IEEE KERALA SECTION

ANNUAL REPORT 2017
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## A.1 EXECUTIVE SUMMARY

List of Executive Committee Members of the Section

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<tr>
<td>Chair</td>
<td>Dr. K.R. Suresh Nair</td>
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<tr>
<td>Vice Chair</td>
<td>Dr. S.M. Sameer</td>
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<tr>
<td>Secretary</td>
<td>Dr. Bijuna Kunju K</td>
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<tr>
<td>Treasurer</td>
<td>Ms. Jyothi Ramaswami</td>
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<tr>
<td>Immediate Past Chair</td>
<td>Mr. Unni Sankar</td>
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<tr>
<td>Immediate Past Secretary</td>
<td>Ms. Sarada Jayakrishnan</td>
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<tr>
<td>Chair, Malabar Subsection</td>
<td>Dr. Gopakumar A</td>
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<tr>
<td>Secretary, Malabar subsection</td>
<td>Mr. Edet Bijoy K</td>
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<tr>
<td>Chair, Kochi Subsection</td>
<td>Ms. Mini Ulanat</td>
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<tr>
<td>Secretary, Kochi Subsection</td>
<td>Mr Paul Ansel</td>
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<tr>
<td>Chair, CS chapter</td>
<td>Mr. Srinivasan R</td>
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<tr>
<td>Vice Chair, CS chapter</td>
<td>Dr. G. Santhosh Kumar</td>
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<td>Secretary, CS Chapter</td>
<td>Mr. Gilesh M.P</td>
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<td>Chair, CASS Chapter</td>
<td>Jithin Krishnan</td>
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<td>Secretary, CASS Chapter</td>
<td>Dhanaraj K. J</td>
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<tr>
<td>Chair, EMBS Chapter</td>
<td>Koruthu P Varghese</td>
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<td>Secretary, EMBS Chapter</td>
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<tr>
<td>Chair, IE, IA &amp; PEL Chapter</td>
<td>Dr. Rijil Ramanand</td>
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<tr>
<td>Secretary, IE, IA &amp; PEL Chapter</td>
<td>Dr. Subhash Joshi T G</td>
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<tr>
<td>Chair, Comsoc Chapter</td>
<td>Dr. Lillykutty Jacob</td>
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<td>Vice Chair, Comsoc Chapter</td>
<td>Mr. Kurian Thomas</td>
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<tr>
<td>Secretary, Comsoc Chapter</td>
<td>Dr. Lakshmi Narayanan R</td>
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<tr>
<td>Chair, PES Chapter</td>
<td>Mr. Hareendralal AG</td>
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<td>Mr. Suhair A K</td>
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<td>Mr. Biju K</td>
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<td>Chair, SSIT Chapter</td>
<td>Mr. Amarnath Raja</td>
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<td>Chair, Young Professionals,</td>
<td>Mr. Shahim Baker</td>
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<td>Mr. Bibin Parukoor Thomas</td>
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<td>Position</td>
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<tr>
<td>Secretary, Young Professionals Affinity Group</td>
<td>Mr. Shahul Hameed</td>
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<tr>
<td>Chair, WIE Affinity Group</td>
<td>Ms Sunitha Beevi K</td>
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<tr>
<td>Vice Chair, WIE Affinity Group</td>
<td>Dr. Deepthi das Krishna</td>
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<tr>
<td>Secretary, WIE Affinity Group</td>
<td>Ms Sathi Krishnan</td>
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<tr>
<td>Chair, Awards Committee</td>
<td>Mr. Satish Babu</td>
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<tr>
<td>Convener, Awards Committee</td>
<td>Mr. Jithin Krishnan</td>
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<tr>
<td>Chair, Student Activities</td>
<td>Mr. Sabarinath Pillai</td>
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<tr>
<td>V-SAC (Travancore)</td>
<td>Mr. Shanu M</td>
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<td>V-SAC (Kochi)</td>
<td>Mr. K.D. Joseph</td>
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<td>V-SAC (Malabar)</td>
<td>Ms. Smitha G</td>
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<tr>
<td>MDC</td>
<td>Mr. Ranjit R Nair</td>
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<tr>
<td>Chair, Professional Activities</td>
<td>Mr. Jayakrishnan M C</td>
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<td>Inter Society Activities</td>
<td>Mr. J Muraleemohan Lal</td>
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<tr>
<td>Chair, Conference Activities Board</td>
<td>Mr. Sasi PM</td>
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<td>Convener, CAB</td>
<td>Mr. Nandakumar R Nandanam</td>
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<tr>
<td>Conference Publications Chair</td>
<td>Dr. G. Santhosh Kumar</td>
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<tr>
<td>Chair, Educational Activities</td>
<td>Prof. K P Mohandas</td>
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<td>Publications</td>
<td>Mr. K Gopalan Nair</td>
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<tr>
<td>Industry Relations Coordination</td>
<td>Mr. Varghese Cherian</td>
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<tr>
<td>ECC</td>
<td>Mr. Abey Easow Joseph</td>
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<tr>
<td>Section Webmaster</td>
<td>Mr. Shahul Hameed</td>
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<tr>
<td>Student Representative</td>
<td>Mr. Asif Noushad</td>
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<tr>
<td>SDLP Co-ordinator</td>
<td>Dr. Ansar S M</td>
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<tr>
<td>Chair, PIE</td>
<td>Mr. Sandeep V</td>
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<tr>
<td>Chair, SIGHT</td>
<td>Mr. K.B. Senthilkumar</td>
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<tr>
<td>Member At Large</td>
<td>Prof. Gomathy K Muraleedharan</td>
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<td>Mr. N T Nair</td>
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<td>Dr. A K Unnikrishnan</td>
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<td>Mr. E E Rajakumar</td>
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<td>Mr. Koruthu P Varghese</td>
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<td>Member At Large</td>
<td>Mr. G. Vijaya Raghavan</td>
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<td>Member At Large</td>
<td>Mr. N.A.P. Thampy</td>
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<tr>
<td>Member At Large</td>
<td>Mr. Srinivasan R</td>
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SECTION HIGHLIGHTS

