# IEEE Kerala Section 2024



## PART A - SECTION SUMMARY
## A.1 Executive Summary

- Section Executive Committee Member List

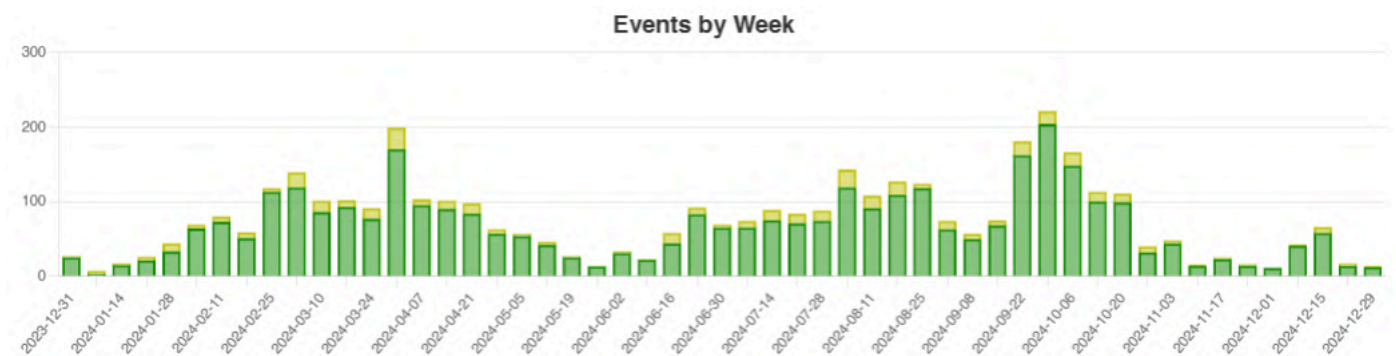| Role | Name |
| --- | --- |
| Chair | Prof. Muhammed Kasim S |
| Vice Chair | Dr. Bijuna Kunju K |
| Secretary | Dr. Biju K |
| Treasurer | Prof. Nandan S |
| Immediate Past Chair | Dr. Mini Ulanat |
| India Council Nominee | Mr. Shone Jose |
| Advisor | Dr. K R Suresh Nair |
| Advisor | Dr. Sameer S M |
| Chair, Malabar Subsection | Dr. Bindima T |
| Chair, Kochi Subsection | Dr. Rekha K James |
| Chair, Awards Committee | Mr. Srinivasan Ravindran |
| Chair, Career & Startup Guidance | Dr. K R Suresh Nair |
| Chair, Conference Activities Board | Dr. Jaison Mathew |
| Chair, Educational Activities | Dr. Sabiq PV |
| Chair, Government Relations | Sasi P M |
| Chair, Grievance Redressal | Dr. Lillykutty Jacob |
| Chair, Industry Relations | Mr. Rony Alex Thomas |
| Chair, Information Management | Joel John Kandathil |
| Chair, Inter-Society Activities | Mr. Narayanan AM |
| Chair, Membership Development | Mr. Jithin K Jose |
| Chair, New Initiatives | Dr. Sameer S M |
| Chair, PIE (Promotion of Innovation and Entrepreneurship) | Mr. Unni Sankar |
| Chair, Professional Activities | Dr. Gilesh M P |
| Chair, Publications & Newsletter Editor | Prof. K. Gopalan Nair |
| Chair, Public Visibility | Dr. Mini Ulanat |
| SDLP Co-ordinator | Dr. K C Raveendranathan |
| Chair, SIGHT | Prof. Sunitha Beevi. K |
| Chair, Strategic Initiatives [Industry Engagement] | Sarada Jayakrishnan |
| Chair, Strategic Initiatives [Academia] | Dr. M. V. Rajesh |
| Chair, Student Activities | Mr. Shone Jose |
| Student Representative | Mr. Vaishakh Suresh |
| Chair, Web Coordination | Dr. Vishnukumar S |
| Chair, Consultant's Network Affinity Group | Mr. A Suhair |
| Chair, Life Member Affinity Group | Prof. Damodaran V K |
| Chair, WIE Affinity Group | Prof. Deepa A K |
| Chair, YP Affinity Group | Neeraj Ipe |
| Chair, Antenna & Propagation Society (APS) | Dr. Sukomal Dey |
| Chair, Circuits And Systems Society (CASS) | Dr. Sreelal S Pillai |
| Chair, Computer Society (CS) | Dr. Deepthi Sasidharan |
| Chair, Communications Society (ComSoc) | Dr. Job Chunkath |
| Chair, Education Society (EdSoc) | Dr. Leesha Paul |
| Chair, Engineering in Medicine & Biology Society (EMBS) | Mr. Vinodkumar V |
| Chair, Geoscience & Remote Sensing Society (GRSS) | Dr. Deepak Mishra |
| Chair, IA / IE / PEL Jt. Chapter | Dr. Vasanthi V |
| Chair, Microwave Theory and Techniques Society (MTT-S) | Dr. Apren T J |
| Chair, Power and Energy Society (PES) | Dr. Ajith Gopi |
| Chair, Photonics Society | Dr. Pramod Gopinath |
| Chair, Robotics and Automation Society (RAS) | Nandakumar R |
| Chair, Signal Processing Society (SPS) | Prof. Reshna Ayoob |
| Chair, Society on Social Implications of Technology (SSIT) | Mr. Jayakrishnan MC |
| Chair, Solid-State Circuits Society (SSCS) | Ajith Ravindran |
| Chair, Vehicular Technology Society (VTS) | Mr. C M Varughese |
| Chair, RFID Council | Dr. Manoj B S |

## Section Highlights

- **Globally the 4th largest IEEE Section** in terms of membership count.
- Computer Society Kerala Chapter – Globally No. 1 among all chapters with 4493 members
- PES – Globally No. 1 among PES Chapters with 1676 members
- Photonics Society - Globally No. 1 among Photonics Chapters with 976 members
- RFID Council Chapter – Globally No. 1
- **3991 Events** reported by the Kerala Section and its sub-units in 2024.

## R00145 - Kerala Section Charts ⓘ

| Name | Prof | Tech | Non-Tech | Admin | Hum | Pre-U | Total |
|------|------|------|----------|-------|-----|-------|-------|
| Kerala Section | 400 | 2249 | 797 | 429 | 76 | 40 | 3991 |

**Events by Week**



## Major Events (International, National)

- **Leaders Meet** - On September 25th aboard NEFERTITI, a cruise in Kochi. The event was graced by **IEEE MGA Vice President, Mr. Deepak Mathur**, as the Chief Guest, along with **IEEE R10 Director, Dr. Lance Fung**, and **IEEE India Council Chair, Dr. Debabrata Das**, as Guests of Honour. The event brought together Section leaders from the IEEE India Council, Kerala Section ExCom members, Student Branch Counsellors, SB Chapter Advisers, Past Chairs, Life Senior Members, and Senior Members with five or more years of IEEE membership.

- The **International Conference on Recent Advances in Intelligent Computational Systems (RAICS 2024)** - the flagship conference of IEEE Kerala Section was held from May 16 to May 18, 2024, at Mar Athanasius College of Engineering (MACE) in Kothamangalam, Kerala, India. The conference focused on the interdisciplinary nature of intelligent computational systems, covering areas such as Electrical, Electronics, Computer, and Information sciences. More than 500 papers were received and the acceptance rate is 35%.

- The **International Conference on Signal Processing, Informatics, Communication and Energy Systems (SPICES 2024),** another flagship conference of IEEE Kerala Section was held from September 20 to September 21, 2024, at the Indian Institute of Information Technology (IIIT) Kottayam, Kerala, India. The theme for this year's conference is "Harmonizing Signals, Data, and Energy: Bridging the Digital Future".

- IEEE Kerala Section technically co-sponsored 13 international conferences held across various institutes in Kerala.

## Major Chapter Activities

- **IEEE PES R10 India Council Global Workshop**

  The **IEEE PES R10 Global Workshop** on *"Resilient Grids: Adapting to Energy Transition"* was inaugurated on **13th July 2024, at 2:00 PM** at **Hotel Residency Towers, Thiruvananthapuram, Kerala**. The session commenced with **Dr. Rahul Satheesh** (Treasurer & YP Coordinator, IEEE PES Kerala Chapter) addressing the IEEE Code of Ethics, emphasizing ethical practices in engineering. **Dr. Ajith Gopi** (Chair, IEEE PES Kerala Chapter) delivered the presidential address, highlighting the workshop's significance and schedule. **Prof. V.K. Damodaran** (IEEE Life Senior Member & Mentor) discussed the crucial role of resilient grids in energy transition and climate change mitigation. A key moment was the unveiling of the **silver jubilee logo** by **Er. A. Suhair** (Past Chair, IEEE PES Kerala Chapter), marking a significant milestone for the chapter. **Prof. Muhammed Kasim** (Chair, IEEE Kerala Section) officially inaugurated the workshop, sharing insights into the evolution of the IEEE Kerala Section and the growth of its society chapters. **Dr. P.S. Chandramohanan Nair** (Founder Chair, IEEE PES Kerala Chapter) provided historical context on the formation of the Kerala Section. The session concluded with a **felicitation ceremony** and a **vote of thanks** by **Er. Harikumar K.P** (Secretary, IEEE PES Kerala Chapter), expressing gratitude to the speakers, participants, and organizers. The inauguration laid a strong foundation for discussions on **resilient grids and energy transition**, emphasizing IEEE PES's role in advancing these critical topics.

