

IEEE

April - July 2020

POWERSCOPE

The News Magazine of PES Kerala Chapter Vol. 2 Issue 2


**Robo
Sanitizer
Challenge.**


KALA - THATHVA - VIGNJANA

 **Power
Talkz**

Home Energy Audit

*IEEE PES Kerala Chapter
Student Awards*



pes.ieeeekerala.org



Raheema



Rohith Rajamohanan

Editorial Board



Prof. V K Damodaran



Prof. P S Chandramohanan
Nair



Er. A K Suhair



Dr. Bobby Philip



Er. Anandhu S
Kumar

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IEEE is the world's largest technical professional organization dedicated to advancing technology for the benefit of humanity.

Abbreviation of Institute of Electrical and Electronics Engineers, pronounced I-triple-E. Founded in 1884 as the AIEE, the IEEE was formed in 1963 when AIEE merged with IRE. IEEE is an organization composed of engineers, scientists, and students.

The IEEE plays a significant role in publishing technical works, sponsoring conferences and seminars, accreditation, and standards development. With regard to LANs, the IEEE has produced some very popular and widely used standards.

IEEE PES

The IEEE Power & Energy Society (PES), formerly the IEEE Power Engineering Society, is the oldest society of IEEE focused on the scientific and engineering knowledge about electrical power and energy.

The IEEE Power & Energy Society is a worldwide, non-profit association of more than 32000 industry professionals, academics and students with a common interest in the electric power energy industry. PES has vibrant communities at the local chapter level and at the international level through our conferences, publications and technical committees. IEEE PES Kerala Chapter is one of the active chapters under IEEE Power & Energy Society.

Our mission is to be the leading provider of scientific and engineering information on electric power and energy for betterment of society, and the preferred professional development source for our members. The scope of the society embraces research, development, planning, design, construction, maintenance, installation and operation of equipment, structures, materials and power systems for the safe, sustainable, economic and reliable conversion, generation, transmission, distribution, storage and usage of electric energy, including its measurement and control.

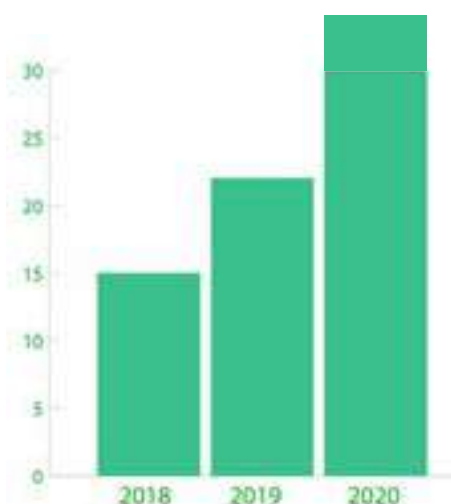
IEEE PES Kerala Chapter

IEEE PES KERALA CHAPTER is one of the active chapters under IEEE Power & Energy Society. Our mission is to be the leading provider of scientific and engineering information on electric power and energy for the betterment of society, and the preferred professional development source for our members.

Membership Growth:

The Power & Energy Society, Kerala Chapter is one among the prominent technical societies of IEEE Kerala Section. PES is a platform for sharing the latest technological developments in the electric power industry, educating members of the industry and the general public and developing standards that guide the development and construction of equipment and systems.

It is led by professional leaders who have expert knowledge in this field. Perceiving the motives and values, there is significant increase on the number of people joining PES every year. The notable change that occurred in the membership growth was between the year 2018 and 2020. In the year 2018 the sail took off with 15 chapters which moved across almost 28 chapters by the year 2019 and finally by the mid of 2020 it reached the destination with 37 chapter across the State, doubling the figure from the start. The membership crossed a landmark figure of 2000 by end of 2019. The rise in graph showcases the impact that PES achieved in moulding professionals. With spirited leaders and enthusiastic members, the IEEE PES Kerala is heading to conquer greater heights.



Twelve months of lockdown, prolonged uncertainty, fiscal haul, social separation never witnessed before, has wrapped up the entire globe. But PES Kerala never gave up, in fact lifted up to surprising stature with an avalanche of events. My hearty congratulations to all IEEE PES volunteers.



I am gratified to know that the second issue of Power scope, the News magazine of PES Kerala Chapter is getting released. The first issue was rich with lot of technical articles and had received great applause from the learned readers. I am confident that this issue will also be received with warm cheering by the technical community.

The efforts taken to bring about the innovative content is appreciable. My special appreciation to the editorial board. Best Wishes to all!

Dr. Sobha Manakkal

Lockdown has kept the morale low but IEEE PES Kerala Chapter was the least affected by it. The news magazine POWERSCOPE is a reflection of the vibrant activities that are coordinated and conducted by the chapter.

IEEE PES Kerala Chapter is a highly energetic chapter with determined leaders and enthusiastic members. 37 student branch chapters work under the chapter as of December 2020.

The chapter is improvising every year, the challenges are being dealt with and faced with practical solutions. We hope that POWERSCOPE April-July will be the epitome of the vibrance of the chapter and the spectrum of events that it has conducted despite all the adversities.

***Raheema
Rohith Rajamohanan***

Chapter Activities & Events




**Robo
Sanitizer
Challenge.**



Robo Sanitizer Challenge

IEEE PES YP launched the “Robo Sanitizer Challenge”, a joint initiative to break the chain and stop the spread of COVID-19. The kickoff webinar was conducted on 23rd March 2020 which demonstrated how to make an automatic hand sanitizer. The webinar was handled by Er. Anish M S.

People decided to spend the quarantine days differently, there were a lot of social media challenges, but there was one that stood out. IEEE Student Branches across the state of Kerala took up the challenge and built their versions of Robo Sanitizers and began installing the systems in areas where the public could access the convenience of an automated hand sanitizer. The student branches include IEEE SB CEV, IEEE SB CEM, IEEE SB COET, IEEE SB VJCET, IEEE SB RSET, IEEE SB CUSAT, IEEE SB SCT, IEEE SB TKM, IEEE SB RIT, IEEE SB VJEC, IEEE SB CET, IEEE SB SAINTGITS, IEEE SB NSSCE among others. The effort and idea of the young engineering caught public attention as well. The challenge was mentioned in various online and print news platforms including The NewsMinute and various regional and non-regional newspapers.

A simple idea might affect the world and makes a difference. No matter what the idea is, the application is key. Time is invaluable. Some try hard to keep themselves ahead of time, some lie lazily and later run after time.





Phase II Webinar & IEEE PES DAY R10 Robo sanitizer Challenge- Webinar

IEEE Power Energy Society Young Professional in association with IEEE SB VJEC conducted a second phase webinar on the Robo Sanitizer Challenge, a joint initiative to break the chain and stop the spread of Covid-19. The webinar was conducted on 6th April 2020 at 5:00 PM. The participants were trained to make a Robot Sanitizer (automatic hand sanitizer) through the webinar.

IEEE PES Young Professionals, IEEE PES Kerala Chapter congratulates all the Student Branches who participated in #RoboSanitizerChallenge, Break the Chain Initiative. A total of 9 Student Branches had taken up the Challenge in the first phase. IEEE PES Kerala Chapter appreciates them for acting appropriately in current scenario & contributing to the society's welfare.

To break the chain and stop the spread of covid 19 IEEE Power Energy Society Kerala chapter in association with IEEE PES YP Kerala section conducted a webinar as part of Robo Sanitizer Challenge an Automatic Hand sanitizer to all R10 PES DAY Ambassadors and Volunteers as a part of PES DAY Activities.

The webinar was conducted on 5th April 2020 at 5:00 PM. The participants were trained to make a Robot Sanitizer (automatic hand sanitizer) through the webinar. The session was handled by Er. Anish M. S, IEEE PES YP, IEEE PES Kerala Chapter. On 5th April 2020, Sunday.



IEEE PES SBCs that took part in Robo Sanitizer Challenge

1. St. Joseph's College of Engineering and Technology, Palai
2. Saintgits College of Engineering, Kottayam
3. Vimal Jyothi College of Engineering, Kannur
4. College of Engineering, Trivandrum
5. Rajiv Gandhi Institute of Technology, Kottayam
6. TKM College of Engineering, Kollam
7. Sree Chitra Thirunal College of Engineering, Thiruvananthapuram
8. Cochin University of Science and Technology
9. College of Engineering, Thalassery
10. Viswajyothi College of Engineering and Technology, Vazhakulam
11. Rajagiri School of Engineering and Technology, Kakkanad
12. College of Engineering, Munnar
13. College of Engineering, Vadakara
14. Adi Sankara Institute of Science and Technology, Kalady
15. College of Engineering, Trikaripur
16. Amal Jyothi College of Engineering
17. Mar Athanasius College of Engineering
18. Jawaharlal College of Engineering and Technology
19. Mar Baselios Christian College of Engineering and Technology
20. LBS Institute of Technology for Women



Engineering in Healthcare & Public Health Facilities

The PESSBC of Rajagiri School of Engineering and Technology in association with the IEEE PES Kerala Chapter and IEEE EMBS Kerala Chapter hosted a webinar on Engineering in Healthcare and Public Health, led by Dr. Jithesh KA, Medical superintendent of District Hospital Mavelikara, Alappuzha. The session started with a welcome note from Mr. Bobby Philip, Secretary of IEEE PES Kerala Chapter. The event was also graced with a note from Mr. Koruthu P Varghese, Chairman of IEEE EMBS Kerala Chapter, who extended his warm welcome to the participants as well as the speaker. After this, the session was handled by Dr. Jithesh who explained several aspects of medicine where engineering overlapped and proved to be more of a multidisciplinary venture. Several recent advancements in the public health sector such as the use of AI and IoT in the medical field were discussed.



WEBINAR ON

Engineering in Healthcare and Public Health

Friday, 1st May 2020 | 05:00 PM (IST)

Register at: bit.ly/Webinar_HealthCare

SPEAKER
Dr. Jithesh K A, MBBS, MMST
Medical Superintendent, District Hospital Mavelikara

IEEE PES Kerala Chapter | IEEE EMBS Kerala Chapter



A detailed Q&A session was also conducted where participants presented their queries to Dr. Jithesh who could view the questions from a doctor's as well as an engineer's perspective. The session came to an end with a vote of thanks by Mr. Bobby Philip.



The Event Commenced on Cisco WebEx Platform.

The event was one that could be enjoyed by participants both within and outside the discipline of engineering. It was insightful and dealt with the advancements in technology that aimed to make our general public's health a concern in which engineers too could actively contribute. The participants got to know that the medical field is abundant with opportunities for engineers also, and about the various fields of expertise that would be required from an engineer in this field.

HOW ENGINEERS CAN CONTRIBUTE TO SOCIETY



At a time when the whole world is battling Covid-19, the need for innovation is at its prime. But even on these worrisome days, we have rays of hope- in the forms of people who are not ready to give up and create magic out of innovation. IEEE Power and Energy Society Young Professionals in association with IEEE SB GECT Thrissur as a part of PES Day 2020 and #RoboSanitizerChallenge presented a panel discussion on 'How Engineers can contribute to society', and they had the perfect team.

The Panel consisted of team 'Sanitizer Kunjappan', the creators of the low-cost, locally made from scratch at the FABLAB, Government Engineering College, Thrissur. They discussed why innovation is important in this age and the role that engineers have to play.

The event was hosted by IEEE SB GECT in association with its Power and Energy Society and PES Young Professionals on behalf of the PES DAY 2020. The panel discussion was planned on the topic "HOW ENGINEERS CAN CONTRIBUTE TO

SOCIETY” and the discussion was lead by the team “SANITIZER KUNJAPPAN” of Government Engineering College Thrissur. The discussion was guided by the SB Chair Vishnu Suresh, PES Chair Shaharadh S, and Young Professional member Shyam Pradeep. The event was scheduled at 6.30 pm on 1st May 2020.

The discussion started with Prof. Ajay James addressing the situations they faced during the corona epidemic. They said that they started with a ventilator project but dropped it as it couldn't meet the international standards. Then they went ahead with Aerosol boxes as requested by the Thrissur Govt. Medical College faculties for the treatment. Then they discussed making a Covid Wisk for collecting samples from the patients as directed by the collectorate after the introduction of Wisk in Ernakulam. Then they had ideas on 'Sanitizer Kunjappan' to sanitize the hospital surroundings and transport food items. This was inspired by seeing the cleaners having a hard time sanitizing the Covid wards. These projects got publicity internationally and few US firms approached for the design of these projects.



Sanitizer Kunjappan was inaugurated by Honourable Minister Sri. A-C Moitheen and was used in Thrissur Medical College. The discussion continued with the ways students could get involved in such projects





and their importance over academic brilliance. They also highlighted the involvement of the team and contributions of Fab Lab and Ideator (both at Govt Engineering College Thrissur) in making these projects a great success.

They discussed the materials used (making them cost-efficient), sensors, mechanisms, and technical knowledge put into the project. They also added that despite not knowing a few techniques and instruments they learned it from internet resources and completed the project successfully.

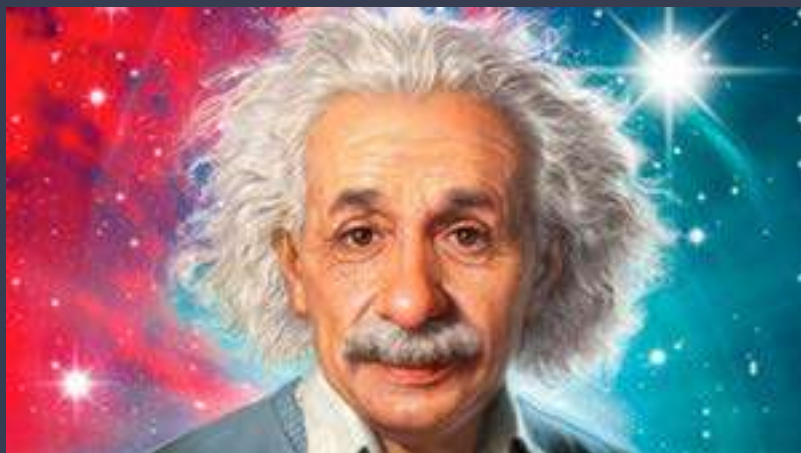
The discussion continued with the importance of the final year projects, doing them sincerely rather than for the sake of submission, gathering additional knowledge, and the need for involvement of students in Technical societies like IEEE.

The discussion ended with students showing interest in being part of these projects and understanding how we could contribute to society, especially at the time of epidemics like Covid-19. The event concluded by 8.30 pm and the SB was requested for more of such panel discussions and the feedback was positive.



DID YOU KNOW?

- *No one has received more U.S. patents than Thomas Edison – 1,093 to be exact.*
- *A diamond will not dissolve in acid. The only thing that can destroy it is intense heat.*
- *Valdemar Poulsen, a Danish engineer, invented an arc converter as a generator of continuous-wave radio signals in 1902.*
- *Einstein received the Nobel Prize for Physics in 1921 for his explanation of the photoelectric effect.*



Dr. Albert Einstein





COMPERIO
Know what's What!

COMPERIO - WiP Webinar



The Webinar on 'Introduction to Artificial Intelligence and Robotics' was organized by Women in Power in association with Women in Computing as part of PES DAY 2020, hosted by IEEE SB ASIET. Introduction to Artificial Intelligence, the first topic was on 2nd May 2020 from 4:00 to 5:00 PM which was hosted in the Cisco WebEx platform. The session was handled by Mr. Prasoon Kottarathil, TFUG Organiser Thrissur, Kaggle Expert, and NVIDIA DLI Educator. A brief and informative class was given by him which included the basics of Deep Learning Perspective and Machine learning.

Around 97 participants attended the webinar which included both members and non-members of IEEE, from in and around the Kerala Section. The students were given the basic yet advanced detail on Artificial Intelligence. Mr. Prasoon explained that AI is a diverse branch including many subjects and he talked about the different norms under it. The ones having basic machine knowledge as well as others could easily follow his way of teaching style. He introduced the audience to Deep Learning Perspectives and Machine Learning. The session was made interesting as he compared everything, he talked about to the things we see often around us. The participants were very active and kept interacting with him by asking doubts in between. Various tips as to what they'll have to pursue to build their career for getting into Artificial Intelligence were also put forth. He even mentioned the sites and companies offering courses about this subject and about the platforms which would help them to improve programming skills.

Great enthusiasm was shown by the attendees and we got instant responses to his questions for them. By the end, a 'Q and A' session was also done and he made sure that all the doubts were cleared. This session was beneficial for the attendees irrespective of their fields of study. He ensured that he'll be available to clear any of the further doubts even after the session. Even though the session got extended to 5:30 PM, the participants were active till the end, which shows the interest they had in this. A feedback form was given to the audience at the end and we got good responses from them.



HOME ENERGY AUDITING

Webinar + Contest

Home Energy Auditing

Per capita energy consumption is considered the yardstick of development of a nation. IEEE Educational Activities Kerala and IEEE PES Kerala Chapter presented a brand event of Home Energy Auditing on 10th May 2020 at 2:25 PM. The event started with a one hour webinar to make the participants aware of Home Energy Auditing and explained the procedure to undertake Home Energy Auditing. All branches of B Tech & M Tech Students, Faculties & Engineers joined the event.



IEEE PES Kerala Chapter and IEEE Educational Activities Kerala conducted the final round of Energy Audit. The finalists did their final presentation on 31st May 2020 at 10:30 AM on Google Meet. The event saw enthusiastic viewers, around 30+ audience witnessed the finalists fight it out. The presentation proved that the contestants were worthy of the honour by giving out excellent presentations and answers to questions from judges.





DEEP LEARNING

Master Class

Deep Learning Master Class

ML is transforming multiple industries and the basic knowledge about digital technologies is crucial.

IEEE Power and Energy Society Young Professionals , IEEE PES Kerala Chapter brings you an exciting platform to break into machine learning. Deep Learning is one of the most highly sought after skills in tech. Deep Learning Master Class is an online course given by the TensorFlow User Group Thrissur. In this five day course, you will learn the foundations of Deep Learning. The course structure is as follows:



Day 1: Introduction to Machine learning and Deep learning

Day 2: Getting started with convolutional neural network

Day 3: Web deployment with Deep learning model

Day 4: Web deployment Part 2

Day 5: Android deployment with deep learning & Introduction to Kaggle

Participants worked on case studies from electrical power systems and different ways to integrate digital technology into the electrical domain. They also heard from many top leaders in the power domain, shared with the participants, their personal stories and gave them career advice.



Basics of Electric Vehicles

Er. Saran K S

IEEE PES YP in association with IEEE Industry Applications Society(IAS) SB Chapter, GEC Palakkad presented a webinar on the 'Basics of Electric Vehicles' handled by Mr. K S. Saran, PES Young Professional Volunteer, IEEE Kerala Section.

The webinar made the participants understand, Why would one go for an electric or hybrid electric vehicle when conventional internal combustion (IC) engine vehicles are popular and available. The webinar was conducted on 9th April 2020, Friday at 7:30 PM. There were a total of 85 participants

***“ The Time is right for Electric Vehicles -
In Fact the Time is Critical ”***

Carlos Ghosn



Introduction to AR & VR

Er. Shyam Pradeep Alil & Er. Thomson Tom

IEEE PES Kerala Chapter and IEEE PES Young Professionals proudly presented a free webinar on Introduction to Augmented Reality and Virtual Reality on 28th April 2020, Tuesday at 10:30 AM(IST).

The participants explored the details of Augmented Reality and Virtual Reality with Mr. Thomson Tom (Chief Executive Officer at Infusory) and Mr. Shyam Pradeep Alil (IEEE Young Professional, Chief Executive Officer at Infusory), most vibrant AR and VR professionals. There were a total of 65 participants

“ We have gone from text > photos > Videos and next is AR/VR. ”

Chris Cox, Facebook Inc.

LESSONS TO LEARN FROM APRIL 5TH LIGHTS OFF

Er. Sasi K Kottayil

IEEE PES Kerala Chapter and IEEE Educational Activities-Kerala, joined hands to organize a webinar on the topic LESSONS TO LEARN FROM APRIL 5 LIGHTS OFF. This webinar gave a comprehensive assessment and study of events that happened and an analysis of the scenarios faced by the national grid during nationwide LIGHTS-OFF. The necessity of such an exercise by PES Kerala Chapter has been suggested by none other than, Prof. Saifur Rehman, Immediate Past President-IEEE PES. The webinar session was engaged by an eminent Professor and researcher in Power Systems- Prof. Sasi K. Kottayil, Professor, Amrita School of Engineering, Coimbatore. The event was conducted on 21/05/2020 from 4.30-6.00PM.



OPPORTUNITIES IN PES SBC & HPSBCP REPORT PREPARATION

Er. Anandhu S Kumar

IEEE SB and PES SB Chapter of Musaliar College of Engineering jointly with IEEE PES Kerala Chapter presented a live webinar on “ OPPORTUNITIES IN PES SB CHAPTER & HPSBCP REPORT PREPARATION “ on 24th May 2020 at 5 PM on WebEx. The speaker was Er. Anandhu S Kumar, Student Activity Coordinator, IEEE PES Kerala Chapter.



ARTIFICIAL INTELLIGENCE IN THE MEDICAL FIELD

Er. Anandhu S Kumar

IEEE PES Kerala Chapter in association with IEEE PES SBC MESCE and IEEE PES Women in Power organized a webinar on Artificial Intelligence in the Medical Field. These days are calling for all sorts of helping hands in the medical field and AI in the Medical Field is a pioneering path to look up to. The session was handled by Ms Salini V Nair, Chief Technology Officer, Ennoventure Inc. The session saw a wide range of participants from all across India and had 60 participants. The event was conducted on 27th May Wednesday from 3 PM to 4 PM on Cisco WebEx



RENOVAR

IEEE PES Kerala Chapter | IEEE PES SBC JCET

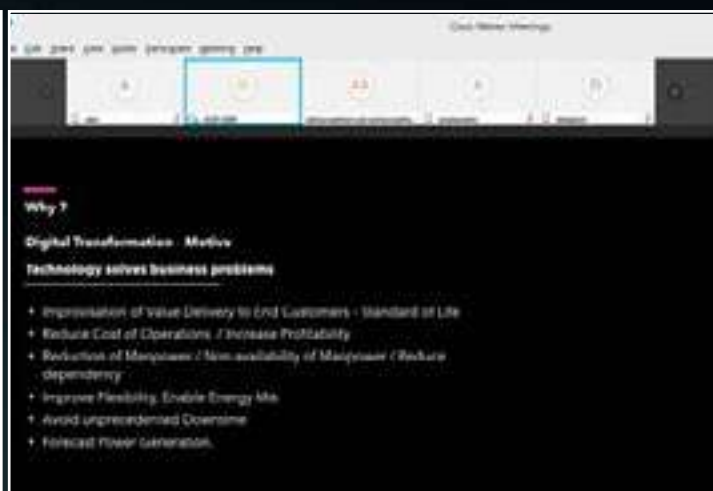


IEEE SB JCET & IEEE PES SBC JCET in collaboration with IEEE PES KERALA CHAPTER conducted a programme named “RENOVAR” exclusively for NCERC students. An initiative to awaken & restore IEEE SB NCERC back to glory. Registration was opened to all NCERC students. The event was conducted on 28 May 2020 at 3pm

TRENDING DIGITAL TECHNOLOGIES IN RENEWABLE POWER

Mr. Jasir Sabri Omar

IEEE PES Kerala Chapter in association with IEEE PES SBC MESCE and Department of EEE, MES College of Engineering, Kuttipuram conducted a Webinar on the topic, “Trending Digital Technologies in Renewable Power Generation Sector”. The webinar was handled by Mr. Jasir Sabri, Managing Director, or Consist Tech India, co-founder and CEO of SPIA Tech India, on 6th June 2020 using the platform Cisco WebEx. Mr. Jasir Sabri clearly explained the trending digital technologies in Renewable Power Generation Sector. The webinar was very informative and the session was concluded by the Vote of Thanks.



