

# IEEE Foothill Section

## JANUARY 2025 MONTHLY NEWSLETTER



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### IEEE Foothill January ExCom/OpCom Monthly Meeting

*Prepared by: Max Cherubin | Proofread by: Prof. Gerald Herder*

On January 14, 2025, the IEEE Foothill Section held its monthly ExCom/OpCom virtually due to DeVry University's schedule. At exactly 07:01 p.m., the meeting started with a review of the December minutes, followed by an update about the election. Someone requested not to receive multiple messages about the election, which is impossible since vTools voting uses system-generated emails. On January 23rd, we'll see if the same officers will remain in their respective positions.

The section was glad to have Alberto Tam Yong at our meeting. He used to be the section's vice-chair, and now he's the chair of the Orange County section. at the same time, he is the Region 6 Student Activities Committee chair. He joined the meeting to remind the students and its faculty about the deadline (February 1st) for submitting their student annual plan for 2025, which was one of the requirements for the student branch for their rebates. He's also willing to do an online vTools training for the students to be equipped with vTools.

The chair will also attend the Region 4 & 6 Annual Meeting on January 24-26, 2025. He also wants to have a quarterly meet-up with the section members. The location is still to be discussed, but Prof. Herder suggested having it in an area that is accessible to members in various areas, for example Riverside, Temecula etc. .

### Social Media and Website

Osman Ceylan reports that we have 81 members on LinkedIn now. The more engagement we do on our social media, the more we can attract volunteers. However, the number of members we have now is not as good. Our Facebook group page, on the other hand, has few members, which is not good. Osman also reminded them to always share with him if there were any activities or events so he could update them in Constant Contact. Pankaj Bhowmik also volunteered to be part of Social Media.

The section was happy to welcome Richard Fung, who would like to volunteer for the section. Richard has a PhD in Electrical Engineering and more than 15 years of experience in the semiconductor industry.



*"I would love to connect to learn more about upcoming volunteering opportunities and how I can contribute to the section's activities."*

*Richard Fung*

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## Technical Committees

Scott Wedge reported that the IEEE Radio Wireless Conference will be held in San Juan, Puerto Rico, on January 25, 2025. See the photo below for their upcoming events.

- ▶ **IEEE RWW (San Juan, Puerto Rico): January 19-22**  
- RADIO & WIRELESS WEEK
- ▶ **SPIE Photonics West (San Francisco): January 25-30**  
- THE WORLD'S LARGEST PHOTONICS TECHNOLOGIES EVENT
- ▶ **DesignCon 2025 (Santa Clara): January 28-31**  
- INCLUDES THE IBIS OPEN FORUM
- ▶ **IEEE ISSCC 2025 (San Francisco): February 16-20**  
- INTERNATIONAL SOLID STATE CIRCUITS CONFERENCE
- ▶ **IEEE IMS 2025 (San Francisco): June 15-20**  
- INTERNATIONAL MICROWAVE SYMPOSIUM, RFIC, ARGTC
- ▶ **IEEE Design Automation Conference (San Francisco): June 22-25**  
- SPONSORED BY THE IEEE COUNCIL ON ELECTRONIC DESIGN AUTOMATION

Bo Chen reported for Ed/CAS/Photonics. They are working on some events and also promoted some seminar series to local college students last year. He had three seminar series for ComSoc CPP-Pomona students. He introduced some fundamental ideas for the semiconductor and the semiconductor laser structures, such as how a semiconductor laser generates light from a typical laser structure. He gave students the idea of how a semiconductor laser can be made from traditional III-V materials. This year, they are focused on new presentations for the chapter, either electronic devices or photonic devices. He will contact industry or academic experts to ask them to give an introduction to the innovative technologies.

Tamer Omar reported for ComSoc. He sent out an eNotice for the ComSoc election, but he did not receive a response from the chapter. He also submitted a paper for SusTech 2025. He is also working with Bassem Maurice and Nicholas on a possible Computer Society workshop for high-school students. The photo shows the events to look forward to from ComSoc.

