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Florida West Coast Section (FWCS)
 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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PE Corner

Art Nordlinger, P.E., Senior Member Ethics

From time to time, it is good to be reminded of the engineer's responsibility to act in an ethical manner. As the next PE renewal cycle approaches, licensed engineers need to have taken one hour of ethics as part of the continuing education requirement for license renewal in Florida.

Why do Professional Engineers need to take a course in ethics every renewal cycle? For one, the Florida legislature made this a statutory requirement, much like it is in many states. I think we can all agree that practicing good ethics can be complicated in a business and legal world that is in constant change. Therefore, it is worthwhile to spend a little time reminding ourselves of the importance of practicing good ethics in our profession.

What is ethics? The Merriam-Webster Dictionary defines ethics as:

- a. a set of moral principles
- b. a theory or system of moral values
- c. the principles of conduct governing an individual or a group
- d. a guiding philosophy
- e. a consciousness of moral importance

This is especially important in the engineering profession because the practice of engineering will have a direct impact on the public's quality of life. Additionally, the ethical standards practiced by an engineer will affect the engineer's clients and employer. Therefore, it is imperative that as members of the engineering profession, we need to exhibit the highest standards of honesty and integrity.

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Next ExCom Meeting
Tuesday, October 4, 2022
Google Meet
Register with vTools
<https://events.vtools.ieee.org/m/323510>

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Basic engineering ethics principles include:

- a. Hold paramount the safety, health and welfare of the public
- b. Perform services only in the areas of competence
- c. Issue public statements only in an objective and truthful manner
- d. Act for each employer or client as faithful agents or trustees and avoid deceptive acts
- e. Conduct oneself honorably, responsibly, ethically and lawfully as to enhance the honor, reputation, and usefulness of the profession

All engineering societies have a code of ethics and/or code of conduct. IEEE has both, which may be found on IEEE's website.

Misconduct can be defined as including, but not limited to, being untruthful, deceptive, or misleading in any professional report, statement, or testimony, whether or not under oath. In addition, it includes omitting relevant and pertinent information from a report when the result of that omission could reasonably lead to a fallacious conclusion on the part of the client, employer, or the general public.

One way we can reduce the opportunity for misconduct is by periodically reviewing the laws dealing with the practice of engineering in Chapter 471, Florida Statutes, and the engineering rules in Chapter 61G15, Florida Administrative Code.

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UPDATE

Robert DeMelo
Chair: IEEE FWCS PES/IAS
Mark Your Calendars
For 2023

IEEE Power & Energy
Society (PES)
General Meeting 2023

Date: 07/16/2023 - 07/20/2023
Venue: Orlando, FL

The IEEE Power and Energy Society General Meeting (GM) will be held in Orlando. The GM attracts professionals from every segment of the electric power industry. It features a comprehensive technical program with paper presentations, poster and panel sessions, a number of technical tours, a student program and companion activities. This year's technical theme is Paving the Way for Grid Modernization.

Website: <https://pes-gm.org>



IEEE Power Systems Relaying and Control Committee PSRC in 2023

IEEE Power System Relaying and Control Committee (PSRC)
 In-Person Meeting

Dates: 1/8/2023 - 1/12/2023
 Venue: Hyatt Regency
 225 E Coastline Drive
 Jacksonville, FL, United States 32202

The IEEE PSRC is chaired by the Florida West Coast Section's very own: Murty Yalla.

For More information:
<https://www.pes-psrc.org/index.html>

PSRC Resource Center:
<https://www.pes-psrc.org/knowledgebase.html>

Subcommittees of the IEEE PSRC
 Include:

- System Protection,
- Line Protection,
- Relaying Communication and Control,
- Relaying Practices,
- Rotating Machinery Protection,
- Substation Protection

Subcommittee webpages:
<https://www.pes-psrc.org/subcommittees.html>

PES/IAS Planning Meeting

Saturday, October 29, 8:00 am – 9:00 am

Village Inn, 215 N Dale Mabry Hwy, TAMPA, Florida, United States, 33609

<https://events.vtools.ieee.org/m/292696>

PE Corner - Continued from Page 2

Additionally, when faced with an ethical question, it is often helpful to “bounce” ethical situations off a trusted colleague who can assist you in making the proper decision. Both people will likely benefit from this consultation.

