

IEEE Foothill

July 2024 Monthly Newsletter

IEEE Foothill July ExCom/Opom Monthly Meeting

The IEEE Foothill July ExCom/ OpCom was held on July 10, and the meeting started exactly at 07:10 p.m. The chair reviewed the minutes, and the treasury report needed to be modified. In the chairman's remarks, the chair said that the section received a check from Nick Massetti as the section's share for the E-Lynx calendar.

Membership Development

Kim Mosley reported that we have 16 new members. Our total is now at 870, an increase of 21 over the last month, although she is unsure if it did one whole month. There are no senior elevations to report, and the last review was done on June 24th. She was able to send out welcome letters to the new members as well, and the chair said that there is a modified one that he will send to Kim to resend the Welcome Letters.

Social Media

Osman Ceylan discussed the status of the section's Facebook page. He said he has been sending reports to Facebook for months but has not received a response. He is now considering creating a new one. He also shared that he designed embroidered keychains for the section and asked other members to choose a design.

Technical Committees

MTT /APS chair Scott Wedge reported the Design Automation Conference in San Francisco from June 23 to June 27. He said his company was active there, and they just recently announced a new product line for AI-powered simulation capabilities for semiconductor design. On June 27th, they had a technical meeting with Tom Lee from Stanford University, who gave a fascinating talk from Rock to Chips. He also shared some take-aways. First, we can take a reflection point with AI. In the AI grid, almost 10% of energy is being used for AI training, and the growth rate of that energy level is astonishing. Electric Power consumption has not been going up dramatically, and while AI training and models take more energy, the equipment doing them is getting more efficient. At the same time, the transistor count on chips

been growing so exponentially. He is planning for the next presentation, which will be on high-performance fractions and PL design.

Osman Ceylan attended the IMS 2024. He said 40 people attended the MTT Chapter Chairs meeting. MTT is offering two nanoVNA kits per section, which are small VNA up to 6.5 GHz, and some experimental kits.

What's Inside

IEEE FOOTHILL SEPTEMBER EXCOM/OPCOM MONTHLY HYBRID MEETING

pages 1-2

STUDENT BRANCH UPDATE

page 2

IMS 2024: STUDENT DESIGN COMPETITION

page 3

PES SEMINAR

page 4

UPCOMING EVENTS

page 5



Koji Yamashita, PES chair, reported about their webinar on June 26, which had 17 attendees, and discussed the Introduction of High-Power Electrical Short-Circuit Test Generators that allow Testing up to 100 KAmps Symmetrical and up to 230 KV. The presentation focused on the NJC Laboratories High Power Lab Generators, including their design, operation, protection, controls, and personnel required to operate them for high-power electrical testing. Their upcoming webinar will be on Aug 7th, which tackles enhancing frequency security in low-inertia grids and redesigning requirements for increased RES penetration and UFLS protection. Their speaker is from Cyprus, Prof. Petros Aristidou from Cyprus University of Technology, Cyprus.

Affinity Group

Pankaj Bhowmick, YP chair, reported that the TAE Tour is still open for students who want to experience TAE. The chair suggested creating a flyer so that he could advertise it to the section.

Consultants Network, Cash Sutton was not available but they don't have a consultants meeting for the month of July and they will again in August 7th.

Student Branch UPDATE



Freddie Martinez and Melissa Castro from CSUSB were the only students to report. Some of the universities are still on break.

Freddie said that they are getting ready for the upcoming semester. They are working on his robotic project for both graduating and non-graduating students.

On the other hand, Melissa Castro of CSUSB-WiE said that they are also preparing for the next semester. By the spring semester, she would like to work with students in the disabilities department on campus and see if they can help some students with wheelchairs. She also mentioned that she wants to attend the WiE-ILS Conference 2024 in August.



IMS 2024 STUDENT DESIGN COMPETITION

Section and MTT/APS Vice-Chair, Osman Ceylan, attended the IMS 2024 - Student Design Competition. Post and photo credits to Osman's LinkedIn post about IMS-SDC 2024.

Besides technical sessions, workshops, and exhibitions, there was another challenge at IMS-2024. It was also its 20th anniversary. Student Design Competition! Thanks to all the teams who showed off their great designs to SDC-9. The scores were very close. Congratulations again!

