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# The Suncoast Signal

The Institute of Electrical and Electronic Engineers, Inc

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## PE Corner

### Art Nordlinger, PE, Senior Member The Latest FBPE News

Licensure renewal is right around the corner, beginning Monday November 2. It's a good idea to log in to your DBPR online account at [myfloridalicense.com](http://myfloridalicense.com) in the next few weeks, before the renewal period starts to ensure that you can access your account — and troubleshoot any problems that you may encounter — before trying to renew your Professional Engineer license. When you sign on you will be asked for an activation code. Your activation code is the last four digits of your Social Security Number. If you cannot access your account by using this information, contact the Board office at (850) 521-0500 or [renewal@fbpe.org](mailto:renewal@fbpe.org). Note that the Board's offices are still closed with all staff working remotely. Thus, emailing will likely elicit a faster response than calling. If you renew before January 15 the fee is \$88.75, a \$10 savings over the usual renewal fee. The discounted rate does not apply to delinquent licenses. For information on renewing a delinquent license visit the renewal page on the FBPE website. Renewals must be completed by February 28, 2021. The FBPE has received communications from PEs asking whether they will allow a delay or exemption to the continuing education requirements due to the COVID-19 pandemic. The Board has discussed this and does not plan to allow a delay or exemption.

## NCEES PE Exam News

NCEES is closely monitoring the impact of COVID-19 on the October 2020 pencil-and-paper exam administration. All exam site locations are currently proceeding with reduced capacity restrictions in place. They are aware that capacity restrictions are preventing many examinees from being able to register for the October exam administration.

*Continued on Page 2*

## **UPCOMING MEETINGS**

**EXCOM**

**Tuesday, November 3rd, 2020**

**Google Meet**

**Register with vTools**

<https://events.vtools.ieee.org/m/244056>

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All material for THE SUNCOAST SIGNAL is due in electronic form by 1st Monday after the 1st Tuesday of the month, i.e. the ExCom meeting, preceding the issue month. **Inputs due: Monday, 10/07/2020.**  
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As a result, NCEES has moved up the transition to Computer-Based Testing for the PE Electrical and Computer: Power exam. The pencil-and-paper version of this exam will not be administered in October 2020. However, registration is now open for the CBT exam with appointments starting December 1, 2020. As is the case with most CBT exams, the PE Electrical and Computer: Power exam is offered year-round at approved Pearson VUE test centers and scores are typically available 7-10 days after taking the exam. This year-round format will allow examinees to have more control over their testing options and reduce the risk of being canceled due to capacity restrictions. The CBT exam specifications are the same as those for the pencil-and-paper exam, and additional exam information is available on the NCEES 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 trends in the profession, IEEE has seminars that will meet your needs. With the renewal deadline only 3 months away seminar demand is high. Sign up now!

## Emergency Rule On Signing, Sealing Extended

The Florida Board of Professional Engineers has approved a second emergency rule temporarily expanding the use of electronically or digitally signed and sealed engineering plans and documents to include printed copies in order to effectuate the state's efforts to reduce the spread of COVID-19. The Board has also initiated regular rulemaking to extend this provision through the end of 2020. For complete details, please see the article "Emergency Rule on Signing, Sealing Extended" in the Latest News section of the FBPE website.



## Laws & Rules and Ethics for Professional Engineers

**Date:** Friday, December 4, 2020

**Time:** 9:30 am-11:30 am

**Cost:** \$30 members, \$50 Non-Members, \$20 Students

**Speakers:** Mr. Art Nordlinger, PE, IEEE Representative to the Florida Board of Professional Engineers

**Presentations:** The Rules and Laws That Govern the Practice of Engineering in Florida

Ethics and the Practice of Engineering in Florida

**CEHs:** One Rules & Laws CEH will be awarded, One Ethics CEH will be awarded, which will meet the current requirements for PE Renewals. Be sure to enter your name and PE number on the signup website as it appears on your license. IEEE Florida Provider Number is 0003849.

**Location:** This seminar will be presented virtually (online live)

**Registration:** <https://events.vtools.ieee.org/m/239252>

**Questions:** Art Nordlinger 813-630-6203 or [a.nordlinger@ieee.org](mailto:a.nordlinger@ieee.org)

### Course Description

*The Rules and Laws That Govern the Practice of Engineering in Florida.*

*This course is at a basic to intermediate level.*

Florida Statute 471 – Engineering

FBPE and FEMC

Florida Administrative Code

Updates from NCEES and FBPE

*Ethics and the Practice of Engineering in Florida.*

*This course is at a basic to intermediate level*

Basic Engineering Ethics Precepts

Florida Administrative Code 61G15

Recent Cases and Examples

**Speaker:** Art Nordlinger is the Manager, Transmission Tariff and Contracts at Tampa Electric Company. Art earned a Bachelor of Science degree in Electrical Engineering from Northwestern University in 1979 and his Master of Engineering degree in Electric Power Engineering in 1988 from Rensselaer Polytechnic Institute. Art is a senior member of IEEE and a registered PE in Florida