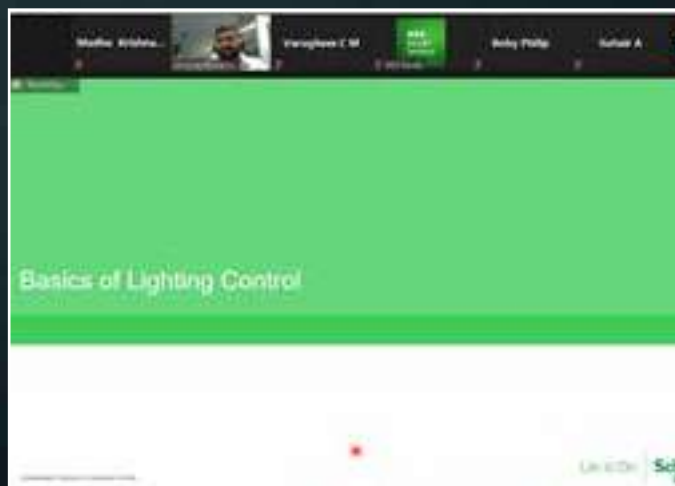
HOME AUTOMATION

IEEE PES Kerala Chapter | IEEE Educational Activities Kerala

IEEE PES Kerala Chapter in association with IEEE Educational Activities Kerala hosted a webinar on the topic 'Home Automation'. The webinar was handled by Er. Anupam Srivastava, Products manager, Schneider Electric on 9th June 2020, using the platform Google meet.

Er. Anupam Srivastava clearly explained the topic. He mainly focused on the methods or ways of Home automation and the innovative advantages of doing so. The webinar was very informative and interesting, the session was followed by a QnA session where the delegates raised their concerns and doubts and the speaker took the time and effort to clear all of them.

More than 130 participants attended the webinar. E-Certificates were provided for the participants. The session started at 4 pm and wound up at 5:30 pm.



STEP



STUDENT TRANSITION &
ELEVATION PARTNERSHIP

STEP 1

IEEE SB NSSCE, IEEE SB MESCE & IEEE SB JCET jointly conducted an online Student Transition Elevation Partnership (STEP) program as part of IEEE PES Day 2020 activities on 14th April 2020 at 5pm (GMT +5:30). The aim of the program was to motivate students to continue IEEE membership after college & also throw lights to benefits for them. There were around 55 participants from various countries across the globe. The sessions were handled by Er.Anish MS, Er.K S Saran, Er.Staji Wilson & Er.Anandhu S Kumar, Volunteers of IEEE Kerala Young Professionals. The event was divided into 4 sessions.

The first session was giving an introduction to what is Young Professionals & IEEE PES. This was handled by Er.Anish M S.

The second session was about various benefits of being a Young Professional. This was handled by Er.K S Saran.

The third session was about how to become a Young Professional & its benefits. This was handled by Er.Anandhu S Kumar.

The fourth session was an overview of WIE. This was handled by Er.Staji Wilson.

The event was the first one of its kind considering it was the first STEP event conducted online and turned out to be a great success.



STEP 2

As a part of IEEE PES Day, IEEE SB CE Vadakara, IEEE SB CE Trikaripur, IEEE SB Ammini College of Engineering jointly conducted an online Student Transition & Elevation partnership (STEP) program.

IEEE SB CE Trikaripur, IEEE SB CE Vadakara & IEEE SB Ammini College of Engineering (AME) in association with PES Young Professionals, IEEE PES Kerala Chapter jointly coordinated STEP-Student Transition & Elevation Partnership Program on 10 May 2020 at 7:30 PM in the presence of Er. Suhair A K, Chair of IEEE PES Kerala Chapter & Er. Ajith Gopi, Vice-Chair of IEEE PES Kerala Chapter followed by Er. Anandhu S Kumar, Er. Anish MS, Er. K S Saran, Er. Staji Wilson, IEEE PES Young Professionals Kerala volunteers.



The Sessions were handled by Er. Suhair AK, Er. Ajith Gopi, Er. Anandhu S Kumar, Er. Anish MS, Er. Saran KS and Er. Staji Wilson.

The sessions mainly deal with the

importance and benefits of continuing IEEE membership after college. 42 members participated in the event.

There were 6 sessions in the event.

- Introduction to IEEE and PES - handled by Er. Suhair AK
- The importance of IEEE and IEEE-PES in the challenging global environment handled by Er. Ajith Gopi
- Renewal and YP and AGs- Handled by Er. Anandhu S Kumar
- Volunteering and Ethical practice- handled by Er. Anish MS
- PES and its benefits – handled by Er. Saran KS
- Scholarship, Global exposure & opportunity- handled by Er. Staji Wilson

STEP 3

The upgrading event of IEEE Power and Energy Society Kerala Chapter, Student Transition and Elevation Partnership (STEP) happened on 19th of July 2020. IEEE PES SBC of Marian Engineering College and IEEE PES SBC of Musaliar College of Engineering and Technology jointly organized STEP (Student Transition and Elevation Partnership) in association with IEEE PES Young Professionals & PES Kerala Chapter on 19th July 2020, 6:00-9:00 PM through Google Meet platform. STEP helped to create a community of enthusiastic, dynamic, and innovative YP volunteers under PES and evaluate their career goals, polish their professional image, and create the building blocks of a lifelong and diverse professional network.

The vibrant speakers were Dr. Adil Usman ,Senior Member, IEEE PES YP Rep, India, Er. Staji Wilson Sub-Regional Rep, IEEE PES Women in Power, Er. David Mathew Jones, Post- Graduate Scholar, NIT Calicut and Er. Shyam Pradeep Alil , COO and Co-Founder, Infusory. STEP event progressed with the support and presence of SB Counselor Prof. Shimi Mohan and IEEE PES SBC Advisor Prof. Mohammed Kasim S of Musaliar college of Engineering and Technology and IEEE PES SBC Advisor of Marian Engineering College Dr. Vijayalakshmy



STEP event began on 19th July 2020 at 6.00 PM with the official inaugural address by Prof. Mohammed Kasim S, PES SBC Advisor of Musaliar college of Engineering and Technology. Prof. Shimi Mohan, SB Counselor IEEE SB of Musaliar college of Engineering and Technology proposed the welcome address. After the informative session by the speakers, Mr. Muhammed Habeeb, Chairman IEEE PES SBC of Marian Engineering College proposed the vote of thanks on behalf of both the Chapters.

The event registration was done

via online registration portal through registration link which was released on 17 July 2020, 11.00 AM. All the registrations for STEP were done via the official website of IEEE PES MCE SBC - <https://ieee-mcepes.org/>. The event registration and associated technical activities were handled by IEEE PES SBC volunteers of Marian Engineering College. The event was open for all students from varying engineering domains. The registration was completely free. On registering the contestants received the meeting link to STEP session through their registered mail ID. There were a total of 82 participants.

IEEE PES YP coordinators of Kerala Section and Chapter, Er. Thomas Sabu, Er. Anandhu Kumar, Er. Anish and Er. K Saran extended their support to the event. IEEE PES YP Er. Jacob Thomas and IEEE PES MCE SBC mentor Er. Anish A Kumar guided our team and encouraged us to organize the event. With the involvement of vibrant volunteers from both SBC the event became notable one in terms of participation and coordination.

STEP 4

IEEE PES SBC JCET and IEEE PES SBC VJEC jointly with PES Young Professionals, IEEE PES Kerala Chapter have organized STEP; Student Transition Elevation Partnership on 25th and 26th July 2020 from 5 PM (IST) through Cisco WebEx.

The first day comprised a panel discussion on the topic Role of IEEE in Career Enhancement, which discussed how one's professional career can be developed, i.e. enhancing one's technical as well as non-technical skills with the help of IEEE.

The panel of speakers for the day was as follows:

- Er. Suhair A K - Chair, IEEE PES Kerala Chapter.
- Er. Ajith Gopi - Vice-Chair, IEEE PES Kerala Chapter.
- Dr. Sobha Manakkal - Vice-Chair, IEEE PES Kerala Chapter.
- Dr. Bobby Philip - Secretary, IEEE PES Kerala Chapter.
- Mr. Ajay Kumar Machani - Chair, IEEE PES Day 2020.



The first speaker was Er. Suhair A K, Chair, IEEE PES Kerala Chapter. The topics discussed were the introduction of IEEE and its contributions, and the importance of people in building up one's career. He also shared his experiences in IEEE, and also about attending a conference in Bangalore, which helped him to establish his professional relations. Besides, he talked about the importance of travel in developing personal and professional skills. Further, he explained how IEEE helps in building one's skills and become good leaders and communicators and also how can one implement ideas into action.

The next speaker was Er. Ajith Gopi, Vice-Chair, IEEE PES Kerala Chapter. He shared his experiences in taking up sessions in both JCET and VJEC. Then, he discussed the importance of connectivity. After that, he briefly discussed IEEE 1584-2018 and also the influence of Standards in the power and energy field, followed by sharing his experience on how IEEE explore helped him in his higher studies. After that, he explained the opportunities in learning through web-based learning and webinars and also mature as professionals in IEEE. Finally, he discussed conferences and scholarships provided by IEEE and also the advantages of IEEE membership to attend international workshops and conferences.

Subsequently, the next speaker was Dr. Bobby Philip, Secretary, IEEE PES

Kerala Chapter. The topics discussed were brief history of IEEE, IEEE standards, how IEEE helps in building entrepreneurship, business, and also in getting guidance from experts. He also explained about industry standards and its new trends, and the training courses available in IEEE, which is beneficial in one's future. He also focused on the humanitarian perspective in advancing technology. Finally, he explained how IEEE helps in networking with experts and in building knowledge.



The final speaker was Mr. Ajay Kumar Machani, Chair, IEEE PES Day 2020. He explained how IEEE helps you to collaborate in doing projects, how IEEE helps in taking initiatives during this prevailing pandemic conditions, and how IEEE brings a profound impact while attending an interview.

Afterward, he discussed various tutorials and webinars in IEEE by giving an example of the microgrid. Finally, he explained how communities and committees help in taking initiatives and in establishing start-ups.

Later, the participants and the organisers expressed their doubts to speakers, and the speakers answered in return. The session ended by 6:45 PM, and about 96 participants attended it.

The second day consisted of 4 sessions handled by Er.Anish MS, Er.K S Saran, Er.Staji Wilson & Er.Anandhu S Kumar, Volunteers of IEEE Kerala Young Professionals with 97 participants.

The first session was giving an introduction to what is Young Professionals & IEEE PES. This was handled by Er.Anish M S, Global Relation Coordinator, IEEE PES YP Kerala.

The second session was about various benefits of being an Young Professional. This was handled by Er.K S Saran, PES YP Activity Coordinator, IEEE PES Kerala Chapter.

The third session was about how to become a Young Professional & its benefits. This was handled by Er.Anandhu S Kumar, Student Activity Coordinator, IEEE PES Kerala Chapter.

The fourth session was an overview of WIE. This was handled by Er.Staji Wilson, WiP Sub-regional Representative, IEEE PES. The topics discussed were:

The event turned out to be fruitful as it was an interactive session & all were able to clear their doubts.

CONTROL AND TRACKING OF BIO-INSPIRED MULTIPLE UNMANNED AERIAL VEHICLES

Dr. Johnson Y

IEEE PES Kerala Chapter in association with IEEE PES SBC MES College of Engineering, Kuttippuram, and Department of Electrical and Electronics Engineering, MES College of Engineering, Kuttippuram hosted a webinar on the topic 'control and Tracking of Bio-Inspired Multiple Unmanned Aerial Vehicles'. The webinar was handled by Dr. Johnson Y, associate professor of Lourdes Matha College of Science and Technology Trivandrum on 12th June 2020, using the platform Cisco WebEx.

Dr. Johnson Y clearly explained about bio-inspired unmanned aerial vehicles. He mainly focuses on the aspects of construction, path planning, formation control, fixed-wing and rotorcraft, physical structure, geometric parameters in Unmanned Aerial Vehicles (UAVs) from the perspective of bio-inspired computation. The webinar was very informative and interesting, the session was followed by a QnA session where the delegates raised their concerns and doubts and the speaker took the time and effort to clear all of them.

Almost 169 delegates, that includes 63 IEEE Members, 24 IEEE PES Members, and 82 Non- IEEE Members from various engineering streams of different colleges and professors also participated in the webinar. E-Certificates were provided for the participants.



DID YOU KNOW?

- *Lightning strikes produce Ozone, hence the characteristic smell after lightning storms.*
- *Water expands when freezes, unlike other substances.*
- *Superfluid Helium defies gravity and climbs on walls.*
- *More than a century before the proliferation of cell phones, Bell invented a wireless telephone that transmitted conversations and sounds by beams of light.*



Alexander Graham Bell





A Women in Power Initiative

PowerTalkZ is a Women in Power (WiP) initiated ongoing webinar series aimed at providing a platform for Lady volunteers from various student chapters across India to showcase and share their knowledge in different streams of STEM. The event stays to inspire women presences in the main arena of Engineering and to ensure the talents are getting the right opportunity to get appreciated.



IEEE PES Kerala Chapter happily announced the first session of PowerTalkz on Strategies to Improve Power System Resilience which was handled by **Ms. Raneena Raoof** from IEEE SB JCET. Participants Joined the session on 30th April 2020 at 7:30 PM. The event continued throughout the months from April to July with a total number of 11 topics and 11 speakers who shared their knowledge on various topics.

1. Ms. Raneena Raoof - 30/04/2020 - Strategies to Improve Power System Resilience
2. Ms. Devika Muraleedharan - 09/05/2020 - Power Electronics Switching Devices



IEEE Women in Power

Power Talkz #1

 Rameena Rasool
Volunteer: IEEE SB ACET

STRATEGIES TO IMPROVE POWER SYSTEM RESILIENCE

Join at: fb.com/ieeepesks

30th April 2020
7:30-8:30 PM
Facebook Live

IEEE Kerala Section IEEE PES Kerala Chapter

IEEE Women in Power

Power Talkz #2

 Devika Kuraseedharan
Secretary: IEEE PES MEECE

POWER ELECTRONICS SWITCHING DEVICES IN POWER SYSTEM

Join at: fb.com/ieeepesks

9th May 2020
7:30-8:30 PM
Facebook Live

IEEE Kerala Section IEEE PES Kerala Chapter

3. Ms.Saniya Binu - 21/05/2020 - Wireless Power Transfer System
4. Catherin Antony – 25/05/2020 – Cyber Security in Smart Grid
5. Sona N Thadevus – 29/05/2020 – Protective Devices

6. Priyadarshini - 03/06/2020 - Audio Spotlight
7. Irene Ann Zachariah - 15/06/2020 - 5G Future and Role of Satellites.
8. Fathima Shijad - 24/06/2020 - DC-DC Converters
9. Nandini J Nair - 27/06/2020 - Wireless Power Transfer
10. Malavika Unnikrishnan - 11/07/2020 - Overview on Smart Substations.
11. Vidhya K P - 27/07/2020 - Blockchain in the Energy Sector



IEEE PES Women's Power **IEEE**

Power Talkz #5



SONA N THADDEVUS
WIRLESS SCHOOL OF TECHNOLOGY KOLLAM

PROTECTIVE DEVICES.
bit.ly/PowerTalkz

29th May 2020
7:30-8:30 PM
Cisco WebEx

IEEE Kerala Section IEEE PES Kerala Chapter

IEEE PES Women's Power **IEEE**

Power Talkz #6



PRIYADARSHINI
COUOR OF ENGINEERING CHENGAMANGALAM

AUDIO SPOTLIGHT.
bit.ly/PowerTalkz

31st June 2020
7:30-8:30 PM
Cisco WebEx

IEEE Kerala Section IEEE PES Kerala Chapter

IEEE PES Women's Power **IEEE**

Power Talkz #7



IRENE ANN ZACHARIAH
K J SOMAIYAS INSTITUTION OF TECHNOLOGY KOLLAM

"5G FUTURE AND ROLE OF SATELLITES"
bit.ly/PowerTalkz

15th June 2020
7:30-8:30 PM
Cisco WebEx

IEEE Kerala Section IEEE PES Kerala Chapter

IEEE PES Women's Power **IEEE**

Power Talkz #8



FATHIMA SHIJAD
JEE COLLEGE OF ENGINEERING

DC - DC CONVERTERS.
bit.ly/PowerTalkz

24th June 2020
7:30-8:30 PM
Cisco WebEx

IEEE Kerala Section IEEE PES Kerala Chapter

IEEE PES Women's Power **IEEE**

Power Talkz #9



NANDINI J NAIR
JEE COLLEGE OF ENGINEERING KOLLAM

WIRELESS POWER TRANSFER.
bit.ly/PowerTalkz

27th June 2020
7:30-8:30 PM
Cisco WebEx

IEEE Kerala Section IEEE PES Kerala Chapter

IEEE PES Women's Power **IEEE**

Power Talkz #10



Malayika Umeshkiran
LBS Institute of Technology for Women

OVERVIEW ON SMART SUBSTATIONS.
bit.ly/PowerTalkz

17th July, 2020
7:30-8:30 PM
Cisco WebEx

IEEE Kerala Section IEEE PES Kerala Chapter

IEEE PES Women's Power **IEEE**

Power Talkz #11



Vidhya J P
Kerala State Institute of Engineering and Technology

BLOCKCHAIN IN THE ENERGY SECTOR.
bit.ly/PowerTalkz

27th July, 2020
7:30-8:30 PM
Cisco WebEx

IEEE Kerala Section IEEE PES Kerala Chapter

IEEE PES Kerala Chapter Student Awards 2019

IEEE PES Kerala Chapter announced the student awards for the year 2019. The awards were announced in three categories.

1. Outstanding Student Chapter Award.
2. Outstanding WiP Student Volunteer Award.
3. Outstanding Student Volunteer Award.



Outstanding Student Branch Chapter Award was announced and the gold, silver and bronze awards were grabbed by IEEE PES SBCs of Rajiv Gandhi Institute of Technology Kottayam, College of Engineering, Karunagappally and MES College of Engineering, Kuttippuram.



Deepna K
Outstanding WiP Student Volunteer



Hari Prasad & Amal J Nellickan
Outstanding Student Volunteers

ORION

KALA THATVA VIGNJANA



19-22 June 2020

Orion

Kala Tathva Vignjana

IEEE PES Kerala Chapter and IEEE PES WiP conducted Orion-a virtual technical festival, from 19th to 22nd June 2020.

Engineering is a field that evolves more dynamically than any other field of science. Technological advancements and ease in the information flow paved the way in the ever so faster development in the field in the last few decades. The competition and at the same time the sense of collectiveness is the key to a faster pace.

WiP IEEE PES Kerala Section came up with an initiative to bring up the engineering students in different areas through various items of competitions and quality assessments. Through a 3 day event, the students took part in various events and compete with each other for self-evaluation.

Based on the performance of the students, the respective SBs and individuals were awarded the championship and runner up titles.

The virtual inaugural ceremony for the virtual technical fest, Orion was on 18th June at 6 PM. The grand fest was inaugurated by Er. Frank Lambert, President, IEEE PES. The ceremony witnessed the presence of Dr. Jessica Bian, President-Elect, IEEE PES; Dr. Celia Shahnaz, R10 Rep, IEEE PES WiP, Er. Staji Wilson, Sub Regional Rep, IEEE PES WiP. The event was hosted on Cisco WebEx, also live-streamed on YouTube and Facebook channels of the IEEE PES Kerala Chapter.



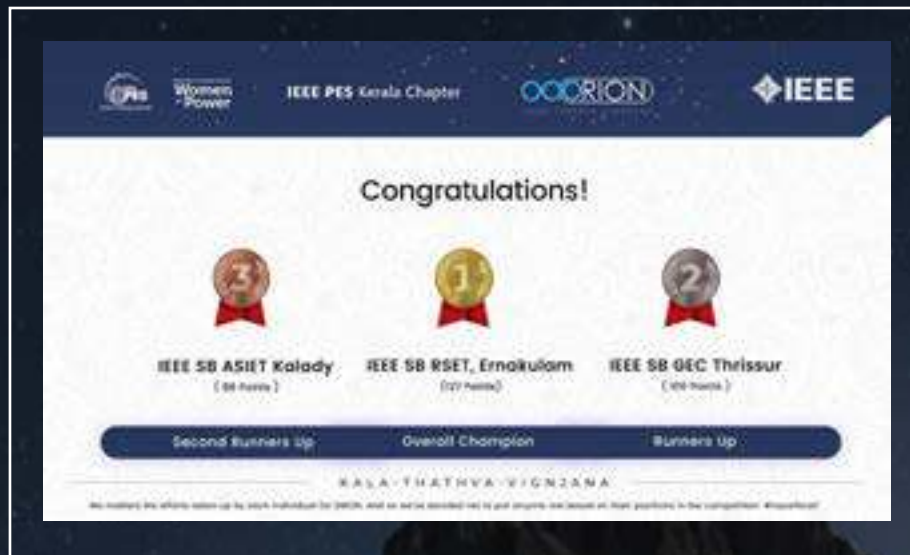
Orion Events



Orion, 3-day event with 4 main categories namely, Category 1 Scribble which consisted of Blog, Idea pitching, Event report writing, Photo manipulation, Doodling, Pencil Drawing, and Painting competition, Category 2 Unveil which consisted of Mini/Main project, Video Presentation and Innovating Existing Technology, Category 3 Sketch which consisted of Poster designing, Logo designing, Ui/Ux designing and Webpage designing, Category 4 Connect which consisted of Quiz, Debate, Coding, Jam, Photography, Capture the flag, Treasure hunt and Mock Interview. A total of 22 no. of events were conducted spanning for 3 days.

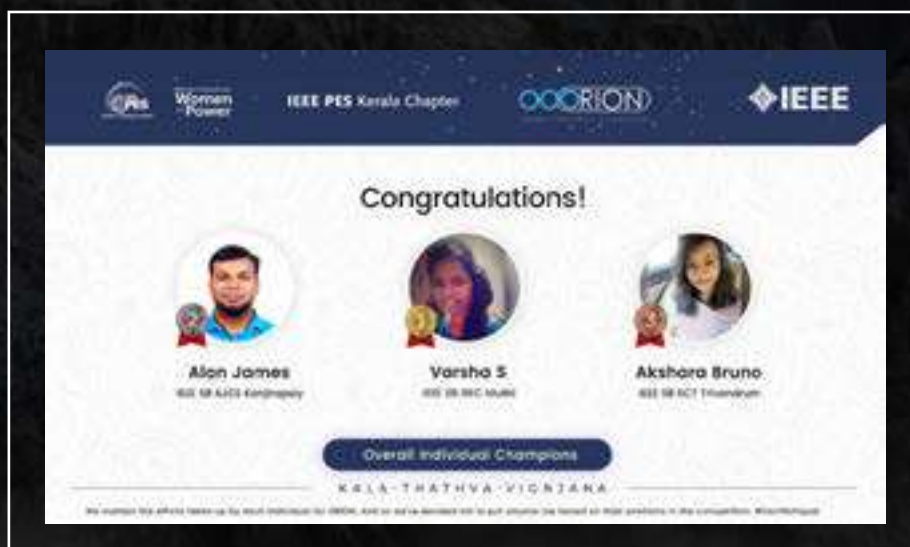
Orion Leader Board

The overall championship was won by **IEEE SB RSET** followed by **IEEE SB GECT** and **IEEE SB ASIET** as first and second runners up respectively.