- **TENSYMP 2017**
  - The flagship Spring conference of IEEE Region-10 was held during 14th-16th July, 2017 at Hotel Le Meridien, Cochin, Kerala
  - The Theme of the conference was “Technologies for Smart Cities”
  - Papers were presented in 10 tracks. There were 3 Keynote talks, 3 Tutorials and 2 Workshop
  - Special tracks were arranged by YP, WIE and R10 Student Activities Committee
  - Spotlight on Energy, Intelligent Transport Systems, Digital Kerala, Software Industry and Technology Education

- **AIPESSC 2017**
  - The event had an attendance of 116 IEEE students across India
  - Keynotes on topics related to Power and Energy, Scholarship Initiatives etc

- **SPICES 2017**
  - Held at Kollam, Kerala during 8-10 August 2017
  - A flagship conference financially owned by Kerala Section

- **JOB FAIR 2017**
  - Aimed to educate, advise and connect engineers to opportunities
  - Held at Mar Athanasius College of Engineering on 25 & 26 Feb
  - 23 companies from various fields came along for the selection
  - Out of 850+ registrations from students all over Kerala, 598 wrote preliminary test and 368 cleared prelims and attended the interviews

- **ROADMAP TO SUCCESS IN ENGINEERING STUDIES 2017**
  - Roadmap to Success in Engineering Studies 2017" is the 6th edition of the flagship event hosted by IEEE Malabar Subsection (MSS) (Under Kerala Section) since 2012
  - The main objective of the program is to introduce the features, scopes and academic structure of various engineering disciplines to engineering aspirants who have completed 12th standard and looking forward for engineering admissions.
Held on 20th of May at Regional Science Centre & Planetarium (RSC & P) Calicut in association with The Institution of Engineers (India) Kozhikode Centre.

**WISE 2.0 NILAMBUR**
- Organised at Nilambur Municipality Hall on 12th February 2017 from 2:30 PM to 4:30 PM
- Digital literacy program intended to spread digital literacy among people of different ages and privileges

**WIE WAVE**
- To celebrate the spirit of womanhood, the student community of IEEE Kerala Section; WIE of IEEE LINK decided to commemorate the essence of being woman on 8th March 2017
- The highlight of Wave was that the events conducted from financial arrangements to transportation arrangements were coordinated exclusively by girls.
- Each hub was given their own space of how to carry forth the WIE Wave in their HUBs
- The only criteria that was put forward was that the event should be coordinated exclusively by girls.

**CHAPTER AWARD**
- IEEE PES Chapter, Kerala Section received the Membership Growth Award for Small chapters with 71% increase in membership

**SECTION MEMBERS HOLDING POSITIONS IN MGA, EAB, TAB, R10, INDIA COUNCIL DURING 2017:**
- **Prof V K Damodaran**
  - Member, IEEE Life Members Committee
  - Member, Educational Activities Board (EAB) Products Editorial Board
- **Mr. Satish Babu**
  - Member, IEEE Humanitarian Activities Committee (HAC)
  - Member, MGA Geographic Unit Operations support committee
- **Mr. Amarnath Raja**
  - Member, MGA Nominations and Appointment Committee
- Dr. Sameer S.M.
  - Treasurer, IEEE India Council

- Mr. Bibin P Thomas
  - Social Media Lead, IEEE Sections Congress 2017

- Mr. Shahul Hameed
  - IEEE day team 2017

- Mr. Ranjit . R. Nair
  - Member, IEEE EAB Student Educational Resources Committee
  - Member, IEEE MGA Member Engagement and Life Cycle Committee
  - Member, R10 Conference Activities Committee

- IEEE NEW INITIATIVES COMMITTEE FUNDED PROJECT – ONE WORLD ONE EDUCATION

  - One World, One Education is a project aimed to develop a platform which helps students and young engineers across the globe to access the educational contents available on the Internet such as from Open Course Wares (OCW) easily and use it effectively for developing competent skills.
  - As of now, the awareness is very low especially in developing countries and only 5.5% of people across the globe that enrolls in open online courses complete it and earns a certificate.
  - The project which is supported by IEEE New Initiatives Committee aims to improve the completion rate of course by employing Machine Learning techniques and also increase the awareness regarding the same.

- NEW CHAPTERS – IEEE COUNCIL ON RFID

  - One new council chapters was formed during 2017 to connect to a large number of professionals working in the hardware and software domain of RFID as well as student members.

- SIGHT PROJECTS

  - 12 SIGHT Chapters in Kerala – two professional chapters and 10 student chapters
  - Signature events
    - Saastra Vismaya
    - Technology Interventions for Protecting Coastal Communities from Sea Incursions
• Initiatives for helping the victims of “OKHI” cyclone hit areas of coastal Kerala and Tamilandu

❖ MAJOR EVENTS (INTERNATIONAL, NATIONAL)

• TENSYMP 2017
  ■ IEEE TENSYMP 2017, the 3-day Spring conference of IEEE Region 10, was held at Le Meridian Hotel, Cochin from July 14th to 16th, 2017.
  ■ Theme: ‘Technologies for Smart Cities’
  ■ Inaugurated by Dr. K. T. Jaleel, the Honorable Minister for Local Self Government, Government of Kerala
  ■ General Chair: Sasi P M
  ■ 350 papers received
  ■ 140 papers were presented from 21 countries
  ■ Participants from Industry, Academia and Government.
  ■ Special tracks of WIE, YP, Student Activities

• SPICES 2017
  ■ The second edition of the flagship conference of IEEE Kerala Section.
  ■ Held at TKM College of Engineering, Kollam during 8-10 August 2017
  ■ 200 Delegates from 5 countries participated
  ■ 95 paper presented in 5 track.

