IEEE

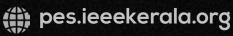
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POWERSCOPE

The News Magazine of PES Kerala Chapter Vol. 4 Issue 1









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IEEE

Formed on 1st January 1963, IEEE is the world's largest non-profit technical organization with more than 4,00,000 members in over 160 countries. The core purpose of IEEE is to foster technological innovation and excellence for the benefit of humanity.

Currently, IEEE has 39 technical societies, 7 technical councils, and 22 technical committees. IEEE has a strong reach among professionals and students, with more than 2000 student branches over 342 sections in 10 geographic regions. IEEE and its members inspire a global community through its highly cited publications, conferences, technology standards, and professional and educational activities. Through the diverse humanitarian and philanthropic programs of IEEE, there are many opportunities to contribute-big or small, to improve the human condition worldwide. You can become involved at any stage of IEEE engagement through contributions of your time, talent, and treasure.

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, nonprofit association of more than 40,000 industry professionals, academicians 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, maintanence, 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.

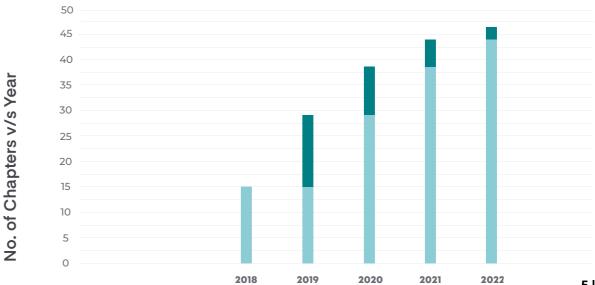
IEEE PES Kerala Chapter —

The unmatchable devotion and the spirit of volunteering that lies deep within the souls of all the volunteers and members of the Chapter has made IEEE PES KERALA CHAPTER as 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 a significant increase in 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 student chapters which moved across almost 28 student chapters by the year 2019. In 2020, it reached the destination with 37 student chapters, doubling the figure from the start and finally, in 2021, IEEE PES Kerala Chapter set its milestone as the largest IEEE PES Chapter in the world with 44 student chapters across Kerala. In 2022, it has increased to 46 student branch chapters. The membership crossed a landmark figure of 2000 by the 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.



Chair's Note

Dr. Ajith GopiChair, IEEE PES Kerala Chapter

Dear IEEE PES Volunteers.

Greetings!



I had attended the R10 Chapter Chair Meeting held in Singapore on 01 November 2022 along with some of our PES SB Chapter Chairs. I understand that, the world is looking at us based on the quantity and quality of programmes we have undertaken so far. As the largest PES Chapter in the world, IEEE PES Kerala Chapter is more responsible now. We will continue this spirit and vibrancy of volunteering in the year of 2023 as well.

IEEE PES Kerala Chapter is the Outstanding Large Chapter Award (OCA) Winner of 2021. I am sure that the Chapter has performed with the same spirit in 2022. PES Kerala Chapter has also won the High Performing IEEE PES Chapter Award for 2021. Kerala Chapter has a total 45 Student Chapters, out of which 39 Chapters are active. 36 SBCs have won High Performing SBC Award from Head Quarters for a total amount of more than \$10000. IEEE PES Kerala Chapter has also won the Social Media Activities Award for 2021.

The Chapter has conducted more than 150 activities including more than 60 activities by Kerala Chapter and the PES Kerala Chapter and more than 90 activities by various PES Student Branch Chapters. PES Kerala Chapter has conducted the very successful events like Student-YP Award Meet up, PES SBC Chair's Meet 2022, PES Professional Members Meet-up, All Kerala PES Student Congress (AKPESSC 2022), STEP 2022 etc. Also, IEEE PES Kerala Chapter actively participated in the IEEE Kerala Section events and important conference like Women in Engineering International Leadership Summit (WiE ILS 2022) held at Kovalam Thiruvananthapuram and INDICON 2022 held at Cochi.

Our very senior volunteers have won several recognitions. PES Kerala Chapter's Immediate Past Chair, Er. A Suhair has won the MGA Award for the outstanding contribution to IEEE. Also, PES Kerala Chapter Life Senior Member, Er. AG Hareendralal has won the IEEE India Council Lifetime Achievement Award for the Best Section Chair. PES Chapter Vice Chair Dr. Boby Philip has been recently nominated as the secretary of the PES India Chapter Council. IEEE PES Kerala Chapter is retaining the largest Global Chapter position in the world with a total membership count of more than 3500 which consists of an enormous numbers of student members who contribute continuously for the



chapter's success in maintaining our position of the largest PES society in the world.

My wishes again for a successful volunteering year 2023!

With Warm Regards Dr. Ajith Gopi Chair, IEEE PES Kerala Chapter

Editors' Note

Goutham Krishna B Silpa Prasad

"A dream does not become reality through magic, it takes sweat, determination and hard work."

IEEE PES Kerala Chapter has managed to have a successful year amidst the pandemic that shook the entire world and bagged the 2021 IEEE PES Outstanding Chapter Award for large chapters. We owe this achievement to the perseverance and dedication exhibited by the team of Professional Execom, consistent hard work and persistent vision of Student Activities Subcommittee, Student Team and the constant support of volunteers and members.

In the first edition of POWERSCOPE 2022, we introduce IEEE PES Kerala Chapter Student Leadership Team 2022. The IEEE PES Kerala Chapter Award Ceremony and events conducted by PES Kerala Chapter as well as the Student Branch Chapters are detailed.

After COVID-19 pandemic, the online events started shifting to offline and hybrid events and we are glad to see the same enthusiasm from everyone to be a part of these events.

We hope that you have a great time reading through our news magazine!

A dream does not become reality through magic, it takes **sweat**, **determination and hard work**.







CHAPTER ACTIVITIES AND **EVENTS**

Webinar:

Tantalizing Resume Building for Jobs/ Internships

Date: 5th January 2022

Time: 7:00 PM IST

Platform: Google Meet

Event association: IEEE SB CE Perumon, IEEE PES Kerala Chapter

Speaker: Praveen Raj Masilamani, System Engineer at Infosys.

IEEE SB CE PERUMON conducted a session at 7pm on 5th January 2022 as part of the PES Chapters Student Activities Committee Leadership Ambassador Program (STEP Category) on "Tantalizing Resume Building for Jobs/Internships". The session was held on Google meet. Speaker was Praveen Raj Masilamani, System Engineer at Infosys and an IEEE volunteer.



International Lecture Series:

Electrical Vehicle Charging Stations: Prospects and Challenges

Date: 7th January 2022 Time: 2:00 PM IST

Event Association: IEEE PES YP Kerala, University of Agder, IEEE PES Kerala Chapter, Department of Electrical Engineering NITC and Industrial

power group NITC

Speaker: Dr. Mohan Kolhe and Er. Sandun Konara.

Professor (Dr) Mohan Kolhe is with the University of Agder (Norway) as a full-time professor in electrical power engineering with a focus in smart grids and renewable energy in the Faculty of Engineering and Science.



Growing concerns on the carbon neutrality through zero emissions pathway had boosted the attention of all the stakeholders of the transportation sector towards electric transportation to achieve sustainable development goals in terms of mobility defined by the United Nations. Electric vehicles are going to contribute to the UN's Sustainable Development Goals (SDGs), especially SDG3, SDG7, SDG9, SDG11. The UN 2030 Agenda states that "sustainable transport systems, along with universal access to affordable, reliable, sustainable and modern energy services (i.e. SDG7), quality and resilient infrastructure (i.e. SDG9), and other policies that increase productive capacities (SDG3, SDG11), would build strong economic foundations for all countries"

International Lecture Series:

Biological and Electrical Microgrids: Land, maritime and space applications

Date: 25th February 2022

Time: 6 PM IST

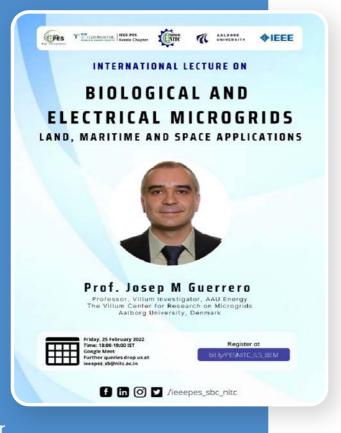
Event association: Department of Electrical Engineering NITC,

IEEE PES YP Kerala & Industrial power group NITC

Speaker: Prof. Josep M Guerrero.

Joseph M. Guerrero has been a full-time Professor with AAU Energy, Aalborg University, Denmark, where he is responsible for the Microgrid Research Program.

This talk started by introducing the control of microgrids, the parallelisms with the human brain and the research for possible sources of inspiration in the last frontiers of neuroscience. The session also included the topics of control in electric power systems of satellites and space platforms and he showed the approaches that extended from terrestrial microgrids and explained the differences and challenges when it comes to apply them out in space. Further, multi-microgrid systems were discussed for



Moon craters in future lunar manmade bases. Finally, the extension from the hierarchical control of microgrids to bioastronautics in the control of closed ecological systems to support with oxygen, water, and food to the astronauts. He concluded his session by talking about the possibility of creating new ecosystems for the Moon and future Mars bases.