Individual champions who won the most points for their SBs were also honored with the individual championship.

Varsha S of Government Engineering College, Idukki came on top with **Alan James** of Amal Jyothi College of Engineering and **Akshara Bruno** of Sree Chithra Thirunal College of Engineering respectively as first and second runners up.




Best of Paintings







Congratulations!



Kailas Krishnan R
UO College of Engineering and Technology



Varsha S S
Government Engineering College Kullad



V U Anukha
Adi Shankara Institute of Engineering and Technology

Painting

KAILAS - THATHY - VIGNANAS

We endorse the efforts taken up by each institution for 2023, and as it is decided not to put anyone the based on their position in the competition. @kailasgopal

Best of Pencil Drawings



QPS Women Power IEEE PES Kerala Chapter OORION IEEE

Congratulations!

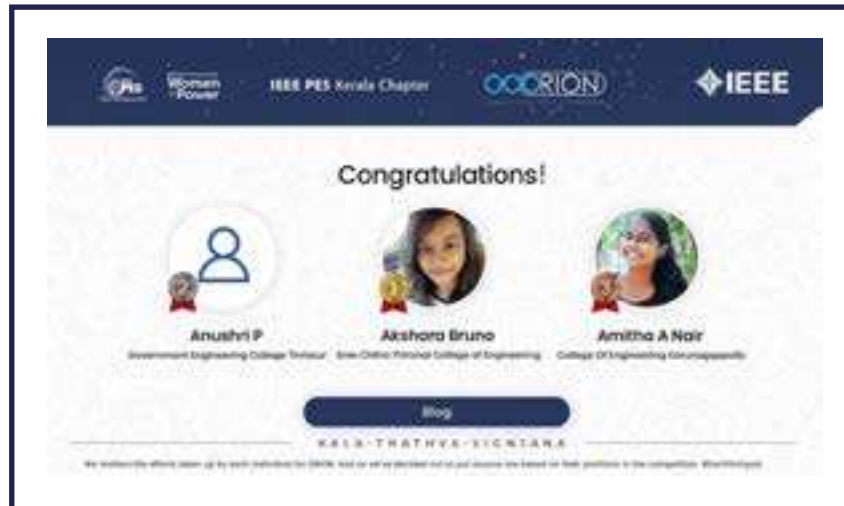
 George Daniel Thomas Bachelor's degree of Engineering and Technology	 Varsha S S Baccalaureate Engineering College Mysore	 Govind Kerthas College of Engineering Chengannur
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Pencil Drawing

KALA - PRATHIVA - VIDYADANA

This website is strictly online only. No download for OORION. And we will not be liable for any personal data leaked by their computers in this competition. @shivashivapad

Best of Orion Blogs

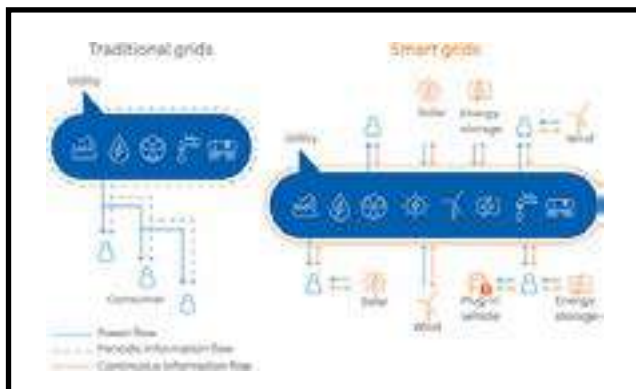


Role of IoT in Transformation towards Smart Grid

The Internet of Things (IoT) is a network over which the computing devices, mechanical and digital machines are interrelated and capable of communicating among themselves by transferring data over a network with no intervention from a human or even a computer. In simpler words, IoT is capable of conducting certain actions depending upon the need. Every entity has its own unique address which makes the message passing probable. Imagine setting up this system in our homes where the coffee maker, air conditioner, front gate and other devices are connected together. When we wake up in the morning, the central system sends a signal to the coffee maker to make coffee so as to help us readily consume it. When we are about to leave for class or work, we can send a signal to open the gate via our mobile phones to the network, leading up to the opening of the gate. And as soon as we leave, we get a notification that the gate has been closed. I would say, the entire system could make our everyday actions easier. Because, let's be real. We all are lazy in our own ways.

Now, what is a smart grid? To answer that, we must revert all the way back to electricity network. We, as humans, thrive on electricity. Almost every equipment in our homes are based to work on electrical energy. Our homes are mere small units when compared to the whole nationwide or worldwide electricity network. The main problem is that these electricity networks are old and outdated, incapable of keeping up with our devices in the 21st century. Whether the weather becomes too harsh or there occurs an unexpected power overload, power outages occur which is not news anymore to us as a consumer. It is in this scenario, a Smart Grid (SG) plays a vital role.

A smart grid is essentially an electricity grid with full computerized support. It is a combination of electrical and communication infrastructure. With the help of smart meters, distributed automation, micro power generation and storage of electricity, among other components, a smart grid can provide the demanded supply. With the traditional power grid, if a power outage occurs, the consumer (which is us) must call or report to the proper authorities. But with a smart grid, it is capable of analysing the control flow and adjust as required. An incredible feature to be noted is that a smart grid can control millions of devices from a control center. It is also reliable, sustainable and cost-effective which is what we are looking for in an efficient future world.



As we rely on alternative energy sources, they tend to make the energy flow in the wrong direction which leads to stress or fluctuations in the 2nd level substations. What we require is more transparency and prediction capability. Or, making the smart grids even 'smarter'. How do we make it smarter? It is for this purpose a smart grid must be integrated with the Internet of things. A smart grid consists of a multi-layered architecture.

With the IoT's IPv6 addressing system, smart meters can communicate with the host of other applications connected through the smart network. Deploying smart grids involves many energy sensors or IoT sensors communicating with each other. This increases the challenges of data readability and interoperability which can be overcome with necessary components. Also, these sensors are wireless. Hence, they reduce maximum human intervention and lower electricity consumption. The energy sensors collect the data, which varies depending on the demand and send it to the backend. From here, the differences are calculated and the supply is regulated suitably.



The smart grid with IoT has become successful in certain countries like the US, Japan and a few of the European countries, and stand as an example to let others picture how the world would look like with added IoT applications. However, this idea is still in process in majority of the world and have not been executed in a large scale. It is because of the following various potential difficulties.

- **Privacy issue**

This is one of the biggest concerns of the users. When we set up smart meters and smart appliances in our

homes, they gain more information about our energy consumption. This could harm our privacy by divulging these data when we are away from our homes, say, for a vacation.

- **Data Tampering**

The primary work of an IoT based system is to transfer data. Such data can be modified by an attacker, i.e. set dynamic pricing over peak periods which could lead to overloaded power network rather than reducing them.

- **Unreliable internet connectivity**

The key essential to this system is for all the devices to be connected to the internet. In countries like ours, India, where the weather is erratic, the connection can become unstable corresponding to the irregular climate. Thereby, this is a plausible difficulty in terms of smooth working because it requires uninterrupted and fast connectivity.

- **Cyber-attack**

The implementation of a smart grid with IoT can be seen as the largest Cyber-Physical-System. This involves physical assets (transformers, smart meters, cables, etc) and ICT (Information and Communication Technology) Systems. In case of a cyber-attack, the physical assets can get damaged. This issue is definitely not possible in the classical power grid. A well-known issue to be noted is the Stuxnet worm which was used to corrupt the PLC circuit and the machinery operation in Iran. It impaired 1/5th of the country's nuclear extractor.

Considering these, there is definitely a vast area of scopes for the IT Services in IoT-enabled Smart Grids.

1. Wireless devices can easily be attacked by virus and can cause data distortions. And since security is our primary concern, IT service providers can create active security solutions.

2. The physical assets like the smart meter share data with IoT devices in a home setup using network topology. For this, the service providers can develop efficient systems so as to lower the consumer's utility bills.

3. Thirdly, in the other widely growing field of technology, Artificial Intelligence. AI service providers can enable altering of power consumption in response to dynamic price changes.

As the world has seen multiple successful implementations of IoT, it is safe to say that IoT enhances positive outcomes with the smart grid. There are definitely some technical, economical and legal aspects to be take care of. In the technical aspect, the software needs to efficiently analyse the loads of data and cause the right outcomes. Economically, the internet connectivity and the devices (smart meter, generator, etc.) used must be viable. With proper maintenance, IoT based smart grid can be set up for a better tomorrow.

Akshara Bruno

SCT College of Engineering, Trivandrum

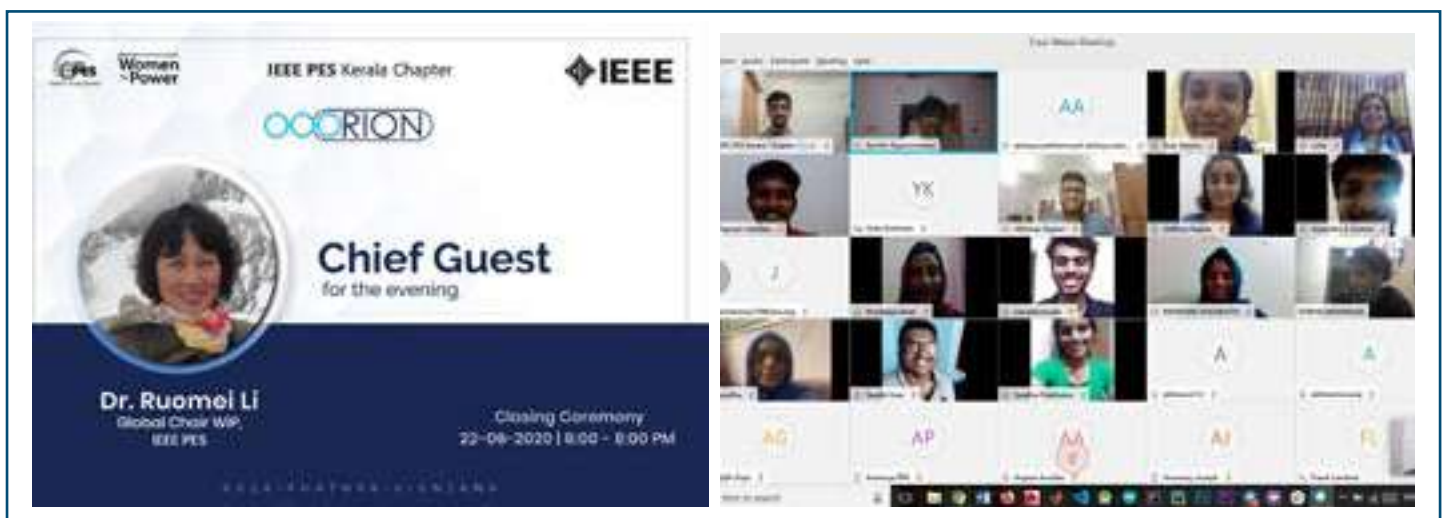
Orion -Closing Ceremony

Various events of different models were then conducted as per the previously prepared schedule and students across Kerala Section competed in the events. The event came to an end on 22nd June. The closing ceremony, conducted on 22nd June at 6 PM on Cisco WebEx witnessed the presence of Dr, Ruomei Li, Global Chair, IEEE PES WiP, and Dr. Mini Ulanat, Chairperson, IEEE WiE AG Kerala Section. The overall Championship was announced by the honorable guest, Dr, Rumei Li and the Individual winners by Dr. Bobby Philip, Secretary IEEE PES Kerala Chapter.

The overall championship was won by IEEE SB RSET followed by IEEE SB GECT and IEEE SB ASIET as first and second runners up respectively.

Individual champions who won the most points for their SBs were also honored with the individual championship. Varsha S of Government Engineering College, Idukki came on top followed by Alan James of Amal Jyothi College of Engineering and Akshara Bruno of Sree Chithra Thirunal College of Engineering. The event came to an end by 8 PM.

Orion was an event successfully completed by the WiP IEEE PES Kerala Chapter with a core team of IEEE PES Kerala Chapter student members and the WiP representatives. The event had about 50 judges for 22 events with 668 number of participants and 86 student branch representatives.



IEEE Power & Energy Society Student Branch Activities

APRIL

D-RELAY: 2.0 **-International Online Energy Hackathon**

The second season of D Relay International Energy Hackathon which is the flagship event of IEEE PES MCE SBC was organized collectively by IEEE PES Student Branch Chapter of Marian Engineering College and VIDYUTH 2019, the Electrical and Electronics Association as part of 3rd PES Day Celebrations with direct sponsorship from Megabyte Technologies Ltd. The first edition of the event was conducted last year, which gained extreme popularity and appreciation thanks to the then organizers Mr. Jacob Thomas (Founder Chairman IEEE PES MCE SBC), Mr. Febin Ansan (Secretary IEEE PES MCE SBC), and Mr. Anoop Johnson (Treasurer IEEE PES MCE SBC)

Er. Ajith Gopi, IEEE Senior Member and current Vice Chairman of IEEE PES Kerala Chapter volunteered for being our final judge for the event. The question for D Relay was formulated by Mr. Febin Ansan (Secretary, IEEE PES MCE SBC). The posters and registration link for D Relay were given publicity on a global level. D Relay attracted participants across the globe. This year we could receive registrations from Brazil, Germany, and Sri Lanka.





The event officially began on 8 April 2020 and was active till 12 April 2020. Participants could submit their responses before 12 April 2020. The responses were shortlisted by Mr. Febin Ansan. The selected responses were sent to our judge Mr. Ajith Gopi for final judgment. Despite his busy schedule, he took immense effort to provide us with detailed judgment and to select the winners. Akhil Krishnan from India was selected as the winner of this year's D-RELAY.



SURGE

- Idea Pitching Competition

Power and Energy Society and Industrial Application Society of IEEE MEC SB jointly organized an online idea pitching competition named "SURGE" from 26th March to 3rd April 2020. Participants were asked to submit a document containing the idea on the topic "Sustainable Engineering Projects for humanity". 16 teams from different engineering colleges across India participated in the competition. The team MEC_ELECTROS were the winners of the event. Anjana Jayan, Akshaya P, Anjana Anil were the members of this team and their project idea was "Sevak-IoT based underground drainage worker safety system". The selection criteria were based on the aspects of benefits to humanity, innovative thinking, and feasibility of the project.



WEBINARIT

Webinar series | Webisode 2

IEEE PES SBC RIT organized the second webisode of webinarit-webinar series on April 9th, 2020 at 11 AM. The session was handled by Amal A G of S6 EEE of RIT, Kottayam on the topic 'Myths and Facts in Electricity'.

The session covered many electrical facts and he well explained the myths that a normal living being can have about electricity. He covered the following topics; Phasors, kW vs kVA, AC power to DC motor, DC motors, Electric shocks, DC transformer arc generation. It was then followed by a session for clarifying doubts related to the topic. The webinar ended by 12 PM and the host thanked the speaker and participants. The event had 35 participants and they gave good feedback about the session and we hope the success of these webinars can be considered as the stepping stone to many of our coming events.

Sanjo Siby Moolamkunnam (Electrical Automation Engineer, Drawout Aps Denmark), alumni of SJCET Palai. The session was conducted from 7 pm- 8 pm on Cisco WebEx Meetings.

The main aim of the session was to make the attendees more informative about the advantage of the distribution system and the benefits of microgrids and their types. The session was very beneficial and the outcome was favorable. About 46 members participated. Out of which 40 were IEEE members and the rest were NON-IEEE members.



WEBINAR

- On Microgrids and Active Distribution Networks

IEEE SB SJCET PES as part of the '2020 IEEE PES Day' conducted a webinar on the topic Microgrids and Active Distribution Networks on April 11th, 2020. The session was taken by Er.

WEBINARIT

Webinar series | Webisode 3

IEEE PES SBC RIT conducted a webinar as part of the webinar series 'Webinarit'. This was the third webisode and was held on 12th April 2020 at 8 pm. The session was handled by Saniya Binu of S2 EEE of RIT, Kottayam on the topic 'Wireless Power Transfer System'.

The session was so interesting and covered complete details of Wireless Power Transmission. The

presenter covered the following topics; WPT (Wireless Power Transmission), History of WPT, Types & Technology of WPT, Applications of WPT. It was then followed by a session for clarifying doubts related to the topic. The webinar ended by 9 pm and the host thanked the speaker and participants. The event had 40 participants. The feedback about the session was good. All the participants got much new information about the growing wireless systems. This session also inspired many students to take their webinar sessions.



WEBINAR

- Basics of Arduino

IEEE PES SBC CETkr conducted a webinar on the topic 'Basics of Arduino' on 12th April 2020 at 4.30 PM in Cisco WebEx on behalf of the PES Day, 2020. Over 40 took part in the webinar handled by Mr. Madhu Krishnan A P, MDC, IEEE PES Kerala Chapter, and chair IEEE IAS SBC JCET.

The poster and content were shared to the public 3 days before the

webinar and 88 registered (55 IEEE members). The webinar link and other details were sent to the registrants through Email and WhatsApp. The 2-hour session was informative and helpful to gain new skills. Feedbacks and suggestions regarding the webinar were made to get from the attendees. A poster was released showing the gratitude towards Mr. Madhu Krishnan A P for the wonderful session. The presentation slides and recorded webinar was sent to all the participants through Google drive.



PESQUIZINE

- Online PES Magazine Quiz Competition

IEEE PES SBC RIT conducted the 2nd edition of PESQUIZINE, an inter-college online quiz competition on 13th April 2020 at 8 pm. The first edition of pesquizine was conducted for students under the Kerala section while the second edition was open for students all over India.

The questions were based on the March-April edition of IEEE Power and Energy Magazine. The quiz had 25 multiple choice questions with a time limit of 7 minutes and

a negative mark for each wrong answer. The competition was held online on Myswots.com. 43 students from 16 colleges under 6 sections of India participated in the event. Cash prizes were awarded for the top 15 students.

The main purpose of the competition was to create an interest among students to read and build up their knowledge from the articles issued in the IEEE Power and Energy magazine every month. The quiz capacitated the participants to step into the world of technological advancements and learn more about the advanced transmission systems.

In the digitalized era, where students lack the benefits of reading, pesquize created a great impact on participants. Satisfying comments and feedbacks obtained from students added to the achievements of the event.



SciFest'20

- Write-Up Contest

IEEE PESSBCMESCE conducted a Sci-Fi Movie Write Up contest on 13th April 2020 as a part of the "Sci-Fest, PES Day event series", and the last entry was received till 11:59 Pm 20th April 2020.

Science Fiction movies always instilled a spirit of awe in the minds of viewers and often defined how science can change the way of human life definitively. The event aimed at participants gaining more insight and knowledge by understanding the core meaning of the movie.

We received a total of 8 responses from different colleges. All the Participants' entries were published in our SB's official Instagram handle @ieeesbmesce.

The winners were announced on PES Day, 22nd April 2020.



IMPLEXIS

- The Technical Crossword Series

A crossword series 'IMPLEXIS' was hosted by the PES chapter of IEEE Student Branch ASIET, Kalady on the dates 13th, 20th, and 27th of April 2020 from 8:00 pm, 9:15 pm, and 8:30 pm on the respective dates in the online platform <https://ieee-asiet.org/pescrossword> in the occasion with 'PES DAY Celebration 2020.'

The technical based crossword was conducted in the online platform <https://ieee-asiet.org/pescrossword> (Crossword Labs). This crossword has helped the participants to gain knowledge in basic technical fields. The questions were mainly from basic Electrical and Electronics Engineering along with General Knowledge questions. The participants were valued based on their scores, speed, and number of attempts which made them participate with full concentration and answer the questions with accuracy and made them understand the Power and Energy related topics.

This series came under the initiative 'Pro Earn' by our Student Branch to allow the IEEE members in our institute to earn some amount of money as prizes along with the certificates and goodies during the quarantine days. The 1st prize consists of 200 INR, goodies and a certificate, the 2nd prize consists of the same without the cash prize and the 3rd prize is the certificate. The winners of the crossword were Harshit Kumar from S4 Electronics and Communication Department who secured the first position, followed by Aparna KS from S2 Electrical

and Electronics Department who came in second, and Ashwin S Nair from S2 Electrical and Electronics Department in the third position.

The main outcome of the crossword series is that it helped the participants to have a grab on the in-depth knowledge from Electrical and Electronics Engineering. It made them explore technical ideas and terms connected with the IEEE Power and Energy Society. It increased their Problem-Solving accuracy and precision to finish the given crossword on time.



ONLINE LECTURE SERIES

IEEE Power & Energy Society Student Branch NIT Calicut in association with Industrial Power Group, Department of Electrical Engineering organized an Online Lecture series on Applications of Artificial Intelligence in Electrical

Engineering Spanning over 6 days and 6 sessions with a duration of 90 mins each. The Online lecture series was organized from April 13th, 2020 to April 18th, 2020.

This lecture series was organized as a part of the 3rd PES Day 2020 celebrations. The Online Lecture series on AI was presented by Dr. Kumaravel Sundaramoorthy; Internet of Things (IoT) and its Applications by Dr. Karthikeyan V and Synchro phasors by Dr. Deepak M.

The Online Lecture series witnessed registrations of over 300 participants from various parts of the country and a handful of International Registrations as well. The participants for the program were a mix of Engineering students, Research scholars, and Engineering college Faculties with a few Industry experts as well. E-Certificates were provided to 187 participants after submission of course assessments by them.

WEBINAR

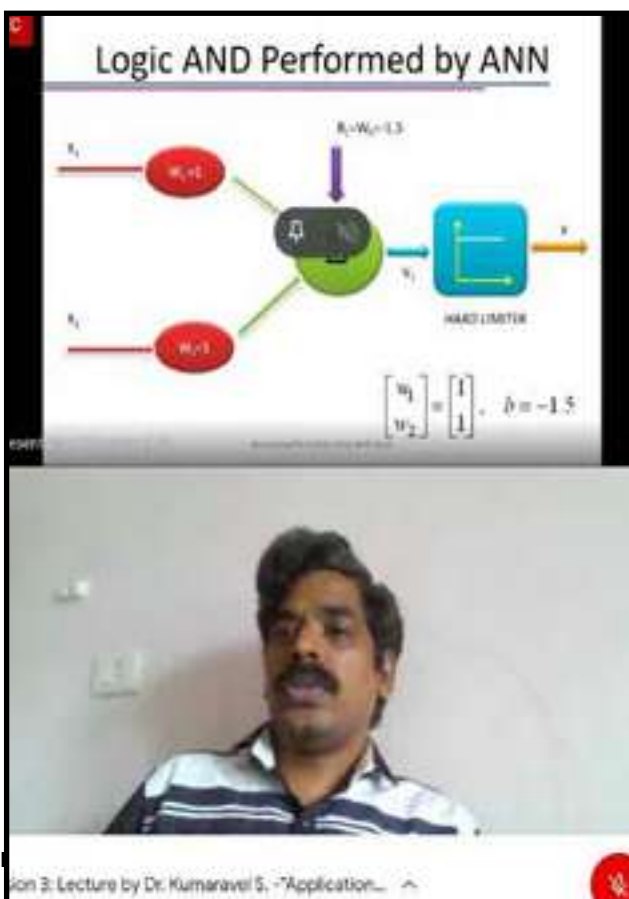
- On Art Of Writing A Research Paper

A webinar on 'Art of writing a research paper' was hosted by the PES Chapter of IEEE Student Branch ASIET in association with PES DAY 2020 on 15th April 2020 from 7:00 pm to 8:00 pm at Cisco WebEx.

