



# IEEE Kerala Section Report



# IEEE Kerala Section Report

## **PART A - SECTION SUMMARY**

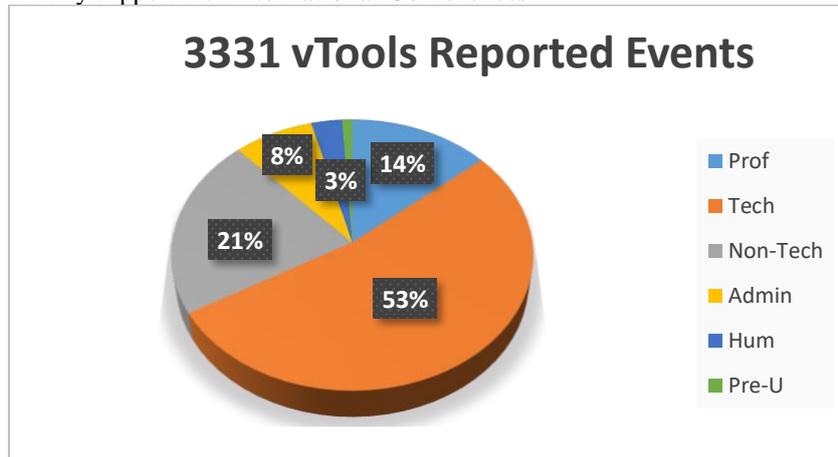
### **A.1 Executive Summary**

#### • **Section Executive Committee Member List**

<b>ROLE</b>	<b>NAME</b>
Chair	Dr Mini Ulanat
Vice Chair	Prof. Muhammed Kasim
Secretary	Dr. Bijoy Antony Jose
Treasurer	Dr. Biju K
Immediate Past Chair	Ms. Sarada Jayakrishnan
Immediate Past Secretary	Dr. Giles M P
Chair, Malabar Subsection	Dr. Sabiq P V
Vice Chair, Malabar Subsection	Dr. Bindima T
Secretary, Malabar Subsection	Shihabudheen K V
Treasurer, Malabar Subsection	Dr. Thasleema
Chair, Kochi Subsection	Dr. M V Rajesh
Vice Chair, Kochi Subsection	Mr. Paul Ansel
Secretary, Kochi Subsection	Mr. Binu A
Treasurer, Kochi Subsection	Dr. Tripti S Warriar
Chair, Awards Committee	Dr. S. M. Sameer
Chair, Conference Activities Board	Dr. Chinmoy Saha
Chair, Educational Activities	Dr. Santhosh Kumar G
Electronic Communication Coordinator	Mr. Alan Mathew
Chair, Government Relations	Mr. Suhair A K
Chair, History Committee	Dr. V K Damodaran
Chair, Industry Relations	Mr. Jayakrishnan M C
Inter Society Activities	Dr. K C Raveendranathan
Membership Development Chair	Mr. Karthik Menon
Chair, PIE (Promotion of Innovation and Entrepreneurship)	Mr. Varghese Cherian
Chair, Professional Activities	Ms. Sunitha Beevi K
Chair, Publications & Newsletter Editor	Prof. K Gopalan Nair
SDLP Co-Ordinator	Dr. Vinita Chellappan
Chair, SIGHT	Dr. Bindima T
Chair, Strategic Initiatives [Industry Engagement]	Mr. Varghese Cherian
Chair, Strategic Initiatives [Academic Engagement]	Dr. Jisha V R
Advisor, Student Activities	Mr. S Gopakumar
Chair, Student Activities	Dr. Giles M P
Vice Chair, Student Activities (Travancore)	Ms. Josna V R
Vice Chair, Student Activities (Kochi)	Dr. Elizabeth Rita Samuel
Vice Chair, Student Activities (Malabar)	Mr. Shone Jose
Student Representative	Mr Thomas Mathew
Webmaster	Mr. Neeraj Ipe
Chair, Consultant's Network	Narayanan CNAG
Chair, Life Member Affinity Group	Mr. Koruthu P Varughese
Chair, WIE Affinity Group	Dr. Meenakshy K
Chair, YP Affinity Group	Mr. Nandan S
Chair, Antenna & Propagation Society Chapter	Dr. Deepti Das Krishna
Chair, Circuits And Systems Society Chapter	Dr. Sreelal S Pillai
Chair, Computer Society Chapter	Dr. Vishnukumar S
Chair, Communications Society Chapter	Shamna H R
Chair, Educational Society Chapter	Varughese C M
Chair, Engineering in Medicine & Biology Society Chapter	Dr. B. S. Manoj
Chair, Geoscience & Remote Sensing Society Chapter	Dr. Rama Rao
Chair, IE, IA & PEL Jt. Chapter	Dr. Bijuna Kunju K
Chair, MTTTS Chapter	Dr. Apren T J
Chair, PES Chapter	Er. Ajith Gopi
Chair, Photonics Society Chapter	Dr. Suresh Nair
Chair, Robotics and Automation Society Chapter	Nandakumar R
Chair, Signal Processing Society Chapter	Dr. M V Rajesh
Chair, SSIT Chapter	Mr. S Gopakumar
Chair, RFID Council Chapter	Dr. Nalesh S

- **Section Highlights**

- IEEE Kerala Section is the **largest section** in the world with more than 16,500 members.
- Comprises 2 Subsections, 2 Councils and communities, 4 Affinity Groups, and **15 Society Chapters**.
- IEEE Kerala Section inaugurated its **3<sup>rd</sup> office** in Kozhikode and hosted the SIGHT chair at the venue.
- Organized several major events such as **INDICON**, **WiE ILS**, **IEEE Job Fair**, **i5**, **SPICES Conference**, etc. with hundreds of attendees.
- **Implemented signature humanitarian work** to bring water and light to tribal villages using the **HAC grant**.
- Conducted **47 section-led events** in the year 2022 and several chapter events.
- The **PES, CS, EdSoc, Photonics Society, RAS and WIE AG chapters** hold the **No. 1 position** in terms of membership in their respective society/AG.
- **96 Active Student Branches out of 117**.
- **19 Student Branches** received the Regional Exemplary Student Branch Award 2022.
- Over **260 student branch Chapters**, more than **60 WIE AG SB chapters**, and nearly **30 SIGHT** community groups.
- Organized and technically supported **9 International Conferences**.