International Lecture Series:

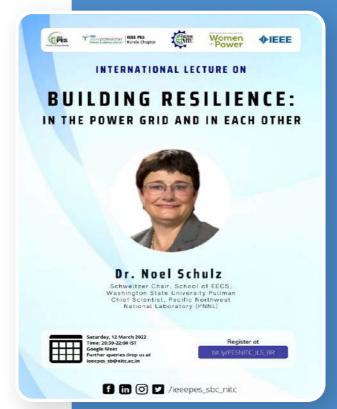
Building Resilience: In the Power Grid and in Each Other

Date: 12th March 2022

Time: 6 PM IST

Event association: IEEE PES Kerala Chapter, Department of Elec-

trical Engineering NITC & Industrial power group NITC



Speaker: Dr. Noel Schulz, Edmund O. Schweitzer III Chair in Power Apparatus and Systems with the School of Electrical Engineering and Computer Science, Washington State University (WSU), Pullman, WA

We have heard much about resilience related to the electric power grid over the last several years. Additionally, during the COVID-19 pandemic response, the word "resilience" has been used frequently to discuss coping skills and processes as individuals, public organizations, and private entities pivoted to on-line connectivity and system paradigm shifts during the public health emergency. This talk was divided into two parts. In part 1 the speaker dis-

cussed the resiliency in the power grid and shared updates on a US-India joint project funded by the US Department of Energy and Government of India Department of Science & Technology to create advanced distribution systems, including microgrids, that incorporate renewable energy sources and batteries. In part 2 the speaker discussed building your resilience and leadership skills including finding mentors and developing networks.





Date: 14th-16th January 2022

Venue: Jawaharlal College of Engineering and Technology, Lakkidi

Organizers: IEEE SB JCET in collaboration with IEEE PES YP Kerala

Partial Sponsor: IEEE Humanitarian Activities Committee



AGIRA was the first technical offline 3-day IEEE Humanitarian Activities Committee partially funded event organized by IEEE SB JCET, in association with IEEE PES Young Professionals Kerala from 14th January – 16th January 2022 at Jawaharlal College of Engineering and Technology, Lakkidi. The event witnessed a total participation count of 45 delegates from across the various engineering colleges of IEEE Kerala Section.

The event AGIRA promoted the participants to develop creative ideas and implement innovative projects alluding to the solar energy sector. AGIRA comprised of basic training & hands-on workshop on initialization & installment of solar power plants and other project ideas related to solar energy, Expert Mentoring, Industrial Visit, Environmental Visit and Cultural Night.











Webinar:

How to Write a Good Research Paper

Date: 15th January 2022

Time: 6 PM IST

Speaker: Dr. R. Venkateswaran

Event association: Humanitarian Activities Committee (HAC) IEEE PES SBC NITC, IEEE PES YP Kerala, Department of Electrical Engineering NITC and Industrial power group NITC

Dr. Venkateswaran (Venki) is the Chief Information Officer of Persistent Systems, responsible for the strategy and operations of the Enterprise Information-Systems with a focus to enable the transformation and growth of the business. The targeted audience for this webinar is researchers of the NITC community. Speaker elaborated about journal paper writing. He mentioned how to initiate thoughts for the journal paper, how to write a precise abstract and how it can be defined with particular divisions, how to make a good introduction part with effective literature. The speaker also mentioned about the content of the paper and how the conclusion section can be defined with a IEEE Power & Energy Society future scope. The session was very helpful for the researchers and gave insightful knowledge in writing a journal paper.



Webinar:

Global Sustainability Lecture series



International community for Global Sustainability (ICFGS) conducted a webinar on "Global Sustainability Lecture series" in collaboration with Energy Sustainability Focus Group (ESFG) ,#UMP Malaysia and IEEE PES Kerala Chapter, India.

First Lecture: Sustainability & Energy Conservation in the Building Sector and the Resource Person was Dr. Jagadish Vengala, Associate Professor, PVPSIT, Vijayawada, India. Second Lecture was on Floating Solar and Ocean Carbon Removal .The Resource Person was Mr Dan Barbulescu, Director, Energy Storage Rights, Australia. The meeting was hosted by Dr Nurizzatul Atikha Binti Rahmat, CEO-ESFG, Universiti Malaysia Pahang and Co-host was Dr Ajith Gopi, Chair, IEEE-PES, Kerala-Chapter, India. The talk was Moderated by Dr Meena Laad, Professor & Head, Symbiosis Institute of Technology, Pune, India. Being extremely relevant in the current scenario, the two talks were very informative and were liked by the attendees

Panel Discussion

Life is all about balance: One Heart, Many Roles



Speakers: Dr. G.Cigdem Yalcin, Dr. Gurleen Kaur, Dr. Lisa Sreejith, Dr. Anamika

Yadav, Dr. Ritula Thakur, Dr. Sobha Manakkal

Moderator: Mrs. Rinsha V

Event association: IEEE PES Kerala Chapter, Department of Electrical Engineer-

ing NITC & Industrial power group NITC

Panel Discussion on the International Women's day is one of the premium events of IEEE PES SBC NITC history. Panelists expressed their struggles and achievements. Ms. Rinsha Moderated the event in a nice way. Everybody expressed their feelings towards Women's day in a very unique manner. Diversity in the panelists is the highlight of the event.

Webinar:

Demand Side Management in Power Systems



Date: 2nd January 2022

Time: 6 Pm IST

Speaker: Dr Anjali Arun Dharme

The webinar mainly concentrated on implementation of demand side management programmes in India. Detailed stepwise action plan formulation for planning and implementing of DSM programme in India was presented. Various policies and regulations framed by India for promotion of DSM activities targeting different sectors were discussed in the lecture. The deficiencies in the existing regulatory and policy framework which have withheld deployment of DSM programmes on a large scale in India was discussed. Speaker also shared a number of barriers and challenges that are needed to overcome for realizing the potential of DSM in India.



WOW 2.0:WISDOM

Emerging Technologies: Trends in 2022

TECH TALKS

The event was a talk session on newly emerging technologies, conducted on 18th February 2022. IEEE PES SBC RIT in association with Women in Power-IEEE PES Kerala Chapter and WiE- Kerala Section, as a part of WOW 2.0.

The session was headed by Er. Shalini V Nair, Chief Technology Officer, Ennoventure Inc. Bangalore on the topic Emerging Technologies: Trends in 2022. The session was graced with the presence of Dr. Nafeesa K (WiP Coordinator, IEEE PES Kerala Chapter), Er. Ajith Gopi (Chair, IEEE PES Kerala Chapter), Er. Suhair A K (Immediate Past Chair, IEEE PES Kerala Chapter), Dr. Prince A (Advisor, IEEE PES SBC RIT), Ms. Alina Thomas (Global Publicity Outreach Coordinator, IEEE PES Kerala Chapter) and Dr. Kala, Treasurer (IEEE WiE Kerala).

The talk was about the newly emerging technologies. The section was very informative and everyone enjoyed it thoroughly. The participant count for the event was ninety eight.

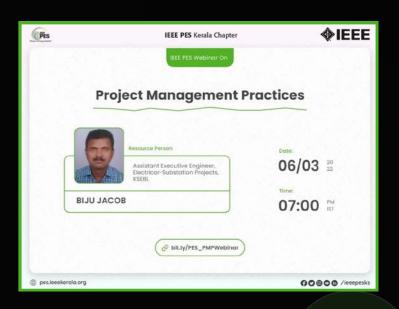


Webinar:

Project Management Practices

A talk session on project management practices was conducted by IEEE PES Kerala Chapter on 6th march 2022. It was a one hour session from 7:00 to 8:00. Resource person for the talk session was Biju Jacob, Assistant Executive Engineer, KSEB.

It was an amazing opportunity to increase our knowledge on project management. Since project management is an important aspect



in every engineer's life, the session helped in increasing our knowledge about project management.

Talk session:

Planning & Executing Humanitarian Projects

As a part of IEEE SIGHT DAY 2022 celebrations, IEEE PES HAC NITC presents "Talk on": "Planning and Executing Humanitarian Projects. The Resource Person:Dr. Bijoy Antony Jose, Associate Professor Department of Computer Science, Cochin University of Science and Technology, Kochi.

The event was conducted on Thursday, 28th April 2022 05:00 PM IST. This was a great opportunity to interact with our prolific speaker. The event is jointly organized and/or supported by IEEE PES Kerala Chapter, IEEE PES Young Professional Kerala, Department of Electrical Engineering NITC, Industrial Power Group NITC.



IEEE PES

Award Ceremony & 2022 Student-YP Meetup 2022

IEEE PES Award ceremony & Student-YP Meet-up was held on May 1st 2022 from 10AM to 1:30PM at Hotel Residency Towers Trivandrum. The event was exclusively for volunteers of IEEE PES Student Leadership Team 2021, 2022 and PES YP Kerala. The dignitaries present at the venue were Prof V K Damodaran (Mentor and Advisor, IEEE PES KC), Er. Suhair A.K (Former Chair IEEE PES KC), Prof Mohammed Kasim (Vice Chair, IEEE PES KC), Dr P.S Chandramohan (First Chair, IEEE PES KC), Dr Ajith Gopi (Chair, IEEE PES KC).

The event started with the Code of Ethics read by Mr Harikrishnan (HSR Kochi Hub), followed by the inaugural address and felicitation which



were given by Prof V K Damodaran (Mentor and Advisor, IEEE PES KC), Er. Suhair A.K (Former Chair IEEE PES KC), Prof Mohammed Kasim (Vice Chair, IEEE KS), Dr P.S Chandramohan (First Chair, IEEE PES KC), Dr Ajith Gopi (Chair, IEEE PES KC). The speeches included topics like how to become successful in our profession, how to become a successful volunteer. The inaugural ceremony came to an end with a vote of thanks by Er. Suhair A.K (Former Chair IEEE PES KC).

The new faces of the Student Leadership Team 2022 were introduced by Er. Akshay Krishnan (SAC, IEEE PES KC). Then we moved on to the award ceremony.

