

IEEE PES KERALA CHAPTER

Quarterly Newsletter

January - March 2025

Welcome to our Q1 2025 newsletter highlighting the vibrant activities and accomplishments of the IEEE PES Kerala Chapter during the first quarter of 2025.

Message from chair



Dear IEEE PES Members,

Add Your Heading Text HereKey outcomes included:
1) Standardized event reporting templates 2) Shared calendar for major competitions 3) Resource pooling agreement for lab equipment 4) SLT ID card distribution. Dr. Manoj B.S.'s keynote emphasized

aligning student activities with Kerala's 2040 carbon neutrality goals. The "Chapter Health Dashboard" introduced during the meeting will now track 15 performance indicators across all SBCs bi-annually.

aligning student activities with Kerala's 2040 carbon neutrality goals. The "Chapter Health Dashboard" introduced during the meeting will now track 15

Major Events & Activities

1 Annual General Meeting 2025

The chapter's flagship AGM brought together 60 members at Hotel Residency Towers to celebrate achievements, recognize excellence, and chart the course for 2025 through strategic planning and leadership transitions.



The January 26th AGM featured comprehensive activity reports, financial disclosures, and the induction of new office bearers. Highlights included the felicitation of outstanding contributors across professional and student categories. Dr. Boby Philip outlined the chapter's vision for enhanced industry-academia collaboration and student development programs. The evening concluded with cultural performances showcasing Kerala's heritage, fostering networking among participants from across the state's power engineering community.

2 Instrument-iT: Embedded Systems Workshop

A 4-day hybrid program that equipped 38 high school students with hands-on Arduino/Python skills through IIT Palakkad's labs and competitive hardware challenges.

Funded by IEEE TryEngineering, this innovative workshop blended online theory sessions (Jan 15-18) with intensive lab work at IIT Palakkad (Jan 20-21). Participants from 23 schools designed IoT-based solutions for real-world problems, culminating in a treasure hunt competition evaluating hardware prototyping skills. CSquare Innovation Lab provided technical mentorship, while Vydythi Club facilitated team collaborations. The program successfully demonstrated how early STEM exposure can ignite interest in power electronics careers.

3 Sustainability & Solar Energy Workshop

First cross-state collaboration with Amrita University featuring technical sessions, PV simulations, and a solar plant visit for 45 participants.



The February 14-15 workshop at Amrita Coimbatore covered: 1) Solar PV system design using PVsyst software 2) AI applications in renewable forecasting 3) Hands-on string inverter configuration. Dr. Ajith Gopi's session on grid integration challenges was particularly well-received. The visit to Kuzhalmannam's 5MW plant demonstrated large-scale solar farm operations. Participants left with certification in basic PV simulation competencies and industry contacts for potential internships.

4. WOW 6.0 Tech Talk #1

130 attendees explored Industry 4.0 applications in power systems through Dr. Harivardhagini's expert perspective on IoT-enabled smart grids.



This February 27th webinar series opener addressed Cybersecurity frameworks for Substation automation, Digital twin implementations, and Edge computing for distributed energy resources. Panelists Prof. Sunitha Beevi and Prof. Deepa A.K. highlighted gender-inclusive design principles for smart infrastructure. Student moderator Archana R Sethu facilitated an engaging Q&A on career pathways in utility digitalization. The collaboration with IEEE WIE AG Kerala achieved 43% women participation, exceeding chapter diversity goals.

5. BTech Project Execution Guide

Dr. Rahul Satheesh's online mentorship session equipped 75+ engineering students with proven methodologies for successful final-year projects.

The February 28th webinar covered: 1) Problem identification techniques 2) Literature review best practices 3) Prototyping cost optimization 4) Effective documentation strategies. Real-world examples from award-winning PES projects demonstrated how to align academic work with industry needs. Breakout rooms allowed personalized feedback on participant proposals, with 12 projects selected for chapter mentorship. Follow-up sessions will connect teams with industry advisors for continued guidance.

6. Membership Development Session

Nithin V.M. led 68 professionals and students through IEEE PES membership benefits and career growth opportunities.



The February 28th Microsoft Teams session detailed: 1) Free access to IEEE PELS transactions 2) Conference grant application processes 3) Young Professional networking platforms 4) Student travel subsidies. Interactive polls revealed 82% of attendees were unaware of the IEEE DataPort resource prior to the session. Success metrics included 23 new membership applications processed within 48 hours and 15 signups for the chapter's mentorship program.

7. AI in Protective Relaying

Prof. Anamika Yadav's technical deep-dive into machine learning applications for next-gen power system protection drew 120 registrations.

March 1st session covered: 1) Neural networks for fault classification 2) Digital relay setting optimization 3) Predictive maintenance algorithms using SCADA data. Case studies from NIT Raipur's smart grid testbed demonstrated 30% faster fault clearance times with AI implementations. Though only 15 attendees participated live due to technical issues, the recorded session has since garnered 287 views on the chapter's YouTube channel, indicating strong deferred interest.

8. IEEE Funding Opportunities

Adithya P Rajeev demystified \$100K+ in available grants/scholarships for 51 attendees during this March 5th Google Meet session.



The comprehensive walkthrough included: 1) IEEE SPS scholarship application tips 2) EPICS project grant writing strategies 3) PELS Empower a Billion Lives challenge criteria. Participants received templates for successful proposals and a calendar of application deadlines. Post-event surveys showed 89% found the "Humanitarian Project Pitch" workshop segment most valuable. The chapter has since formed a grant-writing assistance team to support members' applications.