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**Major Student and Affinity Group Activities**
- **IEEE YESS - Largest Student Member Congress in IEEE -** YESS'24 is the largest student congress in IEEE history. Co-organised by 42 IEEE OUs, it brought together 4,089 participants from 93 student branches. The event was powered by 453 dedicated volunteers, featuring 117 speakers, 104 faculty members, and 25 special guests, including IEEE Life Senior Members. YESS'24 offered over 30 innovative events, such as the world's first Generative-AI Fashion Show, India's first IEEE Dataport-powered Datathon, an industry-mentoring program sponsored by 14 companies, etc. This transformative platform enabled the networking and engagement opportunity for 4000+ IEEE members across South India.

**Awards**
- R10 Outstanding Large Section Award 2024 - **IEEE Kerala Section**
- **4** Winners of IEEE CS Richard E Merwin Scholarship 2024
- **2** IEEE India Council Awards
- **5** IEEE Outstanding Branch Counselor & Branch Chapter Advisor Award
- **11** IEEE Regional Exemplary Student Branch Award
- **8** Darrel Chong Student Activity Award **(1 Gold, 3 Silver, 4 Bronze)**

## A.2  Financial Report

**IEEE KERALA SECTION ACCOUNTS**
**01 JANUARY 2024 - 31 DECEMBER 2024**
**ABSTRACT**

| Sl. No. | Head | Receipts (in Rs.) | Payments (in Rs.) |
|---|---|---|---|
| 1 | Opening Balance - cash | 268.00 | |
| 2 | Opening Balance - bank | 1,34,50,761.03 | |
| 3 | Income | 3,83,00,747.62 | |
| 4 | Expense | | 3,38,44,811.83 |
| 5 | Closing Balance-Cash-in-hand | | 78.00 |
| 6 | Closing Balance-Bank | | 1,79,06,886.82 |
| | **Total** | **5,17,51,776.65** | **5,17,51,776.65** |
| 7 | Closing Balance | 1,79,06,964.82 | |
| 8 | Payables to Student Branches (Rebate & Society Chapter funds) | | 87,36,941.00 |
| 9 | Payables (Project funds) | | 19,63,812.00 |
| 10 | Payables (Individual award money) | | 41,120.00 |
| 11 | Payables to different Societies including the fund received | | 56,25,442.00 |
| 12 | Amount earmarked for AGM & Awards function | | 6,34,524.00 |
| | **Total** | **1,79,06,964.82** | **1,70,01,839.00** |
| | **Balance** | **9,05,125.82** | |

| Sl. No. | Chapter | Amount (in Rs.) |
|---|---|---|
| 1 | Robotics & Automation Society | 21,96,291 |
| 2 | Communication Society | 8,33,402 |
| 3 | Signal Processing Society | 7,90,192 |
| 4 | Solid State Circuits Society | 6,58,164 |
| 5 | Power & Energy Society | 5,48,458 |
| 6 | Young Professionals Affinity Group | 5,07,994 |
| 7 | GRSS | 4,85,978 |
| 8 | Computer Society | 3,94,338 |
| 9 | Life Member Affinity Group | 3,70,195 |
| 10 | Circuits & Systems Society | 3,50,184 |
| 11 | Women In Engineering Affinity Group | 2,64,938 |
| 12 | Photonics Society | 2,36,856 |
| 13 | Antenna & Propagation Society | 2,33,885 |
| 14 | IA/IE/PELS Joint Chapter | 1,91,778 |
| 15 | SIGHT | 1,60,477 |
| 16 | MTTS | 1,23,360 |
| 17 | Education society | 1,03,173 |

## PART B - ORGANIZATIONAL ACTIVITIES

## B.1 Membership Development Activities
- Total number of active members in the past 3 years.

| Month/ Year | Total |
|---|---|
| 31 Dec 2021 | 13008 |
| 31 Dec 2022 | 15402 |
| 31 Dec 2023 | 15074 |
| 31 Dec 2024 | 15157 |

- Organized and conducted Membership Development (MD) sessions in collaboration with various members of the Student Activities Committee (SAC) team and the Student Leadership Team (SLT) of IEEE LINK serving as speakers..These sessions, held in various student branches across Kerala, utilized both online and offline formats to maximize outreach and engagement. The sessions took place at St. Thomas Chengannur on March 2nd (offline), CUSAT on March 22nd (offline), RSET on March 23rd (online), MBITS on March 15th (offline), LBS on March 21st (offline), and GECK on March 19th (online), NIT Calicut February 13(offline), Sahrdaya March 21(offline). Attendees were provided with comprehensive information about IEEE and its benefits, empowering them to make informed decisions about IEEE membership and encouraging active participation in IEEE activities. Through interactive presentations, discussions, and personalized engagement, students gained a deeper understanding of the advantages of IEEE membership and were encouraged to actively participate in IEEE activities.

## B.2 Chapter Activities
- Total number of Chapters in the Section: **21 (20 Society Chapters, 1 Council Chapter)**
- Number of Chapters formed in the current year: **4 (Computational Intelligence Society, Control Systems Society, Electromagnetic Compatibility Society, Aerospace and Electronics Systems Society**
- Number of active Chapters (Chapters who have reported required number of meetings during the year): **19**
- Summary of Chapter activities (Chapter wise with attachment table/information)

| Chapter (Events Reported) | Notable Events |
|---|---|

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|---|---|
| Circuits & Systems Society | **Program on IOT** - Session on IoT technologies (January 3).<br>**VLSI Design and Intelligent Systems** - Workshop on VLSI and intelligent systems (January 25).<br>**Maker CASS: One Day Workshop on PCB Design and 3D Printing** - Hands-on workshop (April 13).<br>**Maker CASS: Three Day Hands-on Workshop on Neuromorphic Analog Circuits** - Intensive training (April 22).<br>**Maker CASS: Circuit Hackathon** - Circuit design competition (May 7).<br>**National Technology Day Celebrations** - Commemorative event (May 18).<br>**i5-Ignite Imaginations & Inspire Iconic Innovations** - Innovation-focused event (March 1).<br>**Circuit Design Workshop for Government School Students** - Educational workshop (March 10).<br>**Memristive Computing Workshop** - Workshop on memristive computing (March 15).<br>**Course in RF Technology with Entuple Technologies** - Training on RF technology (May 13).<br>**RFIC Workshop in collaboration with Keysight** - Workshop on RFIC (June 10).<br>**Vega Processors Programming for High School Students** - Programming workshop (August 10).<br>**IEEE CASS Seasonal School** - Focused on memristive sensing and bioinspired computing systems (October 16).<br>**Maker Chips** - Event on chip design (July 1).<br>**Certification Course on Verilog HDL** - Course on Verilog HDL (July 28).<br>**CHIPCHAT** - Discussion on VLSI and embedded systems (August 19).<br>**Two Day Workshop on MEMS-CMOS/ROIC Integration** - Comprehensive workshop (August 23).<br>**One-Day Hands-on Workshop on DIR-V VEGA Processor Programming** - Practical training (August 29).<br>**CHIPATHON** - Hackathon focusing on chip design (August 31).<br>**Symposium Celebrating 75 Years of CASS** - Anniversary symposium (August 31).<br>**IEEE Kerala Graduate Student Community Travancore Hub Inauguration** - Hub inauguration (September 11).<br>**Accelerating Intelligence: Unleashing AI with FPGA** - AI and FPGA-focused event (April 8).<br>**PCB Workshop using KiCad** - Workshop on PCB design (February 21).<br>**CHIP CHAT: MEC's Workshop Series on VLSI and Embedded System** |
| [Communications Society](#) | **HTB Project Field Visit** - Field visit for a project (January 19).<br>**SLT Meeting** - Strategic Leadership Team meeting (March 3).<br>**ComSoc AGM** - Communication Society Annual General Meeting (March 7).<br>**HER STORY** - Event celebrating women's achievements (March 8).<br>**She Hack** - Hackathon for women (May 12).<br>**Quizophile** - Quiz competition (May 17).<br>**Career, Leadership, and Professional Development that IEEE can provide** - Session on career and leadership development (September 16).<br>**Chairs Meeting** - Meeting for IEEE chapter chairs (August 20).<br>**PROCOMM'24 Final** - Final round of PROCOMM competition (September 21).<br>**SheHack** - Another session of She Hack (March 8).<br>**6G Summit Kerala 2024** - Summit on 6G technology (November 16).<br>**YP Meet** - Young Professionals meet (November 17).<br>**PROCOMM 2024** - PROCOMM competition (September 21). |
| [Computer Society](#) | **Colloquium'24** on Cloud Computing - A comprehensive event on cloud computing (February 24),<br>**Deep Dive into LL Models** - A detailed session on LL models (August 3),<br>**Cyber Shield** - Focused on cybersecurity (August 9),<br>**SheCan** - Empowering women in technology (March 8),<br>**Cyber Summit** - Discussions on cybersecurity trends and practices (March 19),<br>**All About REM & UPE** - A deep dive into REM and UPE (March 24),<br>**IEEE R10 Young Professionals Upskill 2024** - A skill development event (November 9),<br>**Dev Summit** - A developer-focused event (August 9),<br>**AI-Driven UI/UX Prompting** - Workshop on AI-driven UI/UX (July 15),<br>**INFORMATYKA - C Code Quest** - Coding competition (July 17),<br>**IEEE Xtreme Training #1** - Training session for IEEE Xtreme competition (August 3),<br>**UI/UX Workshop (AKCSSC)** - Workshop on UI/UX (December 14),<br>**Full Stack Development (AKCSSC)** - Workshop on full stack development (December 14),<br>**Cloud Computing (AKCSSC)** - Workshop on cloud computing (December 14), |