The 2019 Headquarters Awards and Recognitions were announced. Prof P.S Chandramohan was awarded IEEE PES OUTSTANDING ENGINEER AWARD (>15 Years). Er Ajith Gobi was awarded IEEE PES OUTSTANDING CHAPTER VOLUNTEER AWARD. Er Anandhu S Kumar was awarded IEEE PES OUTSTANDING ENGINEER

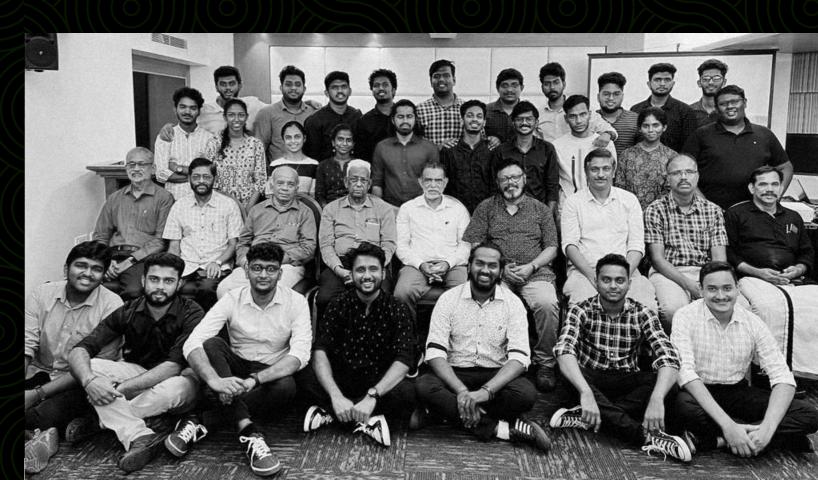
AWARD (<15 Years).

The 2020 Headquarters Awards and Recognitions were announced. Dr Sobha Manakkal was awarded IEEE PES OUTSTANDING ENGINEER AWARD (>15 Years). Dr Boby Philip was awarded IEEE PES OUTSTANDING CHAPTER VOLUNTEER AWARD. Dr Deepa S Kumar was awarded IEEE PES OUTSTANDING ENGINEER AWARD (<15 Years).

The 2021 Headquarters Awards and Recognitions were announced. Dr Nafeesa Koyisseri was awarded IEEE PES OUTSTANDING CHAPTER VOLUNTEER AWARD. K P Harikumar was awarded IEEE PES OUTSTANDING ENGINEER AWARD (>15 Years). K S Saran was awarded IEEE PES OUTSTANDING ENGINEER AWARD (<15 Years).

The vote of thanks was given by Er Akshay Krishnan (SAC IEEE PES KC), Er Anandu S Kumar (Industrial Engagement, IEEE PES KC), Er Harikumar K P (Secretary, IEEE PES KC).

The event concluded with a photo session



Andrytrial Vijit to

2MW Solar Power Plant

Date: 10th June 2022

Time: 10:00 am

Event association: IEEE SB NCERC and IEEE PES SB NCERC in collaboration with IEEE PES Kerala Chapter.

IEEE SB NCERC and IEEE PES SB Chapter NCERC in collaboration with IEEE PES Kerala Chapter went on an industrial visit to 2MW Solar Power Plant at Kuzhalmannam, Palakkad on 10th June 2022. There were about 70 IEEE student members accompanied by two faculty members. Officials at the solar power plant received us at the entrance and gave a detailed description about the solar power plants and their working.

The students were divided into three batches and each of the batch was routed to different sections of the power plant. The 2MW O&M team Ms. Prabha and Mr. Jithin has guided the team and described the Generation process, Control process, Transmission process and Power Evacuation of the solar power plants. Visit was very informative and had a good idea on the essential components and functions of a typical solar power plant in general and the photovoltaic system.





Workshop:

Introduction to PVsyst

IEEE PES SBC RIT in collaboration with IEEE PES YP Kerala, conducted a 2-Day workshop on Introduction to PVsyst to give students a basic idea on its working.

The session was of two hours, conducted from 19th to 20th February. The session was handled by Er. Hariprasad, Research and development coordinator, IEEE PES YP Kerala Chapter. The session was



very useful and each topic was taken in such a way that everyone would easily understand it. The participant count for the event was 41.

Training Session:

Interactive Training on Humanitarian Project Design

Young Professionals Kerala along with IEEE PES HAC organized a training session on Interactive Training on Humanitarian Project Design as a part of the PES HTPDC 2022.

The session was conducted on 27th March Sunday from 7:30 to 8:30pm IST. The panelist for the session was Dr. Shaikh Fattah (Chair, IEEE PES HAC), Dr. Hussain Mahadi (Chair, PES HAC Assessment Committee), Dr. Celia Shanahaz (Chair, PES HAC Education Committee) and Dr. Tanmoy Roy Choudhary (Secretary, PES HAC). The session was very interactive.







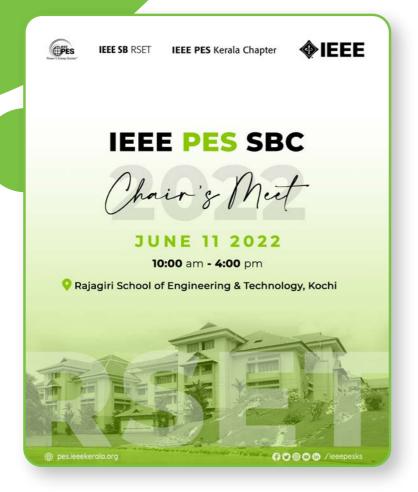
Webinar:

How to build a Good CV

The event was conducted on 30th April 2022. The event was aimed to build a good CV for the future placements of the participants. The session was taken by Rohith Rajamohanan Design Lead, IEEE PES Young Professionals Kerala.

The session was highly appreciable and noticeable. session was of 1 hour total and at the end of the session a feedback form is shared to the participants for their opinions about the webinar. There were many participants from various colleges and the overall review about the webinar was great.

ALL KERALA PES SBC CHAIR'S MEET 2022





The All Kerala PES SBC Chair's Meet was conducted on 11th June 2022 at RSET, Kakkanad. It was a well organized and a very informative session with many takeaways for those who attended the session. The grand inaugural ceremony was graced by the presence of Dr. Mini Ulanat, Chair, IEEE Kerala Section, Dr. Boby Philip, Vice Chair, IEEE PES Kerala Chapter, Dr. Sobha Manakkal, Vice Chair, IEEE PES Kerala Chapter, Er. Hari Kumar K P, Secretary IEEE PES Kerala Chapter and Ms. Prathibha P K, PES SBC Advisor, IEEE RSET SB.

The session started with the Code of Ethics read by Ms. Alina Thomas, WiP Student Representative. Ms. Prathibha P K, PES SBC Advisor, IEEE RSET SB was invited to give the welcome speech. Dr. Mini Ulnat, Chair, IEEE Kerala Section, gave the Inaugural address and she highlighted the responsibilities of a Chair.

Felicitation was given by Dr. Boby Philip, Vice Chair. He conveyed how the volunteers must contribute to fellow volunteers and to the society. The Felicitation address was given by Dr. Sobha Manakkal, Vice Chair. Her engaging speech was about how once can change the next day and how different tomorrow is from today. The Vote of thanks was given by Er. Hari Kumar K P, Secretary.

The next session was engaged by Dr. Sobha Manakkal covered various aspects like the new SBC inauguration, description of various upcoming events and other events. She also spoke about the WiE ILS in Trivandrum participation as well. A session on the PES activity guidelines was taken by Er. Hari Kumar K P. He had an informative session wherein he used Analytics and an engaging presentation to convey the information about the various activities conducted by respective SBC.

The important session on Vtool was taken by Er. Akshay Krishnan, Student Activities Coordinator. He talked about the Officer reporting of the existing and newly created SBCs. Details about Vtool Event reporting was also mentioned in a lucid manner, An engaging session on branding guidelines was taken by Mr. Sanjay P V, Design Lead. The session was an informative presentation which elaborated various aspects of the IEEE, PES logo and about poster designing.

An informative session on Academic projects and industry relations was handled by Dr. Boby Philip where he spoke about the academia and industry relation and how to best utilize this opportunity. As part of the Environment week celebration an Oath was taken. The oath was delivered by Ms. Sreelakshmi V, Student Representative. The session was anchored By Ms. Sidhi Asha Shaji, WiP Travencore Hub Student Representative and Ms. Irene Binnet, WiP Kochi Hub Student Representative.

