Note: Due to Supply Chain Problems we will print the Signal on White Paper as opposed to the traditional grey

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**PE Corner**

Art Nordlinger, PE, Senior Member

*What Qualifies for Continuing Education Hours (Part 1)*

Licensure renewal is coming up in less than a year and you’re thinking, “It’s time I got serious about getting some Continuing Education Hours (CEHs).” This seems like an appropriate time to talk about what you can do to earn your CEHs. Maybe you are dreading the thought of having to sit through 16 hours of technical education (section 2, below). Well, there are other things that qualify for CEHs of which you may be able to take advantage. Sections 61G15-22.003 and .004 of the Florida Board of Professional Engineer’s rules address this. The first section addresses Qualifying Activities for Area of Practice Requirement and the second Conversion of Education Units to Continuing Education Hours. I’ll combine the sections here and provide some editorial commentary.

**(1) Successful completion of college courses.**

One (1) college semester hour credit is equal to 45 continuing education hours

One (1) college quarter hour credit is equal to 30 continuing education hours.

Yes, you can complete the entire requirement by taking one college level course in your area of practice.

You can’t “carry over” CEHs from one renewal period to another. I would note that there are states (other than Florida) that do allow some amount of carry-over. This has been discussed by both the Continuing Education Committee and the full Board and, at least for now, no action is contemplated.

*Continued on Page 2*
Continued from Page 1

Additionally, in a few cases where an engineer's continuing education was found deficient during an audit and the engineer then “made up” those hours by taking the necessary courses as required by the Board, some engineers then tried to use those “make up” course hours to satisfy the continuing education requirement in the subsequent renewal period as well. The Board sees this as double counting and disallowed those hours.

(2) Successful completion of short courses, tutorials, webinars, and distance education courses offered through delivery methods such as live, correspondence, recorded, Internet-based; or attending seminars (including in-house engineering seminars), workshops, or professional and technical presentations at meetings, conventions or conferences presented/sponsored by a provider or vendor with specific knowledge related to the licensee’s area of practice approved under Rule 61G15-22.011, F.A.C.

One (1) contact hour of professional development in course work, seminars (including in-house seminars at an engineering firm), or professional or technical presentations made at meetings, conventions, or conferences is equal to 1 continuing education hour.

Note that Rule 61G15-22.011 requires that both providers and content be approved by the Board. So if you are planning to go this route, make sure that the provider and content have been approved by the Florida Board. IEEE and other professional societies are “exempt providers” and don't have to have individual courses approved.

Continued on Page 4
The Use of Synchrophasors to Understand What Happened to the Power Grid During the Winter Storm Uri Event – February 2021

Date: Thursday, July 21, 2022
Time: 11:30 – 1:30pm (log-in to the seminar begins at 11:15) – 2 Hours
Location: Webinar - Online
Speaker: Dr. Mack Grady, Professor of ECE, Baylor University - mack@ieee.org
IEEE Fellow, Registered Professional Engineer in Texas
Cost: $50 Members/$100 Non-Members/$10 Students
CEH Credits: Two (2) CEHs will be provided for this event. Florida provider #0003849.
Registration Online at: https://events.vtools.ieee.org/m/312250
Questions: Adrian Zvarych - azvarych@powergridmail.com or Robert DeMelo – Robert.demelo@ieee.org

Abstract: The winter event that occurred in February of 2021 (unofficially referred to as Winter Storm Uri) was one of the costliest winter storms on records.

The storm resulted in over 170 million Americans being placed under various winter weather alerts being issued by the National Weather Service in the United States across the country and caused blackouts for over 9.9 million people in the U.S. and Mexico, most notably the 2021 Texas power crisis. The blackouts were the largest in the U.S. since the Northeast blackout of 2003.

This lunch and learn with cover how the use of Dr. Grady’s Texas Synchrophasor Network (TSN) and how the use of data, oscillography, etc. helped paint the picture and explain the sequence of events that took place on the grid during the duration of the storm.

Speaker: Dr. Mack Grady, PE is a professor at Baylor University since 2012, and was awarded Professor Emeritus status at U.T. Austin in 2013 for his service there since 1983.

Dr. Grady is an IEEE Fellow for “Contributions to the analysis and control of harmonics and electric power quality.”

In 2007, with the help of Schweitzer Engineering Labs, he started the “Texas Synchrophasor Network” (TSN) with three stations in Texas and one is New Mexico. The TSN moved with him to Baylor in 2012, additional stations were added in the Eastern Grid, including three stations belonging to OG&E. Also, SEL, ERCOT, OG&E, Austin Energy, U.T. Austin, U.T. Rio Grande Valley, and several other individuals continue to support the effort. His two other present-day research topics are 1. working as part of the HEMP-E3 research team of DoD-DTRA and their affiliated ARA research organization since 2008, and 2. assisting ERCOT with grid topics most important to them.