- Major Events (International, National)

- **INTERNATIONAL MAJOR EVENTS**

- **INDICON 2022** was conducted with **1200 paper submissions and 400+ papers** presented in person, becoming one of the biggest conferences in the post COVID era.
- **WiE ILS 2022** was conducted as a residential programme assembling 50% of attendees from the industry.

- **NATIONAL MAJOR EVENTS**

- **IEEE Job Fair**: IEEE Kerala Section brought **40+ companies** under one roof to interview **300+ job-aspiring students** from 1200 who took online qualifying tests. **Around 200 Job Offers** were made as a result.
- **EVHACK 2.0**
- International Conference on Innovative Trends in Information Technology 2022 (ICITIIT-22)
- SPICES 2022
- International Conference on Computing, Communication, Security, and Intelligent Systems (IC3SIS-2022)
- International Conference on Futuristic technologies in Control systems & Renewable Energy (ICFCR)
- International Conference on Advances in Computing, Communication, Embedded and Secure Systems (ACCESS'22)
- International Conference on Innovations in Science and Technology for Sustainable Development 2022 (ICISTSD 2022)
- International Conference on Innovations in Science and Technology for Sustainable Development 2022 (ICISTSD 2022)

- Major Chapter Activities

- **i5 – Ignite Imagination & Inspire Iconic Innovations – Joint event with 5 Society Chapters.**
  - IA/IE/PEL Jt. Chapter
  - IEEE Robotics and Automation Society
  - IEEE Signal Processing Society
  - IEEE Education Society
  - IEEE Communications Society
- 2<sup>nd</sup> Edition of PESGRE 2022, 326 submissions from 22 countries, 176 accepted papers.

- Major Student and Affinity Group Activities

- **Student Activities**
  - **All Kerala Students Congress 2022 (AKSC)**
  - IEEE Kerala Section Students Technical Consortium 2022 (TECHSORTIUM)
  - Hub Meets of Malabar, Kochi, Travancore Hubs.
  - Branch Counselors and Chapter Advisors Congress.
  - Orientation Session on Young Innovators Program (YIP)
  - F2F with the new SB Office Bearers
  - Renaissance 3.0, an IEEE R10 MDLT-Funded Event hosted by IEEE LINK

- **Young Professional (YP)**
  - **Genesis:** For Young Professionals at Thiruvananthapuram and Kochi
  - **iTripleEcon** Session 1 - Work life balance by Sneha Priya M, Workflow manager and Divisional Director Toastmasters
  - **EVOLVE** - Stepping stone for newly converted GSM members at Lead College, Palakkad with more than 150 students (R10 Fund: 400\$)
  - **STEP 2022** - Global YP Funded event (Global YP Fund: 500\$)
  - Industrial Visit at KSEB Substation, Kanjikode, Palakkad
  - **VOLT 2022** at Aquatic Island in Kumbalangi
  - **BREAK THE CEILING** - Interactive session by Ms. Nitika Rai, Consultant E&Y as part of Women's Day Celebrations 2022
- **Women In Engineering (WIE)**
  - [WiE International Leadership Summit \(WiE ILS\)](#)
  - 20 years of WiE AG Kerala.
- **Life Member Affinity Group (LMAG)**
  - Won recognition for **highest number of events** in IEEE Region 10
  - Participated in [SYWL 2022](#) at Korea and [AISYWLC 2022](#) at Pune
- **Consultant Network Affinity Group (CNAG)**
  - Conducted "ConsulTalks", a talk session series by CNAG
  - Five sessions of the talk sessions were conducted with the theme sustainable consultancy, roadmap to consultancy, knowledge regarding growth, scaling of MSMEs with ESG reporting, green and net zero buildings respectively.
- **SIGHT**
  - [Domestic & Drinking Reservoir with Renewable Energy – Bavelli \(D2Re-B\) project](#): \$4782
  - Visit of HAC Chair Mr. Sampathkumar to Calicut Office
  - LUMEN: Lights for Uplifting Mankind, Environment and Nature
- **Awards**
  - 2 IEEE MGA Achievement Awards 2022
  - 6 IEEE R10 Awards 2022
  - 5 IEEE India Council 2022 Awards
  - 4 IEEE Computer Society Awards & 21 Chapter Grants
  - IEEE Outstanding MTT-S Chapter Award
  - IEEE Outstanding AP-S Chapter Award
  - IEEE Photonics Society Largest Membership Increase Recognition
  - 19 IEEE Regional Exemplary Student Branch Award Winners
  - 14 IEEE MGA Darrel Chong Outstanding Student Activity Award Winners (2 Gold, 5 Silver, 7 Bronze)

## A.2 Financial Report – (Please follow the format given below)

IEEE Kerala Section AGM 2022 Accounts for the Year 2022 From 1st January 2022 to 31st December 2022			
Abstract			
SI No	Head	Receipts	Payments
1	Opening Balance	₹ 6,644,304.84	
2	Income	₹ 29,042,201.52	
	Total	₹ 35,686,506.36	
3	Expense		₹ 24,525,966.32
4	Balance		₹ 11,160,540.04
6	Closing Balance	₹ 11,160,540.04	
7	Payables (Rebates, Project funds etc)		₹ 6,893,917.56
8	Payables to different Society Including the fund received .		₹ 2,918,811.00
9	Total payables		₹ 9,812,728.56
10	Balance	₹ 1,347,811.48	
11	AGM expenses expected		₹ 800,000.00
12	Award night expenses expected		₹ 300,000.00
13	Malabar Subsection TENCON surplus (comitted)		₹ 300,000.00
14	Receivable from SPS Society,WIE ILS Conference,INDICON2022 Conference	₹ 648,162.88	
15	Total	₹ 1,995,974.36	₹ 1,400,000.00
	Balance	₹ 595,974.36	