IEEE PES Kerala Chapter

STUDENT LEADERSHIP TEAM

2022



SREELAKSHMI V RIT Kottayam Student Representative



ALINA THOMAS T RSET Kochi WiP Student Representative



NAVNEETH M **GEC Thrissur** Technical Coordinator



ROHAN DAMODAR S CET Membership Development Coordinator



SASHA S JCET Palakkad Student Representative Malabar Hub



HARIKRISHNAN PM RIT Kottayam Student Representative Kochi Hub



KEVIN P CE Adoor Student Representative Travancore Hub



NAVYA MENON P **MESCE Kuttippuram** WiP Student Representative Malabar Hub



IRENE BINNET MACE Kothamangalam WiP Student Representative Kochi Hub



SIDHI A S CE Karunagappally WiP Student Representative Travancore Hub



BLESSON TOMY RIT Kottayam Global Publicity **Outreach Coordinator**



SRIHARI B NCERC Thrissur Electronic Communication Coordinator



SANJAY P V GEC Idukki Design Lead



ANANYA BABU MACE Kothamangalam Content Lead



SHIHAB RAHMAN S **CE Munnar** Content Creator



ABHIRAM SREEKUMAR CE Adoor Webmaster



SILPA PRASAD GEC Idukki Newsletter Editor (Design)



GOUTHAM KRISHNA B RSET Kochi Newsletter Editor (Content)

IEEE PES Kerala Chapter

PROFESSIONAL EXECOM 2022



DR. AJITH GOPI Chair



DR. SOBHA MANAKKAL Vice Chair



DR. BOBY PHILIP Vice Chair



ER. HARIKUMAR K P Secretary



ER. SIBU M S Treasurer



ER. SUHAIR A Immediate Past Chair



DAMODARAN Advisor & Mentor



HAREENDRALAL Mentor



PROF, MUHAMMAD KASIM Student Contests



DR. BIJUNA KUNJU Industry-Academia Interactions



PROF K SUNITHA BEEVI Educational

Activities



ER. KORUTHU VARGHESE Professional Activities



DR. PS CHANDRAMOHANAN News & **Publications**



Awards & Nominations



ER. K R VENUGOPAL



DR. K. BIJU Member Driven Initiatives



ER. VARUGHESE C M **Industry Relations**

ER. NITHIN V.M

Membership Development

(Kochi Hub)



DR. NAFEESA KOYISSERI Women in Power



ER. SHYAM PRADEEP ALI PES Young Professionals



ER. AKSHAY KRISHNAN PES Student Activities



ER. HAMNA SUNIL Membership Development (Travancore Hub)



ER. BHEEM RAJ Membership Development (Malabar Hub)



ER. JAI KRISHNAN NAIR Humanitarian Activities Coordinator (SIGHT/HAC)



ER. ANANDHU S KUMAR Industrial Engagement



ER. RANEENA RAOOF General Coordination and Support



ER. SARAN K S Student Conferences /DLP



DR. MANAS KUMAR **JENA** Research Initiatives



ER. HARIPRASAD Entrepreneurship & Student Conferences

Frequently Asked Questions



Access to Technical Content, Training, and Education for Every Engineering Discipline

Find Your Resource Center



What are IEEE Collabratec Communities?

IEEE Collabratec Communities are large forums for engaging in topics related to trending technical subject matter, geographical regions, or IEEE Societies/IEEE-aligned entities. Engagement can include posting information or opinions in the form of text, links, images, and videos as well as commenting, replying, and LIKE-ing on the same.

What is a PES Chapter?

The IEEE Power & Energy Society currently has over 220 local chapters worldwide. A chapter is the grassroots organization of one or possibly several jointly represented IEEE technical societies, in our case the Power & Energy Society, which directly serves the technical, educational, scientific, literary and professional needs of the membership and the public at large under the auspices of its geographical managing entity, which is usually an IEEE Section, or several joint Sections, or an IEEE Council, such as the Los Angeles Council, the India Council and the Japan Council.

What is IEEE Resource Center?

The IEEE Resource Center is the world's most extensive digital library devoted exclusively to the power and energy industry. It contains thousands of in-depth technical resources, accessible from any location, available 24/7, and developed by engineering and technical experts across many science and technology topics.

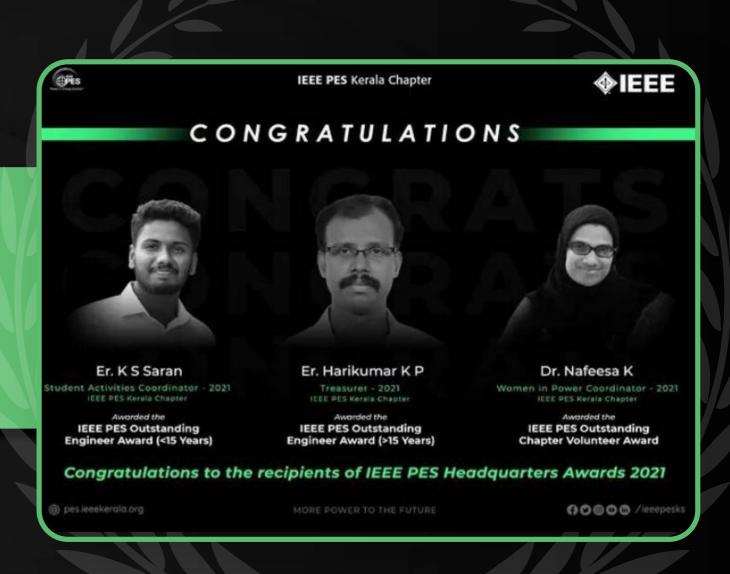
What is the benefit of using IEEE Resource Center?

The users of the IEEE Resource Centers have an opportunity to earn continuing education credits (CEUs/PDHs) that will help you maintain your professional engineering license and stay on the forefront of your technical field.

CONGRATS CONGRATS CONGRATS

IEEE PES Headquarters Awards 2021

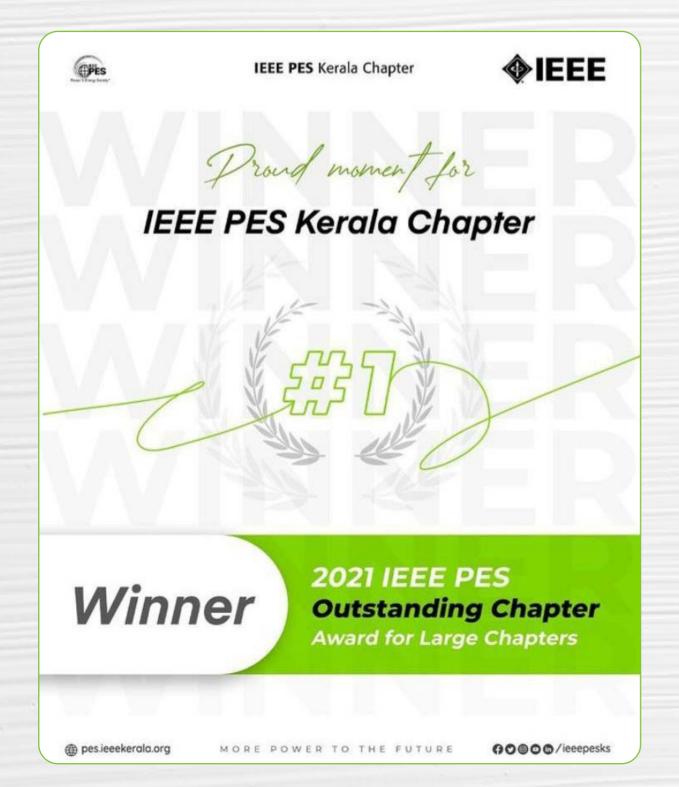
Er. K S Saran(Student Activities Coordinator-2021) has been awarded the IEEE PES Outstanding Engineer Award-<15 years, by the IEEE PES Headquarters Awards 2021. Er. Harikumar K P(Treasurer-2021) has been awarded the IEEE PES Outstanding Engineer Award->15 years, by the IEEE PES Headquarters Awards 2021. Dr. Nafeesa K(Women in Power Coordinator-2021) has been awarded the IEEE PES Outstanding Chapter Volunteer Award by the IEEE PES Headquarters Awards 2021.



CONGRATSCONGRATS CONGRATSCONGRATS









3 PES SBC's have attained the exalted 2021 High Performing Student Branch Chapter Program Awards. College of Engineering, Karunagappally bagged the first position along with #1 in Region 10. Rajiv Gandhi Institute of Technology, Kottayam bagged the second position and also was #2 in Region 10. The third position was awarded to Marian Engineering College and they were also #7 in Region 10.



Student Branch Chapter Activities

Celesto 2.0

The event was conducted on January 22nd 2022 from 7-9 PM. CELESTO 2.0, a talk session on the topic 'INDIAN SPACE PROGRAMS' was conducted by IEEE PES GECI in collaboration with STELLERIO GECI. The speaker of the session was Mr. Abhilash Narayan, scientist in the Liquid Propulsion Systems Center (LPSC), one of the lead centers of ISRO and head-quartered at Valiamala near Thiruvananthapuram. The event was held online through Google Meet App with The main objective of the event was to enhance knowledge on THE INDIAN SPACE PROGRAMS and to create more.

The participant count was 164.



Talk: Industrial IOT

IEEE PES SBC CEAL in collaboration with IEEE IAS SBC CEAL and IEEE Kerala YP organized a talk session on "Industrial IoT" on 26th January 2022 at 7.00 PM-8.00 PM (IST) through the Google Meet platform. The session was handled by Mr. Jacob Thomas, Engineer (Robotics and FA), HikVision. The program was anchored by Lekshmi S. The program started with a welcome address delivered by Lekshmi S. The speaker briefly explained about Industrial IoT and its applications and; shared his workplace experiences. He also gave guidelines for getting a career opportunity in IoT and also discussed the ways to improve the required skills. The session ended with a round of q&a sessions and a vote of thanks by Akshay Prasad.

The participant count of the event was 70.



Webinar: Power System Resilience: Overview

IEEE PES SBC IIT Palakkad presents IP-TIF OORGA GRAND CHALLENGE webinar on "Power System Resilience:Overview". Speaker was Mr. Chandan Kumar Manager, System study and reliability Eastern Regional Load Dispatch Centre(Kolkata) 13 January 2022 .6:30 PM --7:30 PM .Event is jointly organized and/or supported by IEEE PES Kerala Chapter Indian Institute of Technology, Palakkad IPTIF Palakkad.



February '22

IEEE PES SBC Activities

Webinar: Intro to Energy Markets, ESG Investing & Renewable Energy

The webinar was conducted on February 2nd 2022 from 6 PM on the topic 'Intro to Energy Markets, ESG Investing & Renewable Energy 'was conducted by IEEE IAS SB IIT Roorkee and Department of Electrical Engineering & Industrial Power Group NITC. The speaker of the session was Rekha Sharma, founder and CEO of Solv4x Inc.