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| | **INFORMATYKA 4.0** - Sessions on startup thoughts, cybersecurity, and LL models (July 15, August 9, August 3). |
| Education Society | **i5 - Ignite Imagination and Inspire Iconic Innovations 2.0** - 3-day national technical convention (March 1).<br>**RiseHER: Inspiring Spotlight!** - Event inspiring women (March 6).<br>**HER STORY** - Celebrating women's achievements (March 6).<br>**HerStory; Women: A Tale of Insights** - Insightful event for women (March 11).<br>**Crafting Career Success: Unleashing the Power of LinkedIn for College Students** - LinkedIn workshop (March 6).<br>**TIMELESS TECH** - Exploring timeless technologies (June 2).<br>**Empowering Women: Anjali Bhavana IPS Unveils Her Journey to the Force** - Inspirational talk by Anjali Bhavana IPS (March 9).<br>**Introduction to MATLAB** - Workshop on MATLAB basics (June 22).<br>**HER STORY event** - Another session celebrating women (March 6).<br>**ENABLE - Empower New Abilities and Broadening Learning Experiences** - Event promoting new skills and learning (July 22).<br>**VENTURE UP** - Entrepreneurship and innovation-focused event (August 17).<br>**PIXIFY - Figma Workshop** - Workshop on Figma (August 3).<br>**IEEE Day 2024 - IEEE Education Society 2024 Awardee's Panel** - Panel discussion (October 9).<br>**Pro Talks - Episode 6: Bridging the Gap: Preparing Engineering Students for Industry Success** - Talk on preparing engineering students (September 18).<br>**I5: IGNITE IMAGINATION & INSPIRE ICONIC INNOVATIONS 2.0** - Another session of the technical convention (March 1).<br>**Ed QUIZ** - Educational quiz competition (March 16).<br>**Pro Talks Episode 5: Creating a Million Entrepreneurs** - Discussion on entrepreneurship (July 29).<br>**FOLDSCOPE WORKSHOP** - Workshop on using Foldscope (March 6).<br>**Inspire Tech - Bridging Minds, Building Futures** - Event focused on innovation and technology (November 22) |
| Engineering In Medicine & Biology Society | **Talk on Gaganyaan Project** - Discussion on India's human spaceflight mission (March 13).<br>**IGNIUM 2024 - Biomedical Quiz** - Quiz competition focusing on biomedical topics (December 28).<br>**A Talk on AR and VR in Healthcare Applications** - Presentation on the use of augmented reality and virtual reality in healthcare (December 27).<br>**Inauguration of IGNIUM 2024** - Opening ceremony for IGNIUM 2024 events (December 26) |
| Geoscience & Remote Sensing Society | **GRSS Membership Drive Session at TKMCE** - Membership drive session by GRSS and IEEE (August 14).<br>**Demonstration of UAV Flights** - One-day demonstration over Azheekal mangrove forest (February 17).<br>**Tutorial on Deep Learning Models for Land Cover Mapping** - Tutorial using high-resolution satellite images (July 18).<br>**From Data to Dynamics: Discovering Differential and Algebraic Equations with Scientific Machine Learning** - Workshop on scientific machine learning (November 20) |
| IA/IE/PELS Jt. Chapter | **Online Talk Session - Experience of a Techno Entrepreneur** - Insights from a tech entrepreneur (March 18).<br>**Panel Discussion: SHEWISDOM** - Discussion on women's wisdom and experiences (March 3).<br>**COGNIZE US!** - Interactive session (March 20).<br>**Industry 4.0 Talk Session** - Discussion on Industry 4.0 advancements (September 23).<br>**Tech Titans** - Event featuring tech industry leaders (September 24).<br>**IEEE IES Distinguished Lecturers Program** - Series of lectures by distinguished professionals (September 25).<br>**Envisioning Tomorrow: The Rise of IIoT in Smart Industries** - Focus on the Industrial Internet of Things (September 22).<br>**Distinguished Lecture on Intelligent Power Management and Control of Electric Drive in EVs** - Lecture on using reinforcement learning (August 9).<br>**Figma Workshop** - Hands-on workshop on Figma (September 25).<br>**All Kerala Industry Application Society Student Conclave 2024 (AKIASSC'24)** - Student conclave (July 19).<br>**Novus - Women in IES Distinguished Lecturers Program** - Lectures by distinguished women in the field (December 16). |

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| | **SYNERGY Solar Design Workshop** - Workshop on solar design (August 24).<br>**Inaugural Ceremony of the EV Masterclass** - Opening ceremony (September 23).<br>**Distinguished Lecture on Intelligent Power Management and Control of EVs Using Reinforcement Learning** - Another session (August 8).<br>**EV Masterclass Offline Boot Camp (A Day at Bosch)** - Industry-academia engagement (December 13).<br>**EV Masterclass and Capstone Project** - Comprehensive masterclass and project (September 23).<br>**KREEPA GREEN POWER EXPO 2024** - Expo focused on green power (November 29).<br>**IEEE PELS Distinguished Lecture Program on System Thinking and Its Roles in Innovation of Power Electronics** |
| Photonics Society | **Talk on Current Trends in Optical Fiber Manufacturing** - Discussion on the latest trends in optical fiber manufacturing (January 4).<br>**Women in Science Domain (WISDOM) Quiz** - Quiz competition for women in science (March 12).<br>**Celebration of International Day of Light by IEEE Photonics Society** - Event celebrating the International Day of Light (May 16).<br>**LUMEN - Illuminating the Future** - Event focused on future advancements in photonics (August 24).<br>**Workshop on Comsol Multiphysics** - Hands-on workshop on Comsol Multiphysics (December 18).<br>**Outreach Activity: Talk on Promising Third Generation Solar Cells** - Talk on advancements in solar cell technology (September 10).<br>**Expert Talk Session: "Multimodal Biophotonic Optical Imaging for Early Disease Detection and Guidance"** - Expert talk on biophotonic optical imaging (October 10) |
| [Power & Energy Society](#) | **IEEE PES Kerala Chapter Annual General Meeting 2024** - Annual general meeting (January 26).<br>**National Seminar on Renewable and E-Mobility** - Part of ANERT RE-EV Expo 2.O, focused on renewable energy and e-mobility (March 2).<br>**Panel Discussion: Empowering Women in Sustainable Energy** - Bridging the gender gap for a greener future (March 8).<br>**Power System Inertia and Contingency Management** - Managing evolving grids with high penetration of inverter-based renewable resources (April 26).<br>**Impacts of Electric Vehicle Adoption On Power Grid** - Discussing the effects of EV adoption on the power grid (May 22).<br>**WOW 5.0 Talks: Challenges and Opportunities for Women in STEM Careers** - Focused on women in STEM (June 29).<br>**EV Grid Integration Challenges** - Examining Australian EV charging profiles (July 11).<br>**ECU Virtualization: Transforming Automotive Testing and Validation** - Workshop on ECU virtualization (July 20).<br>**IEEE PES R10 India Council Chapters Global Workshop** - Global workshop (July 16).<br>**Transitioning to Resilient Grids** - Addressing challenges through innovative technologies (July 14).<br>**Role Of Renewables and Electric Vehicles in Enhancing Resilience** - Enhancing modern power systems (July 14).<br>**Wind Resource Assessment in India and Development of Wind Energy in Kerala** - Wind energy development (July 13).<br>**Talk Session on Using Buildings for Virtual Energy Storage** - Virtual energy storage (July 14).<br>**Importance of Diversity in the Power and Energy Society** - Discussing diversity (July 14).<br>**Talk Session on Empowering Sustainable Future with Hydrogen** - Focused on hydrogen (July 13).<br>**System Engineering Approach to EV Design** - Workshop on EV design (July 14).<br>**Shaping the Future of Utility-Scale Solar** - Solar energy developments (July 13).<br>**Designing Solar PV Systems Using PVSyst** - Workshop on PV system design (July 13).<br>**AKPESSC (All Kerala Power and Energy Society Student Congress)** - Student congress (September 27).<br>**Integrating EV with Smart Charging for Sustainable Development** - EV and smart charging (September 23).<br>**Five Days Faculty Development Program on Exploring New Frontiers in Power Systems and Power Electronics** - Faculty development program (October 4).<br>**Expert Talk on Communication Systems in Power Systems** - Communication systems in power (October 10). |