## Beyond 5G

**Date:** Tuesday, November 10, 2020

**Time:** 5:00 pm—6:30 pm

**Speaker:** Huseyin Arslan Ph.D., Professor and IEEE Fellow, IEEE Distinguished

**Location:** This seminar will be presented virtually (online live)

**Registration:** <https://events.vtools.ieee.org/m/242400>

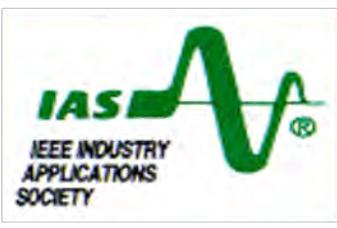
**Questions:** [paul.belussi.us@ieee.org](mailto:paul.belussi.us@ieee.org), Phone : 407-408-5407

**Abstract:** Today's wireless services and systems have come a long way since the rollout of the conventional voice-centric cellular systems. The demand for wireless access in voice and multi-media applications has increased tremendously. In addition to these, new application classes like extreme mobile broadband communication, ultra-reliable and low latency communications, massive machine type communications, and Internet of Things have gained significant interest recently for 5G. The trend on the variety and the number of mobile devices along with the mobile applications will certainly continue beyond 5G, creating a wide range of technical challenges such as cost, power efficiency, spectrum efficiency, extreme reliability, low latency, robustness against diverse channel conditions, cooperative networking capability and coexistence, dynamic and flexible utilization of wireless spectrum.

More than anything, 5G has introduced a new vision and sets of challenges for wireless researchers in many layers of the protocol stacks, especially in the Physical and Medium Access Layers. In order to address these technical challenges, highly flexible and adaptive radio access technologies are needed. Hence, 5G and beyond is about flexibility and applications. 5G and beyond is expected to bring about a communication system (with a single standard) through very flexible and cognitive design to support wide variety of services. As a result, the wireless radio researchers are facing a new challenge, which is the design of a flexible communication system in every layer of the communication protocol stacks. In this talk, the flexibility and adaptability of 5G and beyond systems will be discussed with a major focus on PHY and MAC layers. The potential directions and research opportunities to address the challenges and requirements of the 5G and beyond vision will be discussed.

**Speaker: Huseyin Arslan Ph.D., Professor and IEEE Fellow, IEEE Distinguished Lecturer**

Huseyin Arslan is a Professor in the Department of Electrical Engineering at the University of South Florida. Dr. Arslan conducts research in the broad area of wireless communication systems. His scholarly work has resulted in designing efficient wireless algorithms with improved performance, increased peak data rate and capacity, extended range, high spectral efficiency, and improved quality of service (QoS) for emerging high data rate wireless systems. His contributions have been well recognized by the scientific community, as evident from how widely his papers have been referenced in other researchers' scientific contributions. He was named an IEEE Fellow in recognition of his contributions to spectrum sensing in cognitive radio networks. His work in wireless communications has led to more than 16000 citations and a Google Scholar H-index of 50. He has served and been serving on the editorial boards of prestigious IEEE journals and several other scholarly journals by Elsevier, Hindawi, and Wiley Publishing. He is also regularly active in the technical program committee of top IEEE conferences in his field.



## Machine Learning Overview with the Artificial Intelligence Landscape

- Date:** Friday, November 13<sup>th</sup>, 2020  
**Time:** 9:00 AM – 11:00 AM  
**Speaker:** Stephen Skrzypkowiak, PhD., P.E.  
**Location:** Google Meet  
Link will be provided to Registrants the day before the meeting  
**Registration:** <https://events.vtools.ieee.org/m/237573>  
**Questions:** Steve Antman 813-460-5434, [steveantman@ieee.org](mailto:steveantman@ieee.org)

**Abstract:** Machine Learning (ML), Deep Learning (DL), and Artificial Intelligence (AI) are the current hot topics (and buzzwords) in science and engineering and will be a big part of future technologies. This has been made possible with the reduction of hardware cost over the years and the development of scripting languages and Software Development Kits (SDKs). This presentation will concentrate on ML and its' applications. Today ML is being used for everything from threat automatic target recognition (ATR), Facebook News Feed, and to present related items on your Amazon page to purchase when you login. Billion of dollars are being invested by the US government, industry (Amazon, Microsoft, Google, Apple, etc.) and universities (CMI, MIT, Standard, etc.) to arrive at the best and most accurate algorithms, methods, and applications.