The speaker introduced to Deregulated Energy Markets describing Congestion Revenue rights, Ancillary services, Reserve allocation, Regulation, Day-Ahead and Real Time market. In addition to this, she also discussed how the grid reliability is maintained and yet the market is kept competitive enough to encourage private investments for new infrastructure in power generation, transmission and discussion. She gave a brief discussion on recent policies to encourage the adoption of renewable sustainable energy in the grid and the crucial role of carbon pricing. She also talked on ESG investing and how commercial investments are encouraged for green portfolios across the globe. The ESG investing is in directing funding the investments for

renewable generation and minimizing the operational risk for the firms. It is supporting the Net Zero goals for almost all countries in the world.



Wide Area Monitoring and Control of Power Oscillations

IEEE PES SBC NITC in association with Industrial Power Group NITC organized a webinar on "Wide Area Monitoring and Control of Power Oscillations" on 19th February 2022 at 6.00 PM (IST). The session was handled by Dr. Lalit Kumar. The arrival of phasor measurement units (PMU) in the past two decades has skyrocketed the research on wide area monitoring, protection and control (WAMPAC) of power systems. It is a known fact that its potential hasn't been fully utilized yet. One of the aspects of wide area monitoring system (WAMS) is the monitoring of power oscillations. Power oscillations affect the economic load dispatch, degrade the reliability, lead to chain reactions, system instability, equipment failure, and may even cause cascaded-blackout.



In depth understanding on the concept of Artificial Intelligence

IEEE PES SBC NITC in association with Industrial Power Group NITC organized a training session on "In depth understanding on the concept of Artificial Intelligence" from 11th to 13th February 2022 at 6.00 PM-7.00 PM (IST). The session was handled by Mr. Lagari A, Technical Business Consultant, Maker & Inventor.



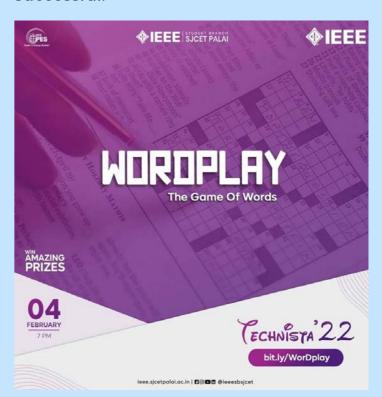
Benefits of IEEE PES Membership

The event was conducted on 12th February 2022. It was an introduction session organized by PES society of IEEE CUSAT SB in collaboration with PES YP KERALA chapter to make students aware of taking IEEE PES membership Benefits, Scholarships, Travel Grants and more. The membership taking process was also explained. The activities of IEEE PES CUSAT SBC in the year 2021 were also discussed. The event had an interactive session as well. It concluded with a vote of thanks by the PES chairperson, IEEE PES CUSAT SBC. The participant count of the session was 68.



Word Play

IEEE PES SBC SJCET conducted a Wordplay -Crossword Puzzle Competition as part of Technista 22 on 04th February 2022. The event was conducted from 7:00 PM – 8:00 PM on WhatsApp. There were around 199 registerends out of which 132 were IEEE members and rest were NON-IEEE members. The event was really fun and helped to increase the thinking skills of the attendees. Which indeed helps the attendees to acquire knowledge in the electrical field. The event was successful.



Poster Making Competition

IEEE PES MCE SBC conducted a poster making competition based on the most excruciating topic of these days "COVID-19 GUIDELINES". The competition was open to all irrespective of what they do. The main objective of the competition was to increase awareness about the pandemic and thus decrease the number of cases so far. The competition was conducted on 2nd of February to 6th of February, 2022.

Around 15 responses were received.Our Vice-Chair Ms. Jessica and Webmaster

Mr. Nain Wilfred were the organizers of the event. The participants of the event showed a wide variety of talents through their posters, the best posters were chosen through a very descriptive procedure.



Introduction to Matlab Simulink

IEEE PES SBC TKMCE organised an interactive session on 'Introduction to Matlab Simulink' handled by HARIGOVIND V, currently working as an Assistant System Engineer (Electric Design) at Tata Consultancy Services. The event was held online through Google Meet and witnessed more than 100 participants. The session began with a welcome speech delivered by the host Bhavya A Kumar. The mentor continued the session with the basics of Matlab as a prerequisite for learning Simulink. He cited the importance of Simulink and its technical uses. Raising the common problems students make, he then enlightened them on the topics like solving an equation, plotting the graph of the given equation, changing the number of pixels and solving problems of physics. Explaining the real-life applications of Simulink, the students were educated about the vast potential of Simulink. The mentor proceeded to solve



electrical engineering problems such as signal processing, deducing the waveform of circuits, and simulation of electric circuits. Towards the end of the session, he conveyed the advanced topics of electrical engineering concisely.

With that, the major topics from basic to advanced were covered within a short period. From the participants' perspective, by the end of the session, they were quite content and confident to use Simulink and their queries were answered swiftly by the mentor. The session concluded with the vote of thanks delivered by the host and a virtual memento was presented to the mentor. Altogether the event was informative and successful with a lot of amazing reviews from our participants.

Basics of Documentation

The first session of BASIX, a 6-session basic skill development series organized by IEEE PES SBC CEA, Basics of Documentation was conducted online on 19th February 2022. The target behind the event was in imparting the knowledge of good documentation to the participants. The speaker of the webinar was Ms. Sherin Cherian, MDC IEEE PES YP Kerala. The event was held online through Google Meet and saw the participation of 22 students from different colleges and universities.

Mr. Sujit Kumar, Chair of IEEE SB CEA welcomed the speaker. After introducing herself, Ms. Sherin Cherian gave an introduction about documentation and talked about traits that define a good report. She then talked about content writing for events, posters, and conferences. She explained what must be done for each case. Report writing was talked about next. She explained the details and structure of a good report to the participants. She also explained what needs to be kept in mind while applying for IEEE awards and proposals. And lastly, she talked about the roles and responsibilities of an IEEE SB secretary. At the end of the webinar the participants actively participated in the Q&A session and the speaker answered all the questions that were asked regarding documentation. The session got positive feedback from the students who attended the session.

The event was successful in helping to achieve the goal of 'BASIX' - to develop the basic skills required in the professional environment. This event was especially helpful for IEEE Volunteers as it elevated their professional writing skills, which is very important in their voluntary endeavor. The session ended with Ms. Parvathi, secretary of IEEE PES SBC CEA giving the vote of thanks.



Introduction to E' Motor Design Using FEA Platform

IEEE PES SBC NITC in association with Industrial Power Group NITC organized a workshop "Introduction to E' Motor Design Using FEA Platform" from 26th to 27th February 2022 at 10:00 am to 4:00 pm(IST).

The Workshop was handled by prominent speakers from academia and industries. On Day 1 the session was handled by, Mr. Prasanth Pathiyil (Industrial

Expert -Senior IEEE Member), Dr. Prajof Prabhakaran (Asst. professor- NIT Surathkal), Mr. Mahesh V (Team Lead - Advanced Systems, Reliamotive Labs), and Mr.Vikas P (CTO- Alfatron Motors). On Day 2 the sessions were handled by, Mr. Mahesh V (Team Lead – Advanced Systems, Reliamotive Labs), Mrs. Fathimatul Asna (Electromagnetic FEA Engineer Reliamotive Labs), and Mr. Rohit Pathiyil (Electromagnetic FEA Engineer Reliamotive labs)

The key objective of conducting the workshop on "E-Motor Design and Analysis" was to provide core skills to young students and engineers involved in the field of electrification. The workshop provided an emphasis on the EV system topologies and philosophy as well as provided the participant hands-on experience on motor design using Motor XP tool. This workshop also supplemented the fundamental concepts involved in traction motors for design engineers. On Day 1, Mr. Prasanth Pathiyil handled two sessions one on know your electric vehicle and second one on topologies and system engineering. The session was followed by Dr. Prajof Prabhakaran on the role of power electronics in electric vehicles. Then Mr. Mahesh V handled a session on Battery Management System-An Overview. And finally the day 1 ended with session Design of E-Motors for EV Application by Mr. Vikas P. Day 2 was started with Practical analysis of BMS by Mr. Mahesh V, followed by Mrs. Fathimatul Asna on introduction to MotorXP. The workshop ended by the hands-on session for Design of a Permanent magnet motor using MotorXP by Mr. Rohit Pathiyil.





Introduction to Arduino



The event was conducted from 17 - 18th February. To help students learn about Arduino, an offline hands-on workshop, INTRODUCTION TO ARDUINO, was conducted by IEEE PES SBC RIT. It was a two-day programme giving a live hands-

on experience on Arduino, done with an intention of giving the basics about the working of Arduino. The workshop was handled by the student members Abhijith Benny and Abdul Rahim. The workshop involved basic ideas about the working of Arduino,its type, etc followed by a mini project. The participant count was 28.

Charging Up 2.0: Workshop

As a part of IEEE SIGHT HAC and IEEE PES VJCET project, Charging Up 2.0 we are planning to set up a Smart Classroom with Solar Power to uplift the future of the children in the tribal settlement school of Mankulam.