## **PART B - ORGANIZATIONAL ACTIVITIES**

### **B.1 Membership Development Activities**

Month/ Year	Life Senior Member	Senior Member	Member	GSM	Associate Member	Student Member	Total
31 Dec 2019	18	169	978	371	41	7275	8852
31 Dec 2020	18	207	894	392	32	6705	8255
31 Dec 2021	25	322	1097	500	69	11467	13513
31 Dec 2022	27	367	1156	483	48	12959	15040

- Conducted Membership Development Sessions throughout the requested SBs in the section.
- Promoted FUTURE50
- Conducted Renaissance 3.0 (R10 MDLT Funded Event) for making the dormant SBs to the active state.
- Established mentorships for weak SBs.

### **B.2 Chapter Activities**

Total number of Chapters in the Section: **15** (including 1 joint chapter)

Number of Chapters formed in the current year: **1** (SSCS)

Number of active Chapters: **15**

#### **Summary of Chapter activities**

##### **IEEE Antennas and Propagation Society (9 events)**

- IEEE AP-S Distinguished Lecture and IEEE AP-S and MTT-S Student Enclave, Hotel Hycinth Thiruvananthapuram
- Walk with leaders and legends: mentoring.
- 3-day workshop on Antennas and simulation tools
- Advanced Workshop on Microwave and Antennas

##### **IEEE Circuits and Systems Society (19 events)**

- Demystifying Analog CMOS circuits with LTSPICE, TKMCE
- PCB design and 3D printing workshop for high school students
- Ideation Workshop 2022, Digital university
- Latest technologies “Graphene technology and applications”

##### **IEEE Communications Society (12 events)**

- i5 – Ignite Imagination & Inspire Iconic Innovations – Joint event with 5 societies.
- ESCOGE 2.0 Quiz series
- TECHCOMM: 2-day technical conclave for students at MACE Kothamangalam

##### **IEEE Computer Society (50 events)**

- AKCSSC 2022 – All Kerala Computer Society Student Convention
- Workshop on Filter Making Using Spark AR
- Workshop On Design with Figma
- AI 101: Introduction to Artificial Intelligence
- Nuvia: Introduction to Virtual Reality

##### **IEEE Education Society (21 events)**

- i5 – Ignite Imagination & Inspire Iconic Innovations – Joint event with 5 societies.
- Steam for Social Good – 2-day Makeathon, Amirta Vidyalayam
- Explore your potential with Education Society.

##### **IEEE Engineering in Medicine and Biology Society (5 events)**

- Started Women in Bio-medical Engineering Chapter
- First JC Bose memorial lecture with MTTs and APS
- Indian Medical Device Regulation: A Walk through, SCTIMST
- Several design and development events throughout the year

##### **IEEE Geoscience and Remote Sensing Society (5 events)**

- Geolekha: GRSS newsletter from Kerala Chapter
- Handling Multi-source remote sensing, IIST
- National seminar on trends in image processing approaches
- Visit to Ponmudi Climate Observatory
- National remote sensing day 2022, Thesis competition, Workshop on LIDAR, etc.

### **IEEE IA/IE/PEL Jt. Chapter (32 events)**

- Second edition of PESGRE 2022, 326 submissions from 22 countries, 176 accepted papers.
- F2F for meeting student and leadership team
- CRISTERE: Women's Day celebration
- Capacity building and Try Engineering workshop.
- EV Hack 2.0 and Distinguished lecture program

### **IEEE Microwave Theory and Techniques Society (9 events)**

- Women in Microwave Colloquium
- Technical talks in collaboration with AP-S
- Inauguration of AP-S Cope activity at Ponmudi

### **IEEE Power and Energy Society (70 events)**

- Solar Yatra
- Industry visit Kuzhalmannam Solar PV Plant
- PES SB chairs meet, environmental day, STEP, PES quiz, High performing SB, etc.

### **IEEE Photonics Society (7 events)**

- Optics to school programme at various schools in 2022
- Two-day workshop on fibre optics for students

### **IEEE Robotics and Automation Society (17 events)**

- Robotics Operating System by Er. Athira Krishnan R (System Engineer, TCS)
- Additive Manufacturing for Robotics in collaboration with NIELIT SB
- Capture The Bug, Design Verification Hackathon

### **IEEE Signal Processing Society (14 events)**

- i5 – Ignite Imagination & Inspire Iconic Innovations
- IEEE SPS Seasonal school on signal, speech, and image processing, TKMCE
- High-Performance Award

### **IEEE Society on Social Implications of Technology (4 events)**

- General meeting of office bearers and members
- Talk on engineering community needs by Mr. Vaishnav S, SR of SSIT
- Webinar on social media: Pervasive, Invasive, Persuasive by Mr. Jim Isaak, Past VP of SSIT

### **IEEE Solid-State Circuits Society (12 events) Newly formed, Approved on March 6, 2022.**

- Inauguration by Mr. John Long, President of IEEE SSCS, on May 4th
- Online PICO open source chimpathon, Dr. Bhuvan, NIT Calicut
- Webinar on VLSI and future opportunities
- Seminar on higher education in Thiruvananthapuram, Kochi and Malaba

Chapter	Affiliate & Associate	GSM	LS+M+SM	Student Members	Total Members	Global position
APS	0	29	41	50	120	
CAS	0	25	44	51	120	
COMSOC	1	31	78	967	1,077	#2
CS	15	37	225	3,152	3,429	#1
ES	2	5	62	115	184	#1
EMBS	0	11	57	175	243	
GRSS	1	7	18	1	27	
MTTS	0	28	27	75	131	
PES	7	45	169	3,304	3,525	#1
PHOTONICS	3	29	43	1,098	1,173	#1
RAS	2	10	79	940	1,031	#1
SSIT	0	1	15	28	44	
SPS	0	39	98	489	626	#3
SSCS	0	12	35	152	199	
IE/IA/PELS	6	39	175	2,065	2,285	#1