**Biography:** Stephen Skrzypkowiak is a Subject Matter Expert (SME) in the areas of X-ray physics, Image and Signal Processing, and Machine Learning. Since 2002 Steve has been a domain expert lead in various capacities to the Department of Homeland Security (DHS), the Transportation Security Administration (TSA), the Transportation Security Laboratory (TSL) and various National Laboratories. He supports various US government agencies in the technical review of various threat detection systems, revising the explosive certification standards, and developing various detection and procurement specifications. He also provides technical support for various research projects including Differential Phase Contrast (DPC) Imaging. He is the Co-Chairman of the DICOS (Digital Imaging and Communications in Security) version 02A and 03 and technical member of the IEEE N42.45 Explosive Detection Standard (EDS) imaging standard. Prior to 2002, Steve was the L-3 Technologies Project Engineer for the eXaminer 3DX6000 EDS (the first 3-D imaging baggage system) that successfully passed the TSL certification operational readiness test.

Steve earned his Ph.D. in Electrical Engineer from the University of South Florida, where he also held various staff and research positions. He has published papers in the areas of Digital Signal Processing (DSP) algorithm implementation, neural networks, and video coding algorithms. He is a Senior Member of the Institute of Electrical and Electronics Engineers (IEEE), a member of the International Society for Optical Engineering (SPIE), Florida Engineering Society (FES), and a Florida Professional Engineer.



## IEEE 1547.8, Draft 8:

**“Recommended Practice for Establishing Methods and Procedures that Provide Supplemental Support for Implementation Strategies for Expanded Use of IEEE Standard 1547.”**

- Date:** Friday, January 22, 2021  
**Time:** 10:00 AM - 2:00 PM  
**Cost:** \$100 members, \$150 Non-Members, \$10 Students  
**Speakers:** Mr. Wayne Hartman, IEEE Senior Member  
**Presentations:** IEEE 1547.8, Draft 8, “Recommended Practice for Establishing Methods and Procedures that Provide Supplemental Support for Implementation Strategies for Expanded Use of IEEE Standard 1547.”  
**CEHs:** Four (4) CEH will be awarded. Be sure to enter your name and PE number on the sign-up website as it appears on your license. IEEE Florida Provider Number is 0003849.  
**Location:** This seminar will be presented virtually (online live) and the link sent the day prior.  
**Registration:** <https://r3.ieee.org/fwc/>  
**Questions:** Robert DeMelo 813-963-0994, [Robert.demelo@ieee.org](mailto:Robert.demelo@ieee.org)  
Steve Antman, (813) 460-5434, [steveantman@ieee.org](mailto:steveantman@ieee.org)

**Abstract:** This technical session explores [IEEE 1547.8, Draft 8, “Recommended Practice for Establishing Methods and Procedures that Provide Supplemental Support for Implementation Strategies for Expanded Use of IEEE Standard 1547.”](#) This recommended practice applies to the requirements set forth in IEEE Std. 1547 and provides recommended methods that may expand the usefulness and uniqueness of IEEE Std 1547 through the identification of innovative designs, processes, and operational procedures. It considers the application of DER based on an overall system-wide, system integration basis. IEEE 1547 was established based on its requirements being satisfied at the point of common coupling (PCC), but 1547.8-D8 additionally addresses DER interconnection considerations beyond the PCC. We’ll address:

- DER interconnection system-level potential adverse effects
  - Opportunities for EPS improvement, considering DER technology capabilities
  - Operation of the Area EPS (distribution system) and operation of the Local Isolated EPS (microgrid)
  - Effects on power quality, including voltage and frequency concerns
  - DER interconnection response to abnormal Area EPS conditions of voltage, frequency, faults
  - Advanced capabilities of DER functions for supporting Area EPS operations
  - Potential for DER’s to increase reliability and efficiency of electricity delivery and grid operations
- A decision was made in 2014 to roll select information from IEEE 1547.8-D8 into the presently being revised 1547.2, “IEEE Application Guide for IEEE Std 1547, IEEE Standard for Interconnecting Distributed Resources with Electric Power Systems.” The selected rolling of key information from IEEE 1547.8-D8 into IEEE 1547.2 will leave out details. This exploration will review key sections in detail.

**Biography:** Wayne Hartmann is a Senior Member of IEEE, serving as a Main Committee Member of the Power System Relaying and Control Committee (PSRC) for over 30 years. His involvement includes being Chair Emeritus PSRCC’s Rotating Machinery Subcommittee (’07-’10), contributing to numerous Standards, Guides, Reports, Tutorials and Transactions and delivering Tutorials IEEE Conferences. He has authored and delivered dozens of conference papers and contributed to McGraw-Hill’s “Standard Handbook of Power Plant Engineering.” Wayne has trained over 25,000 engineers and technicians in his 30-year career span.