• IEEE INTERNATIONAL 5G SUMMIT: IOT & CYBERSECURITY-IEEE COMMUNICATION SOCIETY
  ■ 18th IEEE International Summit held on 1st July, at Mascot Hotel, Trivandrum,
  ■ The summit topics were focused on 5G, IOT and Cybersecurity.
  ■ 10 speakers from various industries.
  ■ A parallel research forum dedicated to ongoing academic research in these areas.
  ■ The event was sponsored by IEEE 5G Initiative, ISOC Trivandrum Chapter, KSCSTE, Texas Instruments, and Lab Systems.
  ■ This event was attended by around 85 people onsite and was watched by around 370 online viewers through live streaming.
DISTINGUISHED LECTURE PROGRAMS: The following DLPs were organized at various locations in Kerala for the benefit of members in the section:

- DLP of IEEE on “Security Challenges and Opportunities in SDN/NFV and 5G Networks” by Dr. Ashutosh Dutta, Lead Member of Technical Staff at AT&T’s Chief Security Office, New Jersey at IIST Trivandrum.

- DLP of IEEE APS Kerala Chapter by Dr. Karl F. Warnick, Professor, Department of ECE, Brigham Young University, USA “100 Years of Phased Array Antenna Modeling and Design: From the Array Factor to Network Theory and Array Signal Processing” – on 25th September 2017.

- DLP of IEEE APS Kerala Chapter by Dr. Karu P. Esselle, Professor, School of Engineering, Macquarie University, Australia “Leaky-wave antennas: from niche applications to mass market”.

IEEE DAY CELEBRATIONS:

- 140 events were celebrated in the section as part of IEEE day.
- This is approximately 15% of total events (936) reported globally.
- 35 Student Branches, 7 technical societies and 3 affinity groups were part of this celebrations.
- IEEE Day Selfie Contest and IEEE Day Network Challenge.
- Entry from IEEE SB TKMCE won second prize in global IEEE Day Short Video contest.

MAJOR CHAPTER ACTIVITIES:

COMMUNICATIONS SOCIETY:

- Industry Talk on "Big Data Analytics" by Mr. Meenakshi Sundaram, Data Scientist at Global Innovation Network, Merck Sharp & Dohme (MSD), Singapore - NIT, Calicut.

- Hands-on session on Communication Protocols and Linux Network Tools - College of Engg Trivandrum.
- Workshop on MIT App Inventor - MESCE Kuttippuram, Kerala

- Seminar on Wireless Networks; Resource Persons: Dr. Mahendran V (Assistant Professor, IIT-Tirupati) & Dr. Chandramani (Assistant Professor, IISc-Bangalore) - Indian Institute of Space Science and Technology (IIST), Trivandrum

- Workshop on Deep Learning; Prof. Vijay Krishna Menon, Asst. Professor at Amrita Center for Computational Engineering and Networking, Amrita University, Coimbatore - TKM College of Engineering, Kollam

- DLPTalk on "Security Challenges and Opportunities in SDN/NFV and 5G Networks" by Dr. Ashutosh Dutta, Lead Member of Technical Staff at AT&T's Chief Security Office in Middletown, New Jersey at IIST Trivandrum - Thiruvananthapuram, Kerala, India

- One day National Workshop on “Realising Anything as a Service in IoT : Technologies and Standards” Jointly with C-DAC TVM & IISc Bangalore. - Thiruvananthapuram, Kerala

- IEEE 5G SUMMIT Trivandrum - Mascot Hotel, PMG, Thiruvananthapuram, Kerala

- Research Forum with nine oral presentations by research scholars from various academic institutions in Kerala, organized by IEEE Communication Society Kerala Chapter. Area: 5G, IOT, and Cybersecurity - Thiruvananthapuram, Kerala

- Communication Society Kerala Chapter sponsored One-Day Workshop: “A deep dive into deep learning”, to be held on 8th Dec 2017 at Department of Electronics, Cochin University of Science & Technology (CUSAT)

- TALK ON INTEROPERABILITY, SECURITY AND RELIABILITY FOR A SCALABLE INTERNET OF THINGS by Prof. Dr.-Ing. Axel Sikora, Institute of Reliable Embedded Systems and Communication Electronics (ivESK), Offenburg University of Applied Sciences, Germany - IIITM-K, Technopark, Trivandrum
• POWER AND ENERGY SOCIETY

  ■ Workshops Conducted on :

    ▪ How to Write and Present Technical Papers – College of Engineering, Trivandrum,
    ▪ ‘Execution of successful projects for B.Tech’ - College of Engineering Chengannur
    ▪ ‘Electrification of High Rise Residential Buildings’ - GEC Barton Hill
    ▪ Training for Energy efficient dream home contest winners - EMC Campus Trivandrum
    ▪ Design of Electrical Infrastructure of a Complex of Multi Storey
    ▪ Design and Installation of PV System
    ▪ ‘Design of solar systems, at College of Engineering Trivandrum
    ▪ ‘OPAL-RT and dSPACE for HIL applications in Power Systems’ - NIT Calicut.

  ■ Student Congress, EMC, Trivandrum

  ■ All India PES Student Congress 2017– Government Engineering College, Trichur, Kerala

    ■ College level Quiz competition for first year engineering students on IEEE day
    ■ Energy Management centre (EMC) Kerala & TKMCE Kollam, organized 'Energy efficient dream home' contest.
    ■ Paper presentation contest was jointly organized by IEEE PES Kerala chapter and PES SBC TKMCE Kollam. The hub level competitions were held.
    ■ State level Quiz competition for first year engineering students -TKMCE Kollam
    ■ State level of Paper presentation contest for engineering students -TKMCE Kollam
    ■ The Power and Energy Society Chapter organized a Power Quizzes for pre-university students and also for 1st year engineering students.