The session was handled by Mr. Fasil O K, the coordinator of Research Scholars working group IEEE Kerala YPs. He is also the Joint Secretary of IEEE EMBS Kerala Chapter and Co-Chair, SIGHT, IEEE Malabar Subsection.



Over 57 delegates took part in the webinar to listen to the expert advice on writing a research paper. A research paper is writing that involves the critical analysis of a topic and presenting it in the form of a paper. The webinar focused on building out a good research paper. Mr. Fasil discussed the steps involved in the research paper writing process like topic selection, thesis statement, paper outline, writing style, grammar, conclusion, and revision. He discussed the challenges encountered in writing a research paper and also gave some



tips for making it a quality one. And there were some common themes addressed during this one-hour session. He covered almost all areas of writing a research paper very effectively.

Furthermore, he showed some examples of his papers for the ease of understanding how to review a paper. Also, he provided some personal insights on how going through the experience positively changed his outlook on his work. The session was helpful for all types of students to develop their research papers and also improve their writing skills.

A research paper writer builds up his skills by continuous practice and sheer determination. The outcome of the session was to help the attendees to write their research papers. A Q&A session had been conducted. Many attendees sent their questions and deciphered them, which implies the session was very fruitful. To encourage that motive, we put on a Call for Article.

CALL FOR TECHNICAL ARTICLE

PES Chapter of IEEE student branch ASIET carried out a call for the article on the topic 'Affordable and clean energy to the community' in association with the webinar hosted on 15th April 2020 as a part of PES DAY 2020. The webinar on the topic 'Art of writing a research paper' was

handled by Mr. Fasil O K. He discussed the basics of writing an article. People who took part in the webinar got motivated to write the research paper. And to encourage that motive, we put on a call for the article.



An article writer builds up his skill with continuous practice and sheer determination. Many people sent their entries in a very good manner. The call was focused on improving the skill in writing an article. People utilized the tips and basics of article writing which was discussed in the webinar. The last date for submission of the entries was on 25th April 2020.

Technocrats and professionals need to have good technical writing skills in the preparation of reports, presentations, documentation, etc. Technical writing in English is used for a specific purpose, and hence it needs to be precise, relevant, and without redundancy. Skills such as writing instructions and inferring data from graphs and charts require the above. People acquired skills in writing an article through the webinar which was already done and they got a chance to explore their skill through the call for the article.

WEBINAR

- Innovations In BTech Projects

On account of PES DAY 2020, IEEE CUSAT Power & Energy Society Student Chapter Jointly with IEEE CUSAT Industrial Applications Society Student Chapter conducted an online webinar on “Innovations in BTech Projects” on 17th April 2020 at 6:30 pm. There were 26 attendees for the webinar. The session was handled by IEEE Kerala Young Professionals Staji Wilson (PES DAY 2020 INDIA LEAD)

The session was about the steps to be followed while making a BTech project and how it can be made Innovative. It was a great experience for us to listen to their experiences and to share our queries with them. The session had helped us a lot in knowing more about how a BTech project can be made innovative.

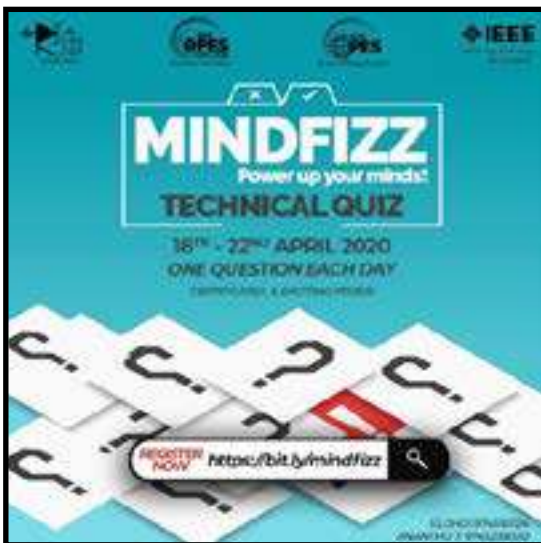


22nd APRIL 2020
3rd IEEE PES DAY

MINDFIZZ

- Online Technical Quiz Competition

As part of the International PES day celebrations, the PES SBC of RSET launched yet another exciting venture. Mindfizz was an international online technical quiz competition conducted by RSET IEEE PES SBC. It consisted of 5 questions, released one per day. The quiz was constructed in such a way that answers to the initial 4 questions lead to the final answer. The participants were active in their submissions, and many of them never failed to submit a single day's entry. The event concluded with announcement of three winners.



Through riddles and condensed facts presented by word, participants had to do intensive research to come up with an answer to each day's question. While some questions were plain and ordinary, some were highly technical. The final answer of Mindfizz was in fact Tesla's Million Mile Battery, a concept announced and patented by the Electric Vehicle manufacturer

Tesla's CEO Elon Musk. We felt that it is an idea that will reshape the energy demands of the e-automotive industry, and thus effectively put it on display to the world through our event. The participants also got to do a lot of research in several fields in the process of participation.



WEBINAR

- On Smart Lighting

On account of PES DAY 2020, IEEE CUSAT Power & Energy Society Student Chapter conducted an online webinar on "Smart Lighting" on 18th April, 2020 at 6:30pm. There were 32 attendees for the webinar. The session was handled by IEEE Kerala Young Professional & PES Kerala Section Student Activity Coordinator Anandhu S Kumar (PES DAY 2020 REGION 10 LEAD). The session was about smart lighting, its applications in industrial and home purposes and the companies and their products based on the same. It was a great experience for us to listen to their

experiences and to share our queries with them.



ELECTRA THE FACT HUNT

- Online Quiz Competition

IEEE PES VJCET SBC in association with IEEE VJCET SB conducted an online quiz ELECTRA THE FACT HUNT on 18th April 2020 at 8 PM. This quiz was exclusive for IEEE members in our college. The questions of the quiz were facts from Power and Energy sectors. It was formatted in multiple-choice type. After the quiz, we have displayed the correct answers to the questions. The students have understood the answers to the questions. A total of 37 members participated in the quiz. The winner of the quiz was Annmary Mathews and a cash prize of Rs 250 has been given.

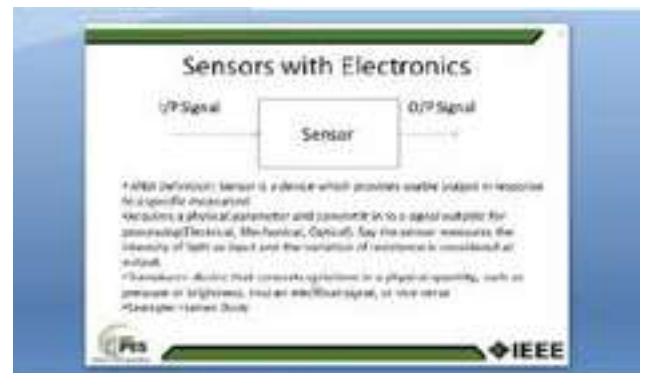


WEBINAR

- On Sensors & Actuators

On account of PES DAY 2020, IEEE CUSAT Power & Energy Society Student Chapter Jointly with IEEE CUSAT Industrial Applications Society Student Chapter and IEEE CEV SB conducted an online webinar on "Sensors and actuators" on 19th April 2020 at 6:30 pm. There were 40 attendees for the webinar. The session was handled by IEEE Kerala Young Professionals Staji Wilson (PES DAY 2020 INDIA LEAD)

The session was about the various sensors and actuators in electronic circuits

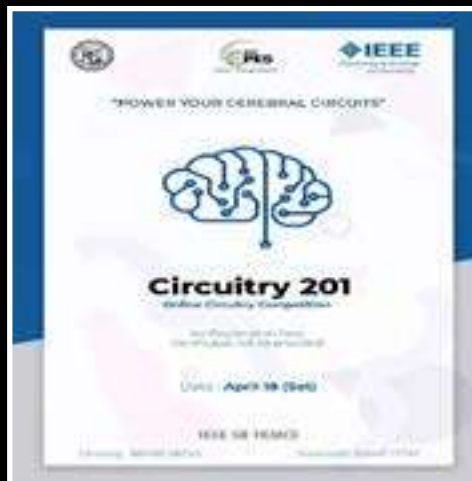


It was a great experience for us to listen to their experiences and to share our queries with them. The session had helped us a lot in knowing more about the various sensors and actuators and how sensors and actuators can be implemented in electrical and electronic circuits.

CIRCUITRY 201

As a part of PES Day 2020 celebrations, the IEEE PES SBC TKMCE within the restrictions of the National Lockdown imposed by the government following the spread of COVID-19 decided to put forth imposing challenges for students. An intermediate level Online Circuitry Competition of 3 rounds- Circuit Solving, Circuit Debugging, and Circuit Designing was presented to the students with a time restraint of 12 hours, that is, from 7 pm on 18th April to 7 am the next day. Out of the 65 participants who registered (of which 41 were IEEE members and 18 were IEEE PES members), 18 smart minds completed the competition. With the highest mark of 92 out of 100, Susmith K Das was the winner of the competition. This was a very impressive score since the questions could've not just been answered through a theoretical application, but with a certain level of logic and creativity.

The competition was a big success, owing to the 4-day process of meticulously framing challenging questions and the participants trying their very best in cracking these hard nuts.



PoSymb 2 - Power System Stability



IEEE PES SBC VJEC conducted PoSymb webinar series as a part of Educate the Community on account of PES DAY 2020. The second webinar was conducted on 18th April 2020 at 5:00 PM through Google meet on the topic Power System Stability. It was handled by Dr. Bobby Philip (Secretary, IEEE PES Kerala Chapter). The webinar lasted for 2 hours. There were about 43 participants in the webinar. The coordinators organized the events smoothly and were well cooperated by the participants.

WEBINAR - On FACTS



IEEE Student Branch College of Engineering Karunagappally in association with Power and Energy Society Student Branch Chapter organized a webinar on Flexible Alternating Current Transmission Systems (FACTS) on 19th April 2020 as a part of the 2020 PES Day initiatives. Handled by Er. Saran K S (Young Professional, IEEE PES Kerala Section), this online educational initiative was aimed to introduce this Power Electronics based system to the students and on how they are used to enhance controllability and increase power transfer capability of networks.

This internet-based educational initiative has opened access to information to the student community through real-time online web seminars. This ensured that free classes are delivered to students to advance their knowledge in this time of lockdown. The different devices used in FACT systems, its compensating circuit, and the further research potential under this field was also discussed in this online seminar. With over 92 participants, the webinar had attendees from different sections including students and professors as well.

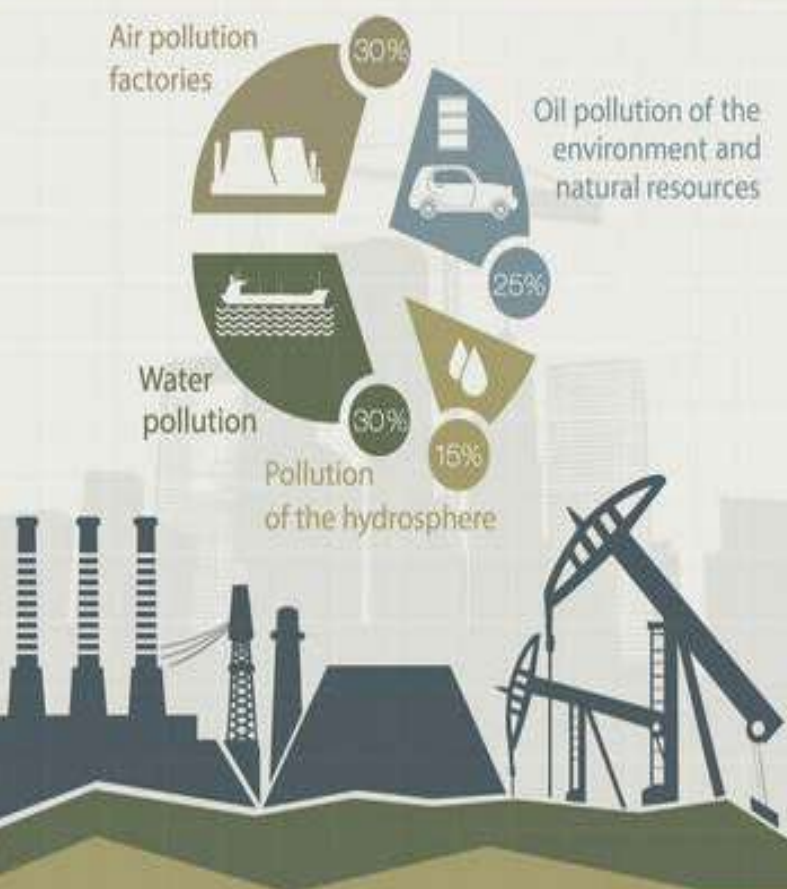
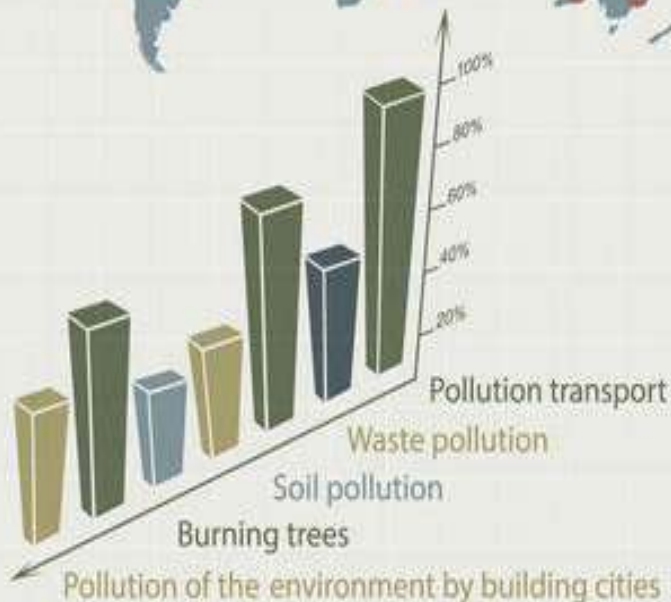
WEBINAR

- On Introduction to Energy Auditing in Home and Protection Devices

IEEE PES SBC MESCE conducted a Webinar on the topic, 'Introduction to Energy Auditing in Home and Protection Devices' as a part of 'Sci-Fest-PES Day Event Series'. The webinar was handled by Mr. Abhinav Rajeev, Former Chair of IEEE SB NSS College of Engineering, Palakkad on 20th April 2020. 40 students from different colleges of different engineering streams and years including professors participated in the webinar.

The topic was relevant in the current scenario of Energy Theft, Lack of reliable energy resources, and safety issues in the ordinary household. The webinar was conducted using the platform Cisco WebEx. The session started at 5 PM and was wound up at 6:30 PM.





QURIOUS'20

- Quiz Series

IEEE PES SB SJCTET as part of the '2020 IEEE PES Day' initiative conducted an online quiz competition based on Microgrids and Active Distribution Networks. The quiz was part of the online quiz series QURIOUS'20 conducted by IEEE SB SJCTET. The event was held on 20 April 2020 from 1:00 pm to 9:00 pm. A total of 44 members were participated in the quiz, out of which 27 were IEEE members and 17 were NON-IEEE members. The event was very helpful and the outcome was favorable. The winners of the quiz were appreciated for their excellent performance. The winners are:- 1st position:- Gobinath D & Ananya Rajesh; 2nd position:- Aswathy Gopalakrishnan & Jishnu K; 3rd position:- Tharanath J Kachiramattam.



WEBINAR BY PROF. CELIA SHAHNAZ

(R10 WiP REPRESENTATIVE)

IEEE PES SBC RIT and IEEE PES WiP RIT jointly conducted a webinar in accordance with PES day 2020 on 20th April 2020 at 7 pm IST on Cisco WebEx. About 75 participants across the globe made their presence in the webinar. The webinar was handled by R10 Women in Power Representative Prof. Celia Shahnaz, Ph.D. SMIEEE, FIEB on the topic Engaging WIE Activities to ensure More Power to the Future. She is an eminent personality who served many IEEE positions globally like, the Chair of Women in IEEE SIGHT Working Group 2020, the Chair of the IEEE Bangladesh Section, many more. She is also the Founder and Advisor of IEEE WIE AG BD.

The webinar comprised both IEEE and non-IEEE members with professionals and student members from India, Bangladesh, Pakistan, Sri Lanka, Peru, and the UK. The webinar was beneficial to all, especially to the women members who would like to pursue a carrier in Power engineering. She motivated the students on the right track by addressing various problems faced by women engineers and how they can turn their failures into opportunities. The students at the SB became much aware of Women in Power and its benefits and also encouraged them to join Women in Power. The webinar was able to create a positive impact on the participants.

She addressed the mission and vision of Women in Power and explained to them that Women in Power aim to create full potential leaders by fostering their carrier, connections, and talent of Women in the Power and Energy Industry. The main achievement of the event was both professionals and students got a fortune to learn from a more experienced mentor like her. Moreover, the positive feedback received from the participants added to the achievements of the event.



PES DAY 2020 QUIZ COMPETITION

IEEE PES SBC MES College of Engineering, Kuttipuram in association with Industrus Tech conducted an online Quiz Competition on PES Day, 22nd April.

100+ students from different parts of the world participated in the quiz. The quiz was based on Power & Energy and General Knowledge and was conducted on WhatsApp from 08:00 Pm to 09:00 Pm.



The event has helped the participant's to improve and increase the knowledge about PES society and its benefits along with general knowledge. The winners were rewarded with prizes including free subscriptions of Norton anti-virus and free courses sponsored by Udemy. Mr. Jovin Chacko won the first prize and Mr. Harigovind M and Mr. Shajeesh Basheer Parakkal respectively came second and third.

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POWERPLAY -online technical debate competition

As part of the International PES day celebrations, the PES SBC of RSET launched yet another exciting venture. Powerplay was the international online technical debate competition organized by the IEEE PES SBC of Rajagiri School of Engineering and Technology. The topic for the qualifiers was whether "nuclear energy is a viable source of energy for the future" or not. After conducting the preliminary round with 15 participants from all over the world, 6 were shortlisted. The final round of this debate competition

was much more energetic than we expected, with participants fiercely presenting their views on whether “AI is a boon or a curse to humanity.” The event ended with three winners out of six participants selected in terms of their performance, irrespective of whether they were speaking for or against the subject.



The event was a fierce battle of words between the participants, be it the initial or final round. As the host, the PES SBC of RSET provided them with a platform for presenting their skill as well as ensured that they would gain technical knowledge also along the way by making this debate a technical one. Thus, the participants went through a good amount of research to get to understand the concepts and present valid points during the rebuttal rounds. So, we can say that several student members worldwide were exposed to technical knowledge besides solely participating in an international debate. Winners: First Place: Bisto Baby, RSET Alumni; Second Place: Rohit Rajamohanam (MESCE) & Jesudas Damasie (RSET); Third Place: Arjun Sunil Kumar (RSET).

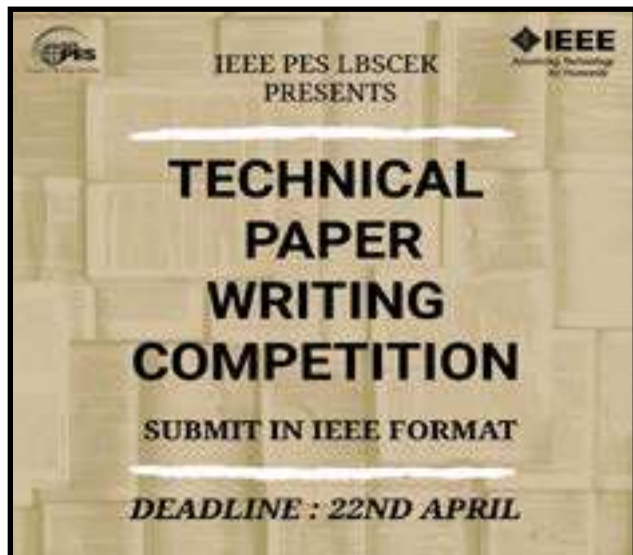


WEBINAR

- On Introduction To Robotics

On account of PES DAY 2020, IEEE CUSAT Power & Energy Society Student Chapter Jointly with IEEE CUSAT Industrial Applications Society Student Chapter and IEEE CEV SB conducted an online webinar on “Introduction to Robotics” on 22nd April 2020 at 6:30 pm. There were 50 attendees for the webinar. The session was handled by IEEE Kerala section Young Professional Anish M S. The session was about the Introduction to Robotics and how we can get knowledge in the field of robotics. It was a great experience for us to listen to their experiences and to share our queries with them. The session had helped us a lot in knowing more about the field of robotics and how robotics can be pursued as a career.

TECHNICAL PAPER WRITING COMPETITION



IEEE PES SB LBSCEK conducted a technical paper writing competition on account of PES DAY 2020 on Wednesday, 22nd April 2020. Through this competition, we allowed IEEE and non-IEEE members to showcase their research skills. Plagiarism is not tolerated in the competition. The contestants submitted technical research papers in the areas of applied sciences, modern technology...etc. The deadline for the paper submission was on 22nd April 2020. 6 students submitted their research papers.

The winners are selected by the judging panel which consists of 3 members including the staff advisor of PES SB and branch counselor of IEEE SB of the college. The judging panel consisting of three members, Dr. Mary Reena KE, Mr. Rensy Sam Mathew, Mr. Azeem K.

PES TUTORIALS

As part of the International PES day celebrations, RSET PES SBC initiated yet another exciting venture. The PES tutorials that our society has made free, through a discount of \$50, have been a boon to the students of Kerala. To make sure that all the PES members of our state get to know about this, PES SBC RSET had initiated a PES tutorial challenge whereby student members of Kerala are taken through the steps of how to access these videos and challenged to view all the videos. The session was followed by a group discussion on the topics that were dealt with at the end of each of the two topics that we had taken up. The challenge followed the pattern of the Robosantizer that was taken up earlier in 2020 by the PES Kerala chapter, in such a way that it would be accepted by one college, and upon starting they would gain rights to challenge three other colleges for the same.





More than an event hosted by the PES SBC of Rajagiri School of Engineering and Technology, this can be viewed as an initiative by us to ensure that all the IEEE student members of Kerala are getting proper exposure and knowledge of the benefit of joining the IEEE PES. Such a great opportunity would be wasted if no one knew about it, so we took it upon ourselves to enlighten the less active members of our society and show them how deep the roots of IEEE go. The event was a great success, with many colleges taking up the challenge and completing it along with us.