## B.3 Professional and Continuing Education Activities

### STEM Grant to IEEE Educational Activities Committee

In order to aid section IEEE volunteers in their STEM outreach projects and create local STEM communities, the IEEE Educational Activities Committee has won the prestigious STEM Grant 2022. The joint proposal of IEEE STEM Champion Prof. (Dr.) Santhosh Kumar Gopalan, Chair, IEEE Kerala Section Educational Committee Activities, and Dr. Shailesh S, Assistant Professor, Department of Computer Science, CUSAT, has been funded with a grant of USD 2000. The section was able to train Ninety pre-university teachers in machine learning and artificial intelligence projects through the submission on “*PRE-UNIVERSITY CAPACITY BUILDING WORKSHOP ON ARTIFICIAL INTELLIGENCE.*” Through this training, the teachers were able to comprehend the concepts properly and spread them throughout the schools. Three phases of the program’s execution have included teachers from numerous districts, including Ernakulam, Thrissur, and Alleppey. The 2022 IEEE Pre-University STEM Portal Grants and TryEngineering.org are gratefully acknowledged by the Educational Activities Committee.

## B.4 Students Activities

Total number of Student Branches in the Section: 117

Number of Student Branches formed in the current year: 1.

Number of active Student Branches (Student Branches who have reported required number of meetings during the year): 96.

### Section level student activities (student congress, paper and other contests, awards etc.)

- **All Kerala Students Congress 2022 (AKSC)**
  - The Annual Technical flagship event of IEEE LINK Kerala Section was conducted from 28th to 30th of October at MES College of Engineering, Kuttippuram. Entrepreneurship, Game Development, AR VR, Metaverse, Artificial Intelligence and Machine Learning were the major technological focus of the event. The event received a total participation of about 320 members and received great feedback from the participants as well. The sessions were very informative and helped in bringing out the creativity and innovative thinking of the participants.
- IEEE Kerala Section Students Technical Consortium 2022 (TECHSORTIUM)
- Hub meets of Malabar, Kochi, Travancore Hubs.
- Branch Counselors and Chapter Advisors Congress.
- Orientation Session on Young Innovators Program (YIP)
- Science Week’22 Celebrations
- F2F with the new SB Office Bearers
- Renaissance 3.0, an IEEE R10 MDLT-Funded Event hosted by IEEE LINK

### **Summary of Student Branch activities (Student Branch wise with attachment table/information)**

School Name	Count of SB Attendees	Count of SBC / AG	vTools Reported Events
Mar Athanasius College of Eng	757	9	178
Adi Shankara Inst of Engineering & Tech	533	8	30
Rajagiri School of Engineering & Tech	504	5	38
Government College of Engineering-Kannur	485	5	76
Muthoot Institute of Technology and Science	484	3	25
Federal Inst of Science & Tech	459	6	29
Chengannur College of Engineering	441	8	69
TKM College of Engineering	439	9	51
Sree Chitra Thirunal College of Eng	433	6	54
St Joseph's College Of Eng & Tech-Palai	425	6	32
Government Engineering College - Barton Hill	395	6	128
NSS College Of Engineering	380	12	21
Model Engineering College	371	8	7
Sahrdaya College of Engineering & Tech - Thrissur	353	12	0
Amal Jyothi College Of Engineering	348	5	39
MEA Engineering College - Perinthalmanna	329	5	20
LBS Institute of Technology for Women	305	4	38
Government Engineering College-Thrissur	271	10	8
Viswajyothi College Of Eng & Tech	270	4	24
National Institute of Technology Calicut	257	8	50
College of Engineering Adoor	246	6	72
Saintgits College of Engineering-Kottayam	246	4	32
Rajiv Gandhi Institute of Technology Kottayam	220	6	16
Government Engineering College-Sreekrishnapuram	215	4	37
Cochin University of Science & Tech	205	7	21
Mar Baselios College of Eng & Tech	203	6	35
Vimal Jyothi Engineering College-Kannur	201	10	54
Government Engineering College - Kozhikode	194	3	38
College of Engineering-Cherthala	187	2	33
MES College of Engineering - Kuttippuram	176	7	40
Toc H Institute of Science and Technology	174	3	53
Government Engineering College-Idukki	159	4	43
SCMS School of Engineering & Tech	159	3	13
Trivandrum College of Engineering	156	9	24