• ANTENA PROPOGATION SOCIETY

  ■ Authorship Workshop: How to publish a technical paper with IEEE
  ■ HAM Radio and Disaster Communication Workshop
  ■ Distinguished Lecture Program by Dr. Karl F. Warnick, Professor, Department of ECE, Brigham Young University, USA
Technical Talk on High-Resolution Iowa XPOL Radars for NASA GPM GV Campaigns: Design, Performance and New Rainfall Algorithms by Dr VK Mishra

■ Short-term training program on 5G - Technologies and Challenges
■ WORKSHOP: Software Defined Radio - Department of Electronics, Cochin University of Science and Technology, Cochin, Kerala, India
■ WORKSHOP: Modern communication systems: IoT, Antenna Design & EM simulation - Malabar Institute of Technology, Kannur, Kannur, Kerala, India
■ APS DLP: Leaky-wave antennas: from niche applications to mass market - Department of Electronics, Cochin University of Science and Technology, Cochin, Kerala, India
■ WORKSHOP: Introduction to Computer Aided Design in Modern Antenna Engineering - Government College, Wayanad, Mananthawadi, Kerala, India
■ WORKSHOP: Fundamentals of Electromagnetics - N S S college, Rajakumari, Idukki, Rajakumari, Kerala, India
■ Invited talks: 1. Radar Phased Arrays, Meta Materials, Stealth & MIMO 2. High-Resolution Iowa XPOL Radars for NASA GPM GV Campaigns: Department of Electronics, Cochin University of Science and Technology, Cochin, Kerala, India
■ Aps Dlp: 100 Years Of Phased Array Antenna Modeling And Design: Array Factor To Network Theory And Array Signal Processing
■ Workshop: Electromagnetic Engineering And Its Applications - Government Engineering College, Barton Hill
■ STTP on RF and Microwaves: Theory to Experiment
■ Workshop: Modern Trends In Rf & Microwave Technologies
■ Distinguished Lecture Program by Dr. Karu P. Esselle, Professor, School of Engineering, Macquarie University, Australia - Leaky-wave antennas

• CIRCUITS AND SYSTEMS SOCIETY

■ Training/workshop on memory resistors and advanced microelectronics - ERDCIIT Trivandrum
• Workshop on Printed circuit board design and python scripting based on IoT - LBITW Trivandrum
• Basic electronics workshop and science toy making - Model Engineering College, Trivikakara
• PCB design and fabrication workshop - NIT Calicut
• Workshop on RF Design concepts in PCB designing and aspects of micro engineering circuits in implantable medical devices

- ENGINEERING IN MEDICINE AND BIOLOGY
  • Workshop on medical electronics – Rohini College of Engineering, Kanyakumari
  • Seminar on Biomedical Instrumentation and compliance on standards - SCTIMST BMT Wing
  • Technical Seminar on Biomedical - KSR College of Technology, Erode
  • 6th Asian Biomaterials Congress hosted by Sree Chitra Tirunal Institute for Medical - Hotel Apollo Dimora, Thiruvananthapuram
  • FDP program on Artificial Intelligence and Neural Modulation - TKM College of Engineering
  • Talk series on IPR based systems in Bioengineering research

- INVITED LECTURERS
  • All society chapters organized invited lecturers at various locations in the section.

- WOMEN IN COMPUTING [WIC]
  Women In Computing track was a special initiative program of IEEE Computer Society, Kerala Section focusing on creating a peer-based community for women in technology fields, building leadership skills, reaching out to students, and to promote and support WIE IEEE members in computer engineering professions through events, networking, career advancement and affinity groups. WIC is aimed at promoting girl students presence in the field of computing. WIC run events, from tech talks to socials, and provide opportunities for female engineers to connect and succeed. Our mission is to increase the impact of women on all aspects of technology in the world. We aimed at developing a strong community to help women connect and share various topics of interest such as upcoming software challenges.
  The WIC track was aimed at promoting computing amongst women and giving them an exposure to the industry. This event mainly focussed on empowering the girls to undertake more technical projects in the near future
and to give them confidence and support to pursue their engineering aspirations.

43 WIE members from across Kerala participated in this event out of which 16 exclusively came for this event. We had participations from Govt. Engg. College Palakkad, College of Engg. Chengannur, College of Engg. Karunagapally, College of Engineering Cherthala, Federal Institute of Science & Technology, MES College of Engg., Adi Shankara Institute of Engineering and Technology, Kalady and Sreepathi Institute of Management and Technology(SIMAT).

❖ MAJOR STUDENT AND AFFINITY GROUP ACTIVITIES

- **STEP (Student Transition Elevation Program)**: Young Professionals
  - IEEE STEP (Student Transition and Elevation Partnership program) on the 22nd of April aimed to convey the benefits of IEEE Young Professionals and thereby facilitate the easy transition of Student member to Young Professional. The participants included recent graduates, Graduate Student members & final year students along with a diverse attendee list of Industry Professionals, Entrepreneurs and Academicians.

- **WIE AG**
  - Shastra Vismaya (A WIE initiative) at Manjeri
  - Urjja Kiran - Energy conservation drive at Veeranakavu, Aruvikkara in association with IEEE PES & IEEE LMAG
  - Energy Conservation Drive at Kilimanoor Panchayat Hall in association with Vidya Academy of Science and Technology
  - As a part of Kombukuthy Pilot Project, a Sastravismaya session was organized by LMAG Kerala jointly with IEEE PES & IEEE WIE Kerala at Kombukuthy Tribal High school
  - Women In Computing track as a part of AKCSSC ’17 at MES College of Engg, KuttipuramShastra Vismaya (A WIE initiative) at Manjeri
  - Urjja Kiran - Energy conservation drive at Veeranakavu, Aruvikkara in association with IEEE PES & IEEE LMAG
  - Energy Conservation Drive at Kilimanoor Panchayat Hall in association with Vidya Academy of Science and Technology
  - As a part of Kombukuthy Pilot Project, a Sastravismaya session was organized by LMAG Kerala jointly with IEEE PES & IEEE WIE Kerala at Kombukuthy Tribal High school
  - Women In Computing track as a part of AKCSSC ’17 at MES College of Engg, Kuttipuram
**AWARDS**

Kerala section has been appreciated and recognized on a global scale by awarding the Section and many of its volunteers for their efforts towards the vision and mission of IEEE.