WEBINAR

- How Did We Sustain The Power Drift on April 5th

Following the Hon. Prime Minister's appeal, the whole nation paid its homage to the medical staff and all those fighting against the global pandemic, COVID-19, by switching off all lighting loads and lighting a lamp of hope for about 9 minutes. From an electrical point

of view, this could have been a fatal blow to the National Grid as a sudden cutting off of loads could have even led to a total collapse if proper measures were not taken to combat the crisis.

The IEEE PES SBC TKMCE in accordance with PES Day 2020 celebrations, in association with the IEEE IAS SBC TKMCE and the Dept. of Electrical and Electronics Engineering, TKMCE, found that we have the responsibility of educating the technical society about the efforts behind avoiding the catastrophe.

A Webinar on the topic was taken by on site experts Er. S R Anand, Dy. Chief Engineer, KSEBL, accompanied by Er. Sunil Kumar A from the State Load Despatch Centre and Er. Suresh Kumar V V from PMU, Alappuzha. The session began sharp at 8 through the Cisco WebEx portal and saw a participation of 65 members who were present all throughout the one hour Webinar. The participants, 63% of whom were IEEE members and 22% of whom were IEEE PES members, consisted of budding engineers as well as teachers and KSEB staff members. The Webinar consisted of all three speakers giving their on site experiences and the Q&A session that followed saw some brilliant questions from the participants which were answered to perfection by our panelists.

There were no technical glitches and all the members kept professional decorum in the online platform, making the event a success in all aspects. The participants were quick to give positive feedback and Certificates of Participation were given out.



per abstract. The questions were aired through a website created specifically for the event (hosted through a GitHub default repository) and through our college's Instagram handle, @ieeersetsb. The nature of the problem statement varied from women's rights violations and security issues to a massive focus on energy harvesting and saving. On the last day, we conducted a rapid-fire quiz competition based on the problem statements of the past four days.



QUAESITOR

As part of the International PES day celebrations, the PES SBC of RSET launched yet another exciting venture. The event was an innovative take on the general concept of idea pitching contests and rapid-fire quiz competitions. We aimed to combine the two effectively, to create a platform that is enjoyable as well as academically useful for participants from all fields of engineering. For the first four days, we provided the participants with one problem statement per day for which they were supposed to write up an abstract of a minimum of 100 words and submit it before noon the next day when the next day's problem statement would be released. Thus, they were given a limit of 24 hours

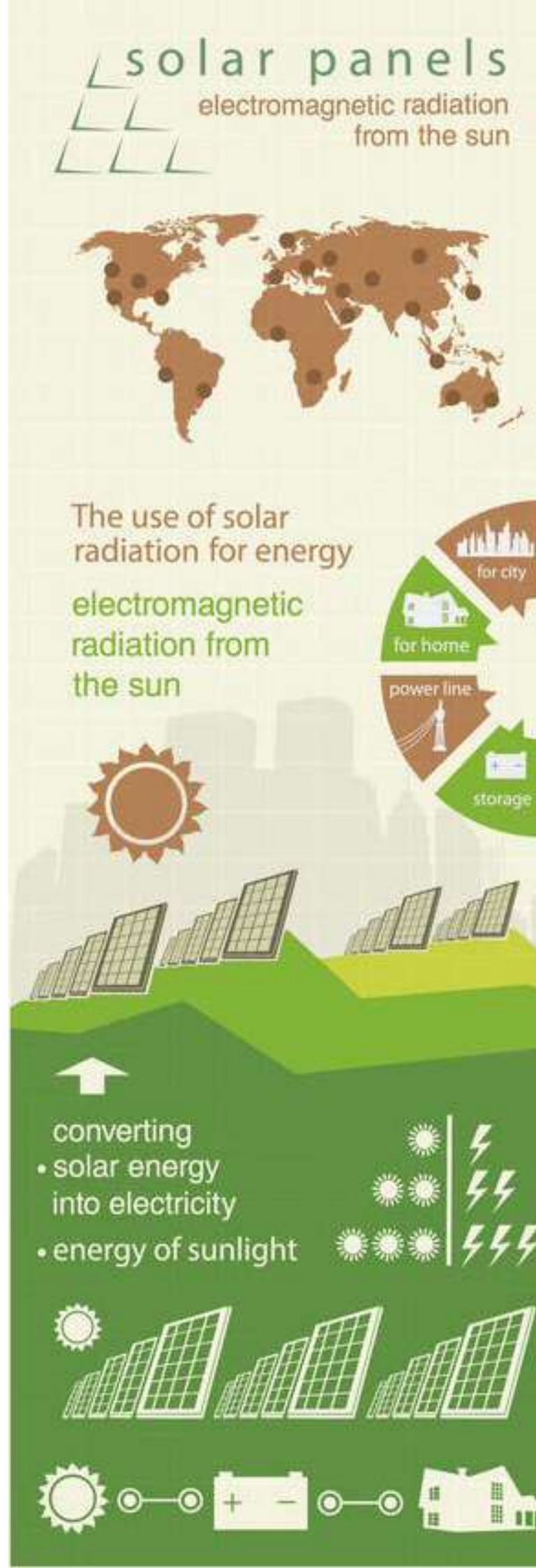
The participants were from various disciplines as well as various years of the engineering discipline from all over the world. They were introduced to the problems in society regardless of their seniority in engineering knowledge or subject familiarity, and we thus created a platform where people with very different viewpoints got to present their idea abstracts for these problems. The submissions from these students were evaluated by our student branch chapter's faculty advisor, Mrs. Pratibha PK.

PES O'QUIZ 2.0

This is the second edition of the annual online quiz event conducted by the Power and Energy Society of IEEE SCT SB as part of its PES DAY celebrations on 23 April, 2020.



The quiz was conducted on 'myquiz' quiz maker platform on the topic "Electric Cars". The total duration of the quiz was 7 minutes. Participants were added to a Whatsapp group for providing instructions conveniently. There were 20 questions. These questions included purely technical based communication engineering questions and questions based on the architecture of mobile phones and their brands. Winners were decided based on the maximum number of correct answers in the quickest time. Three winners were declared.



WEBINAR

- On Enhancing Women Power Engagement In Humanitarian Technical Projects

IEEE PES VJCET SBC, in association with IEEE SIGHT and WIE of Viswajyothi college of engineering and technology, conducted a webinar in accordance with IEEE PES DAY and IEEE SIGHT DAY celebration on the topic, Enhancing Women in Power Engagement in Humanitarian Technology Projects by Prof. Celia-Shahnaz, Ph.D. SMIEEE, FIEB Professor, Department of EEE, BUET, Dhaka, Bangladesh. . She is one of the most prominent members of the IEEE society. She has held a no. of leading positions in the past few years. Starting with being an R10 WIE coordinator in the year 2016, she went on to be the chair of the wie workshop subcommittee during the academic year 2017-18. She was also the IEEE PES Women in Power (WiP) IEEE Region 10 Regional representative from 2017-20, Member of the IEEE WIE WePower Subcommittee from 2019-20, Communications Chair of IEEE SIGHT Steering Committee in 2017 & 2019, Chair of Women in IEEE SIGHT Working Group, member of IEEE New Initiative Committee and chair of IEEE Bangladesh section presently.

The webinar was conducted on 25th April 2020 at 7:30 PM on Webex. There were 118 registrants from different parts of the world and overall 70 members participated in the webinar.



ONLINE YP PANEL DISCUSSION

As part of the International PES day celebrations, the PES SBC of Rajagiri School of Engineering and Technology had brought together the top Young Professional members of the IEEE Kerala Section to have a Panel Discussion with the members of our student branch. Through sharing of experiences regarding their professional life, learning how to set oneself apart from the crowd, and truly discovering the endless possibilities offered by the IEEE, the event enriched student members from the very roots. The students had a very well-knit Q&A session with the YP's, clearing their doubts at the personal as well as organizational level.

The student members of the IEEE RSET SB got to interact closely with the YP's of IEEE PES Kerala Section, getting to know of their experiences and thus learning what they did to reach such great heights

in life. The students also specifically asked where the present YP's wished they could have improved in the past, setting the groundwork for an even better PES Section for Kerala in the coming years.



WEBINAR

- On Ecological Deterioration & #one treeplantchallenge

IEEE PES SB SJCTET and WIE SB SJCTET in collaboration with NSS SJCTET and shutterup stories as part of the '2020 IEEE PES Day' initiative conducted a webinar on the topic Ecological deterioration & #onetreplantchallenge on 25 th April 2020. The session was taken by Dr. Bindhu B K (Associate professor, Department of civil engineering). The session was conducted from 4:00 pm- 5:00 pm on Google meet. The session was taken to give basic knowledge of deterioration of our environment and how to reduce the threats that humans creates,it was helpful for the attendees and outcome was favourable.

WEBINAR

- On cybersecurity

Power and Energy Society of IEEE MEC SB organized a webinar on the topic “Cyber Security in the time of pandemics” as part of PES Day Celebrations 2020. Arun Kumar R, Security Engineer, Aurizeg Solutions was the speaker. The webinar was conducted on 26th April 2020 at 4 pm via the Cisco Webex app and was attended by 90 participants from different colleges across the country. The session covered the topics:

1. Cybersecurity and its importance.
2. Trending Cybersecurity Threats
3. Malicious File through email
4. Zoom Application Vulnerability leads to data exposure
5. Phishing attacks

Prevention of all these threats.

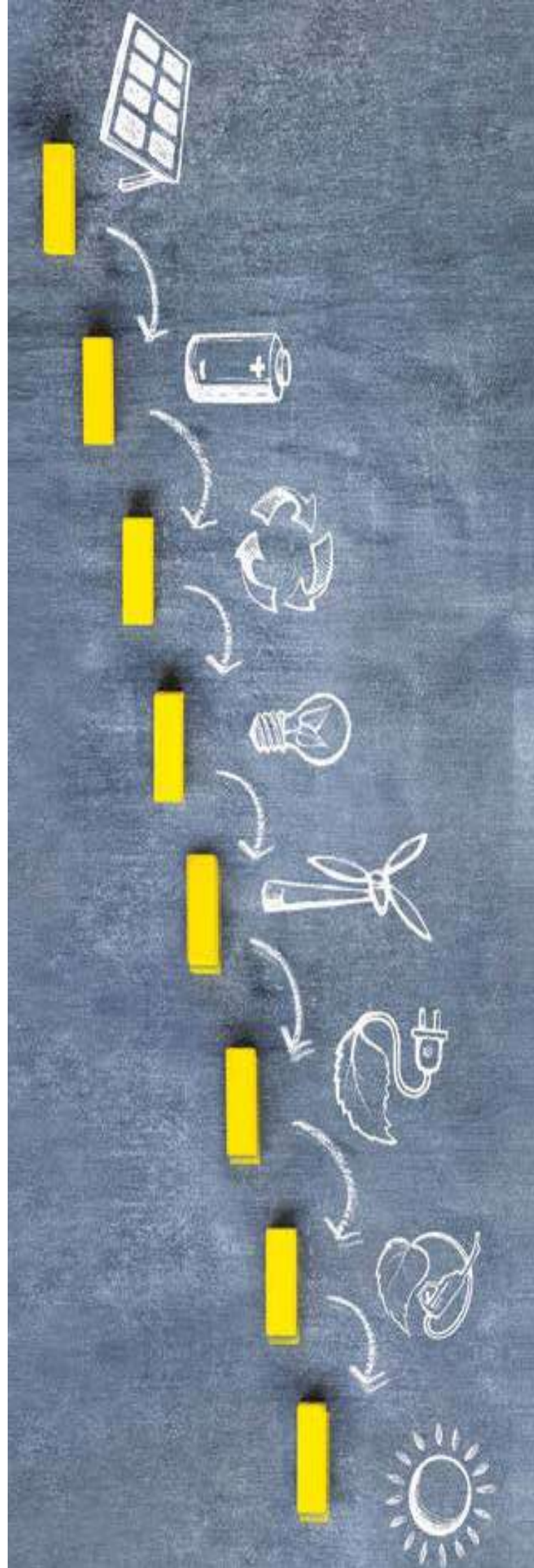
Apart from this, there was a live practical demonstration of how hacking is done. Numerous queries and doubts from the side of participants were also discussed.



DRACATHON

- Technical Video Contest

IEEE PES in association with 'IEEE CS SOCIETY' of Viswajyothi college of engineering and technology conducted a competition to show the technical skills as a part of 'DRACATHON'- unleash the beast in you, conducted as a part of PES Day 2020 celebration. A technical video contest. We have posted it on our Instagram page's IGTV, @ieeesbvjcet. Total entries are 3, out of which Siddharth Ganeshan won the prize for the best video.



INDUSTRY CONNECT 2020

As part of the 3rd IEEE PES Day 2020 Online Education Activities, the Student Branch Chapter of PES at National Institute of Technology Calicut was successful in hosting a Virtual Industry Expert discussion – INDUSTRY CONNECT; which brought together experts from the power industry, research and development organizations, electric power utilities, and energy sector service providers to discuss, share and exchange ideas related to the latest trends and technologies in the power industry.

The event was received by overwhelming registrations from professionals, engineering college faculties, students, and research scholars from all over India. We were glad to have a few international participants as well who attended the sessions.

INDUSTRY CONNECT
25th April 2020

Session 1: Controlled Switching Basics, Application and Recent Trends 10:00AM IST

Session 2: Reactor Switching Challenges and Controlled Switching Strategies 4:00PM IST

ABOUT THE SPEAKER

A Past Graduate in Power Systems and Distribution in the area of Controlled Switching, Dr. Urmil Parikh is currently the Principal Engineer - Power Systems, he has published a number of papers in various international journals and conferences in India and abroad. His specialties include controlled switching for Circuit Breakers, Load shedding monitoring & Load Management of HV Switchgear equipment has focused Switchgear development, Power System analysis and System Investigations. He is also a contributing reviewer, representing India for study committees of CIGRE WG A2.0 guidelines and also provides for the supervising and operation of controlled switching projects and also for IEEE SC 104/105 in AC circuit breakers with exceptionally low electromagnetic wave emissions. He has delivered expert systems in the area of power system studies and protection for a large number of participants from various power industries and engineering colleges.

SPEAKER
Dr. Urmil Parikh
Principal Engineer,
ABB POWER PRODUCTS & SYSTEM INDIA LIMITED

INDUSTRY CONNECT
27th April 2020

Grid Operations - Challenges of the day 10:00AM IST

ABOUT THE SPEAKER

An alumni of National Institute of Technology Calicut, with a Post Graduation in Industrial Power and Automation, Mr. Vineeth Koshy Philip is an experienced professional in the Power Systems domain. He is employed at the Central Grid control center as an Operations Planner with a GCC utility. His expertise includes operations and generation control, operating economy and compliance.

SPEAKER
Mr. Vineeth Koshy Philip
Operations Planning Engineer

The first guest lecture was delivered by Dr. Urmil Parikh, Principal Engineer – ABB Power Products & System India Limited, and focused on Controlled Switching Technology. Controlled switching is used to mitigate transients in power systems during the switching of various power equipment like reactors, capacitor banks, transformers, and lines. This technology also assists in managing the grid due to large renewable penetration and also improves the life cycle duration of the power system assets. The sessions discussed challenges in implementing this technology and the way to handle them considering equipment design, switching device characteristics, and network topology.

Our second invited guest lecture was proudly delivered by our alumni (Batch of 2011), Mr. Vineeth Koshy Philip – Operations Planning Engineer at a leading utility in GCC. He laid out a beautiful explanation of how the Grid operations take place and the latest technologies in place. He emphasised on the roles within a Central Control Center, recent trends in Power System Control, Economic Operation, experiences with Renewable Energy Mix & Smart Metering and familiarisation of Industrial Tools in Use.

APTORA 2.0

In view of PES DAY 2020, the Power and Energy Society of IEEE SB CEA decided to organize the APTORA 2.0, a successor of APTORA 1.0 that was conducted the year before. APTORA is an online 60-second video competition on the topic “Emerging Technologies” as a facet of the PES Day 2020 challenge through our Student Branch’s official Instagram page.

The Student Branches of various colleges that participated could also challenge each other to participate in the contest. The event was well attended and saw participation from SBs from different parts of the country. Through this event, the participants have learned presentation skills and how to be spot on with the topics of their presentations. Pulling off a brief talk about a topic on something as vast as emerging technologies and presenting them within 60 seconds is a difficult task that requires proper knowledge and research in the field. APTORA 2.0 managed to introduce a healthy competition between various Student Branches while also fulfilling its purpose of gaining, briefing, and sharing the knowledge of participants so that we could promote the young engineers to thrive for knowledge on the ever-relevant topic of emerging technologies.

The winners were declared based on certain criteria that were given to the participants before the competition, the criteria being the Contestant’s performance and the number of likes received for their

post. The Winners were declared through the official Instagram page of IEEE SB College of Engineering Adoor.



3 PHASE VIRTUAL

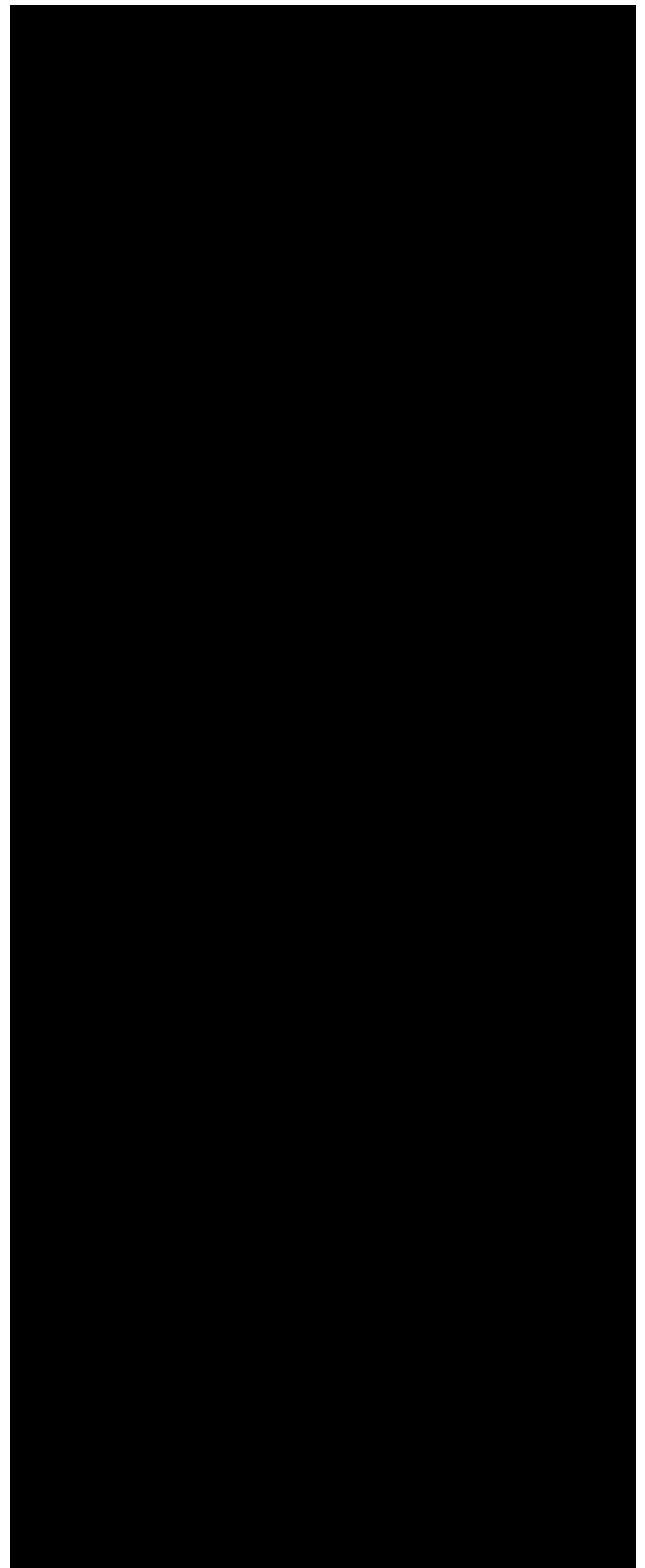
The Flagship event of IEEE PES Student Branch Chapter of Marian Engineering College

The legacy of 3 PHASE dates back to its humble beginnings in 2016, as an event to celebrate science and engineering. It was a result of an aspiring mind’s efforts to promote science and technology among the students and the workforce. With its charisma and effective organization, 3 PHASE flourished from being a mere technical event to a mainstream phenomenon by 2019 through 3 PHASE REGENERATED. 3 PHASE, thus elevated itself as the official flagship event of IEEE PES MCE SBC. The outstanding support that we had received throughout the years inspired us to formulate the third edition of this technical

extraordinaire 3 PHASE VIRTUAL. This year's theme "Forging a new pathway", embodies the vision of its former organizers and our reckless efforts to materialize the event at this time of quarantine.



3 PHASE VIRTUAL was held between 25 April 2020 to 30 April 2020, 5days with 12events. Participants could register through the official site of IEEE PES MCE SBC (<https://ieeemcepes.org/>), registration fees of Rs. 25 /- were charged as the registration fees which they could pay through the online payment portal. With a single registration, the participants could access all 12 events. On registration, participants received a question link via the registered email id which granted them access to all 12 events. The technical competitions were open from 26 April 2020 to 30 April 2020. where candidates could submit the final response before 30 April 2020. Each day a webinar with our distinguished speakers were hosted successfully by IEEE PES MCE SBC.



DYNAMITE

IEEE PES student branch chapter of Marian Engineering college hosted an interesting technical game session for the participants through DYNAMITE.

Pictures based on scientific innovations and technologies were provided to the candidate. The students could register through our official website (<https://ieee-mcepes.org/>). Amal A N of Marian Engineering College secured the first prize in the competition.



ARDUINO BUZZ

In our quest to bring more spirit into the competition we thought of materializing ARDUINO BUZZ as part of 3 PHASE VIRTUAL. ARDUINO BUZZ is an Arduino based coding competition that challenged technical minds to predict the most accurate code which would generate the plot displayed by the serial plotter. The students could register through our official website (<https://ieee-mcepes.org/>). The plot was provided to the attendees and they were asked to write the correct

Arduino code. Nicky Biju of Marian Engineering College secured the first prize in the competition.



INNOVATION HACK

Innovation Hack was an online idea presentation conducted by IEEE PES in association with IEEE CS and IEEE SIGHT VJCET. The challenge is mainly to present a technology to ease the problems faced after this battle with COVID19. The event was open to only IEEE Members. The winning idea was rewarded with a cash prize of Rs 1K and the second for Rs 500. The winner was Akshita Guptha and runner up was Amith Tony Joseph. The judging panel consisted of Dr. M Balakarthi, Jomu M George, and Krishnendu K.



WEBINAR

- On Emerging Technologies in Power Transmission

As part of the International PES day celebrations, the PES SBC of Rajagiri School of Engineering and Technology hosted a webinar on Emerging Technologies in Power Transmission, led by Mr. Saran KS, one of the outstanding Young Professionals of Kerala. The webinar deals with the new technological trends in Power Transmission and sought to enlighten the fresh students of the Engineering discipline on the nature of their subject and the scope of their technical knowledge in the industry.

The event was a purely technical webinar on current and rising trends in energy transmission. Topics of complexity like HVDC and FACTS were explained with ease by Mr. Saran KS, and the Q&A session with the participants was also expertly handled. The participants were enlightened about the subjects that were presented and were happy about the execution of this topic. This was discerned from the feedback forms we circulated.