Whether you are a PE looking to attain re-

quired 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.

And for the PEs, don't forget that the next renewal deadline is only 4 months away. Better finish earning those CEHs now!

SAVE THE DATE
Senior Member Gala Banquet
St. Petersburg Yacht Club
Saturday, November 5, 2022



The IEEE Florida West Coast Section Senior Membership Elevation Committee and the FWCS Executive Committee are pleased to announce the 2022 Senior Member Gala Banquet, to be held on 5 November in St. Petersburg's beautiful downtown waterfront. All FWCS members are invited to join FWCS in recognition of the accomplishments of the Section's Senior and Life Senior Members.

The Gala program will include presentations on Senior Membership development in the Section and the Region, highlighting plans for new opportunities for professional engagement and leadership in 2023 such as speaking, collaborating, and mentoring opportunities available specifically for our Senior and Life Senior members. A FWCS Senior Member Keynote will showcase the impact an IEEE member can have on technology. Awards and recognitions will showcase the accomplishments of contributors to the Senior Member experience during the pandemic years 2020-2022, including the contributions of our University of South Florida student members

who have collaborated with the Senior Member Elevation Committee to launch the monthly Signal newsletter featured Student Member interview of a new Senior Member.

There will be opportunities to sign up to contribute to the Senior Member Elevation Committee, to be interviewed by a USF engineering student for the Signal series, and to support FWCS Senior Member activities in the coming year. FWCS members eligible but not yet a Senior Member will have the opportunity to start the process and be elevated in the next promotion cycle.

Business or formal attire is suggested, and pre-registration is required. Registration is at:

<https://events.vtools.ieee.org/m/318089>

For more information or to volunteer in the Gala planning committee, please contact:

Senior Member Elevation Committee Chair,
 Hermann Amaya at: hermann.amaya.us@ieee.org.



ELECTRIC VEHICLE & ENERGY EVENT
September 1, 2022
SPC CLEARWATER CAMPUS
 Article by Sean Denny
 (STEM Champion/RAS Chair),
 Robert DeMelo (PES/IAS Chair),
 Jacob Chacko, Dr. Chuck Hawkins and
 Emma Alaba (Robofest Chair and
 RAS Photographer)



After bestowing the title of STEM Ambassador, the IEEE elevated my appointment as STEM Champion. The Florida West Coast Section Executive Committee (EXCOM) members supported my efforts and posted in the Signal Newsletter. Through the power of communication, it caught the attention of Dr. Sidney Martin, Programs Director and Engineering Professor at St. Petersburg College. He reached out to me to help promote an *Electric Vehicle & Energy Event* at the Clearwater Campus on September 1. I joined forces with Power and Energy Society/Industry Applications Society (PES/IAS) Chair Robert DeMelo to recruit speakers for him. Vice Chair Andrew Seely pulled interested members from Senior Membership Elevations. We also had assistance from Raul Ortega, IEEE Section on the East Coast of Florida who expanded the virtual audience in VTools. Sidney picked his top six speakers

which included three Excom Members Robert DeMelo, Jacob Chacko, and Dr. Chuck Hawkins. Earlier in the day, there was an Electric Car demonstration and a variety of speakers including Dr. Andres Cardenas, Dr Isaac Barpal, Mr. Shankar Karki, and Dr. Sidney Martin. Kayla Allemang, secretary for the IEEE FWCS PES/IAS, participated by bringing her electric vehicle to the event.