- **Prof. Sunitha Beevi**, Chair WIE affinity group received IEEE Region 10 WIE Outstanding Professional Volunteer Award
- **Mr. Bibin Parukoor Thomas**, Vice Chair, Young Professionals received IEEE Region 10 YP Outstanding Volunteer in Industry Award
- IEEE Kerala Section bagged **Silver prize for the IEEE Region 10 Golden Jubilee Video Contest**
- IEEE Kerala Section was recognized for **2017 Outstanding Section Membership Recruitment and Retention Performance**
- **Mr. Shahul Hameed**, Secretary, IEEE Kerala Young Professionals, won grant from IEEE New Initiatives Committee for the project 'One World, One Education'.

- **Richard E Merwin Scholarship**
  - Abishek P, CET; Amrith M, CET; Megha Ben, CET; Jairam Shankar, RSET; Arundhati Kurup, SCT; Hima Bindu, SCT; Vignesh Hari, CEC; V Sresankar, CET were recipients of Richard E Merwin Scholarship
- **2017 Darrel Chong Award**
  - **Amrita Vishwa Vidyapeetham, Kollam** was listed in the GOLD category for ROBOTSAV.
A.2 FINANCIAL REPORT

The summary of financial activities of the Section as per audited report presented in AGM is as below.
The Institute of Electrical and Electronics Engineers (IEEE) Kerala Section, TC-25/2696-5, Ambujavilasom Road, Thiruvananthapuram, Kerala, India

Balance Sheet Generated from Netsuite

<table>
<thead>
<tr>
<th>Financial Row</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current Assets</strong></td>
<td></td>
</tr>
<tr>
<td>Bank</td>
<td></td>
</tr>
<tr>
<td>70199 - Indian Overseas Bank KERALA</td>
<td>Rs.1,838,948.02</td>
</tr>
<tr>
<td>72242 - KERALA Petty Cash</td>
<td>Rs.549.78</td>
</tr>
<tr>
<td>Total Bank</td>
<td>Rs.1,839,497.80</td>
</tr>
<tr>
<td>Total Current Assets</td>
<td>Rs.1,839,497.80</td>
</tr>
<tr>
<td>Current Assets Less Current Liabilities</td>
<td>Rs.1,839,497.80</td>
</tr>
<tr>
<td>Total Assets Less Current Liabilities</td>
<td>Rs.1,839,497.80</td>
</tr>
<tr>
<td><strong>Long Term Liabilities</strong></td>
<td></td>
</tr>
<tr>
<td>74246 - Reserve Allocation Payable</td>
<td>Rs.237,658.29</td>
</tr>
<tr>
<td>Total Long Term Liabilities</td>
<td>Rs.237,658.29</td>
</tr>
<tr>
<td>Total Assets Less Total Liabilities</td>
<td>Rs.1,601,839.51</td>
</tr>
<tr>
<td><strong>Capital and Reserves</strong></td>
<td></td>
</tr>
<tr>
<td>Retained Earnings</td>
<td>Rs.1,026,885.70</td>
</tr>
<tr>
<td>Net Income</td>
<td>Rs.574,953.81</td>
</tr>
<tr>
<td>Total Capital and Reserves</td>
<td>Rs.1,601,839.51</td>
</tr>
</tbody>
</table>
PART B - ORGANIZATIONAL ACTIVITIES

B.1 MEMBERSHIP DEVELOPMENT ACTIVITIES

Total number of active members in the past 5 years

<table>
<thead>
<tr>
<th>Member Grade</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life Members</td>
<td>10</td>
<td>10</td>
<td>13</td>
<td>13</td>
<td>16</td>
</tr>
<tr>
<td>Senior Members</td>
<td>84</td>
<td>93</td>
<td>102</td>
<td>131</td>
<td>127</td>
</tr>
<tr>
<td>Members</td>
<td>914</td>
<td>892</td>
<td>868</td>
<td>939</td>
<td>875</td>
</tr>
<tr>
<td>Associate Members</td>
<td>35</td>
<td>49</td>
<td>62</td>
<td>40</td>
<td>39</td>
</tr>
<tr>
<td>Affiliate Members</td>
<td>4</td>
<td>6</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Graduate Student Members</td>
<td>457</td>
<td>614</td>
<td>428</td>
<td>617</td>
<td>531</td>
</tr>
<tr>
<td>Student Members</td>
<td>4076</td>
<td>3519</td>
<td>5432</td>
<td>6170</td>
<td>7488</td>
</tr>
<tr>
<td>Total</td>
<td>5580</td>
<td>5183</td>
<td>6905</td>
<td>7910</td>
<td>9076</td>
</tr>
</tbody>
</table>

- 14% growth in membership, largely aided by students who constitute 82.5%
- 30% of members in Kerala are members of Women in Engineering
- 62% of higher grade members in Kerala are Young Professionals
- “2017 Outstanding Section Membership Recruitment and Retention Performance Award” for meeting both recruitment and retention goals
- No. 1 in India and No. 2 in R10, in terms of membership, as on July 2017
- Membership drives, vibrant programs, chapter activities, all have contributed.
- Conducted 90 Membership Drives all over Kerala Section in 2017
B.2 CHAPTER ACTIVITIES

❖ TOTAL NUMBER OF CHAPTERS IN THE SECTION:

Kerala Section has a total of **Eleven** Society/Council Chapters, adding one Council Chapter in 2017.