START THE CHAIN FOR SUSTAINABLE WORLD

IEEE PES and SIGHT of Viswajyothi college of Engineering and Technology, Vazhakulam conducted a Campaign for creating a Sustainable World in association with Inaugural SIGHT DAY and PES DAY.

The campaign challenged 50+ members out of which 18 members accepted the challenge. The videos was posted on SB Instagram pages.



WEBINAR

- On Basics of Nano Sensors and their Application

IEEE SB GEC, Thrissur in association with the PES Day 2020 conducted a Webinar on the topic “Basics and applications of Nano Sensors”. The session was planned under the guidance of the SB Chair Vishnu Suresh and PES Chair Shaharadh S. The session was handled by Dr. Yuvraj Velusamy who is an Assistant professor in the Department of Biotechnology at Sahrdaya College of Engineering and Technology Kodakara, Thrissur. He also holds a doctorate in Nanomedicine. The registration for the event started on 27th April and was closed by 28th April. The registration went up to 200+ participants.



The session began at 4.30 pm on 29th April, starting with a few facts about the novel coronavirus including its size & structure. Then he talked about the way nature inspires us in developing Nanotechnology. He continued with the definition of nanotechnology, nanoscale, nanoparticles found in nature, human sensors, and nanotechnology in everyday life. Then he acknowledged with nanosensors, top-down & bottom-up process, techniques used, and the types of nanosensors. He also talked about materials used and the application of nanosensors which include the food industry, agriculture, nanorobots, cancer therapy, defense, and much more. The session ended after a Q&A session by 5.45 pm.

TOP TIPS TO SAVE THE EARTH

SAVE ENERGY



change your LIGHT BULBS

If every U.S. home swapped out one incandescent bulb with a compact fluorescent bulb, we'd save enough energy to light more than 3 million homes each year.



live where YOU WORK

Leaving your car at home twice a week can cut greenhouse gas emissions by 1600 lbs each year.

adjust your THERMOSTAT

Increasing your thermostat by 1° in the summer and decreasing it by 1° in the winter will save you 10% on your energy consumption!



SAVE WATER



shower WITH A FRIEND

A full tub uses 70 gallons. A five minute shower is 10-25 gallons. Skip the solo tubby time and shower with a friend. It's good for the soul and good for the earth.



go VEGETARIAN once a week

It takes 2500 gallons of water to produce one pound of beef.



fix that LEAKY TOILET

You could save 200 gallons of water every single day.



REDUCE, REUSE, RECYCLE



reduce your TRASH

Turn your scraps into earth-friendly compost!

Try worm composting for speedy results. Hint: they love coffee!



reuse your SHOPPING BAG



recycle your ELECTRONICS

One of the fastest growing forms of waste in the U.S.



Professional Exe-Com 2020-2021



Er. AK Suhair
Chairman



Dr. Sobha Manakkal
Vice-Chair



Er. Ajith Gopi
Vice-Chair



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Er. K.R. Venugopal
Membership Development



Er. Varghese CM
Industry Relation



Prof. Muhammad Kassim
Student Contests



Prof. P S Chandramohan
Publications



Er. Koruthu Varghese
Conferences/DLP



Er. Jayan Payipatt
Technical Activities



Dr. Kumaravel
Malabar Subsection Representative



Prof. Sunitha Beevi K
WiP Activity Coordinator



Prof. Bijuna Kunju
Industry-Academia Interactions



Dr. Nafeesa K
Educational Activities



Prof. K Biju
MDI



Er. Anandhu S Kumar
Student Activities Coordinator



Er. Saran K S
PES YP Activity Coordinator

Student Leadership Team 2020



NITHIN VM
RIT Kottayam
PES SR



HAMNA SUNIL
CE Trivandrum
Women in Power SR



AKSHAY C
RIT Kottayam
PES TC



MADHU KRISHNAN AP
JCET Lakkidi
MDC



ASLAM UBAID
MESCE Kuttippuram
HSR - Malabar Hub



YADU KRISHNAN
CE Adoor
HSR - Travancore Hub



SWETHA PRABHAKAR
CE Chengannur
WIP SR - Kochi



SREELAKSHMI KS
JCET Lakkidi
WIP SR - Malabar



VIGNESH HARIDAS
ASIET Kalady
ECC



SARATH S
NSSCE Palakkad
ECC



SWATHI SREE
NSSCE Palakkad
PES - Design Lead



NAVANEETH KRISHNA
RIT Kottayam
Webmaster



ROHITH RAJAMOHANAM
MESCE Kuttippuram
*Newsletter Editor
(Designer)*



RAHEEMA
MESCE Kuttippuram
*Newsletter Editor
(Content Writer)*



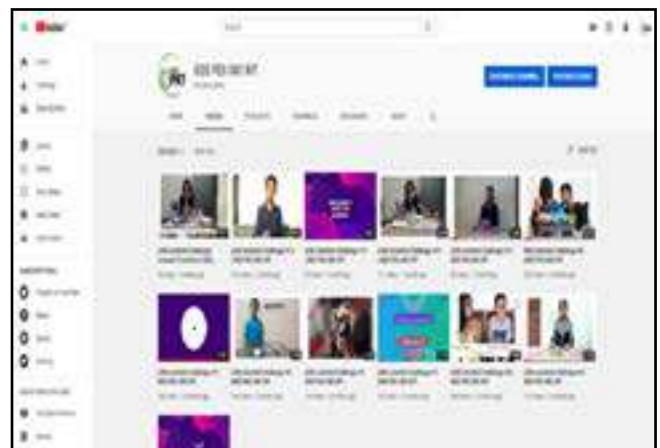
ABHIRAMI S
NSSCE Palakkad
Content Writer

MAY

LITTLE SCIENTIST CHALLENGE

IEEE PES SBC RIT conducted a Pre-university event namely the 'Little Scientist Challenge'. This challenge was conducted to introduce school students to the world of science. The event spanned over May and June.

This challenge was open to all engineering students irrespective of the college or university. The challenge was to shoot a video of students doing simple science experiments with the available materials in the home itself. The age limit was 13 years. It was made sure that every experiment was done under the supervision of an adult. All the entries were uploaded to the official YouTube channel of our SBC.





The ultimate aim of this event was to create and attract school students to the field of science. It had a great impact on the students and it made them come up with a variety of experiments. This was reflected in the responses received as we got 12 excellent entries. It also benefitted the school students to tackle their boredom due to lockdown and more importantly increased their curiosity towards science.

WEBINAR

- On Opportunities for a PES member

The IEEE PES SBC VJEC conducted an international webinar on Opportunities for a PES member as a part of PES DAY 2020. The webinar is conducted on 1st May 2020 at 8:30 AM IST through Cisco Webex. And the session is taken by Mr. Juan Carlos Montero (President-elect 2020-2021 IEEE CABANA Council, Vice President Membership and Image in Power & Energy Society). The webinar lasted for 1 hour. And the participants will get a chance to know about the opportunities for a PES member including access to various magazines and e-learning platforms and a lot more through the webinar. There were about 48 participants in the webinar. The coordinators organized the events smoothly and were well cooperated by the participants.

This is the first webinar of Mr. Juan Carlos Montero taken in Region 10. We got 93 registrations from various sections of Region 10 countries including India, Pakistan, Bangladesh, Srilanka and Malaysia and even from Panama and El Salvador.



WEBINAR

- Getting Started With Dialog Flow

IEEE MBCCET conducted a webinar on “Getting started with dialog flow”. It was conducted in association with the PES society of our college as a part of PES DAY 2020. We had participants from in and out of the college which made it a great success. The resource persons were Aditya Vishnu of the Computer science Department. The webinar mainly focused on giving the fundamental knowledge and started the event webinar by giving a brief description of the components along with the basics.

The session was informative and was helpful for the participants. The class was taken smoothly and it even had an interactive secession although it was planned to be completed by 4:00 pm it extended till 4:30 pm. After the secession feedback where collected from the participant and E-Certificate was provided to the resource person as well as the participants. With the help of this webinar, IEEE MBCCET tried to instill a basic knowledge of Dialog Flow on students which will be very useful to them for their future projects.



WEBINAR

- Basic Concepts of Power Generation and Transmission

In view of the importance of Power Transmission and generation, the IEEE Student Branch of College of Engineering Adoor in association with Power and Energy Society set up a platform for students to learn about the Basic concepts of Power Generation and Transmission in the lockdown period as a part of PES DAY 2020. The session was delivered by Dr. John George, Head of the Electrical and Electronics Engineering Department at College of Engineering Adoor and Branch Counselor of the IEEE Student Branch of College of Engineering Adoor.

The session aimed to introduce to the audience the basics of transmission and generation of Power, the advancements that happened in the field over the years, its impact on society, and the various principles of power transmission and generation. The session covered topics like the present-day methods of Power generation like Hydro-Electric power, Nuclear Power Plants, Basic Power transmission from the Power Plant to the consumer, stability of a power system which is steady-state stability, dynamic stability, and transient stability and limits of stability.

The session ended with the elaboration of some methods to improve transient stability. The session was very engaging and informative.



PROJECT DESIGN COMPETITION

A Project Design Competition was held by IEEE CUSAT SB IAS and PES combined on account of PES DAY 2020. The topic given was "Pandemic and Engineering ". The competition was held as two levels, preliminary and finals. The preliminary round consisted of the presentation of abstracts based on the project that was done by the teams. The selected five teams were selected for the finals and they were asked to submit a detailed video report of the project. The teams registered participated actively and brought up innovative projects. The participants were asked to submit the abstract of their project on the 7th of May and a detailed report on the 8th of May. On 9th May, the finalists were announced. The finalists were asked to submit a video presentation on their project on 10th May. The evaluation was done by Dr. P.G Latha, Assistant Professor of Electrical Department, CUSAT. The winners were announced on May

12th.

The 1st prize was bagged by team Nutmeg. The project was Smart Mask for pandemics like Corona and they got a cash award of Rs.2500. The 2nd prize was given to team Lavender for Covid Detector and the 3rd prize to team Maverick for Smart Belt. The second and third prize winners were awarded a cash award of Rs.1000 and Rs.500 respectively. The competition was held successfully with active support from the coordinators and participants.

ANY IDEAS?

As a part of Exuro'20- A series of online Inter SB Competitions hosted by IEEE SB TKMCE in association with "SAC?", the IEEE PES SBC TKMCE, conducted an online idea pitching competition. The candidates were supposed to team up within their SB amongst both Student and Professional members in their SB and submit innovative ideas on either of these topics:

- a) Sustainable Net-Zero or Surplus Energy Systems for Residential Premises in Kerala
- b) Ways to Improve the Performance of our Power Grid using Modern Techniques

Teams of up to 4 members in a group were allowed to participate and were given 8 days to prepare a presentation which could either have been a ppt or a video explanation along with an abstract of the idea in less than 350 words.



We saw a tight competition among 9 teams across Kerala representing 5 IEEE Student Branches. The event was judged by Dr. Imthias Ahmed T P and Dr. Sheik Mohammed S, experts in this field from the Department of EEE, TKMCE. The winning idea, from Team CUBA from Rajagiri School of Engineering and Technology, was about Peer-To-Peer Energy Trading. Another idea that was neck-to-neck was 'Modernizing Frequency Stability in Power Grids Using CNN'. The winning team was awarded 30 points, the first runner up with 15 points, and the second runner up with 10 points.

INDUSTRIAL LIGHTING DESIGN USING DIALux

A yet another initiative of the 2020 IEEE PES Day, a webinar on Industrial Lighting design using DIALux was organized by IEEE Student Branch College of Engineering

Karunagappally in association with Power and Energy Society on 9th May 2020. The webinar was taken by Er. Anandhu S Kumar (Sr. Executive at Wipro Lighting, IEEE PES Kerala Section Young Professional) from 7:30 pm to 8:30 pm (IST).

One of the most commonly used software to plan, calculate, and visualize lighting for indoor and outdoor areas, DIALux is popular among enthusiasts in illumination technology and light designing. The webinar was focused to acquaint this software with the students with an emphasis on its different industrial applications. Everything from beginning a new project, analyzing the different environmental and physical constraints, and manipulating the different features to create an efficient design was discussed in this online seminar. Including students and professionals, the online seminar had over 77 participants from different departments.

WEBINAR

- Journey of virtualization to cloud computing

IEEE PES SB SJCTET in association with RAS SB SJCTET as part of the '2020 IEEE PES Day' initiative conducted a webinar on the topic Journey of virtualization to cloud computing on 10 th May 2020. The session was taken by Mr. Muthukrishnan G (staff Engineer Juniper Networks Bangalore). The session was conducted from 11:00 am- 12:00 pm on Google meet. The session was taken to provide clear knowledge of cloud computing and its advancement, it was helpful for the attendees and the outcome was favorable.

IEEE PES SB SJCTET in association with RAS SB SJCTET as part of the '2020 IEEE PES Day' initiative conducted a webinar on the topic Journey of virtualization to cloud computing on 10 th May 2020. The session was taken by Mr. Muthukrishnan G (staff Engineer Juniper Networks Bangalore). The session was conducted from 11:00 am- 12:00 pm on Google meet. About 43 members participated. Out of which 29 were IEEE members and the rest were NON-IEEE members. The session started with a brief description of computing and the advancement of virtualization to cloud computing. The session was very interesting, helpful and the doubts of the attendees were cleared, and the outcome of the session was truly favorable.



PESCRIBE

In conjunction with IEEE PES DAY 2020 PES Chapter of IEEE SB Mar Baselios Christian

College Of Engineering And Technology, Kuttikkanam has conducted an online write-up preparing competition based on PES magazines called PESCRIBE. IEEE SB MBCET conducted this event to encourage students to read the PES magazine issued by the IEEE

POWER AND ENERGY SOCIETY, A bimonthly magazine dedicated to disseminating information on all matters of interest to electric power engineers and other professionals involved in the industry. The task is to select any one article from the PES magazine which had been provided by us, to read the magazine and make a quick write up on the article within 500 words.

There were a total of 47 participants in the competition; 26 IEEE members, 18 PES members and 21 non-IEEE members. We had participation from all over the country and a major portion of them were from the Kerala section. Based on their performance, we selected the top 3 write-ups, and certificates are given to them. And all the participants were provided with participation certificates.



PITCHATHON

In conjunction with IEEE PES DAY 2020 PES Chapter of IEEE SB Mar Baselios Christian

College Of Engineering And Technology, Kuttikkanam has conducted an online Pitchathon, an event that enabling aspiring and passionate individuals to identify the challenging problems. The event was open to all individuals, coming from technical and non-technical fields of interest. Under the mission of bringing the aptitudinal and diverse Indian student community together to bring a change and add value to the lives of people. We had given some problem areas to the participants, and they need to do is to identify the problems from the given areas and submit it on the forms that we provided.

The problem areas were :

1. Cybersecurity
2. Problems faced by women and children
3. Energy conservation
4. Agriculture, economy, and future business
5. Pandemic issues

The competition was held on the website zynact.com.

There were a total of 169 participants in the competition and it includes 42 IEEE members (26

PES members) and 127 non-IEEE members. We had participation from all over the country and a major portion of them were from the Kerala section. On the basis of their performance, we selected the top 3 write-ups, and certificates are given

to them. And all the participants were provided with participation certificates and a Free web hosting service.



IEEE AND PES MEMBERSHIP BENEFITS

IEEE PES SBC RIT conducted a Membership Development series, 'IEEE and PES Membership Benefits' from 16th May to 30th May. This was a WhatsApp group discussion conducted for the student IEEE members of RIT.

We know that the benefits of being an IEEE member are a lot more than we can explain. So, we decided to cover the most relevant benefits of being an IEEE member. We conducted the discussion once every two days. A PDF on the topic explaining all the benefits, contents, and opportunities are shared with the group and the members are always given the space to ask doubts and clear their queries. They are given two days for each topic to share their ideas and clear their doubts.

It was seen that all the student IEEE members were unaware of all benefits and opportunities of being one. This program helped a lot of members to learn and explore about IEEE and grab the benefits of being an IEEE member. This was reflected in the excellent responses that we got from the participants. It helped many of them to explore various resources to which they have access. We covered the following topics as part of this event:

1. GoogleApps@IEEE
2. IEEE PES resource center
3. IEEE PES Women in Power

4. IEEE Xplore Digital Library
5. IEEE Spectrum
6. IEEE App
7. IEEE Tv
8. IEEE Collabratec

We conducted this event in the IEEE SB RIT WhatsApp group so that every member of our SB can get benefitted from this event. The members were having the chance to go through the contents of the shared benefits according to their free time. This gave an upper hand over webinar sessions as every one of our members may not be available at the same time. Over 220 members of our SB got benefitted from this event. This was the 1st phase of our Membership Development series. There will be the next phase of this series to cover the rest of the topics.



ARTICLE WRITING

IEEE PES SB SJCTET as part of the '2020 IEEE PES Day' initiative conducted an online article writing contest. The topic was Resonance. The event was held on 17th May 2020. A total of 9 members were participated in the quiz, out of which 7 were IEEE members and 2 were NON-IEEE members. The event was held to increase the writing skills of the attendees. The outcome was favorable. The winners were appreciated for their excellent performance.



KNOW YOUR SOCIETY: ALL ABOUT PES

IEEE PES SB ASIET hosted a webinar on the topic 'Know your society: All about IEEE PES' on 17th May 2020 from 3:00 pm to 4:00 pm at Cisco WebEx.

The session was handled by Mr. Amal J Nellickan, who has been a proactive volunteer of IEEE SB ASIET for the past three years.

His efforts helped the student branch to start the power and energy society chapter. He was also the membership development lead of the IEEE PES Kerala Chapter Student leadership team 2019.



Around 75 people took part in the webinar. The webinar was all about the IEEE PES Society. The Power and Energy society provides the world's largest forum for sharing the latest in technological development in the electric power industry, for developing standards that guide the development and construction of equipment and systems, and for educating members of the industry and the general public. Amal focused on the PES member benefits, scholarships, grants, and opportunities. And he also conferred about how we can make use of our membership in an effective manner. For that, he gave some expert advice also.

Power and Energy society provides lots of opportunities, scholarships, and grants to its active members. Amal has gone through all areas related to Power and energy

society in this one-hour session. The attendees got a great chance to learn about Power and Energy society through this webinar. The session was very helpful for the people to get some extra knowledge on power and energy society, and also it motivated the people to get a membership as well as to renew the membership. And at the end of the webinar, a Q&A session was also done. Many attendees sent their questions and Amal made sure that all doubts were cleared. And people commented that the session was very informative, which implies the session reached its ultimate aim.

The winners are Susmith Das KK (TKM College of Engineering), Jithesh Raj M (GCE Kannur), Asim Hassan (School of Engineering, Cusat) securing 1st,2nd, and 3rd positions respectively. Appreciation Certificates along with an online free course were shared with the winners.



TECHQUIZ

The IEEE Power and Energy Society (PES) SB Chapter, College of Engineering, Trikaripur on behalf of the 'PES Day,2020' conducted the 'TECHQUIZ', an Online Quiz Competition on 18th May 2020 at 7:30 pm. It was conducted through an online website 'ClassMarker'. The questions were related to basic concepts of Electronics, Electrical, and Computer Science Engineering. The online registration was started 2 days prior of which 115 registrations (79 IEEE members) were made. Further details were sent through a WhatsApp group including all the participants. Out of 115, 90 attended the quiz. A feedback form was also shared with the participants to get the necessary suggestions for the event.



WiP TECH'Z WEBINAR

By Er. Staji Wilson

"Awareness on IEEE Women In Engineering & Women In Power "

IEEE PES SBC of Marian Engineering College organized a webinar under the WIP TECH'Z series as part of Thirds PES Day Celebrations on 21 st May 2020. The event coordinators were S Devika Rajesh (Women in Power, IEEE PES Student Branch Chapter Marian Engineering College) and Gopika G (Vice Chairman, IEEE PES Student Branch Chapter Marian Engineering College). The event registration was done via the online registration portal through the registration link which was released on 20 May 2020 at 7:00 pm. All the registrations were done via the official website of IEEE PES MCE SBC - <https://ieee-mcepes.org/>.



The speaker was Er. Staji Wilson is an IEEE PES Young Professional and the Sub - Regional Representative of IEEE PES Women In Power. She has been an active IEEE volunteer has also led the IEEE PES team in PES Day 2020 as a country lead. She is currently working as an assistant engineer at Tata consultancy services. The webinar session handled the topic "Awareness on IEEE Women In Engineering & Women In Power ".

The event was open to all students from varying engineering domains. The registration was completely free. On registering the contestants received the meeting login credentials through their mail. There were a total of 30 participants, with a total of 36 tickets sold the event was an overall success.

WEBINAR

- PCB Design & Manufacturing Process

IEEE PES SBC CETkr conducted a webinar on the topic 'PCB Design and Manufacturing Process' on 21st May 2020 at 7.30 PM in Zoom on behalf of PES Day 2020. About 50 participants (30 IEEE members) took part in the webinar handled by Mr. Midhun C, (Jr. Hardware Engineer, Neo Green Labs Kochi), Volunteer, IEEE Kerala Young Professionals. The webinar link and other details were sent to the registrants through Email. The 2-hour session was very informative and helpful to gain an insight into the topic. The session gave an overview of how the PCBs are made, steps involved in the whole process, basic technical terms, and methods of production. Feedbacks and suggestions regarding the webinar were made to get from the attendees and the presentation slides were shared via email. Active participants were provided with participation certificates. A poster was released showing the gratitude towards Mr. Midhun C for the wonderful session.



VOLUNTEERING WITH IEEE

A webinar on the topic 'Volunteering with IEEE' was hosted by the PES Chapter of IEEE student branch ASIET, Kalady on 24th May 2020 from 3:00 pm to 4:30 pm at the online platform of Cisco Webex. On occasion with the 'PES DAY Celebration.'



The Resource Person for the event was Ms. Aathira Marayil who is currently the Joint Secretary of the Computer Society of the IEEE Kerala Section along with being the Electronics and Communication Coordinator of the IEEE Kochi Subsection and was the Region 10 lead of the IEEE Xtreme 13.0 she was the Public Relations Officer at IEEE Compute and the Content Developer of IEEE Compute and also the Assistant Publicity Lead of IEEE Compute, now she is working as a Software Developer at Lulu Forex.