9. First Execom Meeting 2025

Virtual leadership assembly on March 6th established annual priorities including membership growth and industry collaboration frameworks.



Chaired by Dr. Boby Philip, the 75-minute meeting: 1) Reviewed 2024's 32% membership increase 2) Approved the "PowerScope" digital magazine launch 3) Finalized 6 industry MoUs for student projects 4) Allocated budgets for 3 regional workshops. Immediate Past Chair Dr. Ajith Gopi emphasized sustaining the chapter's 92% event satisfaction rating. Action items included forming special committees for Women in Power and Young Professional initiatives.

10. Women's Day Panel: EV Startups

March 8th discussion featuring female entrepreneurs highlighted challenges/opportunities in Kerala's emerging electric mobility sector.



Moderator Adithya Rajeev guided panelists through: 1) Battery swapping infrastructure hurdles 2) Motor design for tropical conditions 3) State policy support mechanisms. Dr. Deepthi S Nair's presentation on indigenous motor controller development drew particular interest, with 37 requests for technical documents post-event. The session achieved 58% women attendance and spawned 3 new student teams for the upcoming IEEE EV Innovation Challenge.

11. MATLAB Control Systems Workshop

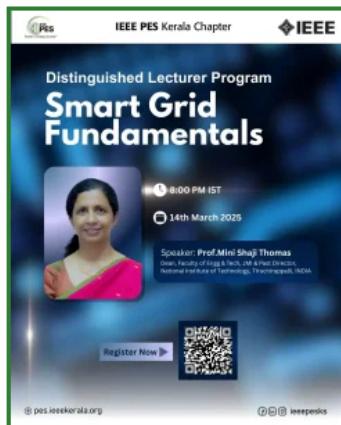
NSSCE hosted 42 students for hands-on training in automation/robotics applications under Dr. Rahul Satheesh's guidance.



The March 8th workshop at ICE System Simulation Lab covered: 1) PID controller tuning 2) State-space modeling 3) Hardware-in-loop verification. Participants implemented robotic arm trajectory control using MATLAB/Simulink, with top performers receiving free Simscape licenses. Feedback indicated 94% satisfaction with the practical-to-theory ratio. This success has prompted planning for an advanced session on AI-based control systems in Q3 2025.

12. Smart Grid Lecture by Dr. Mini Thomas

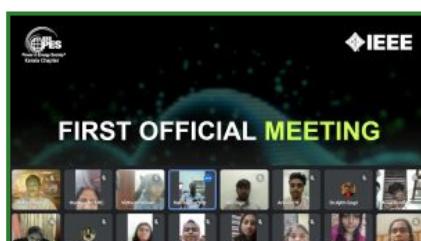
JMI Dean's March 14th technical session attracted 90 participants for insights on digital substations and grid modernization.



Key takeaways included: 1) IEC 61850 implementation challenges 2) Cyber-physical system security protocols 3) Distribution automation case studies from Delhi's smart grid pilot. Moderator Anvitha Vinod facilitated comparative analysis of Kerala's grid readiness versus national benchmarks. The event recording has been incorporated into 3 university power systems courses as supplemental material, significantly extending its educational impact.

13. First SLT Meetup

March 17th virtual gathering aligned 25 student leaders on 2025 outreach goals and chapter engagement strategies.





The 2-hour session: 1) Introduced new WiP Coordinator Archana Sethu's "50 Women in Energy" initiative 2) Planned 6 campus roadshows 3) Finalized the Student Paper Contest rubric 4) Distributed roles for PowerScope content creation. Breakout sessions generated 17 actionable ideas, including a "Power Mentor Hour" webinar series pairing students with industry professionals. The meeting established quarterly performance metrics for all SLT portfolios.

14. WOW 6.0 Tech Talk #2

Rushali Thakkar's March 22nd session on smart energy management drew 82 participants exploring IoT/AI integration.



The discussion highlighted: 1) Blockchain for P2P energy trading 2) Load forecasting with LSTM networks 3) Dynamic pricing models from European case studies. Prof. Deepa A.K.'s segment on women-led microgrid projects in rural Kerala sparked lively debate. Post-event networking led to 4 collaborative research proposals between student attendees. The series will continue quarterly, with July's session focusing on offshore renewable integration.

15. AI Power Edge: E-Mobility

Dr. Neeta Anna Eapen's March 27th lecture showcased ML applications in transportation systems to 68 participants.



The Amrita School of AI-hosted session demonstrated: 1) Mesoscopic traffic simulation for EV charging placement 2) Computer vision for accident prediction 3) Reinforcement learning for bus scheduling. Live demos of the Radford University Traffic Simulator allowed participants to modify parameters and observe system behaviors. This inaugurated a 6-part tech talk series that will next cover digital twin applications for grid resilience.

16. SLT-Chairs Meetup at FISAT

First physical gathering of 35 SBC chairs on March 30th strengthened statewide student chapter coordination.



Key outcomes included: 1) Standardized event reporting templates 2) Shared calendar for major competitions 3) Resource pooling agreement for lab equipment 4) SLT ID card distribution. Dr. Manoj B.S.'s keynote emphasized aligning student activities with Kerala's 2040 carbon neutrality goals. The "Chapter Health Dashboard" introduced during the meeting will now track 15 performance indicators across all SBCs bi-annually.



Copyright © 2025 IEEE PES KERALA CHAPTER
All rights reserved.

You are receiving this email because of your membership in
IEEE Power and Energy Society.