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| | **IEEE Day PES Quiz** - Quiz competition (October 14) |
| Computational Intelligence Society | **Inaugural Function of IEEE CIS Joint Chapter of Kerala Section & Kochi Subsection** - Inaugural function for the joint chapter (May 6).<br>**Genetic & Evolutionary Algorithms: Remembering Jeffrey Horn** - Talk remembering Jeffrey Horn's contributions to genetic and evolutionary algorithms (June 25).<br>**A Critical History of AI** - Discussion on the historical development of artificial intelligence (August 6).<br>**Low-Cost GPU and AI-Based Computational Tool-Suite for Cancer Diagnosis and Radiotherapy Treatment** - Presentation on a computational tool-suite for cancer diagnosis and radiotherapy (December 16) |
| [Robotics & Automation Society](#) | **Workshop on Drones and its Applications** - Workshop on drone technology (February 21).<br>**Capacity Building for Human Resource Development in Unmanned Aircraft System** - Training on unmanned aircraft systems (March 5).<br>**Introduction to the Metaverse, AR/VR Environment Setup and Practical Application** - Workshop on the metaverse, AR/VR setup, and applications (March 1).<br>**IEEE – R10 Robotics Workshop - Travancore Hub** - Robotics workshop (April 6).<br>**ROS Workshop** - Workshop on Robot Operating System (July 23).<br>**ROBOCREWTALES** - Robotics-related event (June 30).<br>**Drone Expo-Yes Program 2024** - Drone technology exhibition (August 24).<br>**Drone Workshop-YES 2024** - Workshop on drones (August 24).<br>**Drone Show - YES 2024** - Demonstration of drone capabilities (August 24).<br>**HYBROT 2.0 - Integration of AI in Projects' Workshop** - Workshop on integrating AI in projects (September 28).<br>**NAVIG8 Maze Solving Robots Phase 1** - Event on maze-solving robots (August 27).<br>**HYBROT 2.0: Crafting Worlds with Blender** - Workshop on using Blender for world-building (September 29).<br>**HYBROT 2.0 - Navig8 Maze-Solving Robot: Robot Assembly & Hands-on Training** - Practical training on robot assembly (October 2).<br>**HYBROT 2.0: Automate with RPA** - Workshop on Robotic Process Automation (RPA) (October 26).<br>**ROS Workshop (Online)** - Online workshop on Robot Operating System (July 23) |
| [Signal Processing Society](#) | **i5 - Ignite Imagination and Inspire Iconic Innovations 2.0: 3 Day National Technical Convention - A three-day technical convention (March 1).**<br>**EmpowerHER - Event focused on empowering women (February 17).**<br>**SheRising - "Chit Chat with WESAT Team" - Informal discussion with the WESAT team (March 9).**<br>**SheRising - Article Writing Competition - Article writing competition for women (March 7).**<br>**SIGMA - Event named SIGMA (April 13).**<br>**IEEE SPS Student Chapter Congress (SCC) 2024 - Student chapter congress (August 23).**<br>**K-12 Signal House Exhibition at YESS 24 - Exhibition at YESS 24 (August 24).**<br>**2025 ICASSP Satellite Event: Authorship Workshop at TKMCE - Workshop on authorship (August 19).**<br>**2025 ICASSP Satellite Event: Authorship Workshop at KMEA - Another authorship workshop (August 17).**<br>**RUST - Stand Out From the Rest - Event named RUST (July 11).**<br>**Execom Meeting - Executive committee meeting (June 1).**<br>**Hack4Good - Hackathon event (December 28).**<br>**SheHeritage - Event celebrating women's heritage (October 20).** |
| Society on Social Implications of Technology | **The Art of Prompt Engineering** - Workshop on prompt engineering (October 31).<br>**Emerging Energy Technologies** - Discussion on new energy technologies (November 6).<br>**Shaping the Future: Engineering Solutions for a Socially Responsible Tech Era** - Event focused on engineering for social responsibility (November 12).<br>**Data Privacy** - Session on data privacy issues (November 15). |
| [Solid-State Circuits Society](#) | **Talk session on, Beyond the Chip: Crafting Career in Semiconductor Innovation** - Career-focused talk on semiconductor innovation (February 21).<br>**Talk session on "Low Noise CMOS Image Sensors for SWIR Imaging"** - Discussion on CMOS image sensors for SWIR imaging (March 1).<br>**Workshop on: FPGA Foundry; Crafting Digital Magic with Verilog** - Hands-on workshop on FPGA and Verilog (March 2).<br>**Talk on "Unlocking Opportunities in VLSI"** - Exploring career opportunities in VLSI (July 22). |

| | LinkedIn: Building Bridges to Success - Workshop on leveraging LinkedIn for career success (April 15).<br>Distinguished Lecture Program on "FPGA Chiplet- Architectures and Circuits for 2.5D/3D 6G Intelligent Radios" by Dr. Farhana Sheikh - Lecture on FPGA chiplet architectures (October 9).<br>Workshop on "Basics of Tinkercad and PCB Creation" held as part of the IEEE Kochi Hub Meetup - Workshop on Tinkercad and PCB creation (October 5).<br>Quiz Competition on "Basics of Electronics and Electrical Engineering" - Quiz competition (October 5).<br>Awareness Session on Opportunities in VLSI and IEEE SSCS - Session on VLSI career opportunities (June 6). |
|---|---|
| Vehicular Technology Society | EV Charging Performance and Issues - Discussion on the performance and issues related to EV charging (February 27).<br>Wireless is back: 6G Revolution Towards Connected Intelligence - Session on the advancements and impact of 6G technology (March 22).<br>Machine Learning and AI for 6G and Beyond Networks - Workshop on the applications of machine learning and AI in 6G networks (October 4). |
| Microwave Theory and Technology Society | J C Bose Talk - A talk honoring the contributions of J C Bose (January 12).<br>75th Anniversary Celebration of IEEE AP-S, 10th Anniversary Celebration of AP-S Kerala Chapter, Annual General Body Meeting of IEEE AP-S and MTT-S Kerala Chapter - Celebrations and annual meeting for the IEEE Antennas and Propagation Society (AP-S) and Microwave Theory and Techniques Society (MTT-S) Kerala Chapter (April 19). |

## B.3 Professional and Continuing Education Activities

**Educational Activities:**

| | | |
|---|---|---|
| Women's Health and Hygiene | Mrs. Padmini M | 12 March |
| Webinar on Engineering Applications of Fuzzy Logic | Dr KM Arun | 6 March |
| Volunteer Induction Program Powered by TRY Engineering | Mr. Stamatis Dragoumanos | 6 April |
| Celebration of IEEE Education Week - Technical Talk | Dr. Hiran V Nath | 17 April |
| Pre-University Program - Scratch to Python Programming | Mr. Zafar, Mr. Irfan, Ms. Hanan, and Mr. Minhaj | 17 April |
| Technical Talk on Generative AI | Mohammed Shameem K | 25 July |
| Quiz on Space Science and Technology | | 29 August |
| Engineer's Day Celebration Application of Artificial Intelligence for Sustainable Transportation | Dr. Munavar Fairooz C | 23 Sept |
| FDP on RTL Design & Verification of the ARM-Based Systems Using FPGA | Mr. N J Hariprasad | 27 & 28 Sept |
| Talk on Introduction to 5G | Dr. Vinay Joseph | 5 Nov |

**Conferences:**

| Name of the Conference | Organizing Institute | Date (2024) |
|---|---|---|
| International Conference on Innovative Trends in Information Technology (ICITIIT-24) | IIIT Kottayam | 15 - 16 Mar |
| Second International Conference on Smart Technologies for Power and Renewable Energy (SPEcon2024) | FISAT | 2 - 4 Apr |
| International Conference on Trends in Engineering Systems and Technologies (ICTEST) | MEC | 11 - 13 Apr |
| International Conference on Circuits, Control and E-Mobility (ICCCE2024) | MBCET | 18 - 20 Apr |
| International Conference on Recent Advances in Computational Systems (RAICS 2024) | MACE | 16 - 17 May |
| International Conference on Advancements in Power, Communication and Intelligent Systems (APCI- 2024) | GCE Kannur | 21 - 23 Jun |
| International Conference on Circuit, Power and Computing Technologies 2024 (ICCPCT 2024) | Baselios Mathews II | 8 - 9 Aug |
| International Conference on Signal Processing, Informatics, Communication and Energy Systems 2024 (SPICES 2024) | IIIT Kottayam | 20 - 21 Sept |

| 3rd International Conference on Futuristic Technologies on Control Systems and Renewable Energy (ICFCR 2024) | MES Kuttippuram | 25 - 26 Sept |
|---|---|---|
| 11th International Conference on Advances in Computing & Communications (ICACC 2024) | RSET | 6 - 8 Nov |
| International Conference on Advances in Renewable Energy and Intelligent Systems (AREIS2024) | JEC | 5 - 6 Dec |
| International Conference on Smart Electronics and Communication Systems 2024 (ICSECS) | IIIT Kottayam | 6- 7 Dec |
| International Conference on Brain-Computer Interface & Healthcare Technologies | CDAC, GMC TVM, IIST, & SCTIMST | 19 - 20 Dec |

## B.4 Student Activities

- Total number of Student Branches in the Section: **116 SBs**
- Number of Student Branches formed in the current year: **1 New Student Branch**
- Number of active Student Branches (Student Branches who have reported required number of meetings during the year): **101**
  **12924 Student Members, 116 SBs, 4149 Reported Student Activities, 34 SAC Activities**
- Section-level student activities (student congress, paper and other contests, awards etc):

**IEEE YESS - Largest Student Member Congress in IEEE**

- YESS'24 is the largest student congress in IEEE history. Co-organised by 42 IEEE OUs, it brought together 4,089 participants from 93 student branches. The event was powered by 453 dedicated volunteers, featuring 117 speakers, 104 faculty members, and 25 special guests, including IEEE Life Senior Members. YESS'24 offered over 30 innovative events, such as the world's first Generative-AI Fashion Show, India's first IEEE Dataport-powered Datathon, an industry-mentoring program sponsored by 14 companies etc. This transformative platform enabled the networking and engagement opportunity for 4000+ IEEE members across South India.