As a milestone towards the project we had completed our Training session . It was held on 25th February 2022. The session was taken over by Mr.Sabu, Assistant Professor, Department of Electrical and Electronics Engineering . The session had to deal with basic electric wiring . The training session has provided the members with basic information and easy understanding, which will help in the implementation process further. project, Charging Up 2.0 has been successfully completed and inaugurated

cessfully completed and inaugurated and is in full swing. The project focused on a tribal settlement school in Mankulam, Idukki district. In the midst of the Covid 19 pandemic, the major issue they faced was the lack of resources for online learning. As a solution to this, our plan was to set up a Smart Classroom with Solar Power to uplift the future of

the children in the tribal settlement. The implementation of the project was led by Basil Eldhose. Our team consists of fifteen members. Four solar panels of 450 watts were installed along with an mbpt charge convertor to control the charge coming from the panel. Also, we had an inverter of 3 Kilo volts on, distribution board. The team members have done the wiring and another installation process for this solar panel. Also a computer and a projector were installed along with the solar panel. After using the facilities, it helped students to have a better learning experience and an outbreak to the digital world. Not only the current students, the future generation of locality were also benefited from the project as it gives them the opportunity to digital literacy. This project is a great provider for open source, for the people of tribal settlements to develop their life.



Site Visit(Charging Up 2.0)

The IEEE SIGHT HAC and IEEE PES VJCET project, Charging Up 2.0 has been successfully completed and inaugurated and is in full swing. The project focused on a tribal settlement school in Manku-

lam, Idukki district. In the midst of the Covid 19 pandemic, the major issue they faced was the lack of resources for online learning. As a solution to this, our plan was to set up a Smart Classroom with Solar Power to uplift the future of the children in the tribal settlement. The implementation of the project was led by Basil Eldhose. Our team consists of fif-



teen members. Four solar panels of 450 watts were installed along with an mbpt charge convertor to control the charge coming from the panel. Also, we had an inverter of 3 Kilo volts on, distribution board. The team members have done the wiring and another installation process for this solar panel. Also a computer and a projector were installed along with the solar panel. After using the facilities, it helped students to have a better learning experience and an outbreak to the digital world.

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March '22

IEEE PES SBC Activities

Print a Circuit

IEEE Power and Energy Society Student Branch of College of engineering chengannur in association with IEEE Robotics and Automation Society and SIGHT in association with National science week celebration, a one day workshop on PCB fabrication Print A Circuit was conducted on 8th march 2022 from 9AM to 4PM. The session was led by Vishu G Sabu (Secretary, IEEE RAS SBC CEC), Ashish Kurian (Chairperson IEEE PES SBC CEC), Goutham K Krishnan (Secretary SIGHT CEC), Sajad (Vice-Chairperson SB CEC), Jittu Jolly (Project Developer IEEE SIGHT CEC), Muhammed Iqbal R (Chairperson IEEE SIGHT CEC), Abel C Alexander (Treasurer IEEE SB CEC). The main objective of the session was to familiarize the students with the designing of PCB. Proteus- An industrial standard designing tool was used for the designing of the PCB. With the knowledge gained from the session students were able to design a "LED chaser" circuit with the guidance of the mentors.

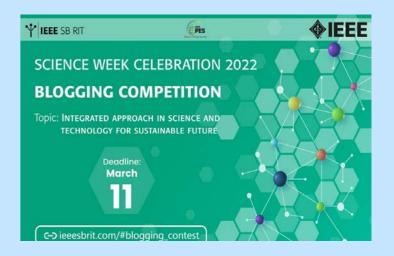
Hola PES

IEEE Power and Energy Society Student Branch of College of Engineering Chengannur conducted an interactive session "Hola PES" on 8th march 2022 from 12.15 PM to 1 PM. The session was led by Libin Mathew Varghese, Former chairperson IEEE PES SBC CEC. About 35 participants joined for the same. The main objective of the session was to give an introduction to "Power & Energy Society". Speaker shared his experience in IEEE volunteering, Student Branch officials, the wide window of opportunities, connections and experiences he had gained through IEEE and PES. The session was interactive and informative, students were able to clear their doubts regarding the session with the speaker. Attendees were urged by the motivational words of the speaker. Prof. Sherin Joseph, advisor IEEE PES SBC CEC addressed the attendees with her inspiring words. The session ended up with a vote of thanks by Vishnu R (Secretary IEEE PES SBC CEC).



Blogging Competition

On behalf of Science Week 2022, IEEE PES SBC RIT conducted a blogging competition to familiarize the students with blog writings and also to provide an opportunity to learn about the topic. The topic was Integrated Approach in Science and Technology for a Sustainable Future. The poster was released on 9th March with a deadline on 11th March 2021. The competition was open for all and had about 14 entries. The winner was Amal P Paulose.



Blogging Competition

IEEE PES VJCET and IEEE SB VJCET in association with IEEE LINK conducted an exciting Blogging Competition as a part of the of the National Science week, 2022. The theme of the event was Integrated Approach in Science and Technology for a Sustainable Future. The number of participants were 3.



Solstice: Online Treasure Hunt Competition



The event was conducted on 14th march 2022. The IEEE PES RSET SBC conducted a treasure hunt competition Solstice, with an aim to help participants familiarize themselves with the leading technologies in the energy sector and the IEEE Power and Energy Society. There were 15 questions with three sections of

5 questions each and 1 task. The duration of the competition was 2 hours and 30 minutes. It was conducted completely in online mode. First one to complete the three sections was selected as the winner of the competition. The participant count for the event was 31.

Introduction to Natural Language Processing

IEEE PES SBC NITC in association with Industrial Power Group NITC organized a webinar "Introduction to Natural Language Processing" on 5th March 2022 at 6:00 pm(IST) handled by Dr. Manu Madhavan.

Natural Language Processing (NLP) deals with computational analysis of human languages for a wide range of applications. Deep learning (DL) methods are ubiquitous in every facet of Al, irrespective of the domain or genre. The webinar focussed to introduce basic DL concepts such as word embedding, RNN and LSTM to build efficient NLP applications. He discussed the text pre-processing steps, tokenization, vectorization, model development. The speaker discussed the recent research trends and current best tools for practical learning.

The attendees were well appreciated the panelists and coordinators for successfully organizing these kinds of events.

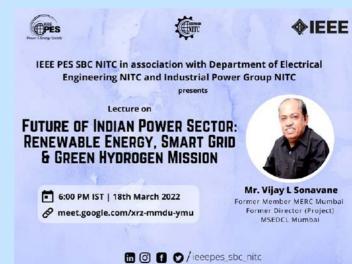


Webinar: Future of Indian Power Sector

IEEE PES SBC NITC in association with Industrial Power Group NITC organized a webinar "Future of Indian Power Sector: Renewable energy, Smart Grid and Green Hydrogen Mission" on 18th March 2022 at 6:00 pm(IST) handled by Mr. Vijay L Sonavane.

Electricity is the prime mover for development of the country. Indian Electricity (Power) sector is growing at the CAGR of 5-7% per year. The Installed Generation capacity has gone to about 395 GW. Coal based Thermal generation has the major share of electricity generation. The maximum Peak Al Demand has crossed over 200 GW. India has achieved the goal of "ONE COURTY ONE GRID" in 2013 by interconnecting all five Regional Grids. We have the "State of ART" Energy Management Centre at "National Load Dispatch Centre New Delhi ". From 2014 onwards Development of SAARC GRID is in progress. We have strong Transmission ties

with Nepal, Bhutan and Bangladesh. Transmission links with other SAARC Courtiers are "Work-in-Progress". The speaker discussed the steps and upcoming policies taken by the Indian govt. in the field of energy. Apart from this, he also talked about smart grid and green hydrogen mission in India.



Low Voltage High Current BLDC Motor Controllers: PCB Design Challenges

IEEE PES SBC NITC in association with Industrial Power Group NITC organized a webinar "Low Voltage High Current BLDC Motor Controllers: PCB Design Challenges" on 26th March 2022 at 6:00 pm(IST) handled by Dr. Prabhat Ranjan Tripathi.

For power electronics engineers and researchers, hardware prototyping of the power converter topologies and ideas is



required for their validation and acceptance in academia and industry. Printed circuit boards (PCBs) have been an integral part of this prototyping. With the increased availability of off-the-shelf microcontrollers, dedicated Power Management, and Control ICs, the PMBLDC drives have gained popularity in low to medium power applications ranging from UAVs to Water Pumps. However, several hardware design challenges include gate driver selection, switch selection, PCB layout, sensors, and control requirements. PCB design and hardware prototyping in this domain are non-trivial and have specific requirements. Tutorials and courses on PCB are limited to high-speed, low-power designs. Nevertheless, PMBLDC drives are designed in various application-specific segments like 12 to 16 Volts up to 50 Amps for UAVs and 48 V, 100 Amps for EVs and 320 Volts, 5 Amps for water pumping solutions. The proposed tutorial deals with all the criteria to be considered while designing an integrated power board for PMBLDC Motor Drives. Design considerations to be highlighted in the tutorial are: - · Design requirements. · Component selection. • PCB design constraints. • Power circuit Layout. This webinar neither promotes particular PCB design software nor endorses any device manufacturer.

Tech4ture

The event was from 08/03/2022 10:00 am to 10/03/2022 10:00 am. The host for the Event was CS MBCET SB, PES MBCET SB. The goal of event was to Introduce students to the possibilities of Integrated sustainable tech solutions for a better future.

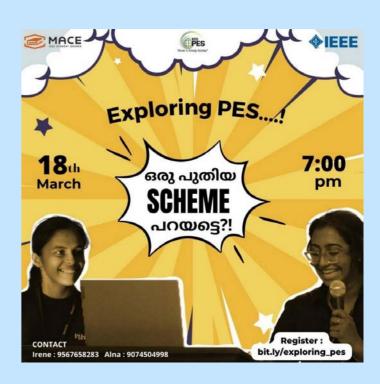


Exploring PES

The awareness program session of IEEE PES SBC MACE, 'Exploring PES' was conducted on 18th March 2022 at 7:00 pm via Google meet. The meeting was hosted and handled by Ms. Irene Binnet, Chairperson of PES SBC MACE and Ms. Alna Maria Ben, Vice Chair of PES SBC MACE. The speakers gave a brief history of IEEE Power and Energy Society and provided an insight to the vast array of resources and opportunities available in the soci-

ety. The students were briefed about the benefits and student competitions in the society, details of chapter funding, various activities, great opportunities in the power and energy fields, details about scholarships, awards and achievements etc.