Nehru Coll of Eng & Research Centre	155	1	4
Government Engineering College, Wayanad	154	3	38
College of Engineering Vadakara	152	4	35
College of Engineering-Attingal	151	7	57
Sreepathy Institute of Management & Technology	145	1	19
KMCT College of Engineering	139	2	26
Christ College of Engineering Irinjalakuda	136	6	89
Albertian Institute of Science and Technology	130	1	15
College of Engineering Trikaripur	127	4	12
UKF College of Engineering and Technology	117	4	5
Sree Narayana Gurukulam College of Eng	115	1	31
Mangalam College of Engineering	114	5	28
College of Engineering - Karunagappally	113	8	53
Jyothi Engineering College - Thrissur	104	3	10
LBS College of Engineering-Kasargod	104	3	103
KMCT College of Engineering for Women	102	0	15
College of Engineering-Munnar	97	6	23
Carmel College of Engineering & Technology	94	0	11
M Dasan Institute of Technology	94	1	28
Indian Inst of Space Science & Tech	90	6	51
Amrita Vishwa Vidyapeetham	87	10	0
College Of Engineering-Poonjar	82	2	37
Providence College of Engineering	81	0	0
University College of Engineering Kariavattom	78	0	3
Bishop Jerome Institute	75	1	11
College of Engineering-Perumon	74	6	73
KMEA Engineering College-Aluva	71	2	11
College of Engineering-Kallooppara	69	3	13
College of Engineering and Management Punnapra	63	0	0
VISAT Engineering College	62	10	116
Muslim Assoc Coll of Eng Venjaramood	56	0	5
Musaliar College of Engineering Chirayinkeezhu	55	7	1
Jawaharlal College of Engineering and Technology	53	3	3
St. Thomas College of Engg and Tech-Chengannur	53	0	0
College Of Engineering-Kidangoor	52	3	1
Younus College of Engineering & Technology	50	0	11
AWH Engineering College	49	0	3
College of Engineering Aranmula	46	1	0
Mar Baselios Christian College of Engg & Tech	44	5	0
Marian Engineering College	42	2	6
Ahalia School of Engineering & Technology	41	4	9
Digital University Kerala	40	0	0
Royal College of Eng & Tech-Akkikkavu	38	1	0
Mar Baselios Inst of Tech & Sci	36	0	4
College of Engineering - Kottarakkara	35	1	53
Sri Shakthi Inst of Eng & Tech	32	0	3
National Institute of Electronics & IT - Calicut	31	1	25
Vidya Academy of Science & Tech	31	2	0
Baselios Mathews II College of Engineering	28	0	0
College of Engineering Pathanapuram	27	1	14
Thangal Kunju Musaliar Institute of Technology	26	2	0
Ilahia College of Engineering and Technology	25	1	9
Mohandas College of Engineering & Tech	20	2	0
Indian Institute of Technology Palakkad	19	3	2
Vedavyasa Institute of Technology	17	0	0
Lourdes Matha Coll of Science & Tech	16	0	0
Sree Narayana Institute Of Technology	16	2	1
Central University of Kerala	15	1	0
Indian Institute of Information Tech Kottayam	15	0	0
College of Eng-Thalassery	14	2	21
College of Engineering Muttathara	13	0	0
IES College of Engineering	13	1	0

## B.5 Affinity Group Activities

- **Young Professional (YP)**

- **Genesis: (Kerala Startup Mission, Kalamassery & KTDC Chaithram)**

The Membership Development Committee of IEEE Kerala Section organized Genesis - An Industry Forum on 6th August 2022 with the intention to increase the professional membership count in the Section and to provide the attendees more knowledge about the trends of the industry.

- **Break The Ceiling**

As part of Women's Day Celebration 2022, Women in YP working group of IEEE Kerala Section YP organized an interactive session with Lt Commander Nitika Rai, a Naval Veteran and Senior Consultant at E&Y.

- **iTripleEcon**  
Session 1 - Through a New Lens by Sneha Priya M, Workflow manager and Divisional Director Toastmasters  
Session 2 - Creative Communication by Ms. Susan Abraham (Director, TELL Education)
- **EVOLVE** - Stepping stone for newly converted GSM members at Lead College, with 150+ students (R10 Fund: 400\$)
- **STEP 2022** - Global YP Funded event (Global YP Fund: 500\$)
- **VOLT 2022** at Aquatic Island in Kumbalangi
- Industrial Visit at KSEB Substation, Kanjikode, Palakkad
- YP Talks - MD Session at Mangalam College of Engineering
- YP Talks - Industrial IOT - IEEE PES SBC CEAL
- YP Talks - Introduction to Augmented Reality
- YP Talks - Mobile app development using Thunkable at LBS College of Engineering
- YP Talks- Matlab Simulink Session at IEEE GCEK
- YP Workshop - UI/UX Designing at Govt. College of Engineering Idukki
- YP Workshop - AI Session at MEA College of Engineering
- **Women In Engineering (WIE)**
  - 2-day International Leadership Summit IEEE WiE ILS 2022  
The Summit saw the top international leaders from IEEE and Region 10 (Asia Pacific), as well as representatives of different IEEE Sections. IEEE WIE ILS 2022 featured high-quality knowledge sharing sessions, workshops and industry sessions.
  - This was followed by a special session on WiE Kerala @20 highlighting the milestones of WIE AG of Kerala section.
  - Welcomed WiE chair Jennifer Castillo to Kerala
  - Talk series “She Leads 2022.”
  - Several social and skilling programmes for WiE volunteers
- **Life Member Affinity Group (LMAG)**
  - Won recognition for highest number of events in IEEE Region 10
  - Participated in SYWL 2022 at Korea and AISYWLC 2022 at Pune
- **Consultant Network Affinity Group (CNAG)**
  - Conducted “ConsulTalks”, a talk session series by CNAG
  - Five sessions of the talk sessions were conducted with the theme sustainable consultancy, roadmap to consultancy, knowledge regarding growth, scaling of MSMEs with ESG reporting, green and net zero buildings respectively.
  - The last session was designed as a fireside chat between an entrepreneur and a cybersecurity specialist.

## B.6 Awards & Recognition Activities

### Award constituted by the Section.

- **Public Awards**

KPP Nambiar Award	<b>Padma Vibhushan Krishnaswamy Kasturirangan</b>
Outstanding Industry Contributions Award	<b>Mr. R. K. Shenoy</b>
Friend of IEEE Award	<b>Mr. Sree Kumar V, Tata Elxsi Limited</b>
Outstanding Teacher Award	<b>Prof. Dr. Rekha K. James</b>
Outstanding Woman Engineer Award	<b>Dr. S. Geetha</b>
Outstanding Startup Award	<b>EyeROV (IROV Technologies Pvt. Ltd.)</b>
Distinguished Honour Award	<b>Prof. Dr. K. P. P. Pillai</b>

- **Professional Awards**

Outstanding Volunteer Award	<b>Mr. Shone Jose</b>
Outstanding Young Professional Volunteer Award	<b>Mr. Karthik K.</b>
Outstanding Humanitarian Volunteer Award	<b>Mr. Abhinav Rajeev</b>
Outstanding LMAG Volunteer Award	<b>Mr. Koruthu P. Varughese</b>
Outstanding WIE Volunteer Award	<b>Dr. Bindima T.</b>
Outstanding Researcher Award	<b>Prof. Dr. Alex P. James</b>
Outstanding Event Award	<b>Women in Engineering International Leadership Summit (WIE-ILS 2022)</b>