## B.5 Affinity Group Activities

| Affinity Group | Notable Events |
|---|---|
| **Young Professional (YP)** | **PIEVERSE** - This engaging event took place on May 3 and May 4, focusing on innovative technological advancements and trends. Participants explored the latest developments in various tech fields, networked with experts, and showcased their projects. |
| | **IEEE R10 Young Professionals Upskill 2024 X Kerala Section** - Held on November 9, this event aimed to enhance the skills of young professionals through workshops, seminars, and interactive sessions, helping them stay updated with industry trends and best practices. |
| | **Mentor Match: Industry Mentoring Program** - Conducted on August 24, this program paired industry experts with mentees to provide guidance, knowledge sharing, and career advice, fostering professional growth and development. |
| | **YP Micro Meetup – 1 \| Travancore Hub** - On February 4, this micro meetup offered a platform for young professionals to connect, share ideas, and collaborate on projects, strengthening their professional network. |
| | **VoLT [Volunteer and Leadership Training Program] 2024** - Held on March 16, this training program focused on developing leadership skills and volunteer management strategies, empowering participants to take on leadership roles within IEEE and their communities. |
| | **STEP'24** - Conducted on April 28, STEP'24 was a technical event that brought together students and professionals to engage in workshops, presentations, and networking activities, promoting knowledge sharing and collaboration. |
| | **Panel Discussion - Utilizing IEEE for Career Advancement** - On August 9, this panel discussion explored how IEEE membership and resources could be leveraged for career growth and advancement, featuring insights from experienced professionals. |
| | **Industry-Institute Interaction** - Held on August 17, this event aimed to bridge the gap between industry and academia by fostering collaboration and knowledge exchange, helping students and professionals stay updated with industry demands. |
| | **Slash-key - Judging and Sponsorship Support** - On July 20, this event focused on providing support for judging and sponsorship in tech competitions, ensuring fair evaluations and fostering innovation. |
| | **Genesis 3.0** - Conducted on November 16, Genesis 3.0 was a large-scale tech event featuring workshops, competitions, and networking opportunities, encouraging participants to showcase their skills and projects. |
| | **YP Meet** - On November 17, this meetup offered young professionals a chance to connect, share experiences, and collaborate on initiatives, strengthening the community and fostering |

IEEE Kerala Section

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| | |
|---|---|
| | professional growth |
| **Women In Engineering (WIE)** | **Tink-Her_Hack** - Held on March 9, this hackathon focused on empowering women in technology through collaborative coding and innovation.<br>**Mandala Art Competition** - Conducted on March 29, this competition celebrated the creativity and artistic skills of participants through mandala art.<br>**SparkHer: Workshop** - On April 3, this workshop aimed to inspire and equip women with the skills and confidence to pursue careers in technology.<br>**Talk Session: Women in Tech** - Held on April 2, this session featured discussions on the challenges and opportunities for women in the tech industry.<br>**FIGMA Workshop** - Conducted on March 31, this hands-on workshop focused on teaching participants how to use Figma for design and prototyping.<br>**STEMMing the Gender Gap: Inspiring Women to Lead** - On April 3, this event aimed to motivate and inspire women to take on leadership roles in STEM fields.<br>**Writing Her Legacy** - Held on April 4, this session focused on empowering women to share their stories and achievements through writing.<br>**Clash Of Clans 2.0** - Conducted on March 30, this event was a competitive gaming tournament that brought together tech enthusiasts.<br>**Techscribe** - On April 4, this workshop provided guidance on technical writing skills for aspiring tech writers.<br>**Shutterbug** - Held on April 2, this photography competition celebrated the visual storytelling abilities of participants.<br>**Her Story** - Conducted on April 4, this event celebrated the achievements and contributions of women in various fields.<br>**Quiz Competition** - On April 2, this quiz competition tested participants' knowledge on a range of topics.<br>**LinkedIn: Building Your Network and Brand** - Held on April 1, this workshop focused on leveraging LinkedIn for professional networking and personal branding.<br>**Master Cloud Computing** - Conducted on April 3, this workshop provided insights into cloud computing technologies and their applications.<br>**Women In Tech: Talk Session** - On April 2, this session featured discussions on the experiences of women in the tech industry.<br>**WOW5.0 - Estimation of Solar Radiation and Its Impact on Green Energy Transition** - Held on May 10, this session focused on the role of solar radiation in the transition to green energy.<br>**Offenses Against Women under Bharatiya Nyay Sanhita** - Conducted on May 17, this session discussed legal provisions and protections for women in India.<br>**NET ZERO HOMES - Awareness Campaign for Women Champions** - In collaboration with IEEE PES Kerala Chapter and K V Nagar Residential Association, Kollam, held on May 18, this campaign promoted awareness about net-zero homes.<br>**Women Empowerment through Green Energy Promotion** - LED training program held on May 25, training 76 women in groups on LED lamp assembling and green energy promotion.<br>**Tink-Her-Hack 2.0** - Another session of the hackathon held on March 9, focusing on women's participation in technology.<br>**Returning Women Engineer's Programme** - Conducted on October 25, this program aimed to support women engineers returning to the workforce.<br>**SAAGA '24: A Tale of Thousand Stars** - Held on November 2, this event celebrated storytelling and creativity.<br>**Women of Wisdom Tech Talk Series (WOW 5.0) Session 7** - Conducted on November 8, this session featured talks on various tech topics by women leaders.<br>**Sasthra Vismaya** - Held on November 9, this event showcased scientific wonders and innovations.<br>**IEEE WIE Regional Retention Revitalization and Advancement Symposium** - Conducted on November 30, this symposium focused on strategies for retaining and advancing women in engineering.<br>**Roundtable on Diversity, Equity, and Inclusivity** - Held on August 10, this roundtable discussed strategies for promoting diversity and inclusion.<br>**Training Unemployed Women/Housewives on Women Empowerment through Green Energy Promotion** - Conducted on January 23 and March 15, these sessions provided training on green energy promotion and LED lamp assembling.<br>**Green Energy - Training on LED Lamp Assembling** - Held on February 6, this training program focused on LED lamp assembling as a women empowerment initiative. |

| Life Member (LM) | **LED lamp assembly** (January 23) - Workshop on LED lamp assembly techniques. |
|---|---|
| | **Keynote address by Prof. V.K. Damodaran** (January 26) - Insightful keynote address. |
| | **PTB Sasthra Pareeksha** (January 28) - Scientific examination and discussions. |
| | **Technical Talk on Lab to Startups** (January 30) - Journey from lab research to startup. |
| | **Manual for Millennium Electrician for wiremen** (January 31) - Guidelines for modern electricians. |
| | **Edu Tech Conclave** (February 2) - Advancements in educational technology. |
| | **Planning Activities for 2024** (February 4) - Finalizing the activity plan for 2024. |
| | **Panel discussion at Renew 2024** (February 4) - Renewable energy innovations. |
| | **Women empowerment through Green Energy Promotion** (February 6) - Promoting green energy initiatives for women. |
| | **Planning of Carbon Neutrality** (February 6-7) - Strategies for achieving carbon neutrality. |
| | **Basics of Electricity** (February 6) - Fundamental concepts of electricity. |
| | **Visiting Exhibition Organised by 36th Kerala Science Congress** (February 7) - Visit to the exhibition. |
| | **36th Science Congress** (February 9) - Showcasing scientific advancements. |
| | **Visit to Global Science Festival Kerala Exhibition** (February 14) - Exploring the exhibition. |
| | **Meeting of LMAG Chairs of R10** (February 18) - Discussing LMAG activities and plans. |
| | **Meeting with the office bearers of KSSP** (February 24) - Collaborative initiatives with KSSP. |
| | **Meeting of PES Execom 2024** (February 27) - Focus on PES activities. |
| | **Valedictory speech on Ignite Imagination & Inspire** (March 3) - Inspirational valedictory speech. |
| | **Planning Carbon Net Zero Cities** (March 6) - Planning for carbon net zero cities. |
| | **Electronics Innovation and Emerging Technologies** (March 13) - Exploring innovations in electronics. |
| | **Discussion with YWCA** (March 15) - Collaborative efforts with YWCA. |
| | **LED Assembling Training Workshop** (March 15) - Hands-on training in LED assembling. |
| | **In Communities and Beyond the Borders** (March 27) - Community outreach and engagement. |
| | **Role of Women and Youth in Knitting Net Zero** (April 5) - Involvement of women and youth in carbon neutrality. |
| | **Women Empowerment through Green Energy Promotion** (April 5) - Promoting green energy initiatives for women. |
| | **IEDC Conclave** (April 10) - Innovation and entrepreneurship. |
| | **Merit of continuing as IEEE member** (April 18) - Benefits of IEEE membership. |
| | **World Environment Day** (April 19, June 7) - Awareness about environmental protection. |
| | **Life Member Executive Committee Meeting** (April 21) - Discussing LMAG activities and plans. |
| | **Kerala State Energy Policy Seminar** (April 29) - Discussing state energy policies. |
| | **Preparation of joint project** (May 9) - Planning joint projects. |
| | **World Day of Climate Protection** (May 12) - Promoting climate protection initiatives. |
| | **Women Empowerment through Green Energy Promotion** (May 27, 28) - Promoting green energy initiatives for women. |
| | **LED Lamp Assembly** (May 29) - Training in LED lamp assembly. |
| | **R10 LMAG Chairs quarterly meeting** (June 2) - Quarterly LMAG activities. |
| | **Expert Consultation** (June 5) - Expert insights on various topics. |
| | **R10 LM Activity Organizing Committee Meeting** (June 9) - Planning LMAG activities. |
| | **Consultation Meeting LMAG Kerala** (June 20) - Discussing LMAG activities and plans. |
| | **R10 PES Global Workshop** (July 13, 14) - Interactions with international delegates. |
| | **Kerala Government Energy Policy** (July 15) - Discussing state energy policies. |
| | **Project strategy for directing innovation promotion** (July 23) - Strategies for promoting innovation. |
| | **IEEE activities under Climate Resiliency and Carbon Neutral Planning** (July 29, August |

