IEEE FOOTHILL

October 2024 Monthly Newsletter

This newsletter is brought to you by:

Panatron Inc

IEEE Foothill October ExCom/OpCom Monthly Hybrid Meeting

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

The IEEE Foothill October ExCom/OpCom Monthly Hybrid Meeting was held at DeVry University in Ontario. Many of our members and guests attended the meeting. The attendees reviewed the minutes from the last meeting. Kevin Wood, the MATHCOUNTS coordinator, attended the meeting to explain the background and what MATHCOUNTS is. The section has supported MATHCOUNTS since 2022. They are also looking for volunteers. MATHCOUNTS will be on February 25, 2025, at CalPoly, Pomona. The TAE Tour last month was a success, and we truly appreciate those who spent the time joining us on that day. The chair and secretary, Prof. Herder, attended the R6 Southern Area Leaders meeting last Oct. 05, 2024. They talked about how to improve and help membership and section.

Membership Development

Kim Mosley reported. The total number of members we have is 949. We have 25 new members, 19 students/graduates, and six-member grades since our last meeting. We also have one senior member elevation. Congratulations to our Computer Society interim chair, Bassem Maurice.

Technical Committees

Scott Wedge talked first about Prof. John Hopfield, who recently received the Nobel Prize in physics. He was a professor at CalTech for 17 years and co-founded their program in computational and neural systems, the first of its kind. The recording of their technical webinar about Fractional and Phase Lock. If you want the recording, you can ask Scott Wedge.

CLASTECH 2024 will be on Nov. 1st at Eravant, Torrance, CA, with four speakers to present.

Bo Chen from Photonics Group reported that they met with the CPP-ComSoc branch and expressed an interest in Photonics. Photonics is the science and technology of light. We plan to have a seminar in November and December about semiconductor lasers since they are the light source of photonics. Bo wants to give the students about the fundamental concept of semiconductor lasers, including three talks.

Dr. Jenny Yu of Nanotechnology talked about the goal for their future events. They also want to give high school students interested in STEM more opportunities. Aside from collaborating with the Orange County Section, they also collaborated with the student club Banshee UAV, a large student club at CalPoly-Pomona. During the meeting, the student club president, Kai Arellano, attended the meeting. By November, they will start their project, and they already have two workshops planned; they also have eight sub-teams who will present their respective disciplines.

Dr. Tamer Omar of ComSoc mentioned that finding a room for the CPP-Comsoc student branch is challenging since it is not a club. So, they agreed to communicate with Michael Nelson (CPP Student Branch Chair) so that Michael could schedule or reserve a lab for their event. He also wants to communicate with and conduct a workshop for high school students interested in microcontrollers.

Affinity Group

Kimberly Mosley of WiE reported that they had a joint event with IEEE-USA on October 17. Aside from that, she also shared about an opportunity for students to apply for a scholarship offered by the IEEE-WiE and IEEE Francis B. Hugle Scholarship. We highly encourage our students to take advantage of this opportunity.

YP Pankaj Bhowmik reported about the success of the TAE Industrial Tour. Eighty-three people attended; 53 attendees were from IEEE, and 30 were guests. Scientists and engineers volunteered as our tour guide. After the tour, they had a networking session, which they enjoyed, with some refreshments and pizzas. A report and photo from the event will also be shared.

During the meeting, David Gonzales, Bill Grist, Nick Ng, and Sean Hamilton attended and shared their backgrounds and contributions as volunteers of IEEE. David Gonzalez is our representative for the SoCal Council under Region and also served as a chair for the section for the past years. Bill Grist is a senior member of our section and has served as a chair for the chapter for a long time. Now, he is active in consulting. He volunteered for the section's Consultants Network. Nick Ng, our Electric Communication Sub-committee chair, shares the e-Lynx calendar with us monthly. Sean Hamilton is the newly appointed interim secretary of our Computer Society Chapter.

CPP

We had our first general meeting had many eager to start a wonderful way. We made plenty of announcements to make regarding workshops, projects, industry talks, industry tours, a CES show in Vegas, as well as introducing our workshop schedule. We introduced a workshop schedule, where many different electrical and computer engineering skills were introduced over the semester. We introduced the board members, and had everyone feel welcome. We also announced our Circuits Construction Workshop and our Oscilloscope Workshop.

Please join us for our second general meeting. The Career Fair was around the corner, and tips were given on performing well at the event. We made plenty of announcements and updates to make regarding the upcoming workshops, long term projects, our upcoming industry tour to TAE Technologies, a CES show in Las Vegas, as well as introducing our two part Arduino series. We announced an awesome hike with CPP Geology to the CPP Letters.

Submitted by: Michael Nelson

CSUSB-WiE

Our dual/shared opener for the clubs went extremely well, and we had a full classroom of students. We presented the workshop we had planned for our clubs and even has other clubs like the Veteran Student Association and the Cybersecurity Club join us in support. In the end, we had a small crafts session where students could make slime and they loved it.

Submitted by: Melissa Castro

Advanced Measurements: The Key to Understanding Dynamics in an Evolved Grid

Prepared by: Prof. Koji Yamashita

The IEEE PES Foothill Seminar, titled "The Advanced Measuremens: The Key to Understanding Dynamics of Evolved Grid," was held online on September 24, 2024. Dr. Shuchismita Biswas from Pacific Northwest National Laboratory (PNNL) emphasized that the transition to inverter-based resources (IBRs) is creating new grid stability challenges, which can be better understood and managed using combination of model-based studies and high-resolution time-synchronized measurements. Dr. Kaustav Chatterjee from the highlighted that the integration of these tools is essential for diagnosing performance issues and enduring the reliability of power systems levels of renewable energy.

Dr. Biswas began by disclosing a recent real-life oscillation event in the U.S. with the predominant frequency component being 0.25 Hz. One of her key messages is that power engineers should keep an eye on the importance of tracking low-frequency oscillations as well as converter-driven high-frequency oscillations. On the other hand, Dr. Chatterjee focused on the data streaming challenge for high-resolution grid sensors, specifically point-on wave (POW) measurements, delving into the development of effective grid event mining techniques using real-world grid events.

A total of 15 participants attended this webinar. Although the number of attendees was small, power engineers from vendors and government-funded national laboratories joined this webinar for proactive discussions. Although the slides are not available, the recorded video can be viewed. Interested individuals can contact Dr. Koji Yamashita at kyamashita@ucr.edu to acquire the right to stream the video.

The forthcoming two webinars will focus on *digital twin* applications in power systems. The first speaker, Dr. Chen Shen, will showcase cutting-edge power system dynamic tools on 10/21. The second speaker, Dr. Nikos Hatziargygiou, will unveil a digital twin application terms of frequency stability in a small island grid on 11/12.

UPCOMING EVENTS:

IEEE Foothill November ExCom/OpCom Monthly Hybrid Meeting
November 12, 2024

IEEE Consultants Network Meeting
November 06, 2024

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OF CALIFORNIA

https://cspeef.org/competitions/east-san-gabriel/

CLASTECH 2025
https://events.vtools.ieee.org/m/429808

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Social MEDIA

BE PART OF US!

The IEEE Foothill Section needs volunteers. Join our growing community, and together, let us promote and share our knowledge in STEM.

For more questions and inquiries, email us at sec.foothill@ieee.org.