1. Power & Energy Society
2. Computer Society
3. Industry Applications, Industrial Electronics, Power Electronics Societies (Joint Chapter)
4. Communication Society
5. Society on Social Implications of Technology
6. Antenna & Propagation Society
7. Robotics and Automation Society
8. Signal Processing Society
9. Engineering in Medicine and Biology Society
10. Circuits and Systems Society
11. Council on RFID
❖ NUMBER OF CHAPTERS FORMED IN THE CURRENT YEAR

- IEEE Kerala Section Council on RFID Chapter was formed on 15 March 2017

❖ NUMBER OF ACTIVE CHAPTERS

- All 11 Society/council chapters and 4 affinity groups have reported the required number of meetings during 2017.

❖ SUMMARY OF CHAPTER ACTIVITIES

A list of activities organized by society chapters is listed here.

- **POWER AND ENERGY SOCIETY**

  - Energy congress at MBC college of Engineering, Kuttikkanam- 06 Jan 2017
  - Faculty development programme at MEC, Trivandrum- 09 Jan 2017
  - Inauguration of PES Student Branch Chapter GEC, Adoor – 13 -Jan-2017
  - First meeting of PES EXECOM ,Trivandrum-26 Jan 2017
  - PES Kerala chapter organized Technical talk on Energy Conservation and Amber to Smart Grid, Thrissur-12 Feb 2017
  - Technical talk on How Membership of IEEE and PES Can Help Boost the Career of the Members at MBC Peermade-12 Mar 2017
  - Expert technical training session about “Internet of Things - IoT”,NIT Calicut-14th March 2017
■ PES-KSEBEA Seminar contest series, Trivandrum-14th March 2017
■ Expert technical session on “Electromagnetic Field Theory”, NIT Calicut-22nd March 2017
■ PES Technical talk on Amber to Smart Grid at College of Engineering Thrikkarippur-27 Mar 2017
■ Talk on Introducing IEEE in College of Engineering & Technology, Payyannur -28 March 2017
■ Programme Future plus at Veeranakavu Day Care Centre, Kattakkada-03 April 2017
■ Execom meeting at Trivandrum on 8th April 2017
■ Technology Workshop On Test And Measurement Systems", NIT Calicut-21st- 22nd April 2017
■ Sasthra Vismaya, Manjeri – 3-4 June 2017
■ Workshop on Energy Conservation Building Code, Trivandrum – 24 June 2017
■ Workshop in the Design of Electrical Infrastructure of a Complex of MultiStorey Buildings – Marian Engineering College, Trivandrum – 29 July 2017
■ Inauguration of PES Student Branch Chapter – Vimal Jyothi Engineering College, Chemperi, Kannur – 1 Aug 2017.
■ Inauguration of PES Student Branch Chapter – St Gitts College of Engineering, Pathamuttom – 17 Aug 2017
■ Professional Talk on “Rapid Transition to Renewable: Imponderable in India's Clean Energy Ambition." at St.Gits Engineering college Kottayam-17 Aug 2017
■ Workshop in How to Write and Present Technical Papers – College of Engineering, Trivandrum – 19 Aug 2017
■ Professional talk on 'Role of Mentoring by IEEE’ at College of Engineering Trivandrum-29 Aug 2017
■ One day workshop on 'Effective writing of technical papers' at College of Engineering Trivandrum-29 Aug 2017
■ Energy conservation awareness programme for Panchayaths- Phase 1 by Vimaljyothi engineering college Kannur- 2nd September 2017
■ one day workshop on 'Execution of successful undergraduate projects' at College of Engineering Chengannur-23 Sep 2017
■ Quiz competition for first year engineering students. College level was conducted on 3rd October 2017
■ 'Energy efficient dream home' contest for engineering college students, Kollam-07 Oct 2017
■ Professional talk on Ethical volunteering at MES College of Engineering Kuttippuram-11 Oct 2017
■ Solar Training Programme conducted by PES SB chapter of College of Engineering Trivandrum, Kerala, from October 21-22, 2017
■ Paper presentation contest organized by IEEE PES Kerala chapter at Travancore, Kochi and Malabar hubs-21 Oct. 2017
■ One day workshop on 'Electrical system design of multi storied buildings' at GEC Bartonhill, Trivandrum-28 Oct 2017
■ Training on Energy Efficient Dream Home Contest at EMC Campus Trivandrum-on 28 Oct 2017
■ Quiz for first year engineering students-Hub level and State level contest, Kollam-04 Nov 2017
■ Two day workshop on 'Energy audit' at College of Engineering Trivandrum-11 Nov 2017
■ Paper presentation contest for first year engineering students-State level, Kollam-18 Nov 2017
■ 5 Day Workshop-OPAL-RT and dSPACE for HIL applications in Power Systems, Calicut-04 Dec 2017
■ Talk on 'Challenges in Power Sector in Kerala and Role of PES' in PES Annual General Meeting 2017, Trivandrum-16 Dec 2017
■ Awareness programme on Energy conservation and renewable resources, Trivandrum-16 Dec 2017
■ DLP talk at NIT Calicut-20 Dec 2017
■ Energy conservation awareness programme for Panchayaths by Vimaljyothi engineering college Kannur-20 Dec 2017
■ Two Day Awareness Program on Energy Conservation for the Community in Veeranakavu, Near Kattakkada and Distribution of LED Bulbs and Exhibition, Trivandrum-21 Dec 2017
■ Two day National Seminar, NIT Calicut-21 Dec 2017
■ One Day Workshop Computer Based Design of Electrical Systems by College of Engineering, Sasthamkotta-23 Jan 2018
■ Distinguished Lecture Program on Direct Current Gas-Insulated Transmission Lines, NIT Calicut-02 Feb 2018
INDUSTRY APPLICATIONS, INDUSTRIAL ELECTRONICS, POWER ELECTRONICS SOCIETIES (IA/IE/PEL) JOINT CHAPTER

