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THE SUNCOAST SIGNAL

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

Volume 65—No. 6 June 2019

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Upcoming Meetings

Tuesday, June 4, 2019 5:30PM EXCOM Meeting
at TECO Plaza Register online at [http://
time2meet.com/fwcs-excom/index.html](http://time2meet.com/fwcs-excom/index.html)
Open to all FWCS Members

Monday, June 10, 2019—IEEE C37.230 Guide for
Protective Relay Applications to Distribution Lines

Monday, June 28, 2019—Becoming an Independent
Consultant

USF 2019 GOLDEN BULL AWARDEE

AMMARA MEHD GHANI

IEEE WIE FWCS Chair and Young Professionals Vice Chair, Ammara Mehd Ghani, is a graduate student in USF. She is pursuing a M.S degree in Electrical Engineering and doing internship in the Security & Compliance Department at Lakeland Electric. She has recently received the Golden Bull Award 2019, which is the highest honors award in USF given to 15 students from the whole university. The Golden Bull Award is given annually up to 20 deserving students on the basis of academic excellence, exceptional leadership, research and demonstrating the core values of USF.

Ammara was the only student from School of Engineering who received this award.



2019 IEEE EXECUTIVE COMMITTEE - FLORIDA WEST COAST SECTION**CHAIR:** Claude Pitts - claudie.pitts@ieee.org**VICE CHAIR:** Paul Belussi - paul_belussi@selinc.com**SECRETARY:** Sean Denny - venner20@ieee.org, (727) 678-0183**TREASURER:** Jim Howard - jhoward@ieee.org, (863) 834-6585**SIGNAL EDITORS:** Ralph Fehr - r.fehr@ieee.org,Donna Howard - amberdon3133@gmail.com**AWARDS & BYLAWS:** Richard Beatie, PE - r.beatie@ieee.org**MEMBERSHIP:** Jim Howard - j.howard@ieee.org, (863) 834-6585**TEACHER IN-SERVICE:** Sean Denny - venner20@ieee.org, (727) 678-0183Computer / Aerospace & Electronic Systems (**COMP/AESS**) Joint Chapter:
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THE SUNCOAST SIGNAL is published monthly by the Florida West Coast Section (FWCS) of the Institute of Electrical and Electronics Engineers, Inc. (IEEE). THE SUNCOAST SIGNAL is sent each month to members of the IEEE on Florida's West Coast. 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 1st Sunday after the 1st Tuesday of the month preceding the issue month.

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Useful links:<http://www.ieee.org/benefits> Global Benefits Finder<http://www.ieee.org/discounts> Discounts Page**PE Corner**

Art Nordlinger, PE, Senior Member

Why Become A Professional Engineer?

Chapter 471 of the Florida Statutes defines the practice of engineering and the titles associated with it. Chapter 471.003(1) states, "No person other than a duly licensed engineer shall practice engineering or use the name or title of "licensed engineer," "professional engineer," or any other title, designation, words, letters, abbreviations, or device tending to indicate that such person holds an active license as an engineer in this state." The next paragraph goes on to define what engineering activities don't require a PE license.

I have been fortunate to have the opportunity to speak with college juniors and seniors about professional licensure. The reaction I get often depends on the student's major and future goals. Most civil and structural engineering students, and some others as well, understand that they won't be able to practice their trade without a PE license. Many, if not most, electrical engineering students plan to practice in areas, like manufacturing or circuit design for example, where a PE license isn't required. And many have not been exposed to the concept that certain areas of electrical engineering require a license, where others don't.

As a result, it can be a bit of an uphill battle to convince an electrical engineering student that sometime close to their graduation, while the material is still somewhat fresh, they should take what might be the longest and hardest exam that they have taken to date. And that they should pay more than one-hundred dollars in order to be allowed to do so.

Though nearly every junior and senior engineering student is certain what their future career path will be, few prove to be correct as their careers progress. For those that find that they need to have a PE at some later time, it is a difficult, and often impossible, task to re-learn the varied material necessary to pass the Fundamentals of Engineering and Professional Engineer exams while working full time. This may at some point restrict the engineer's career path.