- **Student Awards**

Outstanding Student Branch Award	<b>College of Engineering, Chengannur</b>
Outstanding Branch Counsellor Award	<b>Ms. Deepa A. K.</b>
Outstanding Student Volunteer Award	<b>Mr. Jachin Bency Thomas</b>
Outstanding Student Volunteer Award	<b>Mr. Basil Reji</b>
Outstanding Student WIE Volunteer Award	<b>Ms. Haritha M. E.</b>
Outstanding Student Humanitarian Volunteer Award	<b>Ms. Rashmi R. Sheno</b>
Outstanding Student Humanitarian Volunteer Award	<b>Mr. Mohammed Zainul Zidan E</b>
Outstanding Student Event Award	<b>Ignite 5.0 - Ignite Imagination and Inspire Iconic Innovations</b>

**Awards Received by the Section, and members.**

- **IEEE MGA Awards 2022**
  - MGA Achievement Award 2022: **Er. A K Suhair**
  - MGA Young Professionals Achievement Award 2022: **Abhinav R.**
- **IEEE R10 Awards 2022**
  - Outstanding Volunteer Award: **Prof. Muhammed Kasim S**
  - SAC Outstanding Volunteer Award: **Mr. Sarath S**
  - Outstanding Section Affinity Group: **IEEE Kerala Section YP AG**
  - Outstanding Educational Activities Group: **IEEE Education Society Kerala Chapter**
  - SAC Outstanding Student Branch Award: **GEC Barton Hill**
  - Special Recognition: **MES College of Engineering**
- **IEEE India Council 2022 Awards**
  - Outstanding Student Branch: **Federal Institute of Science & Technology**
  - Lifetime Achievement Award: **Mr. E G Hareendralal**
  - Outstanding Volunteer Award: **Mr. Anu Mohammed A, GECBH**
  - Outstanding WiE Professional Volunteer Award: **Mrs. Josna VR, GECBH**
  - Outstanding Student Volunteer Award: **Mr. Gokul C M, GECBH**
- **IEEE Computer Society Awards**
  - Outstanding Chapter Award for Early Career Professionals Engagement – **IEEE CS Kerala Chapter**
  - Richard E. Merwin Award: **Parvathi J Nair - MACE, Amal Abdul Azeez - MESCE**
  - Upsilon Pi Epsilon Award: **Lavanya E V – GEC Kannur**
  - **21 CS Student Branch Chapters** received the Annual Chapter Grant of **\$5027** from IEEE CS MGAB
- **IEEE MTTs Society**
  - Outstanding MTT-S Chapter Award: **Indian Institute of Space Science & Technology SB and IEEE Government Engineering College Barton Hill SB**
- **IEEE APS**
  - Outstanding AP-S Chapter Award: **Government Engineering College Barton Hill**
- **IEEE Education Society**
  - 2022 R10 Education Activities Outstanding Group Award: **Education Society Kerala Chapter**
- **IEEE Photonics Society**
  - Largest Membership Increase Recognition: **College of Engineering Karunagappally**
- **IEEE Regional Exemplary Student Branch Award**
  1. Government Engineering College, Barton Hill
  2. Sree Chitra Thirunal College of Engineering, Trivandrum
  3. College of Engineering, Adoor
  4. College of Engineering, Karunagapally
  5. TKM College of Engineering, Kollam
  6. Govt. Engineering College, Wayanad
  7. Govt. Engineering College, Sreekrishnapuram
  8. Govt. College of Engineering, Kannur
  9. MES College of Engineering, Kuttipuram
  10. MEA Engineering College, Perinthalmanna

11. Mar Athanasius College of Engineering, Kothamangalam
12. St. Joseph's College of Engineering & Technology, Palai
13. Rajagiri School of Engineering and Technology, Kochi
14. Federal Institute of Science and Technology, Angamaly
15. College of Engineering, Chengannur
16. Amal Jyothi College of Engineering, Koovappally
17. Rajiv Gandhi Institute of Technology, Kottayam
18. Cochin University of Science and Technology, Kalamassery
19. Adi Shankara Institute of Engineering and Technology, Kaladi

- **IEEE MGA Darrel Chong Outstanding Student Activity Award**

**Gold:**

1. Govt Engineering College, Barton Hill – Exordium
2. Mar Athanasius College of Engineering - Student Professional Awareness Activities Month (SPAAM)

**Silver:**

1. College of Engineering, Adoor - ARBITRIUM 5.0
2. Govt. College of Engineering, Kannur - LOLLAPALOOZA 2.0
3. Mar Baselios College of Engineering & Technology – CodeXtreme
4. Sree Chitra Tirunal College of Engineering - Aura 2.0
5. Rajiv Gandhi Institute of Technology, Kottayam - REX 2.0

**Bronze:**

1. NSS College of Engineering – UNPLUG
2. College of Engineering, Cherthala – Innovanza
3. College of Engineering, Karunagappally - “Women in Power Summit 2021 (WIPS 2021)”
4. Amal Jyothi College of Engineering - QuaRunTime 2.0
5. Government Engineering College Wayanad - SIGHT CAMP'21
6. Sree Chitra Tirunal College of Engineering – Dotslash
7. Federal Institute of Science and Technology - Student Development Program (SDP)

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

- Quarterly and Annual Newsletters in 2022: [newsletter.ieeekerala.org](https://www.ieeekerala.org/newsletter) & [inked.ieeekerala.org](https://www.linkedin.com/company/ieeekerala)
- Home Page of the Section: [www.ieeekerala.org](http://www.ieeekerala.org) (Regularly updated to report the events as and when they happen)
- Other means of contacts with Section members including social media:
  - Facebook: <https://www.facebook.com/IEEEKerala>
  - Instagram: <https://www.instagram.com/ieeekerala>
  - Twitter: <https://www.twitter.com/IEEEKerala>
  - LinkedIn: <https://www.linkedin.com/company/ieeekerala>
  - YouTube: <https://www.youtube.com/@IEEEKeralaSection>

## B.8 Industry Relations

- Membership growth and retention
- Most of the Society chapters conducted professional and continuing education activities for the members from Industry
- A new “Strategic Initiative on Industry Engagement” has been launched to improve the relationships and collaboration with the industry.
- Formation of a Student Activities Board with members from both Industry and Academia to bridge the gap between what is required in the industry and the deliverables from Academia.
- Special Awards are given to IEEE Members and Non-Members based on their Industrial contribution.
- Awards are also given to Industries/organizations, which support IEEE Kerala Section in Industry Academia Interaction Activities.
- Events reported in Section B.2 and B.3 of this document engage industry experts or expose the IEEE members to the industry.

