station serves as a microgravity and space environment research laboratory in which scientific research is conducted in astrobiology, astronomy, meteorology, physics, and other fields. The ISS is suited for testing the spacecraft systems and equipment required for possible future long duration missions to the Moon and Mars.

The ISS program evolved from the Space Station *Freedom*, an American proposal which was conceived in 1984 to construct a permanently manned Earth-orbiting station, and the contemporaneous Soviet/Russian *Mir-2* proposal from 1976 with similar aims. The ISS is the ninth space station to be inhabited by crews, following the Soviet and later Russian *Salyut*, *Almaz*, and *Mir* stations and the American *Skylab*.

It is the largest artificial object in space and the largest satellite in low Earth orbit, regularly visible to the naked eye from Earth's surface. It maintains an orbit with an average altitude of 400 kilometers (250 mi) by means of reboots maneuvers using the engines of the *Zvezda* Service Module or visiting spacecraft. The ISS circles the Earth in roughly 93 minutes, completing 15.5 orbits per day.

The station is divided into two sections: the Russian Orbital Segment (ROS) is operated

by Russia, while the United States Orbital Segment (USOS) is run by the United States as well as many other nations.

Roscosmos has endorsed the continued operation of ROS through 2024,[19] having previously proposed using elements of the segment to construct a new Russian space station called OPSEK. The first ISS component was launched in 1998, and the first long-term residents arrived on November 2nd, 2000 after being launched from the Baikonur Cosmodrome on October 31st, 2000.

The station has since been continuously occupied for 20 years and 346 days, the longest continuous human presence in low Earth orbit, having surpassed the previous record of 9 years and 357 days held by the *Mir* space station. The latest major pressurized module, *Nauka*, was fitted in 2021, a little over ten years after the previous major addition, *Leonardo* in 2011.

Development and assembly of the station continues, with an experimental inflatable space habitat added in 2016, and several major new Russian elements scheduled for launch starting in 2021. In December 2018, the station's operation authorization was extended to 2030, with funding secured until 2025.

There have been calls to privatize ISS operations after that point to pursue future Moon and Mars missions, with former NASA Administrator Jim Bridenstine saying "given our current budget constraints, if we want to go to the moon and we want to go to Mars, we need to commercialize low Earth orbit and go on to the next step."

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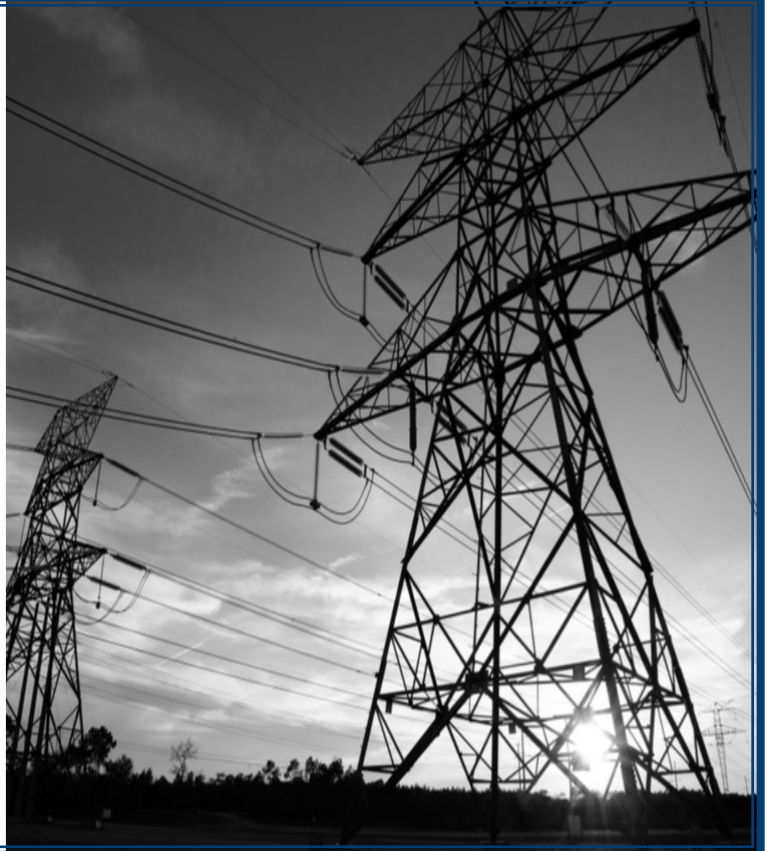
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| November 2021 - Calendar of Events <i>(For more information see "Inside the SunCoast Signal" → Page 1)</i> |                    |                           |     |     |     |                                     |
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