Here are the Top 5:

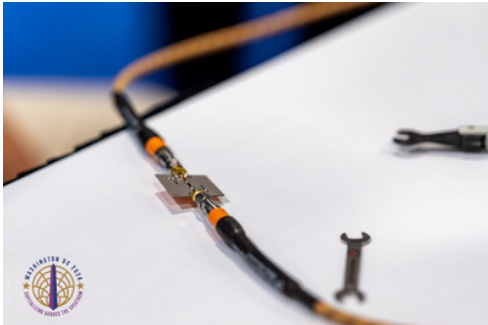
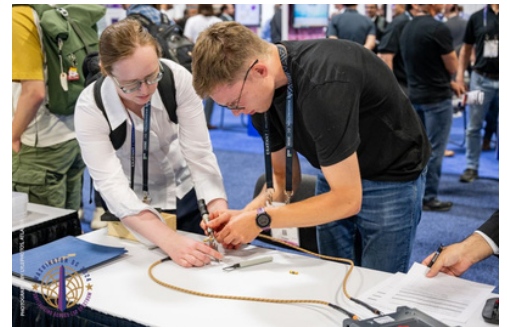
1st: Jongheun Lee, Korea University

2nd: Cem Cindas, Istanbul Technical University

3rd: Leonhard Hahn, Nicole Zocher, Max Glossner, Lukas Witte, Friedrich Alexander - University Erlangen Nuernberg

4th: Steven Matthew Cheng, Zixiao Zhang - University College Cork & Tyndall National Institute

5th: Ernesto Alejandro Hernandez - Domiguez, Alfredo Sanchez - CINVESTAV Unidad Guadalajara



PES Chapter Seminar:

OVERVIEW OF DEMONSTRATION PROJECTS AIMED AT HARNESSING RENEWABLE ENERGY ON REMOTE ISLANDS



The IEEE PES Foothill Seminar, "Introduction of High-Power Electric Testing Lab: Two 850-Megawatt Electrical Short Circuit Test Generators that Allow Testing up to 100 kiloamp Root Mean Square Symmetrical and up to 230 KV," was held online on June 26, 2024. Mr. Kaleb Spencer from the S&C Electric Company presented an unparalleled testing facility for meeting national and international standard requirements regarding short circuit interruption capabilities.

Mr. Spencer began by showcasing the equipped power equipment in the National Joint Council (NJC) laboratory. He then explained how protective relays are set and tested using these short-circuit generators. Testing operations were also displayed through a comprehensive video, specifically exhibiting operation panels and monitoring tools. Mr. Spencer emphasized that this testing lab has contributed to delivering certified protection relays to the power industry, ensuring safety security.

A total of 17 participants attended this webinar. During the discussion segment, speakers and the audience elaborated on the current utilization rate, applicability for International Electrotechnical Commission (IEC) standards, as well as IEEE standards, and maintenance work to keep the testing performance of the lab. Although the slides are not available, the recorded video can be watched. Interested individuals can contact Dr. Yamashita at kyamashi@ucr.edu to acquire the right to stream the video.

The next topic is redesigning frequency reserves in the low-inertia, islanded "Cyprus" power grid. The speaker, Petros Aristidou, an assistant professor at the Cyprus University of Technology, will demonstrate practical frequency support products and methodologies to cope with increased Renewable Energy Sources (RES) penetration and Under-Frequency Load Shedding protection under low inertia grids.

Agenda

- Introduction to NJC Laboratories
- Design and Operation of Generators
- Protection and Relaying
- SCADA System
- Lab Personnel
- Demo

Design and Operation

- 850MVA
- 13.75KV L-L
- 3 Phase
- 60Hz

Building Automation System

Monitors cooling system
Provides alarms

PulseClosing® Technology Demo

Upcoming Events

IEEE FOOTHILL AUGUST EXCOM/OPCOM MONTHLY HYBRID MEETING

August 13, 2024

IEEE FOOTHILL CONSULTANTS NETWORK MEETING

August 07, 2024

PES: ENHANCING SYSTEM SECURITY IN CYPRUS: ADDRESSING LOW-INERTIA CHALLENGES AND FREQUENCY STABILITY

August 07, 2024

We welcome
VOLUNTEERS

You can email us at
sec.foothill@ieee.org for inquiries.



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ACCOUNTS