The session was very interactive and informative. It also greatly helped spark an interest among the students in PES, which has greatly contributed to active participation and voluteering. The session was attended by around 40 participants. The session ended by 8:00 pm.



April '22

IEEE PES SBC Activities

Cyber Security in Energy Systems



IEEE PES SBC NITC in association with Industrial Power Group NITC organized a webinar "Cyber Security in Energy Systems" on 2nd April 2022 at 6:00 pm(IST) handled by Dr. Ravi Yadav.

Dr. Ravi Yadav started the session with cyber security aspects and how it affects the power system networks. He conveyed various examples across globe which witnesses the cybersecurity threats. He explained a state estimation problem with cybersecurity aspects. It was a fruitful and insightful session for beginners in this research area.

Finally, he conveyed false data injection issues and type of cyber threats in the system future.

Sheroes

IEEE PES SBC MBCET celebrated Mother's Day 2022. As part of the celebration, a game was conducted called SHEROES – Guess the Personality Game on May 8th. The game was conducted via Google form. This event was a grand success with active participation from the students. 66 students participated, of which 30 were IEEE members. The winners are Anjana A. J. (3rd year, EC, LBSITW) at first place; Krishnan Gopakumar (3rd year, ME, MBCET) at second place and Aby Chakupurakal (2nd year, CS,MBCET at Third place.





Inauguration of IEEE PES SBC

The event was conducted in seminar hall, Aryabatta block of NCERC with about 100 participants. The program started with silent prayer in memory of founder chairman late Shri P.K Das followed by a prayer song sung by Anaswara.C, Sreelakshmi. The IEEE code of ethics was read by Anjali Nandana V.P. Welcome address was given by SB Counselor Dr. Sobha Manakkal. The Presidential address was delivered by Dr. Ambika Devi Amma, Principal, NCERC. Inaugural address was given by chief guest Er. Ajith Gopi in which he declared the chapter to be inaugurated. The release of newsletter and certificate distribution of previous IEEE Execom members was done by the chief guest. The new Execom members were introduced by Asst. Prof Neethu.M, PES chap-

ter Advisor. Dr. K Radhakrishnan, (Advisor, NGIK), Asst. Prof. Sanish V.S (SB counselor, JCET), HOD MTR Dept, HOD MECH Dept, HOD Applied Science Dept, delivered felicitation. Anand.M chair of IEEE SB NCERC handled the SB presentation. Vote of thanks was delivered by C.Swetha, Vice chair IEEE SB NCERC. Chief guest handled a session on Solar electrification of villages. The program came to an end at 12:30 with the National Anthem.



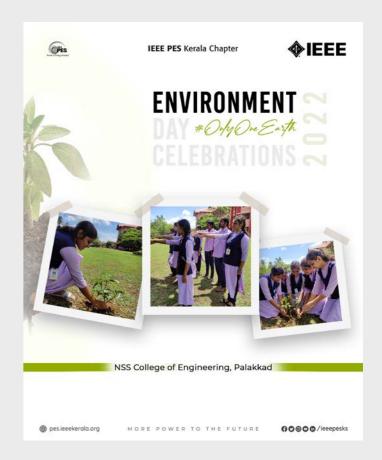


ENVIRONMENT DAY # Only One Earth CELEBRATIONS



NSS College of Engineering, Palakkkad

As a reminder to re-establish the connection we have with the environment. on June 5th, for this year's World Environment Day, IEEE Power and Energy Society SBC NSSCE in association with IEEE PES Kerala Chapter conducted a few programmes aligned with this year's theme of 'Only One Earth'. The members planted a sapling as a symbol of solidarity to the UNEP theme which calls for "collective transformative action on a global scale to celebrate, protect and restore our planet, our common home". Afterwards the members pledged an oath to protect nature in hopes of a clean and bright future for the planet.



Government Engineering College Idukki

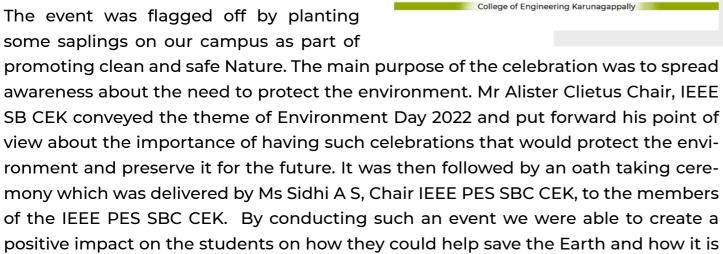
IEEE PES SB chapter of IEEE SB GECI conducted SCION, a sapling planting event as a part of environmental day celebration. Vaishnavi M.S, PES Chairperson and Aswathy, PES vice chairperson coordinated the whole event. The event was conducted as a part of environmental day celebration in which saplings were planted accompanied by cleaning the premises of the college and an oath were taken to remark on the responsibility of every earthling. The event was conducted at the college premises in which all the IEEE exe members participated. All the execom members members participated in the event.



College of Engineering, Karunagapally

World Environment Day is celebrated every year on the 5th of June to raise global awareness, and to take positive environmental action to protect nature and our Earth. As part of World Environment Day, 2022 IEEE PES SBC CEK joined hands with IEEE PES Kerala Chapter in their Environment Week celebration and conducted an event on the 17th of June 2022 by taking the Environment Day oath and planted some saplings on the premises of College of Engineering Karunagappally.





Mar Baselios College of Engineering and Technology

going to benefit the existing and future generations.

As a part of the World Environment Day celebrations IEEE PES SBC MBCET organized a Plant a Sapling Drive and an Oath Taking Ceremony on 24 June 2022. This event was a grand success with active participation from the IEEE Members. 10 IEEE PES Members took the oath.





Jawaharlal College of Engineering and Technology

As part of the World Environment Day 2022 celebration initiative by IEEE PES Kerala Chapter, IEEE PES SBC JCET successfully organized an oath taking ceremony, pledging for the protection of nature and preservation of our environment. The ceremony was held on 19th June 2022 at the garden of Jawaharlal College of Engineering and Technology, in the presence of our Student Branch Advisor, Asst. Prof. Sanish V S and PES members of IEEE PES SBC JCET. Later, our SBC also took part in the Plant a Sapling initiative by planting trees at the homes of the PES volunteers. Through this event, we were able to make the PES volunteers aware



of their role in protecting Mother Earth and live in harmony with nature.

College of Engineering Chengannur

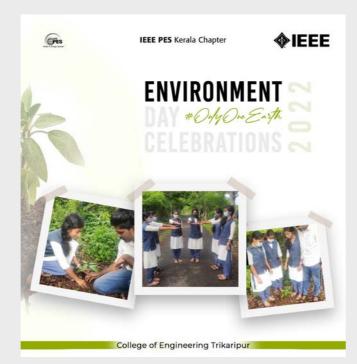
IEEE Power and Energy Society Student Branch of College of Engineering Chengannur organized a Plant a Sapling Drive and an Oath Taking Ceremony as a part of our Environment Day Celebration Initiative. This program was a huge success and was an eye opener about the importance of building a green ecosystem for the present and for the future generations to come.Mrs. Smitha Dharan(Principal, College of Engineering College), Mrs. Deepa J(Staff advisor IEEE SIGHT CEC), Mrs. Sherin Joseph(Staff Advisor IEEE PES SBC CEC) planted 3 saplings in the college premises, and took part in the Oath Taking Ceremony along with the student volunteers.



63 | POWERSCOPE IEEE PES KERALA CHAPTER | 62

College of Engineering Trikaripur

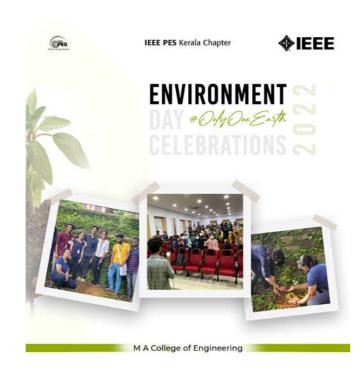
IEEE PES SBC CETkr conducted "Plant a Sapling Drive" on 22 nd June as a part of Environmental Day celebrations 2022. The drive began with a pledge to protect and ensure the safety of mother Earth. Even though the drive was initiated by IEEE members of the SB but was carried over by other students of the college too. Several saplings were planted in the college premises. "One touch of nature makes the whole world kin".



Mar Anthanasius College of Engineering

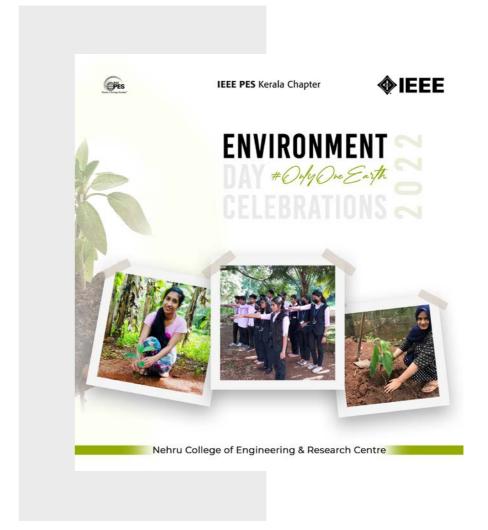
As a part of Environment Day Celebrations, IEEE Power and Energy Student Branch Chapter MACE conducted an oath taking ceremony on 15th June 2022, 4:30 PM. The ceremony was held amidst the entire team IEEE MACE SB meeting and the oath was rendered by the Student Branch Chair, Mr. Aravind Reghunath.