## JANUARY UPDATES

ComSoc Chapter Elections Call for Officers Nominations	December 17: Machine Learning in NextG Networks via Generative Adversarial Networks	2025 IEEE TryEngineering STEM Grant Application	Teaching Microcontrollers High School Initiative (Students, Equipment, MOA)
SusTech 2025: Net-Zero Smart Home Monitoring System	HackRF One Software Defined Radio (SDR)	RC/ Autonomous Car Race and IoT Arcade	

Koji Yamashita of PES reported. They had a webinar on December 18, and there were 15 attendees in total. He was not able to attend it, although he was able to write a write-up about it on the next page. This month, they have another webinar on January 30, and the topic is a bit different from the conventional topics: the electricity market. It highlights the end users, meaning the residential customers in the distribution grid. Their speaker is from Israel. He has a lot of webinar speakers but the dates are yet to announced and just recently two of the students Kaisen Leong and Ryan Lansang updated the PES website including videos of past webinars of the chapter.



**CPP: Reported by Michael Nelson**

General Meeting -- UCI Guest Speaker



We had an incredible guest speaker from UCI to offer insights about the Masters in Engineering Program and how it differs from MS/PhD opportunities, and offer some valuable tips and tricks for admissions.

In our MIT App Inventor workshop, 6 student attendees learned how to use MIT App Inventor, a web-based application designed to simplify app development. Students designed and coded simple apps, including a color-picking app, a simple calculator, and an RC controller. With MIT App Inventor, they could watch their apps update in real-time on their phones. To connect these apps to the real world, students learned to use Bluetooth to send signals from their RC car controller app to an Arduino microcontroller, creating a simple wireless RC car system. With this, we hope to inspire students on how to connect their electronic projects with their devices, introducing them to the field of the Internet of Things.

Bassem Maurice of the Computer Society reported. They had supported Dr. Omar with their high school initiative. They also had a few meetings regarding the MOA. There was also an initiative discussion with David Gonzalez about starting a Blockchain Hackathon. Last month, they also had a presentation with 16 attendees, 13 IEEE members, and three guests. Dr. Omar already discussed the request for funding the Arduino kits for the high school initiative. He also attended the CS monthly membership meeting. There are grants for events organized by CS Chapters. He's planning to apply for them.

## PES: Grid-Forming Inverter Based Resources and Emerging Standards

Reported by: Koji Yamashita

The IEEE PES Foothill Seminar, titled "Grid-Forming Inverter-Based Resources and Emerging Standards," was held online Dec. 18th, 2024. Dr. Julia Matevosyan, from the Energy System Integration Group, delivered an insightful presentation on grid-forming converter technologies, emphasizing their implications for emerging standards in the power industry.

Dr. Matevosyan began by showcasing the background and motivation for adopting these innovative technologies in modern power grids. She then presented an exhaustive list of potential or currently applied ancillary services, comparing them against those offered by conventional or currently-used grid-following inverter technologies. Dr. Matevosyan highlighted that energy storage batteries represent the most plausible device for leveraging grid-forming technologies efficiently due to their adaptability compared to other devices such as wind turbines or solar panels. She also discussed incentivization measures adopted by power companies globally, noting that while a few companies employ market mechanisms to promote the adoption of grid-forming inverters, several rely on mandatory requirements to ensure compliance.

The webinar attracted 15 participants. Despite the modest attendance, the event fostered engaging discussions among power engineers, reflecting the relevance and interest in this evolving field. The seminar slides and recorded video are now available on the IEEE Foothill Section website. Interested individuals can visit <https://foothill.ieee-bv.org/category/pwrenrgy/> for more details.

The next webinar, scheduled for January 30th, 2025, will focus on electricity market challenges and their impact on retail customers. Mr. Igor Aronovich, from a transmission system operator in Israel, will share lessons learned and practical insights from real-world power grid operations. Stay tuned!



## UPCOMING EVENTS

### IEEE Foothill February ExCom/OpCom

February 11, 2025

### IEEE Foothill Consultants Network Meeting

February 05, 2025



## SOCIAL MEDIA



<https://www.facebook.com/groups/ieeefoothill>



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<https://www.tiktok.com/@ieeefoothillsection?lang=en>