Earlier in the day, there was an Electric Car demonstration and a variety of speakers including Dr. Andres Cardenas, Dr Isaac Barpal, Mr. Shankar Karki, and Dr. Sidney Martin. Kayla Allemang, secretary for the IEEE FWCS PES/IAS, participated by bringing her electric vehicle to the event.

Robofest Chair Emma Alaba took photos and discussed how the morning went:



Get together to discuss Energy and learn about Electric Vehicles and More!

Thursday, I had the opportunity to attend the energy event on the SPC Clearwater Campus. Arriving around 10:30ish, the soulful sound of the music guided me to the outside activities in the Courtyard. Vendors were still setting up, Electric Vehicles were driving in, Duke Energy trucks already lined up, presentations already started in ES-104 – no time to waste. I am pleased to take you on a brief tour of the morning (10am – 2:30pm) activities. It was hard to decide where to start - outside or course!



Chad Mairn, VR and Energy booth - he was just finishing up set-up (display, laptop, headset, etc.). He invited me to try out the VR. He demoed it, I strapped on the headset, controllers in each hand. I attempted to draw /color something, using my visual imagery skills ... Oops! I need more instructions. The VR environment gave me greater insight into the human dimensions. Thank goodness a group of middle schoolers showed up and I escaped back into the physical world.



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As I surveyed the Courtyard, a red car caught my eye. As I got closer, the Red BMW with Wings appeared in front of me - Wow! Nice! This BMW belongs to Michael Schulz (MIKA) – check out his video for more. The Electric Bike – Nice! Great to see a bike that’s easy to use - just jump on and ride.



Meet Will Larry Co-Founder of EVT Electric Vehicle Transportation - driving the future. Sustainable transportation utilizing renewable energy while conserving Tampa Bay and cities going forward.

He said, “Drop Uber, Drop Lyft and ride sustainable with EVT. Ev-tride.com”. Nice car, check out his video for more. Also, check out pictures of other electric vehicles – great lineup.



Dr. Sid Martin gave a fascinating presentation on Energy – The Future. Cleaner, cheaper, more efficient, the future of energy. Batteries holds the key to powering the future – batteries that are lighter and last longer. Smart Cities and communities; Electrified and Autonomous Vehicles. Dr Martin also answer the questions as to what the future holds for the students - check out his video for the answer and more.



Dr. Isaac Barpal presentation was about the Electric Vehicles – Past Present Future. Automotive propulsion: a motor vehicle must overcome 3 constraints: do always be automatically charged for extended usage. Hydrogen Infrastructure – California is leading the way to hydrogen fueling stations by 2026. Awesome subject and speaker.



It was great meeting the faculty and staff from SPC’s Engineering, Manufacturing, and Building Arts Program, hear from industry leaders as they discuss topics like electric vehicles, green energy, and how energy is produced, and watched an electric vehicle show!

As one of the activities said, “If Life Gives You Lemons, Make a Battery”.

Emma Alaba, Dir. FL Robofest Organizer

I checked into ES-104 and greeted Dr. Martin for the evening Energy Talks. Registration brought in 26 people for St Pete College and our IEEE VTools showed 15 members. Emma Alaba and I took pictures and video for the evening speakers between 5pm and 9pm.

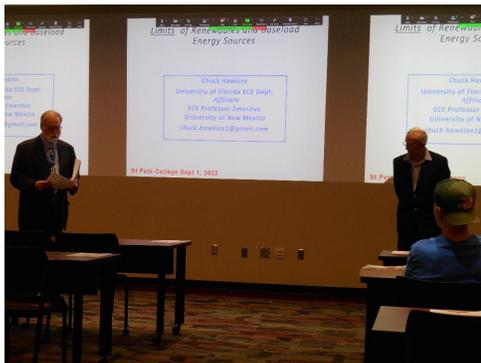


Photos: From left to right, Sean Denny, Emma Alaba, Robert DeMelo, and Jacob Chacko.