## B.9 Humanitarian Technology Activities

- Humanitarian Technology related activities supported by the Section including collaboration with other OUs.
- SIGHT Activities
- [Domestic & Drinking Reservoir with Renewable Energy – Bavelli \(D2Re-B\) project](#): \$4782
- Visit of HAC Chair Mr. Sampathkumar to Calicut office
- LUMEN: Lights for Uplifting Mankind, Environment and Nature

## B.10 Community Activities

- IEEE Kerala Section completed the signature humanitarian work of water pump using solar power in tribal community.
- IEEE Kerala Section executed LUMEN project where streetlights using solar power were installed in a remote village.
- The [Annual Awards evening of IEEE Kerala Section](#) was held on 14th February 2023. Awards were given to non-IEEE Individuals and organizations who have given remarkable contributions to society. Details of the awards are given in section B.6
- IEEE Kerala Section conducted STEAM workshop and hackathon using grant from Educational Activities Committee

## **PART C - OTHERS**

### **C.1 Special Events**

#### **[INDICON 2022 at CUSAT](#) - Click to see more**

The flagship conference of IEEE India Council was hosted by IEEE Kerala Section. In this edition, we switched to physical mode with over 400 papers being presented in person. R10 director Dr Deepak Mathur inaugurated the event with most sections in India sending their leadership to attend.

1350 paper submissions | 497 papers presented | 600 delegates | 9 tracks.

**Genesis :** Industry Forum Organized by the Membership Development Committee of IEEE Kerala Section

An Industry Forum with deliberations between industry representatives and Young Professionals was conducted on 6<sup>th</sup> Aug 2022

#### **[WIE ILS 2022 - WiE International Leadership Summit](#)**

- IEEE WIE ILS 2022, the 2-day leadership summit of IEEE WIE was organized at Uday Samudra, Kovalam, Thiruvananthapuram, in the presence of prominent and distinguished personalities on July 29th and 30th 2022.
- The summit marked the celebration of 25th Anniversary of IEEE Women in Engineering.
- The summit is being held on the theme Empowerment, Leadership and Equality.

#### **i5 (Ignite Imagination & Inspire Iconic Innovations)**

- In collaboration with IEEE KERALA SECTION, IEEE MEA SB conducted a mega event i5. Ignite Imaginations & Inspire Iconic Innovations (i5) is a three-day National Level Convention organized by the five most recognized society chapters of the IEEE Kerala Section including IEEE Education Society, IEEE Signal Processing Society, IEEE Communication Society, IEEE Robotics and Automation society and IEEE IA/IE/PELS Jt. chapter.
- The event was held on the 14th, 15th, and 16th of October 2022 at MEA Engineering College, Perinthalamanna.
- i5 featured top-notch programs in association with high-profile firms that includes workshop sessions from reputed industries, competitions, talk sessions and personality development training.

#### **IEEE International Conference on Power Electronics, Smart Grid and Renewable Energy (PESGRE 2022)**

- 326 submissions from 22 countries, 176 accepted papers.
- The second edition (PESGRE 2022) was conducted in virtual mode from 2-5 January 2022. IA/IE/PEL Jt. Chapter, Kerala, IEEE Industry Applications Society and IEEE Kerala Section are the financial sponsors of PESGRE 2022. IEEE Industrial Electronics Society, IEEE Power Electronics Society and IEEE Power and Energy Society are the technical sponsors for the conference.
- The conference focused on the challenges, latest developments, and upcoming technologies in power electronic systems, electric drives, renewable energy resources, and smart-grid operation and opened with an inaugural address from Prof. Liuchen Chang, President, IEEE Power Electronics Society.

### **C.2 Relationship with National and International Societies and Non-Government Organizations (NGO)**

- 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 every year, IEEE Kerala Section arranges weekly Technical/Professional talks on a variety of topics on Wednesdays. IEEE Kerala Section arranges webinars, technical talks, industrial visits, workshops, face to face meetings delivered by various prominent speakers every year with these major professional societies.
- Sastravismaya was held by WiE at Govt HSS Kuttamassery with sponsorship from Rotary Club of Cochin Downtown.

#### **Tie Ups & Relations with Governmental Agencies:**

IEEE Kerala Section maintains good rapport and official tie-ups with various governmental and quasi-government bodies.

IEEE Kochi hub hosted a Techfest, a joint event with KSCSTE, the premier govt agency for Science and Technology in the state.

IEEE Malabar Hub conducted Upscale an idea pitch fest in collaboration with Kerala Startup Mission.

### C3. Collaboration with other IEEE Sections

- Sponsored [All India Student YP WiE LM Congress \(AISYWLC' 22\)](#) organized by Pune Section & IEEE India Council. And sent a number of participants for the Congress.
- IEEE Kerala section has extended its support to other sections of India to use [MiNT platform](#) for the communication and e-resource management. India Council had hosted a demonstration of the MiNT 2.0 platform for use by other sections as well.
- Several delegates came in from other IEEE Sections for WiE ILS 2023.
- [Organized a Joint ExCom of IEEE India Council & IEEE Kerala Section during IndiCon 2022](#) in presence of R10 Director and Secretary.