## B.6 Awards & Recognition Activities

- Award constituted by the Section

| Public Awards | |
|---|---|
| KPP Nambiar Award | **Mr. Madhu S Nair** |
| Amarnath Raja Humanitarian Technology Award | **Prof. Manpreet Singh Manna** |
| Amarnath Raja Humanitarian Technology Award (Honourable Mention) | **Prof. Shirshendu De** |

| | |
|---|---|
| Outstanding Woman Engineer Award | **Smt. V. Shobana ITS** |
| Friend of IEEE Award Industry | **C-DAC Thiruvananthapuram** |
| Friend of IEEE Award Academia | **Muthoot Institute of Technology & Science, Kochi** |
| Outstanding Teacher Award | **Dr. Sameer S M** |
| Outstanding Startup Award | **Netrasemi Pvt. Ltd.** |
| Industry Academy Collaboration Award | **Tata Elxsi Ltd.** |
| **Professional Awards** | |
| Outstanding Volunteer Award | **Dr. Bijoy Antony Jose** |
| Outstanding WIE Volunteer Award | **Dr. Nafeesa Koyissery** |
| Outstanding Humanitarian Volunteer Award | **Ms. Gayathri Manikutty** |
| Outstanding Industry Contributions Award | **Mr. Satish Babu** |
| Outstanding Researcher Award | **Prof. Chinmoy Saha** |
| Outstanding Young Professional Volunteer Award | **Mr. Rony Alex Thomas** |
| Outstanding LMAG Volunteer Award | **Mr. Gopakumar S** |
| Outstanding Small Chapter Award | **IEEE Photonics Society Kerala Chapter** |
| Outstanding Large Chapter Award | **IEEE Signal Processing Society Kerala Chapter** |
| Best Event (Professional) | **Semiconductor Technology and Systems Community Inaugural Meetup** |
| **Student Awards** | |
| Outstanding Student Volunteer Award | **Mr. Kedar Kamalraj** |
| Outstanding Student Volunteer Award (Special Mention) | **Mr. Mrudul John Mathews** |
| Outstanding Student WIE Volunteer Award | **Ms. Aswathi T** |
| Outstanding Student Humanitarian Volunteer Award | **Mr. Siyadh MN** |
| Outstanding Branch Counselor Award | **Dr. Jayachandran E S** |
| Best Event (Student) | **TechX Infinia** |
| Outstanding Student Branch – Kerala Section | **IEEE SB National Institute of Technology Calicut** |
| Outstanding Student Branch – Kochi Hub | **IEEE SB Sahrdaya College of Engineering & Technology** |
| Outstanding Student Branch – Malabar Hub | **IEEE SB Government College of Engineering Kannur** |
| Outstanding Student Branch – Travancore Hub | **IEEE SB Government Engineering College Barton Hill** |

● Please list all Awards and Recognitions received by the Section, and members in the Section, from R10 and IEEE HQ

| Award Name | Award Winner |
|---|---|
| 2024 R10 Outstanding Large Section Award | **IEEE Kerala Section** |
| IEEE EDS Distinguished Service Award | **Dr. M K Radhakrishnan** |
| IEEE MGA Achievement Award | **Dr. Mini Ulanat** |
| IEEE Region 10 LMAG Achievement Individual Service Award | **Prof. V K Damodaran** |
| IEEE Education Society Student Leadership Award | **Akshay R S** |
| IEEE R10 Outstanding Volunteer Award | **Robin Francis** |
| IEEE R10 SAC Outstanding Volunteer Award | **Goutham Rajesh** |
| IEEE Circuits and Systems Society Guillemin - Cauer Best Paper Award | **Prof. Alex P James** |
| IEEE Circuits and Systems Society Global Chapter of the Year Award | **IEEE CASS Kerala Chapter** |
| IEEE Education Society Chapter Achievement Award | **IEEE Education Society Kerala Chapter** |
| IEEE Industry Applications Society Outstanding Joint Chapter Award | **IEEE IA/IE/PELS Jt.Chapter Kerala** |
| IEEE Photonics Society 2023 Largest Membership Increase Award | **IEEE Photonics Society Kerala Chapter** |
| Solid State Circuit Society Chapter of the Year Award | **IEEE SSCS Kerala Chapter** |
| IEEE Life Member Affinity Group Achievement Award - Global | **IEEE Kerala Section LMAG Chapter** |
| IEEE Life Member Affinity Group Achievement Award - Region 10 | **IEEE Kerala Section LMAG Chapter** |

| | |
|---|---|
| IEEE Outstanding Branch Counselor & Branch Chapter Advisor Award **(5)** | **Dr. Bijuna Kunju K**<br>**Dr. Hari Kumar R**<br>**Ms. Remya K P**<br>**Dr Sobha Manakkal**<br>**Dr. Vinita Chellappan** |

| IEEE Regional Exemplary Student Branch Award **(11)** | **IEEE SB Trivandrum College of Engg.**<br>**IEEE SB Sahrdaya College of Engg. & Technology**<br>**IEEE SB Government Engg. College Barton Hill**<br>**IEEE SB Rajiv Gandhi Institute of Technology**<br>**IEEE SB Mar Athanasius College of Engg.**<br>**IEEE SB Amal Jyothi College of Engg.**<br>**IEEE SB TKM College of Engg.**<br>**IEEE SB Adi Shankara Institute of Engg. and Technology**<br>**IEEE SB College of Engg. Chengannur**<br>**IEEE SB Federal Inst of Science & Tech**<br>**IEEE SB College of Engg. Karunagappally** |
|---|---|
| Darrel Chong Student Activity Award **(Gold) (1)** | **IEEE SB Sree Chitra Thirunal College of Engg.** |
| Darrel Chong Student Activity Award **(Silver) (3)** | **IEEE SB Rajagiri School of Engg. & Technology**<br>**IEEE SB NSS College of Engg.**<br>**IEEE SB Mar Athanasius College of Engg.** |
| Darrel Chong Student Activity Award **(Bronze) (4)** | **IEEE SB Government College of Engg. Kannur.**<br>**IEEE SB Government Engg. College Barton Hill**<br>**IEEE SB College of Engg. - Chengannur**<br>**IEEE SB Sahrdaya College of Engg. & Technology** |

## B.7 Communication Activities (Newsletter, Home Page, E-mail etc.)

- Newsletter (name and number of issues in the year): **IKS Newsletter (4 per year)**
- Home Page of the Section (give the URL and how often it is updated): **https://www.ieeekerala.org**
- Other means of contact with Section members including social media:
  - **Facebook: https://www.facebook.com/IEEEKerala/**
  - **Instagram: https://www.instagram.com/IEEEKerala/**
  - **Twitter: https://twitter.com/IEEEKerala**
  - **LinkedIn: https://www.linkedin.com/company/IEEEKerala/**
  - **eNotice**

## B.8 Industry Relations

- **Semiconductor Community Meetup:** IEEE Kerala Section (Industry Relations Committee, Strategic Initiatives (Industry) Committee, and Student Activities Committee), in collaboration with Kerala Chapters of Photonics, CAS, and SSC societies hosted the first Semiconductor Technology and Systems Community Meetup. The event was held at Maker Village, Kalamassery on the 8th of June, 2024. The event kicked off with the welcome speech of Mr Shone Jose, SAC Chair, Kerala Section. Then the meetup was inaugurated by Sri. P Rajeeve, Hon. Minister of Industries, Law, and Coir, Govt. Of Kerala. Prof. Muhammed Kasim S, Chair, IEEE Kerala Section, delivered the presidential address, followed by a keynote address by Mr P.V.G. Menon, Advisor, ESDM. Then, the logo for the Semiconductor Technology and Systems Community was unveiled by Mr P.V.G. Menon. Subsequently, the community was felicitated by Dr Alex P James, Dr. K. R. Suresh Nair, and Mr Raja Rajeev Kumar. The inauguration was concluded with a vote of thanks by Dr Pramod Gopinath, Chair, IEEE Photonics Kerala Chapter. Next, we moved on to a talk session on "Introduction to Semiconductor Industry", by Mr P.V.G. Menon, where he talked about the potential and challenges of chip design and manufacturing. He also followed up on the economics of the Electronics and Semiconductor Industry and discussed the potential boom of the electronics industry in India. The panel discussion on the Semiconductor Industry was moderated by Mr Rony Alex Thomas, Chair of Industry Relations, The panelists included Mr P.V.G. Menon and Dr. Alex P James. They were asked questions on the feasibility of setting up the semiconductor industry in India, and how it can become an economic powerhouse; the relationship between academia and industry, and the importance of startups. The next session was a talk on AGI Chips, by Dr Alex P James. It was followed by a session of Open Source Chip Design, by Ms. Vineeta V Nair, Ms. Aswani A R & Ms Sruthi P, Research Students, DUK. We had Mr Rijin John, Silizium Circuits, who talked about his startup journey. He also showed us a chip, designed by the company. The startup story of K-Chip followed it. The day was concluded with the session on Career Opportunities in the Semiconductor Industry by Mr. Rony Alex Thomas, who guided students on how they can establish themselves in the industry. Participants had the chance to provide insights, ask questions, and offer suggestions. Through these interactions, communities grow stronger and events improve over time.