FWCS PES/IAS Chair Robert DeMelo, was first to discuss the topic titled “What Does It Take to Turn on a Light Bulb.” His presentation provided a high-level overview of the power system from supply (nuclear, hydro, solar, wind, fossil fuels), to transfer (transmission and distribution), and to overall use (residential and commercial).

I spoke about how this presentation came together with STEM Champions and Power Engineering Society, promoted the IEEE STEM Portal on the Tryengineering.org website, and the activities of the Robotics and Automation Chapter of the Florida West Coast Section.

Jacob Chacko discussed “Electrical Energy and How it is distributed.” He passed around products such as cutouts, fuses, surge arresters that are utilized for the distribution of electricity. If there is a permanent fault on a power line, the line fuse blows, and the drawer drops down to provide an indication that something downstream tripped the fuse and needs to be fixed. In California due to wildfire danger, a current limiting fuse is utilized to reduce the chance of a brush fire. The fuse in this case has a fusible element encased in a tube of sand. In case of a fault, the high fault current converts the sand to glass and stops the flow of electricity.



The last talk from Dr. Chuck Hawkins was “The Limits of Renewables and Baseload Energies.”

He presented data comparing the pros and cons of the Energy techniques discussed earlier. After the conference, Dr. Hawkins stated, “Overall a good gathering with focus on teaching.” Raffle prizes were handed out and the speakers got a bag, hat, and gift card. A student approached me when we were dismissed to thank us for finding Dr. Isaac Barpal who spoke earlier. He was responsible in the 1960s for the development of what we call the Hybrid Vehicle.

This made the day worth our efforts.

*Photos by Emma Alaba
and Sean Denny*

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

Senior Member Roundup

Oct. 29, 2022 - 12pm - 4pm

Register: <https://events.vtools.ieee.org/m/321638>

Contact / Questions: andrew.seely@ieee.org

hermann.amaya.us@ieee.org

A Contributor to Future Engineers and the IEEE

*An interview with Dr. Kanwalinderjit Kaur, an IEEE Senior Member,
by Yahya Alhasan,
a Senior Mechanical Engineering student at the University of South Florida*

A very loyal and active IEEE Senior Member, an energetic person, and what is most important, a true educator. Those three characteristics describe Dr. Kaur, who I had the pleasure to speak with through an opportunity offered by the IEEE Florida West Coast Section along with the IEEE USF branch.

After going through her resume, I wondered where to start given her 27 years of diverse experience as a Software Engineer, Assistant Professor at more than 5 Universities, a Researcher, and a great contributor to the IEEE.

At the beginning of the interview, Dr. Kaur gave a brief description of her background. Dr. Kaur is an IEEE Senior Member and currently working as an Assistant Professor in the Department of Computer and Electrical Engineering at California State University. She started her higher education in 1992 when computers and new technology were rarely used. She finished her Master's in Computer Application at Punjabi University in 1995. Since she was planning to get into academia, she decided to get another master's degree, a Master of Technology in Computer Science and Engineering at Punjabi University and end up getting her Ph.D. in Computer Science later.

When she graduated with a dual master's degree, she worked as a Software Engineer where she developed, designed, and tested coding systems and programs for various government organizations in India. While working, Dr. Kaur quickly rose to leadership positions in some of her projects. Among the clientele, there were banks, corporations, and small government organizational units.

After working for two years in the industry she started getting into the teaching field, to pursue her passion for teaching. Dr. Kaur said that her happiness is bound to her students success and learning. She feels that when her students learn and understand what she is teaching, she is influencing the next gen-

eration by guiding students who are willing to help improve society. Such dedication to society is clearly shown through her continuous volunteering at the IEEE where she gets to help other professional engineers get elevated to the rank of Senior Members.

One interesting thing that I noticed while going over Dr. Kaur's resume is that at the beginning of her career pathway she started with teaching seniors and graduate students, however, in the last few years she began to focus on sophomore and junior students.

She commented saying that she believes that by teaching young college students, she can have enough time to train them and make them familiar with the applications of the theories studied in real life.