PES/IAS ExCom Meeting
Saturday, July 30, 8:00 am – 9:00 am
Online at: https://meet.google.com/frb-xedi-gww
Florida Laws and Rules and Ethics for Professional Engineers

Date: Thursday, July 28, 2022
Time: 10:00 am-noon
Location: This seminar will be presented virtually
Speakers: Mr. Art Nordlinger, PE, IEEE Representative to the Florida Board of Professional Engineers
Cost: $30 IEEE Members / $50 Non-Members / $20 IEEE Student Members
CEHs: One (1) Rules & Laws CEH will be awarded; and
One (1) 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.
Registration: Register at https://events.vtools.ieee.org/m/310530
Questions: Art Nordlinger: a.nordlinger@ieee.org or Robert DeMelo: Robert.demelo@ieee.org

The Laws and Rules 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

Art Nordlinger, PE, who recently retired after a rewarding career in the electric utility industry, was most recently the Manager of 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, Chair of the Florida Engineers Management Corporation (FEMC), and a registered PE in the state of Florida.

Continued from Page 2 - What Qualifies for Continuing Education Hours (CEH)

(3) Teaching or instructing in subsection (1) or (2) above. However, teaching credit is valid for teaching a course or seminar for the first time only. Teaching credit does not apply to full-time faculty.

For teaching of subsections (1) and (2) above, apply a multiple of 2, if the requirements of subsection 61G15-22.003(3), F.A.C., are met.

Here is a way for many of us to get double credit by teaching a course with appropriate technical content in your area of expertise. Talk to an IEEE officer about this opportunity.
DC Arc Flash Calculations

Date: Friday, August 26, 2022
Time: Seminar: 10:00AM - 3:00PM
Location: Online - Webinar
Speaker: Thomas Blair, P.E., Senior Engineering Fellow, Tampa Electric Company
Course Level: Intermediate
Cost: $75 Members, $150 Non-Members, $10 Students.
CEH Credits: Four (4) Professional Development Hours will be awarded

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.

Registration: Online at https://events.vtools.ieee.org/m/315799
Questions: Ryan Copley – r.copley@ieee.org / Tom Blair - tom_blair@ieee.org
Robert DeMelo – Robert.demelo@ieee.org

Abstract: Your local IEEE PES/IAS Chapter will host a seminar on the topic of performing “DC Arc Flash Calculations”. We will cover the three most common methods for performing calculations:

♦ Maximum Power Transfer Method
♦ Stokes & Oppenlander Arc Resistance Method
♦ Paukert Arc Resistance Method

Additionally, we will discuss the difference between methods when applied to a voltage sourced system compared to a photovoltaic sourced system. Lastly, we will discuss some test results of PV systems and compare to the various calculated models to determine how accurately the models estimate actual incident energy levels on PV systems.

Speaker: Tom Blair is a Senior Engineering Fellow with Tampa Electric. He performs electrical system analysis and uses the results to specify electrical equipment ratings, protective relay settings, and electrical system arrangement.

Tom has also been adjunct professor in the past at the University of South Florida and has presented courses at the university on topics such as Electrical Machines and Drives, Energy Production Systems Engineering, and the FE and PE (power) exam preparation course at USF. Mr. Blair is a Senior Member of IEEE.
Interview with Ron Ambrosio by Khalid Alosaylan
An Interview Revealing a Talented Software Engineer’s Story with Programming, Management, and Entrepreneurship.

Ron Ambrosio’s 40 years of experience is not merely inspiring but a guide to those interested in knowing how a programmer could be an impressive one, become a manager, and start a company in the areas of technology. Such interests were very similar to my interests, the interviewer. I am Khalid, a Third-year Electrical Engineering Student at the University of South Florida interested in Engineering Project Management and Entrepreneurship, and I had the pleasure to be interviewing Ron Ambrosio, an IEEE Senior Member.

Ron is a Senior Technical Executive and a Software Architect. His areas of specialties are Technology, Business, and Energy Transformation. Ron is not a typical engineer but a truly talented one. Ron started his career as a Visiting Student Programmer working around Speech Recognition at IBM Thomas Watson Research Center in 1981. Ron worked there for 34 years when he became the CTO of Smarter Energy Research. Ron experienced working in a smaller corporation where he was the Director of R&D at Microware Systems Corporation. Not only that, but he also co-founded Utopus Insights, Inc in the area of Smart Energy along with a set of 8 patents and many awards.

After knowing about such a background, I immediately found myself interested in how he succeeded in becoming a professional programmer then a manager and to end up being an entrepreneur!

✦ **Khalid:** How can a student of software engineering or any related fields become a talented programmer?

✦ **Ron:** Start to learn how to plan development timelines. Most programmer are bad at it. Only half of the people I managed were good at time estimation. A rule of thumb I used when I managed programmers is that I double up the time that they tell me they need to finish the project because as programmers we always forget how much it takes us to debug and test a software system.