Experience has shown that there are many advantages to having a PE license. Even those that don't need to have a PE to advance in their career can find it useful. When applying for a job or a promotion, having passed the FE or having a PE can help set that person apart from the pack. It can help to show an employer that this person is willing to "take it to the next level". Interestingly, in some businesses where a PE is not strictly required for practice, licensure is listed as a "desirable" or even required to attain higher level engineering positions.

So regardless of a student's engineering major or future plans, they should be encouraged to take the first step and take FE exam around the time of graduation. This can help to set them apart from their peers. And you never know when you might need it.

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.

Leader's Center **Volunteer Organizations—Part 3**

Paul Schnitzler, Ph.D—Life Senior Member

In Part 2 we used the first part of the YES I AM model. Now will see how to add the second part: **I AM**. This will help you get what you want—and manage your stress in the process.

Go back to **your** wish-list, the activities that no one seemed to care about. They *are* important to you. You could simply do them all yourself but that may be more than you want to take on.

Remember the first half of the acronym: **You** are passionate about your personal ideas, right? So check **E** and **S**.

Can **Everyone** benefit from one of your ideas? Perhaps they can suggest the value of your idea to them?

Seek their guidance regarding its value to them. If they can help here, again **Seek** their guidance for how to make your ideas work.

But suppose they are not enthusiastic about your ideas? Move on to the rest of the acronym.

I AM: Include All; Ask for Help; Manage Your Concerns.

Include them by asking how they might *improve* your ideas. It may turn out that by making some changes, your ideas will become better.

Ask for their help. You might say “Who is willing to help make this idea happen?” Or, “You know that I would like this to happen and I would welcome your help. Is there some way we might do it together?” Consider the true value of a task no one

wants to do. Could the task really be *un*important?

Or try this: “I have been trying to get this going... But I must be missing something because no one else seems interested. Help me see how the idea needs to change.” And keep asking: “I may have overlooked some things. What do you think would be really good for us to do?” Or “You know that I have been pushing this idea. Help me see if it really is needed by our organization.” Or “What have we been overlooking that our organization could really use?” Often others know more than you think!

Some tests: Is the task actually needed? Does it satisfy the organization’s purpose? Does the team think it is a good idea?

Manage your discomfort. You are not sure that your ideas will be implemented and that makes you anxious. With each person who agrees to help, ask what they need from you.

Be ready to hear that some of your ideas are not really needed—then what? By accepting that, you are being the best kind of leader: you have put the organization first.

Remember, if you can lead a volunteer organization, you can lead any group. Not sure? Send me your thoughts and questions. I will address them in future columns.

Watch for more on leadership in engineering (and other) organizations. Need a speaker? Have questions? Ideas? Contact me at pauls@usf.edu or go to <http://leadchangewithoutfear.com/> and click the tab “Successful Real Change.”

Guardian ad Litem Program of Pinellas and Pasco Counties Seeks Volunteer Child Advocates for Abused and Neglected Children

Guardians ad Litem work on a team with professional staff to advocate for children who have been removed from their homes due to neglect or abuse and come under the jurisdiction of the courts often due to parental drug abuse or domestic violence. Guardians ad Litem identify what is in the best interest of the child to the courts by making monthly visits to the child in their current placement to identify what the child’s needs are. They work to find a permanent placement for the child. Training is free. To learn more about making a difference to a child visit www.herotoachild.org or call Karen in Pinellas at 727-464-6147, Larnelle in Pasco at 727-727-834-3493 or visit www.guardianadlitem.org for information in other counties. For other ways to help contact our local foundation at AmyF@galf6.org.



IEEE C37.230 Guide for Protective Relay Applications to Distribution Lines

Date: Monday, June 10, 2019

Time: 7:30am-8:00am Registration,
Seminar 8:00AM – 4:30PM (lunch not provided)

Speaker: Thomas Blair, P.E., Senior Engineering Fellow, Tampa Electric Company

CEH Credits: **8 Continuing Education Hours (CEHs)** will be awarded for this seminar. Be sure to provide your name and PE number as it appears on your license. IEEE Florida Provider Number is 0003849.