In an interview with KGT TV in 2018, Dr. Kaur stated that there are over 1 million cyber-attacks that happen daily and they are still growing. A cyber-attack is when a hacker or a craker attempts to damage a computer network or system, it benefits the hacker by having the power to control the user's data and use them for monetary benefits or political reasons.

I followed up on that and asked her, "who are the target people for these cyber-attacks?". Dr. Kaur explained that the number had grown to 3 million cyber-attacks daily. Then she explained that cyber-attacks can take place in several aspects and can happen to anyone. However, it usually happens to older people and corporations. She gave a few examples of highly ranked corporations getting cyber-attacked and losing a fortune.

Dr. Kaur has a unique prediction for the future of the cybersecurity field. She believes that the number of cyber-attacks will continue to increase, however, the development of the technology will grow as well which will be faced up with more attacks.

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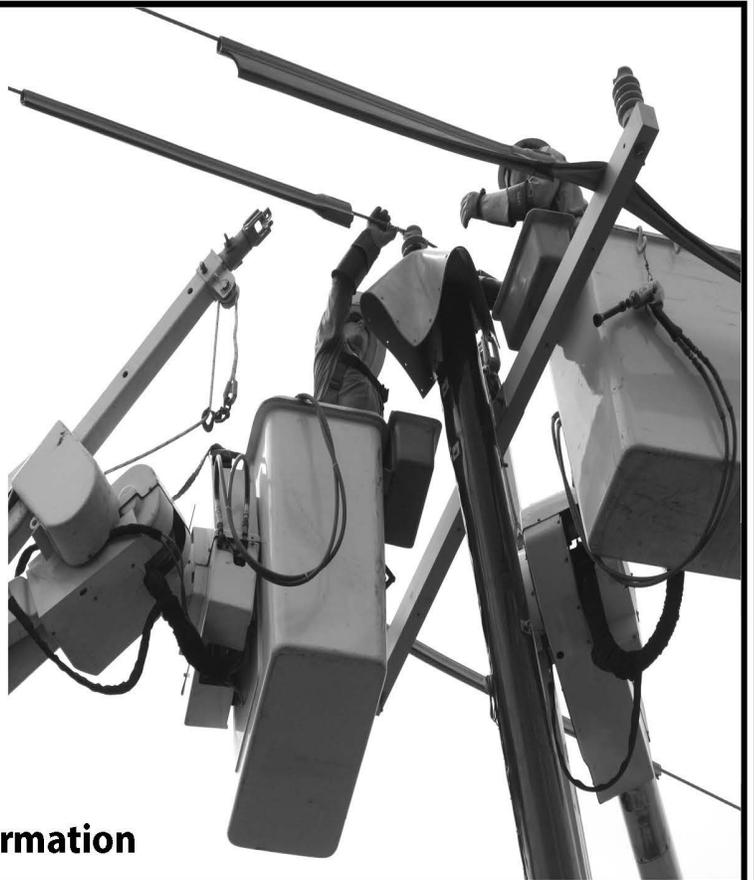
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I know that being a member of a professional organization is important, but I wanted to discuss with her more about the value of IEEE to her career. She explained that her relationship with the IEEE goes way back to the 1990s when the magazine of the organization was only published as a printed paper at the library. She always wanted to be a member of IEEE to learn and help the organization grow.

She acknowledged that the organization helped her develop in her career. She has been an active mem-

ber for more than 13 years in the organization. Due to her diligence, IEEE promoted her to be a nominator in the organization.

Towards the end of the fantastic conversation, Dr. Kaur advised me and other engineers by saying that the engineering field is a difficult space. However, she asks new engineers to be patient and consistent through their journey. She says that the first job for a fresh graduate is “learning and not earning”.

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October 2022 - Calendar of Events (For more information see "Inside the SunCoast Signal" → Page 1)						
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	*Signal Inputs Due End of Day					
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						*PES/IAS ExCom →Page 3 *SM Roundup →Page 6