Besides, a sapling initiative was also taken by the PES Student Branch Chapter which was conducted on 27th June 2022 from 4:30 PM to 5:30 PM. Students took



the initiative to plant 2 saplings within the college campus in order to nurture the environment and provide for its needs. About 92 students participated in the oath taking ceremony and 10 students participated in the plant sapling initiative.







IEEE PES Kerala Chapter

MES College of Engineering, Kuttippuram

ENVIRONMENT

Why One Earth



IEEE PES Kerala Chapter

PES

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PES DAY

Events



A walk through PES Communities

IEEE PES SBC CEAL organized a talk session on "A walkthrough PES Communities" on 23rd April 2022 at 7.00 PM (IST) through Google meet platform. The session was handled by Mr. Muhammed Rashid K K, Membership Development Coordinator, Student Leadership Team 2021, IEEE PES Kerala Chapter. The program was anchored by Krishnendu, WIE AG Chair, PES SBC CEAL. The program was started with a welcome speech address delivered by Adithya Latheesh, PES DAY AMBASSADOR 2022. The speaker briefly explained about "A walkthrough PES Communities" and shared his valuable information. The session ended with a round of q&a session and vote of thanks by Lekshmi S, Chair, IEEE PES SBC CEAL. The speaker cleared all raised questions from participants.



Poster Making Competition

As a part of PES DAY celebrations, a poster making competition was conducted on the theme "Powering a sustainable future" with a deadline on April 19th. The motive of the competition was to build awareness about a sustainable future and to make students brainstorm on the same. "The best way to predict the future is to create it". The participant count for the event was 8.





Career in Sustainability

Career in Sustainability was a webinar organized virtually on 27th April, 2022 at 2.15pm IST in accordance with PES DAY 2022. The session was handled by Saranya Sasidharan, Graduate sustainability and building physics Engineer at Cundall. The webinar mainly focused on the various career options in the field of sustainability and about the higher study options available for those who wish to pursue sustainability as their career. The speaker also discussed the Urban Fellow program provided by IIHS, Bangalore. The UFP is scholarship-based, nine-month, full-time, residential, in-

terdisciplinary which seeks to combine classroom teaching, site-based applied learning, work in live projects, and external internships to introduce Fellows to diverse forms of urban practice. As an alumnus of Cambridge University, she also talked about the selection procedure and academic life in the University.



Implico- Crossword Puzzle

As part of the IEEE PES Day 2022 Celebrations, a crossword challenge named "Implico" was conducted by IEEE PES SBC MACE. The competition was held online via Google Forms on 28th April 2022 from 8:30 pm to 9:30 pm. This competition was aimed at the improvement of knowledge on sustainable energy through some fun. This event was coordinated by Ms. Anna Ann Mathew. The participants had to fill up the words in the crossword using the given hints within the time given. The contestant who first solved maximum clues accurately was awarded the first prize. 61 members participated in Implico and 48 of them were IEEE members.

Shift to Sustainable Industrialization

As part of the PES Day 2022 Celebrations of IEEE PES SBC MACE, POTEN-TIA, IEEE PES SBC MACE in collaboration with IEEE SIGHT MACE organized a webinar on the topic- 'The Shift to Sustainable Industrialization'. The speaker for the session was Engr. Ahamed Ismail, Ph.D Candidate, Al-Azhar University, Egypt. The webinar was conducted on 29th April 2022 from 7 pm IST to 8 pm IST via Google Meet. The coordinators of the session were Ms. Anna Mathew, Allen Binu and Irene Binnet. The session began with Mr. Ahamed introducing himself and briefing on the kind of work he has done and is doing. The talk then focussed on various ways in which energy management can be done efficiently using renewable resources. Ways in which the current energy crisis can be overcome and his views on the adoption of more sustainable ways for setting up various industries were discussed.

Scripto - Article Writing Competition

As part of the IEEE PES Day 2022 Celebrations, an article writing contest named "Scripto" was conducted by IEEE PES SBC MACE. This competition was aimed at the enhancement of writing skills and conveying an idea about sustainability. This event was coordinated by Ms. Anna Ann Mathew and Ms. Irene Binnet. Participants had to upload handwritten or typed articles in a given Google form. The topic of the article-writing competition was "Is sustainability just about preserving the environment?" and the deadline for submission was at first 27th April which was then extended to 30th April, 2022. Judgement was based on the way of writing and the right explanation to the topic. 24 members registered for the event from which Fizza Anwar Sadath emerged as the winner, Anagha V became the first runner up and Ramkrishna emerged as the second runner up.







Webinar on Women Empowerment

As a part of PES Day 2022 IEEE PES SBC VJCET in collaboration with IEEE WiE AG VJCET conducted an astounding Webinar on WOMEN EMPOWERMENT. The webinar was conducted on 27th April 2022 at 7:30 PM, the platform for the session was Google Meet. The cynosure of the day was Dr. Nafeesa K WiP Coordinator, IEEE PES Kerala Chapter, Professor and Head of the Dept. of Electrical and Electronics Engineering, MES College of Engineering, Kuttippuram, Kerala.



PV Syst Workshop

The event was a workshop organized in collaboration with IEEE MEC SB as a part of IEEE PES Day Celebrations 2022. The workshop was organized on 8th May, 2022 at 7:00pm IST, and was handled by Abhinav R, Junior Research Fellow at IIT Palakkad, member of IEEE Young Professional. The workshop was 2 hours long and covered topics such as Introduction to Solar Energy, various components of Solar PV Systems, sizing of a PV System and design of commercial projects. The participants were asked to install PV syst software prior to the workshop and a sample design was implemented through the software.



The session ended with a Q&A session where the speaker cleared all the doubts of the participants.

Power System Protection Overview

As a part of IEEE PES Day 2022 an educational session on Power System Protection Overview was organized. The session was conducted on Tuesday, 26th April 2022 from 5:00 to 6:15 PM GMT. The session was handled by Senior Protection Engineer at Capula Ltd Stone, UK, Er. Mariela Moscoso. As Power system protection systems play a crucial role in establishing reliable electrical power systems, the program was very interesting and it was an amazing learning experience.



Word Rummage

PES Day 2022 festivities started off with the official announcement of the theme for this year – Powering a sustainable future. IEEE PES MBCET concluded the PES DAY celebrations with the event "WORD RUMMAGE - Guess the word game" as part of the celebration. The announcement was made via a poster release on May 9th, 2022. The registration was done through Google forms. The event took place in thewordsearch.com.

The event saw active participation from the students. A total of 90 students registered for the event – of them 40 are IEEE



members. Winners were announced on 19th May at 6.00 pm on Instagram. Athira Shaji (S4 CE, Barton Hill), Binita Susan Thomas (S4 CE, MBCET), and Aishwarya Mohan (S4 BSc Maths, Jesus and Mary College) secured the first, second and third prizes respectively.

Elektra

IEEE PES Day 2022 festivities started off with the official announcement of the theme for this year – Powering a sustainable future. IEEE PES MBCET started with an event named ELEKTRA – an electric car designing competition as part of the celebration. The announcement was made via a posture release on May 5th, 2022. The submission date was fixed as May 10, 2022, through Google form.

The event saw active participation from the students. A total of 19 students registered for the event – of them 9 are IEEE members. They submitted the designs on Google forms.



Winners were announced on 19th May at 6.00 pm on Instagram. Krishnan Gopakumar (S6 ME, MBCET), Prajwal (S2 CS, MBCET), and B Navaneethakrishnan (S4 EEE, MBCET) secured the first, second and third prizes respectively.

Enigma

The event ENIGMA was conducted as a part of IEEE PES Day Celebrations 2022. The crossword was based on the theme "Sustainable future". It was conducted on 9th May, 2022 at 8.30pm IST for 10 minutes. Ten questions were asked in the crossword, 4 down and 6 across. The participants were asked to complete their crossword within 10 minutes, and the one who completed the crossword correctly first was declared as the winner.



Imperitura

IEEE PES SBC TKMCE on 30th of April 2022 organized a quiz based on sustainable development, The quiz was held in online mode with a number of participants from numerous colleges spread throughout Kerala. The portal chosen for the quiz was QUIZZES, modified to fit our criteria to evaluate the participants. The participants were monitored throughout the duration of the quiz and the winner along with the top ten contenders were selected and were informed them about the same. The event was overall a success with active participation and joyous results.



Talk on EVs

The event was a collaborative talk session with IEEE RSET SB on EVs in India and was a part of the events hosted by PES CUSAT SBC to celebrate PES Day 2022. The session was two hour long and was handled by Harigovind M, Electric Design Engineer at TCS, member of IEEE Young Professionals. The event was very interactive.

The speaker talked about EVs, their importance, challenges faced and charging stations. The session ended with a Q&A session, a lot of questions were asked by the audience and it was all discussed in great detail.



Edizone 3.0: Hybrid PES day fest

IEEE SB CEK in association with IEEE PES SBC CEK conducted the latest version of Hybrid PES Day Fest, EDIZONE 3.0, as part of the IEEE PES Day Celebrations 2022. It was a great event and the event was packed with valuable technical sessions, workshops and competitions from 30th April to 8th of May. The offline sessions for introducing the event was held on the 30th of April and 1st of May, at the College of Engineering Karunagappally.





IEEE PES Kerala Chapter





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