Course Level: Intermediate.

Cost: Members: \$125 Non-members: \$175

RSVP: Ray Trusik, Florida Electrical Cooperatives Association
850-877-6166 Ext. 3
rtrusik@fecfa.com

Note: *There is no online registration for this event*

Location: Sand Pearl Resort
300 Mandalay Avenue Clearwater FL 33767
<http://www.sandpearl.com>

Questions: Tom Blair at 813-228-1111, ext 48179 or tom_blair@ieee.org

IEEE C37.230 - Guide for Protective Relay Applications to Distribution Lines, was published in 2007 and was revised in 2018. The revised edition is expected to be released in 2019. This seminar will cover the updated version of IEEE C37.230.

The level of difficulty of this course is Intermediate. This course will review the fundamental topics of fault & load characteristics, harmonics and interrupt ratings. We will present the topics of distribution fundamentals, line configurations and various protection schemes for each line configuration while presenting the advantages and disadvantages of these protection schemes. Solutions to identified problems will be discussed and examples presented. We will describe recommended protection criteria and basis behind the various protection philosophies.

The course will present some common special applications of protective relaying such as multiple feeder faults, loop schemes, load shedding philosophies, protection of circuits with distributed energy resources, breaker failure/backup protection, single phase tripping, ground fault protection, and the more recent topic of arc flash hazard calculation.

Regarding arc flash hazard calculations, this course will cover the various methods of determining the incident energy levels and protective clothing requirements utilizing NESC tables and NFPA70E tables and when the tables from these two standards do and do not apply. Additionally, this course will cover arc flash hazard calculations utilizing IEEE 1584 - Guide for Performing Arc-Flash Hazard Calculations. IEEE 1584 was updated in 2018 and this seminar will cover the updated standard for performing Arc-Flash Hazard Calculations utilizing the updated standard. We will also discuss the OSHA (Occupational Safety & Health Administration) requirements for protection of employees from arc flash hazards for utilities.

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.

**IEEE/FWCS CONSULTANTS NETWORK
AFFINITY GROUP****Machine Learning Made Easy with MATLAB®****Date:** Tuesday, June 18, 2019**Time:** 6:00 PM to 8:00 PM**Speaker:** Bernhard Suhm of MathWorks**Location:** St. Petersburg Yacht Club, 11 Central Avenue, St Petersburg, FL 33701**Register at:** <https://events.vtools.ieee.org/m/198874> Attendance is limited to 35.**Questions:** Contact Jim Stosic: JStosic@GeniumInc.com**Abstract:**

Machine learning is driving innovation in many application areas, including movie recommendations, fraud detection, digital health monitoring and advanced driver assistance to name a few. Developing machine learning models and deploying them on embedded systems or cloud infrastructure often still requires significant expertise with signal processing, big data, and model optimization.

This presentation begins with an overview of machine learning, including various types of machine learning, the workflow, and what makes building predictive models challenging. You will learn what the hot topics Deep Learning and Artificial Intelligence are all about relative to Machine Learning.

Then, in the context of real world applications, this talk addresses how MATLAB® empowers engineers and scientists without significant signal processing and machine learning expertise to:

- Quickly build initial predictive models without writing any code
- Optimize performance, including hyperparameter tuning
- Scale processing to big data and cloud computation
- Leverage advanced signal and text processing techniques
- Deploy models in production IT systems or on embedded devices

Speaker:

Bernhard Suhm is the Product Marketing Manager for machine learning at MathWorks. He works closely with customer facing and development teams to address customer needs and market trends in our machine learning related products, primarily the Statistics and Machine Learning toolbox. Prior to joining MathWorks, Bernhard led analyst teams and developed methods applying analytics to optimizing the delivery of customer service in call centers. He also held positions at a usability consulting company and Carnegie Mellon University. He received a PhD in Computer Science specializing in speech user interfaces from Karlsruhe University in Germany.