- **'Beyond the Chip: Crafting Career in Semiconductor Innovation':** IEEE SSCS Kerala Chapter, in collaboration with the Industry Relations Committee, Kerala Section, conducted a talk session on "Beyond the Chip: Crafting Career in Semiconductor Innovation", the very first event organised by the new EXECOM for the year '24-25. The manufacturing aspect within the semiconductor industry was elaborately discussed, highlighting specialized manufacturing companies known as fabs. He mentioned some of the major fabs globally including CSMC, Other World Company, and Global Foundries, alongside Tower Semiconductor and UMC. The emergence of Indian companies like the Tata Group in IC manufacturing was

noted. He emphasized the division of labour, with some companies solely focused on manufacturing, such as TSMC, while others like AMD and Qualcomm focus on chip design. He also mentioned a few companies that manage both design and manufacturing, like Intel, which sometimes utilizes TSMC foundry for production.

- **Launchpad Kerala 2024: July 15th at Technopark Trivandrum and July 19th at Jain University Kochi**: Organized by IEEE Kerala Section and GTech MuLearn, sponsored by KKEM, the event receiving positive reviews from both recruiters and candidates. The event provided a platform for companies to identify talented individuals from the vast talent pool in Kerala. Around 3500 students registered for the event from which around 400 were selected through various rounds of preliminary selection. These students attended the final interviews with more than 30 companies across the 2 days.

- **DIHACK: Electronics hardware hackathon in collaboration with Digital Core Technologies, Jain University Kochi:** Di Hack was structured in two stages
Preliminary Stage: Conducted online, this stage was open to 3rd and 4th-year engineering students. It saw enthusiastic participation of 86 teams from various institutions. The participants worked on problem statements set by the company, and the top 15 teams were selected by the company for the final round.
Final Stage: This was a 24-hour hardware hackathon on 14th and 15th December. The participating teams had to develop a hardware solution to the problem set by the company using the components provided to them. The winners received cash prizes of ₹25,000, ₹15,000, and ₹10,000 for the first, second, and third places, respectively. Happy to note that this event opened the possibility of a career with Digital Core Technologies for a few of the participants.

## B.9 Humanitarian Technology Activities

- **Domestic and Drinking Reservoir with Renewable Energy-Kalamkuttykudi (D2Re-K):** The IEEE SIGHT Kerala group successfully addressed the longstanding drinking water shortage in Adimali, Mankulam Pandyan Kudi Tribal Colony by installing a **4000-liter solar-powered water tank** and solar street lights. Led by Prof. Sunitha Beevi K, Mr.Abhinav Rajeev and a dedicated team, the project aimed to enhance the quality of life for the tribal community. The initiative involved 25 volunteers and was completed between May 11-13, 2024.

- **Humanitarian Technology Project Expo**: At IEEE YESS 2024 on 24th August 2024, this event brought together students, professionals, and industry leaders to explore innovative solutions that align with IEEE's mission of advancing technology for humanity. The primary objective was to promote awareness of technological advancements and their social implications, while fostering collaboration between students, professionals, and industry stakeholders. The expo also highlighted ongoing projects and initiatives under the IEEE SIGHT framework. The event attracted an impressive turnout of over 1,451 participants, including IEEE members, students from various engineering colleges, industry representatives, and faculty members from academic institutions. The expo featured seven exhibition stalls that showcased a variety of innovative projects from different student branches.

- **Emergency Torches for Wayanad Distress Relief**: IEEE SIGHT Kerala Section in collaboration with IEEE SB NITC assembled 300 emergency torches at NIT Calicut to aid the Wayanad Relief efforts. Student volunteers came together at NIT Calicut to assemble 300 emergency torches to do their part in aid of the disaster-affected areas in Wayanad. The students worked diligently to assemble the torches on the 1st of August 2024. These torches were delivered to the disaster relief efforts on the 3rd of August 2024.

- **EUREKA 2024 STEM Outreach Program**: Organized by IEEE SB NSSCE in collaboration with IEEE Kerala Section SIGHT, aimed to inspire high school students to explore how technology can solve global challenges. Focusing on environmental sustainability, climate change, and disaster management, the initiative aligned with the United Nations Sustainable Development Goals (SDGs). Over two days, the program reached four schools: St. Ann's Senior Secondary School, NSS HSS Akathethara, MESEM Higher Secondary School Olavakkode, and GHS Ummini.

- **GenAI X Gender Hackathon**: Amrita IEEE SIGHT SB, in collaboration with Amrita Vishwa Vidyapeetham and IEEE Kerala Section SIGHT, launched the GENAI x Gender Hackathon as part of the International Conference on Gender and Technology (GTC) 2025. Cosponsored by the IEEE Society on Social Implications of Technology (SSIT) and IEEE Kerala Section, this global event aims to address the challenges at the intersection of Artificial Intelligence (AI) and gender empowerment. The hackathon seeks to bring together participants from diverse backgrounds to innovate and develop solutions that empower women and underrepresented groups by fostering inclusivity in technology design and application. The overarching goal is to bridge the gap between technical solutions and social impact, focusing on ethical, social, and cultural dimensions while addressing gender biases in AI technologies.

- **POWERCONNECT**: PowerConnect+ was a 2-day program aimed at immersing students in the world of Power Electronics, hosted by Amal Jyothi College of Engineering in collaboration with IEEE SIGHT KS, made possible by a grant of $1250 from IEEE PES MDI 2023. The program featured expert guidance from ISRO, IITs, and IEEE PES. A total of 50 participants,34 IEEE members and 16 non-IEEE members.

## B.10 Community Activities
- The **IEEE SB CE Poonjar**, in association with the **IEEE WiE Kerala Section**, organized **"Sastra Vismaya & Gen AI – AI Tool Introduction"** on **November 9, 2024**, to engage students in science, technology, and AI. **Dr. Mini U.**, STEM Champion

(2024) and MGA IEEE Diversity & Inclusion Committee Member-at-Large, delivered the keynote address. The event welcomed **52 students from four schools**, fostering curiosity through hands-on experiments and AI learning. The **morning session** featured **Morse Code Telecommunication** by **Sri. Shahim Baker** and a **Popsicle Bridge Making** activity by **Anupama M.S.**, promoting teamwork and problem-solving. In the **afternoon**, a **Generative AI workshop** introduced students to AI tools, serving as a prelude to the **IHRD International Conclave on Generative AI**. The event concluded with a **Quiz Competition**, where winners received prizes and all participants earned certificates. **"Sastra Vismaya & Gen AI" successfully blended scientific exploration with AI exposure, inspiring students to pursue careers in technology and innovation.**

- The **EUREKA 2024 STEM Outreach Program**, organized by **IEEE SB NSSCE** in collaboration with **IEEE Kerala Section SIGHT**, aimed to inspire high school students to use technology for global challenges, focusing on **climate change, disaster management, and sustainability**. Over two days, sessions at **four schools** introduced students to IEEE, emerging technologies, and the **United Nations Sustainable Development Goals (SDGs)**. Highlights included a **drone demonstration** by **Kerala's first licensed female drone pilot, Rinsha P.**, showcasing drone applications in disaster relief, and a **hands-on flood detection system** using STEM robotics. A **DIY Emergency Torch Workshop** provided students with practical skills in building low-cost, disaster-resilient technology. The program left a **lasting impact**, inspiring students with real-world IEEE projects like **torch donations for Wayanad landslide relief** and **solar-powered mobile chargers**. Encouraged by positive feedback, the team plans **advanced workshops on drones and SDGs**, ensuring a **continued impact on STEM education and sustainable development.**

- The **Sourajala project**, implemented by **IEEE SB NSSCE** in collaboration with **IEEE SIGHT Kerala Section**, successfully tackled **water scarcity** in the **tribal village of Chavadippara, Walayar, Palakkad**, by integrating **solar energy** with **clean water distribution** for **18 families**. Over **three days**, teams worked on **solar panel installations, plumbing systems, and solar-powered lighting**, ensuring sustainable water access. Key challenges, like **soil collapse during installation**, were overcome with local support. The project culminated in an **inauguration by Dr. S Chithra IAS, District Collector of Palakkad**, with participation from IEEE leaders and local officials. **Sourajala showcased IEEE's commitment to community-driven sustainability**, demonstrating how **renewable energy solutions can transform rural lives** and serve as a model for future humanitarian projects.

## PART C - OTHERS
### C.1   Special Events
- **IEEE YESS - Largest Student Member Congress in IEEE: YESS'24** is the largest student congress in IEEE history. **Co-organised by 42 IEEE OUs**, it brought together 4,089 participants from 93 student branches. The event was powered by **453 dedicated volunteers**, featuring **117 speakers**, **104 faculty members**, and **25 special guests**, including IEEE Life Senior Members. YESS'24 offered over 30 innovative events, such as the world's first Generative-AI Fashion Show, India's first IEEE Dataport-powered Datathon, an industry-mentoring program sponsored by 14 companies etc. This transformative platform enabled the networking and engagement opportunity for **4000+ IEEE members across South India**.