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

- Kerala Section has 2 Subsections (Kochi Sub Section and Malabar Sub Section), 15 Society Chapters and 2 Council and Community, 4 Affinity Groups.
- Management Committee of IEEE Kerala Section consists of Section Chair, Vice Chair, Secretary, Treasurer, Immediate Past Chair and along with them the Chairs of two Subsections. All financials and decision making are done by this body which includes subsection chairs.
- The Sections financially and technically support all activities organized by the subsection/society chapters. Support was extended for organizing technical, educational, and professional activities.

### C.5 Best Practices of your Section (which you would like to share with other Sections for the benefits of members)

- The Section Executive Committee has representation and active participation of the Chair, Vice Chair and Secretary of all Subsections, Affinity Groups and Society Chapters.
- Apart from Core Office Bearers, volunteers are assigned with specific responsibilities such as educational activities, Professional activities etc.
- All Former Chairs of the Section are also included as members-at-large.
- Active participation of members ranging from Life senior members to student members in the section governance and activities
- Strong interaction and liaison with Government departments and local administration bodies.
- An award function is conducted annually with outstanding and phenomenal contributors from Industry, Government, and academia honored with special awards. Outstanding IEEE volunteers from all categories of the Section members are also given special awards.
- Active presence on all social media channels such as Facebook, Twitter, Instagram as well as YouTube
- Mentoring of new members and young professionals by appointing senior Section volunteers as advisors
- Participation of academia, R&D, Industry in the Governance
- Formation of Student Activities Board to provide a sense of direction and guidance to the Student Activities in the Section
- One of the most vibrant student activities teams in R10 with about 15000+ student members across 90+ active SBs. Coordination of student activities through Local Integrated Network of Kerala (LINK) and 3 HUBs that coordinates the activities of IEEE Students in three zones of the Section.
- IEEE Kerala Section has started an idea of “Section Interns” (IKS Interns) who would help the IEEE Kerala Section Office Bearers, ECC, Webmaster, and other Society volunteers to reach out to the members better and also report to the higher committees with the best of the activities.
- Student Representation in Sections decision-making process

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

- The major problem that the Section experiences is the retention rate of student members. The transition to GSM/Members is poor.
- The last year has seen a better retention rate of student members due to the efforts of the MD volunteers.
- Internships, within and outside the IEEE communities, and job fairs are ways to retain student members.

## **PART D - GOALS AND PLANS**

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

- **IEEE Job Fair 2023** jointly with GTECH and MuLearn. 100+ companies are expected to participate. This time we are planning it to conduct at **three locations**, namely, Trivandrum, Kochi and Calicut
- We conducted Job Fair 2022 ([ieejobfair.com](http://ieejobfair.com)) jointly with G TECH, a group Industries at Info Park Kochi in June-July 2022. 5000 Registrations, 500 short listed, 186 offers. One of the most prestigious events of IEEE Kerala Section.

- **EV Hack 3.0** - A national level hackathon in collaboration with **BOSCH**. Third version is upcoming. Students are getting **internship opportunities**.
- **PESGRE 2023**, the 3<sup>rd</sup> International Conference on Power Electronics, Smart Grid and Renewable Energy at Trivandrum in Dec 2023. Call for Paper submission is in progress.
- **WIECON-ECE, WIE International Conference** on Electrical and Computer Engineering is upcoming in Nov 2023.
- Membership development Activities targeting all Organizational Units (Section, Subsections, Society Chapters, Affinity Group Chapters, Student Branches, Student Branch Chapters and SB Affinity Group Chapters) to get maximum **retention, recruitment and recovery**.
- Membership advancement of eligible professional Members to Senior Members and Fellow grade are also aimed. Nearly **190 Members are elevated** to Senior Members in the last two years.
- For 2023, we are **targeting 50% retention, 10% recovery, 60% recruitment**.
- Expanded the MD Team with Chair, Vice Chair, Secretary, and Representatives from Travancore, Kochi and Malabar areas, YP Team, and MD team of SAC.
- Currently we are working for maximum retention. This will be followed by Recovery & Recruitment from March onwards.

## D.2 Goals and Future Plans

- Development of Professionalism in the community
- More member engagement activities for the professional members
- Soft skill development and placement-oriented training for Student members
- More educational programs for Pre-University students
- More Humanitarian projects
- Women Empowerment in rural areas.
- Membership development Activities

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

- For the last two years, we were closely monitoring the membership growth, Retention, Recovery and Recruitment. We observed that the retention rate is very less in **Member and Student Member category**.
- In 2022, we noted that 533 Student Members and GSMs are elevated to Members in June and August. **Only 44/533** in this category are renewed for 2023. The main reason for the low renewal is the **hike in membership dues from \$ 13.5 to \$86.00 / \$80.5**. The situation was exactly same in 2021 and previous years also.
- We discussed this matter with Dr David Kohler, Vice President MGA in the Section Chairs meet held at Bangalore on 12 Nov 2022. We proposed a new member grade, namely, **“Recent Graduate Member”** in IEEE with membership dues same as that of GSM for three years. A proposal in this regard was given to Mr Deepak Mathur, 2022 R10 Director as suggested by Dr David Kohler in November itself. If this suggestion is approved, the retention among newly elevated Members and recruitment among recently graduated members will be high.

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

IEEE Kerala Section has been a leader in membership growth and has grown to become the section with largest number of members. We have also been financially disciplined by following of local audit rules in our execution and following IEEE financial guidelines.

To improve ourselves we are setting out the following plan:

- Increase our professional membership by targeting student leaders from society chapters in becoming part of GSM and Young Professionals.
- Elevating members to senior members which has been found to have 90% or more retention as a category.
- Increase professional member interaction to promote involvement and improve retention
- Conduct funding related workshops to educate members on how to apply for IEEE grants
- Follow strict financial discipline and conduct training for all office bearers on how to use funds the right way.