Young Professionals June Meeting

Becoming an Independent Consultant

Date/Time: Friday, June 28th, 2019 @6:30 pm

Place: TECO Energy, 702 N. Franklin St, Tampa, FL 33625

Registrations: <https://events.vtools.ieee.org/m/194811>

Cost: Not even a penny!

Description:

Come learn about the benefits of becoming a consultant. How, why, and when to become a consultant, the ins and outs on how to be successful, benefits and advantages of working for yourself, and how to get clients. This talk will be jam-packed with tons of references to paper and videos. The talk will include an overview of IEEE-USA's Alliance of IEEE Consultants Network and the training and support resources it provides to consultants. The audience will be introduced to Mr. Hermann Amaya, the founder, and chairman of the IEEE FWCS Consultant Network Affinity Group and a key member of IEEE-USA alliance with connections at the national level. Important consulting business lessons-learned will be presented along with some very concrete ways to avoid the pitfalls. Included in the presentation is the path consultants use toward more passive income, a form of entrepreneurship.

Speaker:

Mr. Stosic is an independent consultant working in the area of Communication System Design and Development. His consultancy was founded in 1996 and grew to 4 employees to include its own product designs. Early on Mr. Stosic provided direct consulting service to companies such as Rockwell-Collins, Motorola, Harris, and Raytheon on the topic of UHF Military Satellite Communications. Mr. Stosic is a Senior Member of IEEE and the vice-chairman of the IEEE FWCS Consultant Network Affinity Group.

For more information contact: T. J. Ross (a.j.ross@ieee.org)

What's Going on @ USF?

We would like to take this space to keep you updated about our branches of IEEE that are housed on-campus. USF has four main branches:

- USF - Our main branch
- MTT - The microwave and antenna wizards
- PES - Bringing the big grid to a small home
- CS - Our computer science division

Our USF branch focuses on building skills for our students. Whether it's programming an Arduino, building a robot, or partnering with a mentor to make their dream project come true.

MTT has been doing an amazing job at inviting speakers to come and present their research, work, and ideas to the student body. They are also planning a mini-WAMI conference for students, enthusiasts and professionals.

PES combines those industry leaders with hands-on practice, and recently held a soldering workshop.

All of this could not be possible without the support of IEEE.

Are you interested in supporting us? Don't know how? It's easy! If you would like to set up a company presentation or a table at a meeting, please reach out to us. Maybe you're interested in just a sponsorship, we have a package for you too. Contact any of our chapter chairs and we would glad to help you. Thank you, and keep on advancing technology for humanity.

Thomas DeCanio, IEEE USF Chair

IEEE-USA FWCS Member Report on Congressional Visits Day 2019

Science Applications International Corp.'s (SAIC) Andrew Seely, solution director, participated in the 2019 Congressional Visits Day (CVD), an annual event coordinated by IEEE-USA. The CVD brings together senior engineers, scientists, and technologists from around the nation to communicate the common interests of the IEEE-USA to legislators, and to provide advice and guidance on technology issues that impact the nation.

On the day of scheduled visits, Seely met with Legislative Assistants and Legislative Correspondents from Senator Marco Rubio, Senator Rick Scott, and Representative Kathy Castor of Florida's 14th Congressional district, and Seely supported colleagues from Georgia to meet with Georgia Senator Johnny Isakson. In each meeting, Seely discussed the IEEE-USA focus for the day: Protecting federal funding for basic science research for five key agencies: Department of Defense, Department of Energy, NASA, National Science Foundation, and National Institute for Science and Technology.

The IEEE-USA position is that a 4 percent increase of real growth in these research budgets would serve to help the United States maintain its current lead over national competitors and adversaries, including the rapid growth of investment in basic research in the Chinese national budget. In addition to basic research funding, some discussions included topics of digital privacy, cybersecurity, power grid security, and the value of Skills-Based Green Card immigration instead of guest-worker status, to provide a path to citizenship for the brightest science and engineering students from other nations who come to the U.S. to study at top universities.