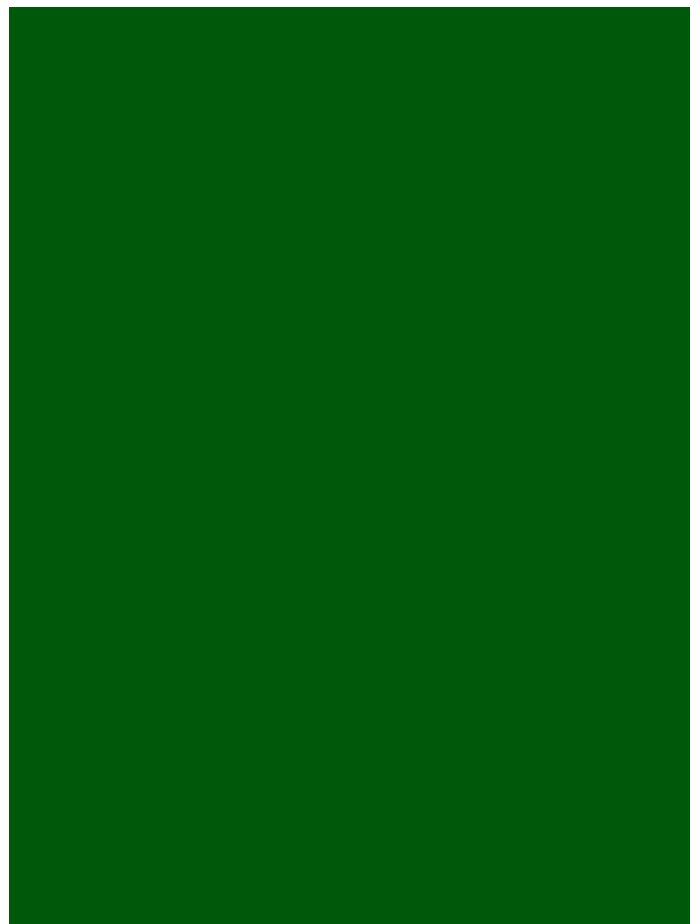
The event started with Ms. Aathira Marayil introducing herself to the participants which were followed by slides and explanations on the

topics such as IEEE, Volunteering, Networking, Scholarships, Awards, etc. She also explained about the self-satisfaction a person gets after becoming a Volunteer of the largest technical organization in the world, IEEE. She explained how Volunteering under IEEE helps us to hold an official position at various levels of IEEE's volunteer organizational structure that range from local activity to the global volunteer operations, impact what your local IEEE group offers members, network and engage with other members and to take part in determining the future of IEEE, planning meetings and other activities, mentoring students, chairing a committee, editing newsletters and creating or maintaining an IEEE website.

The main outcomes of this webinar were that it benefited the participants to learn about the topic 'Volunteering with IEEE' and how it helps them to meet other IEEE Volunteers and learn from them or we can pass on what we had learned from our own previous experiences, helps us to participate in IEEE Technical based activities and events and also learn about new technology products as it expands our technical knowledge, we can take part in events that interest us, gain valuable management and leadership skills and most importantly it helps us to give back to our profession.

USING IEEE WISELY

IEEE PES SBC VJCET has conducted an interactive session on the topic Using IEEE Wisely by Aathira Marayil on 24th April 2020 at 7 PM on Google Meet. The webinar was exclusively for IEEE members of VJCET. The session was interactive and the participants were giving really good reviews. A total of 64 members of IEEE VJCET SB participated.



EdiZone' 20



IEEE SB College of Engineering Karunagappally in association with PES organized a 3-day IEEE PES Day Virtual Fest, EdiZone 20, on 22nd, 23rd & 24th of May 2020. Named in memory of Thomas Alva Edison and his contributions to the field of electrical engineering, EdiZone was an online platform for the student community to develop and showcase their technical prowess. With a great set of friendly competitions like hackathon, idea pitching, poster designing contest, article writing contest, power, and energy quiz, and smart talks, hosted in association with it, this initiative fascinated student participants from different fields of interests.

Students must be encouraged in the world power and energy sectors that stimulate an interest in them to elevate their developmental and research expertise.

EdiZone was aimed to provide a series of lectures and contests that help them brainstorm and analyze the possible ways by which they can contribute to the rest of the world. Incorporating these core principles in creative competitions, it was successful in gaining interests

WEBINAR

- Use of AI for Efficient Energy Management

As part of PES Day celebrations, the Power and Energy Society of IEEE SB College of Engineering Adoor in association with Women in Power conducted a Webinar on the Use of AI for Efficient Energy Management which was chaired by Dr. Jayantika Soni on 22nd of May 2020. Dr. Jayantika Soni is an entrepreneur and researcher specializing in the field of power and energy. Dr. Soni is the co-founder and CTO of Resync, an early-stage startup building AI-driven energy clouds. Dr. Soni explains the high penetration of renewables and dropping prices of batteries which are disrupting trillion-dollar infrastructures, by moving from centralized power plants towards distributed energy resources. For the primitive power grid system, there's the powerplant that generates the energy and then transfers it through transmission and distribution networks to residential, commercial, and industrial sectors and for the advanced energy cloud system, there's a two-way power flow system, mobile energy resources, and digital energy cloud platforms. Then she talked about her company RESYNC's AI-based software optimization and real-time control.

Dr. Soni ended the webinar with an interactive session in which she clarified any doubts and answered various questions put forward by the delegates. She also conducted a Q&A

session in which she answered all the questions asked by the delegates. Dr. Soni ended the session on an inspiring note where she explained how she found out her true passion and how IEEE has helped her to achieve her dreams. The session truly inspired the participants to follow their passion and choose careers they are interested in.



CirQter

- Online circuit designing contest

IEEE PESSB SJCTET in association with the online technical fest of IEEE SB SJCTET, Technista 20 as part of the '2020 IEEE PES Day' initiative conducted an online circuit designing contest on 22nd May 2020. The event was held to increase the skills of attendees in circuit designing. A total of 20 participated, out of which 15 were IEEE members and the rest were NON-IEEE members. The winners were appreciated for their excellent performance.



A - CROSSTIC FUN

- Online technical crossword competition

IEEE PES SBC of Marian Engineering College organized an online technical crossword named A-Crosstic fun as part of Third PES Day celebrations. The event coordinators were Mohammed Habeeb (Chairman, IEEE PES Student Branch Chapter Marian Engineering College) and Alan Stephen (Secretary, IEEE PES Student Branch Chapter Marian Engineering College). The event registration was done via the online registration portal through the registration link which was released on 23rd May 2020 at 7:00 pm.



The event was open to all students from varying engineering domains. The registration was completely free. There were a total of 101 participants. The event had a puzzle related to the latest innovations in the field of engineering. The event received a great level of response from various engineering colleges in Kerala. Angeline Susan Mathew of Marian Engineering College secured the first position in the competition.

WEBINAR

- Prospects of Renewable Energy in Kerala

IEEE PES SBC CETkr conducted a webinar on the topic 'Prospects of Renewable Energy in Kerala' on 24th May 2020 at 8:00 PM in Google Meet on behalf of the PES Day Celebrations. About 30 participants (15 IEEE members) took part in the webinar handled by Shri. Ajith Gopi (Heading Technical Consultancy in Solar PV Projects and Wind Energy Programme), ANERT Department of Power, Govt. of Kerala and also Vice-Chair, IEEE PES Kerala Chapter.



The session was very informative and helpful to gain an insight into the topic. The session gave an overview of the overall scenario of the renewable energy exploitation in Kerala, sustainable use of a renewable source of energy, the potential for solar rooftops in Kerala, wind energy program, grid-connected PV plants, typical floating PV systems, doughnut economics, etc and also suggestions to be the new normal and build more equal and sustainable societies. The session ended with a very interactive Q&A session with interesting questions and relevant answers.

ONLINE QUIZ CHALLENGE

IEEE SB CEA in association with Power and Energy Society and Women in Engineering conducted an online quiz competition on the topic “Renewable Energy” named Online Quiz Challenge exclusively for 1 st Year IEEE Student Members of IEEE SB CEA as a part of PES day 2020. The Online Quiz Challenge consisted mainly of 15 questions based on the topic of Renewable Energy. It was conducted on the platform “My Quiz”. The questions were prepared by the responsible team. Rules and Regulations of the quiz were informed earlier. The participants joined the competition through the code that was provided. The participants were given about 15 seconds to answer a question. It was a very informative and knowledge enriching competition for the participants.



Presentation Competition

IEEE PES SBC VJCET has conducted an online presentation competition on Environment and Technology from 26th May 2020 to 31st May 2020. The presentation should only contain a minimum of 5 slides and a maximum of 8 slides. A total of 19 entries have been recorded.



Arduino Programming & Simulation

IEEE PES VJCET SBC in association with Women Power and IEEE WIE AG VJCET has conducted an online training cum webinar on Arduino Programming and Simulation from 27-30 May 2020 on Webex at 5 PM. It included the basics of Arduino to its simulation and it has been covered within 4 days. A total of 114 students participated in the webinar from different parts of the globe. The participants were given an online training certificate.



WEBINAR

- Opportunities: The Increasing Diversity in Engineering

RSET IEEE PES SBC in collaboration with WIE RSET conducted a webinar on “Opportunities - The Increasing Diversity in Engineering.” It was hosted by the renowned speaker Ms. Aisha Nazia Nasir Mayin.

The webinar was conducted on the 28th of May from 06:00 PM onwards. The session will be dealt with the various opportunities in the engineering discipline in regards to job opportunities. The speaker briefed us on the new dimensions in engineering, the integrated branches, and what job opportunities we could get out of it.

The webinar attracted the attention of a lot of students and young engineers who were eager to dive into the new depths of engineering. The platform for this event was Cisco WebEx.

The event was successfully held on 28th May from 6 pm to 7 pm. There was a total of 90 registrations. 48 of them were IEEE members and out of the 28 were PES members. The participants were given insight into the fact that opportunities are not things that knock on your door, but something that you have to seek. She also shared with us the importance of volunteering and how that can be a gateway to the future. Another important method that she emphasized for seeking opportunities was the effective usage of social media by which jobs, internships, etc. could be found.

After the initial introduction on how to seek opportunities by discovering oneself, she spoke about the new rising branches of engineering and “entrepreneurship.” In the last few minutes of the conversation, she mentioned the importance of having good communication skills to excel in any field and also gave tips on how to improve your speaking skills. The session was concluded with an interactive question-answer session. The webinar was well received by the participants.

Looking for ways to save money & energy at the same time?

Follow these 8 simple steps all homeowners should do to cost effectively lower their energy bills!



Install and set a programmable thermostat.

This could save you an estimated 10% per year on heating & cooling costs.



Choose energy-saving light bulbs. Replacing 5 of your home's most frequently used lights with energy efficient ENERGY STAR bulbs could save you \$75/year in energy costs



Use an electronic power strip. Help reduce phantom loads.



Use sunlight to your advantage. Choose window treatments that allow you to use natural light while reducing heat loss & gain.



Switch to ENERGY STAR appliances fans & electronics.



Reduce energy for water heating. Take simple steps like lowering your water heater's temperature and installing low-flow showerheads, to reduce your water heating bills.



Hire a professional to maintain your heating & cooling system. Check and replace your air filters regularly and arrange for annual maintenance with a qualified technician.



Consult a home performance contractor to achieve large savings. These professionals will do a comprehensive audit of your whole house using specific tools to measure home energy efficiency.

JUNE

AFTER GOODBYE

IEEE PES SBC VJCET organized an online talk series on the 1st, 2nd, and 14th of June 2020.

An Online talk series by the pass-out seniors about their IEEE Journey in College, its benefits, and their memories about IEEE. The platform used was Google meet. The talk was from 7 PM to 9 PM. All the IEEE members of our college were invited to attend. The program was refreshing and inspiring for our student members.





WEBINAR

- IEEE Badge Challenge & its opportunities

IEEE PES SBC RIT conducted a webinar session on 'IEEE Badge Challenge and it's opportunities'. The session was handled by Mr. Justin Varghese, Chairperson of IEEE PES SBC RIT. It was held on June 4, 2020, at 7 PM IST in the Cisco WebEx platform.

The session was to introduce the student members to the currently active IEEE Badges available in IEEE Collabratec and to make them aware of the opportunities which can be gained from IEEE Collabratec. The session also went through the steps to earn the Discovery Badge.



The webinar ended at 8 PM with the speaker thanking participants. He urged the participants to try and earn the badge and also motivated them to volunteer in helping other members to earn them. He gave a complete idea about IEEE collaborates. He explained how to set up an IEEE Collabratec account, the available communities, sources of mentors, networking techniques, and many more which are available in IEEE

Collaborates. This helped the student members to familiarise themselves with IEEE Collaborates. The event had a participation of 45 students. The webinar was recorded and it was shared among the members which helped them to attain the badges. More than 50 student members from our SB collected the Discovery badges.

POSTER DESIGNING

On behalf of the world's environment day, IEEE MBCCET SB chapter in collaboration with PES MBCCET SB, IAS MBCCET SB and PES women in power conducted an online poster designing competition. The event was opened to both IEEE and non-IEEE students. World Environment Day focuses attention on important environmental issues. According to the United Nations, "World Environment Day is commemorated each year on June 5th. It is one of the principal vehicles through which the United Nations stimulates worldwide awareness of the environment and enhances political attention and action".

The theme for World Environment Day 2020 is, 'Time for Nature', with a focus on its role in providing the essential infrastructure that supports life on Earth and human development. There was a good number of participants and made the competition a great success. Also, all the participants were provided with participation certificates.

WEBINAR

- AI Techniques in Smart Grid and Renewable

In view of PES DAY 2020, the Power and Energy Society of the IEEE Student Branch of College of Engineering Adoor decided to organize a Webinar on AI Techniques in Smart Grid and Renewable Energy Systems. We thought that there was no better host for this class than Mr. John Benedict Boggala. He explained what smart grids are and how they work in accordance with AI. He explained how Smart grids may be able to power the future and introduced the delegates to the scope in the field of Smart Grids. He also made it clear how AI technology works along with the Smart Grids to ensure more efficient transmission of electricity and helps in faster restoration after power blackouts. He shed light on the fact that with the proliferation of IoT technologies like sensors, controllers, automation systems, etc, the development of Smart Grids will also take place.

He concludes his session by briefing how promising Smart Grid technology is and how, with some improvements and significant investments in infrastructure, Smart Grids may become a reality. Mr. John also provided some links to the participants which may help them gain knowledge in the field. After the webinar, there was a QnA session in which he clarified all the questions asked by the delegates. He also pointed out how many job opportunities lie in the field of Smart Grids and which subjects to focus on to acquire a profession in this field. The session helped the delegates to learn more about the revolutionizing technology of Smart Grids and how it helps humanity by ensuring efficient power generation and consumption with the help of Artificial Intelligence. Mr. John's session was also very interactive and comprehensive and the feedbacks received from the participants were remarkable

WEBINAR

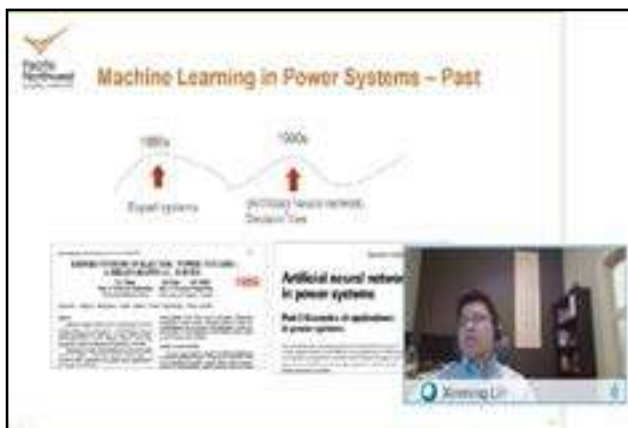
- Machine Learning in Power Systems

The IEEE PES SBC of Rajagiri School of Engineering and Technology hosted a webinar on "Machine Learning in Power Systems" on 6th June 2020. The session was led by Dr. Quihua Huang.

Quihua Huang is currently a Senior Power System Research Engineer with the Electricity Infrastructure Group, Pacific Northwest National Laboratory, USA.



He has been a Principal Investigator, Project Manager, Task Lead, and Key Technical Contributor in 10+ DOE-funded projects. Besides these, he is also the recipient of the 2019 IEEE PES Prize Paper Award, 2018 R&D 100 Award, and several other achievements in his field of expertise. The event was blessed with 343 registrations and live participation of a maximum of 153 participants online at a time. The session dealt with the basics of AI and a comparatively deeper dive into Machine Learning. The Q&A session at the end was also part of what made the webinar in total be well received by the participants.



of energy efficiency, government. We had participants from in and out of the college which made it a great success. The resource person explained the energy audit and the ways to reduce energy consumption per unit of product output. The session was informative and was helpful for the participants. The class was taken smoothly and it even had an interactive session. After the session feedback was collected from the participant and E-Certificate was provided to the resource person as well as the participants.



WEBINAR

- General aspects of the Industrial Energy Audit

The electrical and electronics engineering department of MBCET in conjunction with the PES Chapter of IEEE SB MBCET conducted a webinar on the topic “General aspects of industrial energy audit”. It was held on 9th June 2020. The resource person was B V Suresh Babu co-founder of attractions accredited energy auditor of Bureau

WEBINAR

- Nuclear Energy

IEEE PES SBC SCT as a part of World Environment Day conducted a webinar on Nuclear Energy – The need, the perception, the reality. It was conducted on the Google Meets platform. There were a total of 184 registrants for the webinar. The resource person was very much knowledgeable and was able to convey his knowledge to the attendees.

The session lasted for 2 hours. The attendees were happy with the webinar as the feedback received was mostly positive.



INTERNSHIP

- On Robotic Process Automation

IEEE Power and energy society and IEEE Industrial application society of the CUSAT student branch together conducted a one-week internship on Robotic Process Automation as a part of PES day 2020. The workshop was from June 10 - 18 and there was 2 hours of session each day at 4 pm for 10 participants. The workshop was handled by Keerthi, an instructor from network systems private Ltd Palarivattam. The workshop focused on familiarisation of blue prism software which is a robotic process automation tool and how to use this to automate various tasks that previously required humans to perform. The sessions with daily challenges were really interesting to us and able to do something new.

ELECTREGY

-Quiz Competition

IEEE PES SB SJCTET conducted a quiz competition based on Electrical Machines. The event was conducted online on 10th June 2020 from 2:00 pm-6:00 pm. Around 74 participated, out of which 54 were IEEE members and the rest were NON-IEEE members. The event was held to increase the knowledge and test the knowledge of the students. The winners of the quiz were appreciated for their excellent performance. The winners were :-1st position:- Athira Sreekumar; 2nd position:- Nicky Biju & Eva Antu.



- Ideathon

The event provided exposure to recent technologies for the battle against COVID-19 by actively finding the solutions for the problem statements given. They also worked on their teamwork and design skills to develop an idea to cater to the problems due to the pandemic. The final round provided great exposure to the participants as they got a chance to present their ideas in front of industry specialists. Participants were able to find out the need gap and were able to propose ideas or products.



- On Impact of COVID-19 on Industry: Affected Areas & New Career Opportunities

The IEEE PES SBC of Rajagiri School of Engineering and Technology hosted a webinar on the Impact of COVID-19 on Industry as part of DeCov'20 - an online webinar cum ideathon. The webinar was led by Mr. Sijo Kuruvilla George, the founding CEO of Startup Village. He is also a consultant to the KSUM and the cofounder of MobMe, the first student start-up in Kerala. The webinar dealt with the impact of COVID-19 on the current economic scenario as well as the post COVID career opportunities available for the student community. The event also dealt with the fundamentals of a start-up as well as the opportunities and funds available for it.



The event was purely an interactive session, with half an hour of Q&A. The Q&A session was expertly handled and provided an insight about the current as well as rising technological trends in the educational sector and how the pandemic affects the overall working of the industrial sector. The participants were enlightened about the topic and were satisfied with the execution of the webinar

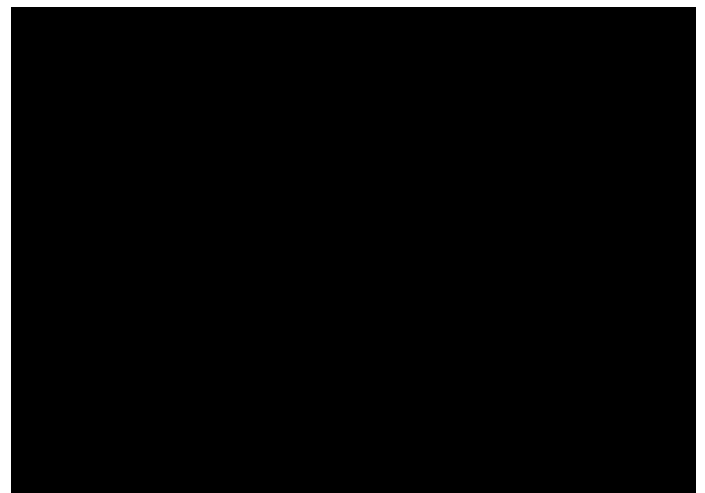
WEBINAR

- On Introduction to LinkedIn

The RSET IEEE PES SBC conducted a webinar on Introduction to LinkedIn hosted by Mr. Sachin Kakkar Director of Engineering at LinkedIn. The webinar was informative and illuminative. He shared information about the importance of having a good LinkedIn profile and how to make one. The session's participants were also briefed on to be active in LinkedIn, what type of

employers they need to go for, and what changes they should make in their profiles to stand out. The event was beneficial for those who didn't know much about it and enlightened others more about LinkedIn skills and learning.

This event was an eye-opener for many participants as they got to know more about the international platform LinkedIn and how it can create a major impact in their lives as professionals. They got to know of various platforms such as LinkedIn Learning, LinkedIn Skills, and the instant resume feature that the company provides to make your career easy and smooth. Overall, it was a wonderful session and was well received by participants from all over the globe.



PROFICIENT

- Report Presentation

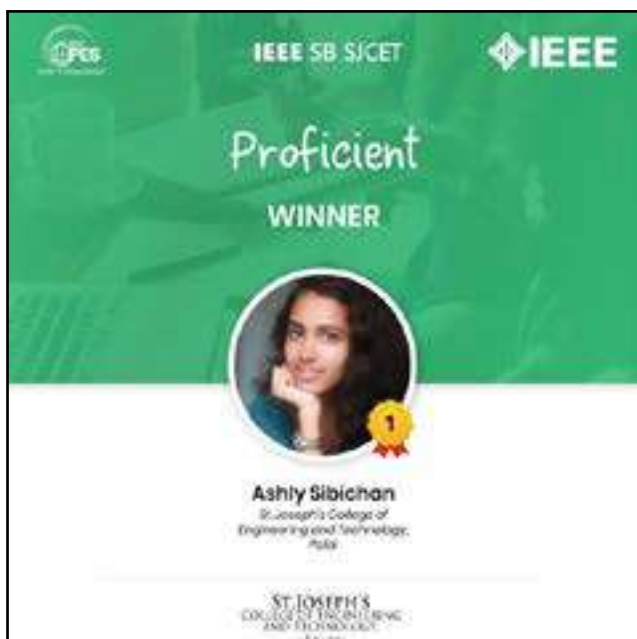
IEEE PES SB SJCTET conducted an online report presentation contest PROFICIENT. It was based on different kinds of work done during the quarantine time. The event was conducted on 20th June 2020 and the entries were accepted till 23rd June up to 6:00 pm. Around 20 participated of which 11 were IEEE members and the rest were NON-IEEE members. The outcome was favorable. The winners were given cash prizes for their excellent performance.



WEBINAR

- On Solar Energy

IEEE PES SBC SCT conducted a webinar on 'Prospects of Solar Energy in Meeting the Energy Needs of Kerala'. The Webinar was conducted on the Google Meet platform. There were 164 registrants for the webinar. The resource person was very much knowledgeable and was successful in imparting his knowledge to the attendees. The session lasted for about 2 hours. The attendees were happy with the webinar as the feedback received was mostly positive.



JUST A MINUTE

On behalf of International Day Against Drug Abuse and Illicit Trafficking, PES and IAS chapters of MBCCET has conducted an online competition just a minute (JAM). The topic of the competition was "How To Say No". The event was open to all individuals, coming from technical and non-technical fields of interest. The entries were uploaded to our Instagram page on 26th June. we had a good number of participants from in and out of college which made it a great success. The winners were selected based on content and likes(Instagram) respectively. On the basis of their performance and likes, we selected the top 3, and certificates are given to them. And all the participants were provided with participation certificates.