- Opening of New IEEE IES student Branch at Vimal Jyothi Engineering College Kannur.
- Section Distinguished Lecture Program (SDLP) on "Green Energy Technologies"
- All Kerala technical Quiz competition on the birthday of Nikola Tesla (July 10th)
❖ COMPUTER SOCIETY

- Third All Kerala Computer Society Student Congress at MES College of Engineering, Kuttippuram
- Technical talk on Data Science for professionals on 6th November 2017 at Travancore Hall, Technopark.
- Talk on GST and use of Data Analytics at 11 AM on 4th November, 2017 at Tax Towers, Trivandrum
- Women in Computing Colloquium to promote the research activities of Women researchers.
- Campus++: An event exclusively for aspiring student entrepreneurs, at Malappuram.
- VIGYAAN: awareness session for school going students, on Cyber Security at Government High School, Vennala.

❖ COMMUNICATION SOCIETY

- Technical Talk on Big Data Analytics by Mr. Meenakshi Sundaram, Data Scientist at Global Innovation Network, Merck Sharp & Dohme (MSD), Singapore - NIT Calicut
- National Workshop on “Realising Anything as a Service in IoT : Technologies and Standards; In partnership with C-DAC TVM & IISc Bangalore
• DLP: Security Challenges and Opportunities in SDN/NFV and 5G Networks by Dr. Ashutosh Dutta, Lead Member of Technical Staff at AT&T’s Chief Security Office in Middletown, New Jersey - IIST Trivandrum
• IEEE International 5G Summit: IoT & Cybersecurity
• Industry interaction session: Signal Processing and Communication – Bridging the gap between theory and practice – VJEC Kannur
• Talk on “Industries Expectation from Engineers” by IEEE ComSoc Vice Chair Mr. Kurian Thomas - Viswajyothi College of Engg and Tech., Vazhakulam
• Talk on “Sustainable Development and Spirituality” Dr. R. Radhakrishna Pillai, Professor, IT & Systems Area, IIM Kozhikode - NIT Calicut
• Hands-on session on Communication Protocols and Linux Network Tools - College of Engg Trivandrum
• Workshop on MIT App Inventor - MESCE Kuttippuram
• Seminar on Wireless Networks; Resource Persons: Dr. Mahendran V (Assistant Professor, IIT-Tirupati) & Dr. Chandramani (Assistant Professor, IISc-Bangalore) - Indian Institute of Space Science and Technology (IIST), Trivandrum
• Workshop on Deep Learning; Prof. Vijay Krishna Menon, Asst. Professor at Amrita Center for Computational Engineering and Networking, Amrita University, Coimbatore.
ANTENNA & PROPAGATION SOCIETY

- Authorship Workshop: How to publish a technical paper with IEEE
- HAM Radio and Disaster Communication Workshop
- Technical Talk on Application of metamaterials in Antennas by Prof. Amalendu Patnaik from IIT Roorkee
- Technical Talk on Substrate Integrated Waveguide: Early Development and Recent Trend by Prof. Animesh Biswas from IIT Kanpu
- Technical Talk on Feed Antenna for Low Earth Orbit Satellites Tracking: An Overview by Sandip Sankar Roy from NRSC, ISRO
- Distinguished Lecture Program by Dr. Karl F. Warnick, Professor, Department of ECE, Brigham Young University, USA
- Technical Talk on High-Resolution Iowa XPOL Radars for NASA GPM GV Campaigns: Design, Performance and New Rainfall Algorithms by Dr VK Mishra
- STTP on 5G - Technologies and Challenges
- Technical Talk on Study and Design of Integrated Mixer and Low-Noise Amplifiers (LNA) Topologies for Wi-Fi and Wideband Systems by Prof. Jayanta Mukherjee from IIT Bombay
- STTP on RF and Microwaves: Theory to Experiment
- Distinguished Lecture Program by Dr. Karu P. Esselle, Professor, School of Engineering, Macquarie University, Australia - Leaky-wave antennas
ENGINEERING IN MEDICINE AND BIOLOGY SOCIETY

- Workshop on medical electronics – Rohini College of Engineering, Kanyakumari
- One day Seminar on Engineering electronics in Biology-Trivandrum, Kerala, India.
- Seminar on Biomedical Instrumentation and compliance on standards - SCTIMST BMT Wing
- Technical Seminar on Biomedical - KSR College of Technology, Erode
- 6th Asian Biomaterials Congress hosted by Sree Chitha Tirunal Institute for Medical - Hotel Apollo Dimora, Thiruvananthapuram
- Two day workshop on High speed design of printed circuit boards ,RF design elements and components which are used in Biomedical instrumentation systems especially in medical devices - Trivandrum
- EMBS Execom meet - Trivandrum
- FDP program on Artificial Intelligence and Neural Modulation - TKM College of Engineering, Kollam
- Talk series on IPR based systems in Bioengineering research

ROBOTICS AND AUTOMATION SOCIETY

- Workshop on Control of Mobile Robot at College of Engineering Trivandrum on 8-9th April 2017
- Technical lecture- Agricultural Robotics: Overview and Case Study of Robotic Coconut Tree Climber and Harvester on 26th April 2017
- Talk on Are Robots going to take away jobs? Impact of AI & Robotics on human employment by "Dr. Roshy John, Global Practice Head, Robotics and Cognitive Systems, Tata Consultancy Services" on 9th June 2017
- Technical Lecture-Design, validation and code generation for control of Robotic Systems”, on 5th July 2017
- Technical Lecture- Wheeled Planetary Rovers on 6th July 2017
- Technical Lecture- Vehicle Electronics and Powertrain Technologies on 21st Sept 2017
- AI and Robotics defined Healthcare: from Sick care to Health care on 23rd Nov 2017
- "Technical Lecture- Enabling Technologies for Self-Driving / Autonomous Vehicles” on 14th Dec 2017
● Talk on Applications of Signal Processing

IEEE Signal Processing Society Chapter of the Student Branch, College of Engineering Trivandrum in association with CDAC (Centre for Development of Advanced Computing) conducted a talk session by the Executive Director of CDAC Trivandrum, Shri. B Ramani on Applications of Signal Processing, on 19th October 2017 (Thursday) at CETAA Hall, College of Engineering, Trivandrum. About 50 students and faculty attended the program.