The IEEE-USA CVD was a great experience, and introduced Seely and others to some of the inner workings of the legislative process, created connectivity between industry leaders across the IEEE-USA, and instilled a sense of pride and purpose in the entire team.

Seely is a solution director for Digital Transformation in the Solution and Technology Group, Enterprise IT Practice, where he supports multiple customers within federal government, including DoD, DoE, and NASA. He is a 20-year member and a Senior Member of the IEEE, a founding member of the nascent IEEE-USA U.S. Government Community of Interest, and the communications coordinator for the IEEE Florida West Coast Section's Senior Membership Advancement Committee. He may be contacted at andrew.seely@ieee.org.

FWCS Senior Member Elevation Committee by Hermann Amaya SMEC Chair

On September 4th 2018 during the Executive Committee (EXCOM) of the Florida West Coast Section of IEEE, Mr. Claude Pitts Chair of the Section determined that a Senior Member Program Committee be established and should operate under the FWCS IEEE Membership Committee currently under the able direction of Mr. Jim Howard and that Hermann Amaya (hamaya@tampabay.rr.com) be the Chair of such committee to carry out the task of providing the means for eligible Senior Member candidates to be elevated to the Senior Member Rank, the highest rank that IEEE grants to its Members.

At the time of this new Committee formation a group of Senior Members very generously volunteered to support future Senior Member Nominations and the following became official members of this committee:

Hermann Amaya, Chair	John Grant PhD
Karl Anderson	David McKinnon
Serge Beauzile	Craig Pinto
Yusuf Bhagat Ph.D	Henn Rebane
Thomas Blair	Andrew Seely, Vice Chair
Alan Gauzens	Stephen Skrzypkowiak Ph.D
Kanwalinderjit Gagneja, Ph.D	Bhuvan Unhelkar

This new Committee formation and installation happens at a very opportune time given that we have initiated a very aggressive program at FWCS to provide the means and opportunity to approximately over 400 IEEE Members who are eligible to advance to the IEEE Senior Member Rank but they must contact the SMEC Chair or one of the committee members to make their desire for advancement known. I wish to extend our appreciation to the members of this Committee for their support and hard work.

The FWCS Senior Member Elevation Committee has been issued the task to search and support those individuals who being members of IEEE have the qualifications to become Senior Members but have not yet attained the rank. It is our charter to provide them with the necessary support necessary to facilitate their promotion. Since its formation, the Senior Member Elevation Committee (SMEC) has been working very diligently and we can now list the members who have attained their Senior Member Rank through the efforts of this committee:

Christopher Braun	Henry Boulanger
Sean Daugherty	Ryan Copley
Dan Leppold	Julio Costa
Kyle Reed	Christopher Evanich
Russell Jay	Curtis E. Falany
Robert Siegel	Patrick Forrey
Hugo Vifian	Kanwalinderjit Gagneja
Robert Aasheim	John Grant
Redwan Alqasemi	Chung Seop Jeong
Olufemi Amao	David McKinnon
Paul Belussi	Mike Okneski
Yusuf Bhagat	Craig Pinto

Congratulations to all FWCS new Senior Members recently advanced.

If you are interested in becoming a Senior Member, log in using your credentials and consult the requirements at <https://www.ieee.org/membership/senior/senior-requirements.html>

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¾ Page	\$110	\$143	\$530	\$663	\$925	\$1,110
Full Page	\$140	\$182	\$670	\$838	\$1,175	\$1,410
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Florida West Coast Section, Tampa

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IEEE, 445 Hoes Lane, P.O. Box 1331, Piscataway, NJ 08855-1331 or call (800) 678-4333
Or fax your address changes to (732) 562-5445

June Calendar of Events (For more information see P. 1) in this Signal...

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3	4 EXCOM Meeting, TECO Plaza 5:30 p.m.	5	6	7	8
9	10 IEEE C37.230 See Page 4	11	12	13	14	15
16	17	18 Machine Learning Made Easy with	19	20	21	22
23	24	25	26	27 PES/IAS Planning Mtg— 6AM at Village Inn, S Dale Mabry	28 Becoming an Independent Consultant See Page 6	29
30						