✦ **Khalid:** Would you recommend a programmer to get an MBA to get into management?

✦ **Ron:** MBA never hurts, but what I think is more valuable is communicating to your manager what your goals are and ask the manager for opportunities to be a project lead. Do that for several projects, which will start to demonstrate your management skills to the people above you.

✦ **Khalid:** Ron, Since you co-founded and were the Chief Scientist at UTOPUS, I’d like to ask you what skills should a software engineer plan to master before starting a startup in tech?

✦ **Ron:** Now is where you need to learn how to communicate your ideas and sell them. You need to become a technologist who is essentially a salesman. Here is also where the MBA comes in! Working for a startup is going to educate you a lot on what do you need to do if you want to start a startup.

✦ **Khalid:** Mr. Ambrosio that you have 8 patents and you have gotten many awards, but what if you were to choose one impressive project from your career. What would it be?

✦ **Ron:** The project was a 180-million funded project with a time frame of five years (2010-2015), which was to create a regional smart grid system using transactive energy techniques over five states in which I was the Chief Architect. It was a result of the American Recovery Act (ARA) which was trying to improve the economy in 2009. A big part of the act was to invest in Smart Grids, and here is where our project came into play. It was one of the largest projects in the world in smart grids.
Finally, I discussed with Ron his connection with the IEEE and his next steps explaining to me that he is much involved in the utilities industry and energy transitions groups.  
Khalid: Would you say that IEEE was a valuable component of your career journey?  
Ron: IEEE influenced my career through the standard of activities and being involved in different working groups. Another thing is contacts by going to conferences like the international smart grid conferences.

♦ Khalid: In one sentence, what is Ron going to do in the near future?

♦ Ron: hmm. Let’s see.

♦ Ron: I am spending more time working on the industry activities I have always loved and being able to control when to take a break and jump in my RV and have a road trip for two month and still attend conferences from the RV. End
SO YOU ARE NOT A SENIOR MEMBER YET?

It has become very clear that the main reason that so many members wait to become a Senior Member of IEEE is because they have a difficulty obtaining the support of three Senior Member or Fellows since they do not know any, and I can attest to this because when I wanted to become a Senior Member not knowing any one I took advantage that being part of the EXCOM in my section there would be a good chance that I could find support among the members of this committee. So, I stood in the middle of the room and made my request known to all present. Lo and behold that I was able to find the supporting references among this group and I am grateful for their volunteer effort, and I consider myself lucky that this was a successful try for me.

But not every one can be this lucky! I have had Life Members write to me telling me that they did not know any senior members and they had done two or three trials at becoming one without success as they could not find member that would support their cases. In addition to this obstacle, many Life Members did not know that there was a Life Senior Member Rank that they could achieve, so they spend their professional lives without this advancement thinking that Life Member was the highest rank they could achieve. In fact, I am constantly receiving letters from candidates, who upon receiving my Eligibility Letter, write back to me telling me that they have been Senior Members since 19XX and they do not need to accept this honor.

This is far from the truth. It is worth clarifying at this point that those members who have achieved Life Member Status cannot consider themselves as Life Senior Member rank because in order for you to become a Senior Member, the highest rank that an IEEE Member can apply for, you must go through the elevation process that the Admissions and Advancement Committee manages and this process is what we at Florida West Coast Section are providing you today.

We have shortened the path to Senior Member without changing the requirements imposed by IEEE, by providing the candidates with the opportunity to have a Nominator and two Reference Providers (the three required references per IEEE) and we do this in a short 30 minute interview meeting online via Zoom and a duly formatted copy of your professional Resumé in a format that we have found to be the most acceptable way to provide the Admissions and Advancement Review Panels the clear and accurate information about the candidate to facilitate their screening task. I know this firsthand because I am a Review Panel Member and come across a myriad of different resumés during my candidate evaluation to Senior Member that are difficult to navigate. I consider this to be a contributing factor to the Florida West Coast Senior Member Elevation Committee’s success rate of 98.5% accuracy in elevating our candidates, along with the efficiency of our Program.

Having said this, I now must inform you that for the Admissions and Advancement Committee’s Review Panel of June 25th, 2022, we have submitted 40 new candidates ranging from all of the sections of Region 3 as shown in the list and their names will be published in the July issue of The Suncoast Signal. Please take advantage of this Elevation opportunity and send me your formatted resumé so I can start your nomination.

CANDIDATES ELEVATED TO SENIOR MEMBER 6/25/2022— Continued on Page 9

Senior Member Roundup
July 23, 2022 - 12pm - 5pm

Register: https://events.vtools.ieee.org/m/315104

Contact / Questions
andrew.seely@ieee.org
hermann.amaya.us@ieee.org
## CANDIDATES ELEVATED TO SENIOR MEMBER 6/25/2022

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July 2022 - Calendar of Events (For more information see "Inside the SunCoast Signal" → Page 1)

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