## The Membership Development Minute:

### “It’s beginning to feel a lot like...Different.”

As I feel that tiny tinge in the air of not quite hot and humid during late evenings and early mornings that I take to be the changing of the seasons in our fine flat State of Florida, I just get the feeling that life feels different. I don’t think it’s even just Covid cabin fever talking although I hope we all seek a better alternative than doing our best ER impersonations with surgical masks every time we make a trip to the grocery store or to the office. But, so far so effective and any of us that have been spared any of the more significant impacts from this global health crisis should feel very fortunate.

A look at the major financial indexes and especially the relative resiliency of the tech heavy S&P 500 versus the lagging older industrially weighted Dow Jones, since mid March lows, tends to reinforce this observation that the world is changing and at least for now tech rules the roost.

Professionally too: customers, shareholders, stakeholders, and management are now much more tech savvy and their expectations both for analytical services and for their tech professionals are becoming more refined and demanding.

So how do we rise to the challenge and flourish in this brave new world? I borrow from the smart phone revolution tag line of “there’s an app for that.” And, in IEEE world as we respond to these ever increasing demands for technical expertise, there is an analogue:

For most every tech problem or field of study within electrical and computing disciplines - “there’s an IEEE society for that!” As an organization, we encourage your questions, creativity, and curiosity!

**Andy Lilly, PE**  
**MD Chair, IEEE FWCS**

<https://www.ieee.org/membership/renew.html>

## This Month at Computer Mentors:

*Directors Message!, Recruitment Message, Teen Business Challenge*

We have a new program about to begin. It's a program being sponsored by Spectrum and will provide Kinship Care parents with tools connect in this COVID-19 world and make them better educators of their children. We will start recruit soon, for a launch at the beginning of January 2021. We will be working with the Family Enrichment Center and recruiting some of our clients through them, but enrollment is open to all Kinship Care parents that are also senior citizens living within Hillsborough County. The program will feature training on virtual meeting tools like Zoom, and Microsoft Teams, and will also have training on tolls to assist the parents to be better educators of their children.

**Ralph Smith**  
**Director and Founder**

[See more details here.](#)

**For more information or to enroll, please email Ralph Smith at:**

[RSmith@computermentors.org](mailto:RSmith@computermentors.org)

# Computer Mentors' KidsCode and TEENtech Programs

[Click Here to register for TeenTech](#)

[Click Here to register for KidsCode](#)

## Project based learning introduced to KidsCode and TeenTech

Computer Mentors is undergoing some changes to our after-school and evening classes. We are focusing on introducing our students to programming languages, concepts, and principles.

Computer Mentors programs will be using project-based learning to show students how all the parts of the programming logic work together to create programs, games or mobile apps. In doing this we hope to inspire the students to take their projects further and even join the computer science industry.

We're also looking to introduce Cyber security classes in January. Cyber Security will introduce students to Malware and ways to avoid and even fight against it. They will also learn how to keep networks safe and secure.

We are looking to add new students to both programs, if you are interested in experiencing our new project based learning model firsthand click one of the links below:

[Click Here to register for TeenTech](#)

[Click Here to register for KidsCode](#)

It's that time of year again where we begin to turn our attention to our annual fundraising event, The Teen Business Challenge (TBC). Due to the current COVID 19 pandemic, this year's TBC will likely be unique as we are contemplating hosting a hybrid event which will include both in-face and online hosted portions, if we decide on a hybrid model, the in-face portion will be held at the Skills Center in Tampa, FL.



With that being said, a special "Thank You" to Eric Maltais and Immertec VR (Immersive Tech Inc.) for the donation of VR headsets and for the support of our Teens. Immertec VR are the creators of a ground breaking new 3D virtual reality technology known as "Medoptic".

The donation of the VR headsets will allow us to add a twist to the competition, a TBC 2021 VR themed event would require the teens to come up with a VR themed business idea as the goal. Many of the changes will be related to the Minimal Viable Product (MVP) portion of the event. We plan to make a final decision on the event format by December 1<sup>st</sup>, so stay tuned for more details in future newsletters.

Tentatively, this year that will either be held on the third weekend of February or March. If you are interested in volunteering to serve the community during the TBC please let us know by clicking on the following TBC volunteer link:

<https://computermentors.org/volunteertbc/>

**KidsCode and TeenTech Fall classes**

[Click Here to view our Fall schedule](#)

**Thank you to our Sponsors!**

## Suncoast Signal Advertising Rates

Size	1 Month		6 Months		12 Months	
	Member	Non-Member	Member	Non-Member	Member	Non-Member
<b>Business Cards</b>	\$25	\$35	\$120	\$150	\$210	\$252
<b>1/4 Page</b>	\$40	\$52	\$190	\$38	\$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



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November 2020 Calendar of Events <i>(For more information see Page 1 in this Signal)</i>						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
		*EXCOM Google Meet			*Signal Inputs Due	
8	9	10	11	12	13	14
		*Beyond 5G			*Machine Learning...	
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				