- **IEEE Leaders Meet- The IEEE Kerala Section hosted Leaders Meet 2024** on September 25th aboard the Nefertiti Cruise in Kochi, attended by IEEE leaders, past chairs, life senior members, and Section ExeCom members. Distinguished guests **Mr. Deepak Mathur, Dr. Lance Fung, Dr. Debabrata Das, and Prof. P.O.J. Lebba** were honored during the event. The cruise voyage was a thrilling experience, as unexpected ocean waves added an adventurous touch, followed by entertainment programs on deck. On September 26th, a solar-powered water metro trip provided a serene escape, offering scenic views of the city skyline and lush greenery. The combination of the unique cruise experience and the tranquil water metro ride made Leaders Meet 2024 a truly memorable and cherished event for all attendees.

### C.2   Relationship with National & International Societies & Non-Government Organizations (NGO)
- **In partnership with InApp, the Amarnath Raja Humanitarian Technology Award** is established in memory of Sri Amarnath Raja, the Cofounder of InApp and Past Chair of IEEE Kerala Section, recognising his outstanding contributions in the area of **Humanitarian Engineering** and upliftment of underprivileged communities within society with Engineering solutions. The award's primary objective is to honour individuals or groups making significant contributions to Humanitarian Engineering, resulting in substantial improvements in the lives of the underprivileged. The award includes a cash prize of **Rs. 75,000 and a plaque/citation**.

- IEEE Kerala Section has a long-standing relationship with other major professional societies in the state like **Computer Society of India, Aeronautical Society of India, Systems Society of India, Project Management Institute, Indian National Society for Aerospace and Related Mechanisms, Society of Aerospace Manufacturing Engineers, Indian Society for Training and Development, Internet Society, Society of Energy Engineers & Managers and Vakkom Moulavi Foundation**. Along with some of these bodies, the IEEE Kerala Section annually arranges weekly Technical/Professional talks on various topics on Wednesdays. **More than 50** Inter-Society Talks were held under the collaboration.

### C3.   Collaboration with other IEEE Sections
- IEEE Kerala Section was a **proud sponsor of the Returning Mothers Conference** held in Bangalore in November 2024. Few WiE Kerala members were sponsored as delegates to attend the same.

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## C.4  Support extended to Sub-sections & Society Chapters within the Section

The **IEEE Kerala Section** comprises **two Subsections** (Kochi and Malabar), **16 Society Chapters, one Council, one SIGHT Group, and four Affinity Groups**. The **Management Committee** includes the **Section Chair, Vice Chair, Secretary, Treasurer, Immediate Past Chair, and the Chairs of the two Subsections**. This committee oversees **financial and strategic decision-making**, ensuring active participation from **subsection chairs** in governance.

The Section provides **financial and technical support** to **subsections and society chapters** for organizing **technical, educational, and professional events**.

 **Funding Allocation:**
- **INR 2 Lakh** per **Subsection**
- **INR 25,000** per **Standing Committee**
- **INR 25,000 to INR 1 Lakh** per **Society Chapter**, based on **professional membership count**, to encourage **membership development (MD) initiatives**.

This structured approach ensures **effective resource distribution** and fosters **active engagement across subsections and technical communities**.

## C.5  Best Practices of your Section

- The **Section Executive Committee (ExeCom)** comprises **Chairs, Vice Chairs, and Secretaries** from all **Subsections, Affinity Groups, and Society/Council Chapters**, along with Core Office Bearers and volunteers with specific responsibilities, such as managing educational and professional activities. Former **Section Chairs** continue to contribute as **Members-at-Large**, and **Travel Allowance** is provided to ExeCom members attending meetings as official representatives of **IEEE Kerala Section**.
- The section actively promotes **engagement across all membership levels**, from **Life Senior Members to students**, fostering strong collaborations with **government departments and local administrative bodies**. To recognize excellence, an **annual awards ceremony** honors exceptional contributors from **industry, government, academia, and IEEE volunteers**.
- To support new leaders, the section organizes **Annual Volunteer Induction Programs** that familiarize **ExeCom members** with essential tools like **vTools**. **New members and young professionals** benefit from mentorship programs led by experienced volunteers serving as advisors.
- Student activities are steered by the **Student Activities Board (SAB)**, with **over 13,000 student members** across **108 active Student Branches (SBs)**. The **Local Integrated Network of Kerala (LINK)** and **three regional Hubs** coordinate student engagement, ensuring student representation in **decision-making** to maintain inclusivity.
- Additionally, the **"Section Interns" (IKS Interns) initiative** provides opportunities for interns to assist **Office Bearers, the Executive Committee Coordinator (ECC), the Webmaster, and Society volunteers**, enhancing **member outreach and reporting activities** to higher IEEE committees.

## C.6  Problems anticipated and suggestions for solutions, if any

- **Engagement of Industry Professionals**
  - Problem: Industry professionals often have limited participation in section activities due to time constraints.
  - Solution: Organize shorter, high-impact networking events, introduce industry-academia collaboration programs, and offer continuing education/professional development courses tailored to industry needs.
- **Student-Professional Transition Gap**
  - Problem: Many students lose IEEE membership after graduation due to a lack of awareness about professional benefits.
  - Solution: Establish Young Professionals (YP) onboarding programs, provide discounted transition memberships, and offer career-oriented mentorship and networking sessions.

## PART D - GOALS AND PLANS

### D.1  Continuation of project/activity in progress and their implementation plans

- The IEEE Kerala Section remains dedicated to hosting **LaunchPad, an IEEE Job Fair**, in collaboration with **GTech and MuLearn**, providing **internship and full-time job opportunities**. With participation expected from over **100 companies across three locations in Kerala**, the event aims to connect talented candidates with top employers.
- The Section is also proud to host **RAICS & SPICES**, two flagship **international conferences**, offering a premier platform for **knowledge exchange and networking**.
- **Membership development** is a key priority, focusing on **retention, recruitment, and recovery** across all **Organizational Units**—including **the Section, Subsections, Society Chapters, Affinity Groups, Student Branches, and Student Branch Chapters**. Special emphasis is placed on **advancing eligible professional members** to **Senior Member and Fellow grades**.
- For **2025**, the Section has set ambitious targets: **50% retention, 10% recovery, and 60% recruitment**. To achieve this, the **Membership Development (MD) team** has been expanded to include a **Chair, Vice Chair, Secretary, and representatives from Travancore, Kochi, and Malabar regions**, along with **Young Professionals (YP) and Student Activities Committee (SAC) MD representatives**.

- Currently, the primary focus is on **retention**, with **recovery and recruitment phases** beginning in **March**. Additionally, the Section ensures strong **student engagement** by including **Kerala's Top 10 Largest Student Branches** in the **Student Activities Committee**, fostering **active participation and collaboration**.

## D.2  Goals and Future Plans

- Enhance **membership retention** through **Young Professionals onboarding programs**.
- Foster **industry-academia partnerships** with **research fellowships**.
- Promote **WiE leadership and technical empowerment programs**.
- Strengthen **humanitarian projects aligned with SDGs**.
- Improve **digital outreach and hybrid engagement models**.

## D.3  Any innovative ideas to make IEEE more creative and value-added for sustaining the membership retention and recruitment goals.

- ❖ **Industry Mentorship & Career Guidance**
  - Establish a **structured mentorship program** connecting students and young professionals with **industry experts** and **academics**.
  - Conduct **career boot camps** focusing on **emerging technologies** and **IEEE certifications** to add career value.
- ❖ **IEEE Skill Accelerator Program**
  - Launch **IEEE-recognized certification programs** in areas like **AI, IoT, cybersecurity, and renewable energy** to provide tangible benefits.
- ❖ **Life Member Engagement**
  - Introduce an **IEEE Kerala Life Member Connect** for knowledge-sharing sessions and project guidance.
- ❖ **Student to Young Professional (SYP) Transition Program**
  - Host **SYP transition workshops** explaining the **benefits of IEEE post-graduation**.
  - Provide **Young Professional grants** for active student members transitioning to professional membership.

## D.4  Business Plan for Sustainable Growth and Financial Stability.

The **IEEE Kerala Section** has established itself as a leader in **membership growth**, achieving one of the highest member counts among IEEE Sections. Our commitment to **financial discipline** is demonstrated through **strict adherence to local audit regulations and IEEE financial guidelines**. To further enhance our impact and sustainability, we have outlined the following strategic initiatives:

- **Expanding Professional Membership:** We aim to strengthen our professional membership base by actively engaging **student leaders from society chapters**, encouraging their transition to **Graduate Student Member (GSM) status and Young Professionals**.
- **Elevation to Senior Member Grade:** With **Senior Members exhibiting a retention rate of 90% or higher**, we are committed to **identifying and elevating** eligible members to this distinguished category, highlighting its **career and professional benefits**.
- **Strengthening Professional Member Engagement:** We will foster greater **interaction and involvement** among professional members by providing **more opportunities** to participate in **IEEE initiatives, leadership roles, and collaborative projects**.
- **Workshops on IEEE Funding Opportunities:** Conducting **targeted workshops** on IEEE **funding applications** will equip members with the knowledge to effectively apply for grants, ensuring **better financial support** for their initiatives.
- **Training on Financial Discipline:** To maintain **transparent and responsible fund management**, we will organize **training sessions for all office bearers**, ensuring they fully understand **fund utilization protocols** in compliance with IEEE financial policies.

Through these initiatives, the **IEEE Kerala Section** continues to strengthen its membership base, enhance professional engagement, and uphold the highest standards of **financial responsibility and governance**.