JULY

LET US HEAR FROM THE MOST SENIOR IEEE-ANS OF KERALA

IEEE SB & IEEE PES chapter of Musaliar College of Engineering and IEEE Educational Activities Kerala conducted a webinar series 2 on “Let us hear from the most senior IEEEians of Kerala” on 5th July 2020 from 6.30 to 8.30 pm. The session was handled by Er. S Gopakumar, Dr. K P Mohandas, Er. Philip John, Er. Koruth P Varghese, Dr. P Janardhanan & Dr. P R Sasendran Pillai. A total of 65 participants joined the webinar (35 IEEE & 30 NON-IEEE).





WEBINAR

- Introduction to Cryptocurrency and Bitcoin

IEEE PES SB SJCTET in association with Computer society IEEE SB SJCTET conducted a webinar on the topic Introduction to Cryptocurrency and Bitcoin on 5th July 2020. The session was taken by Mr. Levanath R (Insight STEM ambassador). The session was conducted from 7:00 pm-8:00 pm on Google meet. Around 131 members attended the session out of which 80 were IEEE members and the rest were NON-IEEE members. The session was taken to provide clear knowledge of Cryptocurrency and Bitcoin, its advancement. It was helpful for the attendees and the outcome was favourable.



WEBINAR

- An Overview Of Indian Grid

The electrical and electronics engineering department of MBCCTET in conjunction with the PES Chapter of IEEE SB MBCCTET conducted a webinar on the topic “An Overview Of Indian Grid”. The resource person was Anusha J Das, Deputy Director of southern regional power committee, Bengaluru. It was held on 5th July 2020. The webinar has two sections from 7 to 8 pm “An overview of grid integration system in India” and from 8 to 8:40 pm “A successful way to Indian engineering service”. We had participants from in and out of the college which made it a great success. The resource person explained most of our questions regarding the grid integration system in India. The session was informative and was helpful for the participants. After the session feedback was collected from the participant and E-Certificate was provided to the resource person as well as the participants.



WEBINAR

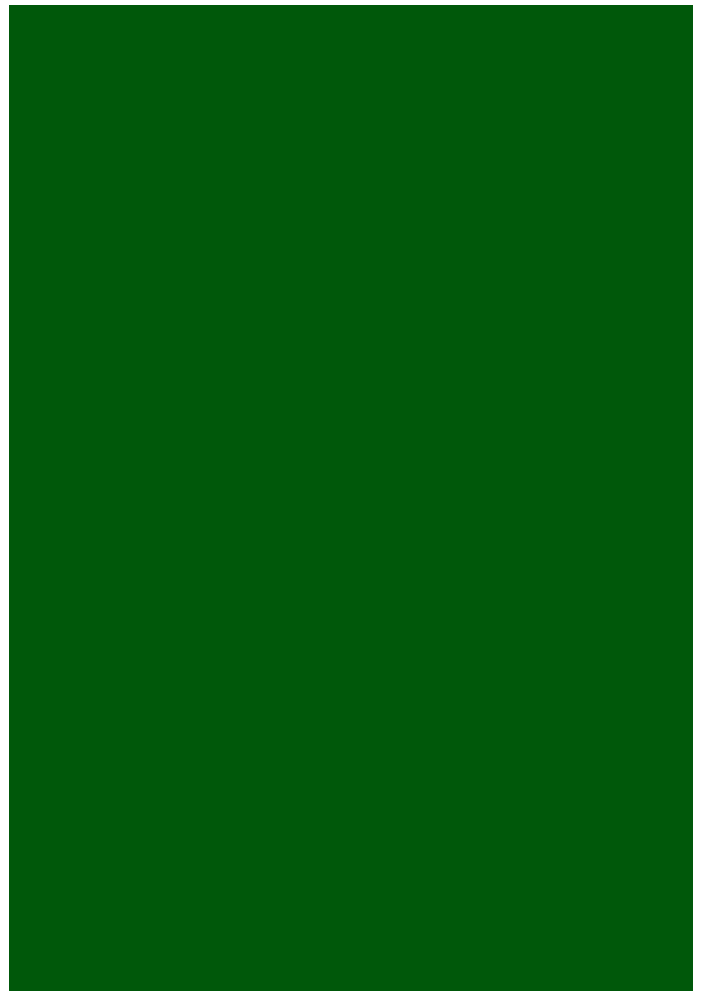
- Electrical System Design Engineer & Project Execution

A webinar on the topic “Electrical System Design Engineer & Project Execution” was hosted by the Power And Energy Society of IEEE Student Branch, ASIET in association with the Industry Applications Society of IEEE Student Branch, ASIET and the Department of Electrical and Electronics Engineering, ASIET on 5th of July, 2020 from 4.00 PM to 5.00 PM, through an online platform. The webinar was handled by Mr. Sajith G R, Senior Manager, ULCCS Ltd.



The session began with an introduction to the Power system utility and its requirement in the industries. He then spoke about breaker capacity and how both GFC & AMF differed and how they are used in various industries. The speaker also efficiently explained the importance of an electrical system design engineer and their role in the completion of projects. The participants were also shown a glimpse into what MCB, ELCB, MCCB

are and how they are designed to work efficiently in the appropriate situations, and why Building Integrated Modelling (BIM) along with renewable sources of energy would be important to meet the ever-increasing energy needs. The webinar also paved out to be an interactive session where the students raised various questions about the topic. The webinar also emphasized the working of Kerala's first solar power system and by the end of the session, the attendees acquired the knowledge about how electrical system design engineers are important for industries and their role in the completion of projects. A feedback session where the students gave their views on various aspects of the session was also conducted. The session ended with a vote of thanks delivered by Mr. Vignesh Haridas, Chairman, IAS SBC ASIET.



MEA ENGINEERING COLLEGE PERINTHALMANNA

IEEE PES SBC Inaugural Function

The IEEE PES Student Branch Chapter of MEA Engineering College was formed on 12th June 2020. It was inaugurated on 6th July 2020 at the hands of chief guest Prof. Frank C Lambert, President, IEEE Power, and Energy Society. The society is dedicated to empowering the development of technology, software, and best practices in all the areas of electric power and energy.



The program began with a welcome address by Dr. Febina Beevi, Advisor of PES SBC of MEA IEEE SB and HOD of EEE Dept. She formally gave welcome addresses to all guests, delegates, faculty members, and students. She gave an introduction to the IEEE MEA student council and mentioned various societies under it. The presidential address was delivered by Dr. G Ramesh, Principal, MEAEC. He gave the students a brief about the PES chapter. He also mentioned its benefits and importance. He requested the PES members to conduct various workshops, conferences, and webinars to create awareness about power saving to the general public. He also congratulated Dr. Febina Beevi and her team for their effort to start a PES chapter on the campus.

The inaugural address was given by chief guest Frank C Lambert, President IEEE PES. He talked about new technologies and upcoming opportunities to work on through which we can light up the world. He shared his journey in PES and encouraged the students to get involved and volunteer at various events. The felicitation was delivered by Sarada Jayakrishnan, chairperson, IEEE PES Kerala Section. She congratulated all for bringing in PES to the SB. She talked about the initiative of the Kerala section for bridging up academia and industry. She also encouraged the volunteers to conduct events that would reach out to the students and bring out the best in them. After that felicitation was delivered by Er Suhair AK, Chair IEEE PES Kerala Section. He talked about the PES chapter and its journey till 2020. He enlightened students with the importance of students to be IEEE members and other technical societies.

He also gave the students a brief about IEEE and its activities conducted worldwide. Later annual plan IEEE PES chapter of MEA SB was given by Mohammed Musharraf, Secretary IEEE MEA SB and founder chair of IEEE PES MEA SBC. He presented the detailed annual plan for the year 2020-21 which includes online workshops, a series of technical events, an awareness program, industrial visit, virtual boot camp, ideation programs, etc. In the end, he also mentioned about the achievements of the IEEE student branch. The program came to an end with a vote of thanks by Sana Parveen, Chairperson IEEE PES MEA SB. She thanked the dignitaries and delegates for sparing their precious time. She also thanked the SB members to make the inauguration a grand success. The function was organized through the Google meet platform.

About Guest & Delegates

Chief Guest:- Prof. Frank C Lambert, President, IEEE Power and Energy Society.

Other Dignitaries:- Sarada Jayakrishnan, Chairperson, IEEE Kerala section; Er. Suhair AK, Chairperson, IEEE PES Kerala section; Dr. Ramesh, Principal, MEAEC; Mr. Haneesh Babu, Vice Principal, MEAEC; Dr. Shoba Manakkal, Vice Chair, IEEE PES Kerala section; Er. Ajith Gopal, Vice Chair, IEEE PES Kerala section; Dr. Bobby Philip, Secretary, IEEE PES Kerala Section.

Over 100+ delegates attended the inauguration function.

PES VOLUNTEER TRAINING

IEEE PES SBC RIT conducted a volunteer training program for the student leader members of the 'PES TEAM' of Rajiv Gandhi institute of technology, Kottayam. It was held on 17th July 2020 at 1 PM IST on google meet. The session was handled by Justin Varghese, Chairperson of IEEE PES SBC Rajiv Gandhi Institute of Technology Kottayam. 16 student volunteers of 'PES TEAM' of our SB participated in the event. The speaker started the session from basics and made the volunteers aware of IEEE, SB, SBC, Affinity groups, IEEE Brands, IEEE code of ethics, and so on. He explained the importance and benefits of being an IEEE member. He also gave all adequate information of the IEEE funding opportunities, travel grants, networking benefits, IEEE websites and many more.

The session ended by 3 pm. The volunteers who participated in the event got the benefits at its highest level as the session was really understanding and covered every point that an IEEE member should be aware of. The session covered topics like how to conduct an IEEE event, how to improve managerial skills, vTools and its importance and a lot more. The PowerPoint presentation was given to the volunteers for future reference. The speaker was successful in bringing the flame of inspiration and leadership quality in all the participants.

PESQUIZINE

IEEE PES SBC RIT conducted the 3rd edition of PESQUIZINE, an inter-college online quiz competition on 8th July 2020 at 8 pm. The first edition of Pesquizine was conducted for students under the Kerala section while the second and third edition was open for students all over India.

The questions were based on the May-June edition of IEEE Power and Energy Magazine. The quiz had 20 multiple choice questions with a time limit of 6 minutes with no negative marks. The competition was held online on Myswots.com. 27 students participated in the event. Cash prizes were awarded for the top 5 students.

The main purpose of the competition was to create an interest among students to read and build up their knowledge from the articles issued in the IEEE Power and Energy magazine every month. The quiz capacitated the participants to step into the world of technological advancements and learn more about the advanced transmission systems.

In the digitalized era, where students lack the benefits of reading, pesquize created a great impact on participants. Satisfying comments and feedback obtained from students added to the achievements of the event.



WEBINAR

- Microgrid Management

The IEEE PES SBC VJEC conducted an international webinar on Microgrid Management. The webinar is conducted on 10th July 2020 at 8:00 PM IST through Google Meet. And the session is taken by Dr. Mo-Yuen Chow (IEEE Fellow, Professor, Director of Advanced Diagnosis, Automation and Control (ADAC) Laboratory, North Carolina State University, USA). The webinar lasted for 1.5 hour. And the speaker briefed all the section in the topic and discussed the future possibilities. There were about 63 participants in the webinar. And there were a questionnaire session at the last 20 minutes and many students cleared their doubts. The coordinators organized the events smoothly and were well cooperated by the participants. We got 193 registrations from all over the sections of India and registration from Egypt, Oman and Sri Lanka.



JAWAHARLAL COLLEGE OF ENGINEERING & TECHNOLOGY

IEEE PES SBC Inaugural Function

The Inaugural ceremony of IEEE PES SBC JCET was conducted on 12th July 2020 by the chief guest of the day, Er. Juan Carlos Montero Q., Vice-President, Membership & Image, IEEE PES at 7 PM (IST) through Cisco WebEx.

The inaugural ceremony commenced by reciting the Code of Ethics by Ms. Vidhya K P (Chairperson, IEEE SB JCET). Then, the welcome address was delivered by Mr. Sanish V S, Chapter Advisor, IEEE PES SBC JCET & Branch Counsellor, IEEE SB JCET describing the inception and establishment of the new chapter. After that, Dr. V P Sukumaran Nair, Principal, JCET delivered the presidential address. Followed by the inaugural address by the chief guest, Er. Juan Carlos Montero Q., Vice-President, Membership & Image, IEEE PES. He extended his support to conduct more programs in our Student Branch Chapter on behalf of IEEE PES. The event was graced by the presence and words of the following IEEE PES Kerala Chapter ExeCom members:

- Er. A K Suhair, Chair, IEEE PES Kerala Chapter
- Dr. Sobha Manakkal, Vice-Chair, IEEE PES Kerala Chapter.
- Er. Ajith Gopi, Vice-Chair, IEEE PES Kerala Chapter
- Dr. Bobby Philip, Secretary, IEEE PES Kerala Chapter
- Er. Anandhu S Kumar, Student Activity Coordinator, IEEE PES Kerala Chapter
- Er. K S Saran, PES YP Activity Coordinator, IEEE PES Kerala Chapter

After that, Dr. K. Umesha, Vice-Principal, JCET, gave the felicitation. He described the future research and technological possibilities in IEEE PES. Then, Ms. S Akhila, Women in Power Representative, IEEE PES SBC JCET presented the plan of action of IEEE PES SBC JCET in the year 2020. Subsequently, Mr. Umesh M, Chair, IEEE PES SBC JCET, delivered the vote of thanks.

Vote of thanks was then followed by a virtual photograph to cherish this glorious occasion. Lastly, Er. Juan Carlos Montero, Vice President, Membership and Image, IEEE PES, handled an insightful presentation on the topic IEEE PES Membership and Opportunities.

The inaugural ceremony concluded by 9 PM (IST) and about 72 attendees and 200 and counting viewers through Facebook live attended this inaugural ceremony.



NATIONAL CONFERENCE

IEEE PES SBC VJCET and EEE department of Viswajyothi College of Engineering and Technology, Vazhakulam has conducted an online National Conference on the topic **ADVANCEMENTS IN CONTROL AND COMPUTING TECHNOLOGIES IN ELECTRICAL ENGINEERING** on 15/07/2020-16/07/2020 at 9:30 AM on Google meet.



WEBINAR

- Newer prospects in Solar Technology Applications

IEEE PES SBC MES College of Engineering, Kuttippuram in collaboration with IEEE PES SBC NSSCE and Department of Electrical and Electronics Engineering, MES College of Engineering, Kuttippuram hosted a webinar on the topic 'newer prospects in Solar Technology Application'. The webinar was handled by Dr. Nikhil PG assistant director of the National Institute of Solar energy Gurgaon GOI.

Dr. Nikhil PG clearly explained about the latest Solar Technologies and their applications. The webinar was very informative and interesting, the session was followed by a Q&A session where the delegates raised their concerns and doubts and the speaker took the time and efforts to clear all of them. Almost 66 delegates, that includes 20 IEEE Members, 27 IEEE PES Members, and 19 Non-IEEE Members from various engineering streams of different colleges and professors also participated in the webinar. The webinar was conducted using the platform Google Meet. The session started at 3 pm and wound up at 5 PM.



YOUR SHINE CAN GLOW THE WORLD

IEEE PES SBC RIT and WIE AG of IEEE SB RIT jointly conducted an event – “Your Shine Can Glow the World”, a talk session on 18th July 2020 at 5:30 PM IST. The session was handled by Ms. Mehak Azeem, IEEE R10 SAC member and IEEE R10 Collabrator Coordinator. 65 participants were present in the session which consisted of 29 IEEE members and 36 Non-IEEE members. This event was organized to motivate and usher more women to take up STEM careers and flourish in their life.

The speaker by blending her stories and inspiring words, highlighted the core values a girl should carry in her mind while making career choices. She spoke about the impact of the masculine image of three school subjects-chemistry, mathematics, and physics, on secondary students’ career aspirations in STEM fields. By offering more complex understandings of issues related to professional women and work, she helped the attendees to increase self-knowledge about their own values and vision.



WEBINAR

- Power Converters - An Industrial Perspective

A webinar on the topic “Power Converters-AnIndustrialPerspective” was hosted by the Power and Energy Society Chapter of IEEE Student Branch, ASIET in association with the IndustryApplicationsSocietyChapter of IEEE Student Branch, ASIET and the Department of Electrical and Electronics Engineering, ASIET on 21th of July 2020 from 5.00 PM to 6.00 PM, through an online platform. The session was handled by Mrs. Mridula Vijayakumar, Former Senior Consultant, Power Electronics Sapiens Consulting. She took the basics of Power Converters since the audience were beginners / new to this field.

Around 90 registrants joined for the session. At first, she introduced herself and talked about the works that she is currently doing in this field. She began by making the participants aware of the importance of Power Converters in this era.



Today, Switched Power Converters are essential for high-performance energy control in a large number of systems and applications. The central concern in the design of switched-mode power converters is the improvement of their dynamic behavior. She briefed about the various types of power converters that are commonly and that non-linear Passivity-Based Control (PBC) algorithms for switched converters have proven to be an interesting alternative to conventional control.

Ms. Mridula explained the significance of Power electronics systems as they are used increasingly in a wide range of application fields, such as variable-speed drives, electric vehicles, and renewable energy systems. These elements have become crucial constituents in the further development of the emerging application fields such as lighting, electric aircraft, and medical systems. Reliable operation over the designed lifetime is essential for any power electronics system, particularly because the dependability of power electronics has become a prerequisite for system safety in several key areas, e.g. energy, medicine, and transportation. She kept the participants active throughout the session by asking questions to them in between and also shared the works she had done in this field and also inspired the audience to attempt on various related backgrounds. The session concluded with a vote of thanks and a feedback form was given to the attendees.

ASTRA

- Web Development

The WIE (Women in Engineering) affinity group in collaboration with PES Women in Power division of RSET IEEE SB conducted a 7-day long learning session on Front-End Web Development. The session was led by Mr. Ananthu T Mani, final year student and Secretary of IEEE PES SBC of RSET.

On the 22nd of July, a basic idea of Web Development was given, along with detailing on front-end and back-end development. The next day was a hands-on session on HTML, where the basics of HTML and creation of skeleton pages were covered.

On 24th of July, the participants were introduced to the basics of CSS and to various selection methods through a hands-on session followed by the topic “box model” the next day.

On 26th July, an introduction to bootstrap and grid system was covered, followed by a hands-on session on the same topic the next day.

On the final day, that is 28th July, a basic webpage with an image gallery along with the usage of font CDN's was developed. Assignments were given every single day, and the final assignment was a competition among the participants to develop a web page of their own within a duration of 3 days. The platform used for providing online lectures was Google Meet. The learning sessions

were recorded and shared among learners for reference.

The learning session was successfully completed where participants got comfortable with CSS3, HTML5 and Bootstrap4. The winners of the final competition were Anisha T Anilkumar and Jishnu K. A special mention was also given to Devika S R for the most aesthetic website.



FOCUS

- Online technical article writing competition

Power and Energy Society of IEEE MEC SB organized an online technical article writing competition named "FOCUS" from 23rd July to 3rd August 2020. Participants were asked to submit an article based on any of the four topics- Electric Vehicles, Distributed Energy Resources, Biomedical Signal Processing, Medical Virtual Reality. 20 participants from different engineering colleges across Kerala participated in the competition. Winners from electrical and biomedical domain were chosen. Jairam R Prabhu from Model

Engineering College and Anson Mathew from College Of Engineering Chengannur were the winners of the event.



LEARN TO MARKET/MAKE IT

IEEE PES SBC MESCE in association with IEEE SB MESCE conducted an event on marketing and public speaking. "Learn to Market/Make It" as part of "Legacy - Event Series" organized by IEEE SB MESCE.



The event was exclusive to the IEEE members of the institution. The event was a team competition where in the teams delivered marketing pitches on various imaginary products. The students showed high level of excitement and came up with creative and exciting ideas. The event was conducted on 23rd July 2020 . A total of 6 teams participated and three teams who performed the best were declared winners. Team Ada Lovelace came first followed by Tesla, Euclid and Marie Curie in the second and third positions.



FACULTY DEVELOPMENT PROGRAM

A National level 5-day Faculty Development Program (FDP) on the topic “Real time application of Power Electronics – Scope and Challenges” was hosted by the Power And Energy Society of IEEE Student Branch, ASIET in association with the Industry Applications Society of IEEE Student Branch, ASIET and the Department

of Electrical and Electronics Engineering, ASIET from 27th of July to 31st July, 2020 from 1.30 PM to 3.00 PM, through an online platform. The Program was coordinated by Ms. Deepa Sankar, Associate professor, EEE Dept, and Ms. Nayana J, IAS Chapter Advisor, IAS SBC, IEEE SB ASIET.

The program was inaugurated by Dr, V Suresh Kumar, Principal, ASIET, followed by the Welcome speech by Ms. Gomathy S, HoD EEE, and a session brief by Ms. Deepa Sankar, Associate professor, EEE ASIET. The Program kick-started with a vibrant session on “Recent advancement in electric vehicles and its charging Infrastructure” by Dr. V Karthikeyan, Assistant Professor, National Institute of Technology, Calicut, and the session covered the basics of electric vehicles and the importance of power electronics in the new area. On the second day, the session was handled by Dr. Sreelakshmy MP, Assistant Professor, National Institute of Technology, Calicut. She explained in detail the topic “Recent trends in electric drive systems for electric vehicles” and the session covered the importance of electric drives and its control aspects. The session on the third day covered the aspects of “Soft switching converters and its applications” and was handled by Dr. Shelas Sathyan, Assistant Professor, National Institute of Technology, Tiruchirappalli. He discussed in detail the disadvantages of conventional converters and solutions for the same and he also efficiently explained the hardware implementation of those.

WEBINAR

- Electrical Power System Operations and Economics

On the 28th of July, the Power and Energy society of RSET IEEE SB conducted a webinar on “Electrical Power System Operations and Economics.” The webinar was hosted by the brilliant Ms. Uduak Akpanedat. The webinar started at 5:00 pm and lasted for an hour with more than 45 students in attendance.

The webinar mainly dealt with modern systems and power operation systems. The host presented numerous slides that explained the concepts of modern power system, its characteristics, generation and issues relating to it. Further into the webinar, she explained about the economics behind these power systems and how it's important and introduced us to the idea of economic dispatch. The webinar concluded with a doubt clearing session followed by a vote of thanks by the Secretary. The session's main objective was to introduce and provide insight into the principles behind the operation of electrical power systems and the cost factors that play a major role in the economics of maintaining such systems. The session achieved its objective in a splendid manner, a fact that was proven by it being well received among the participants who also actively took part in the Q&A session.



The fourth day covered the importance of power electronics and its requirement in renewable energy applications, the wind energy sector was detailed, with practical challenges. The session was handled by Dr. A. Vijayakumari, Associate Professor, Amrita Vishwa Vidyapeedam, Coimbatore. While all 4 days covered the scope and importance of the area of power electronics, the last day shared the most vital information regarding real-time implementation using FPGA. The session was handled by Dr. Dinesh Gopinath, Associate Professor, College of Engineering, Trivandrum. A feedback session where the participants gave their views on various aspects of the session was also conducted at the end of each session. The session ended with a vote of thanks delivered by Ms. Nayana J, Chapter Advisor, IAS SBC, IEEE SB ASIET.

POWERSCOPE