Career Paths in Machine Learning & Signal Processing 2017 was a one day event conducted by IEEE Signal Processing Society Branch Chapter, M.E.S College Of Engineering, Kuttippuram in association with IEEE Signal Processing Society Kerala Chapter. The main objective of this event was to focus on student aspirants who wish to do projects in Machine Learning and Signal Processing. The event also aimed at students who are looking for a career in Machine Learning and Signal Processing. The event was held on 21st October 2017 at M.E.S College Of Engineering. The sessions were conducted by Musfir Mohammed, Data Scientist at AttinadSoftware, Techno Park Trivandrum and Mr. Mohammed Noushad, Data Analyst, Attinad Software, Techno Park Trivandrum.
❖ SOCIETY FOR SOCIAL IMPLICATIONS OF TECHNOLOGY

- Technology Interventions for Protecting Coastal Communities from Sea Incursions
- Talk on Nepal issue
- PES-SSIT Joint initiatives discussion
- Okhi Support

❖ CIRCUITS AND SYSTEMS SOCIETY

- Three days’ workshop on advanced memresistors design: A three days training/workshop on memory resistors and advanced microelectronics were conducted by IEEE CASS
IEEE CASS Kerala chapter on May 15, 16 and 17th of 2017 at ERDCIIT Trivandrum. Faculties from CDAC and VSSC were the resource persons.

- **IEEE CASS certified workshop on PCB and Raspberry Pi:** IEEE CASS Kerala chapter organized a two-day workshop on Printed circuit board design and python scripting based on IoT. The participants were mainly students and they were exposed to high level of training in the respective subjects. The event was organized at LBITW Trivandrum.

- **Basic electronics workshop and science toy making**

- **The event was part of EMPNEO at Model Engineering College, Thrikkakara, Kochi.** The event was a basic electronics hands-on workshop and science toy making. Event dates: 30 July 2017

- **PCB design and fabrication workshop:** IEEE Kerala Section CASS Chapter in association with student branch of NIT Calicut conducted a two days’ workshop on PCB Design and Fabrication workshop. Dates: 26-27 Aug 2017

- **Technical talk in the limelights of TESERACT 17 conducted by SJCET Pala student branch.**

- **High speed Design concepts in Biomedical instrumentation systems- Trivandrum.**
B.3 PROFESSIONAL AND CONTINUING EDUCATION ACTIVITIES

Summary of continuing educational activities including conferences, technical activities, training courses, and distinguished lecture programs are given below

❖ TECHNICAL ACTIVITIES

- Tech Roundup 2017: Professional Activities Committee organised a one day session - Tech Round-up 2017 on Saturday, April 29 at hotel 'The Capital', Pulimoodu, Trivandrum. The one day program had sessions and discussions on the latest trends in the technology world. Topics: Machine Learning & AI, Crypto Currencies & Blockchain and Internet of Things.

- A Session on “Energy Conservation in Daily Life” by Er.Aneesh Rajendran, Assistant Executive Engineer(Electrical)-Kerala Tourism Development Corporation, was organised at the The Institution of Engineers (India) Hall on 18-01-2017.

- A Session on “Digital Banking” by Mr.N. Satheesh Chandran, & Mr. N. Balaji, Technology Officers from Canara Bank, was organised at the The Institution of Engineers (India) Hall on 25-01-2017.

- A Lecture on “Artificial Intelligence-Key Factor of all Modern Computer Applications” By Er.N.T. Nair, Past Chairman, IEEE Kerala Section, was organised at the The Institution of Engineers (India) Hall on 15-02-2017.

- A Case Study of “Vizhinjam International Seaport” By Dr.Jayakumar, MD & CEO of Vizhinjam International Seaport Limited, was organised at the The Institution of Engineers (India) Hall on 01-03-2017.

- A Discussion on “Power Scenario- In Kerala-Problems and Solutions”, headed by Er.Madhavan Pillai, Retd, Chief Electrical Inspector, Govt of Kerala, was organised at the The Institution of Engineers (India) Hall on 08-03-2017.

- A Session on “Evolution of Aircraft Technology”, by Shri. Sheeju Chandran Dy. Project Director, Human Spaceflight Project, VSSC, ISRO, was organised at the The Institution of Engineers (India) Hall on 29-03-2017.

- A talk on “How Electrical Safety can be Achieved in Modern Building”, by Prof.Sisily Thompson, Police Training College, was organised at the The Institution of Engineers (India) Hall on 19-04-2017.
A talk on “Reliable Practices in Satellite Launch Vehicles”, by Dr.B.Valsa, Deputy Director (Systems & Reliability), VSSC, ISRO, Thiruvananthapuram, was organised at the The Institution of Engineers (India) Hall on 26-04-2017.

A talk on “Vedic Mathematics”, by Adv.N.Hariharan, Former Head of Information Systems, Indian Oil Corporation, was organised at the The Institution of Engineers (India) Hall on 03-05-2017.

A talk on “Missile Technology”, by Er.Jayakishore S.R., Deputy Manager, Planning, BrahMos Aerospace, Thiruvananthapuram, was organised at the The Institution of Engineers (India) Hall on 10-05-2017.

A talk on “Recent Trends in Food and biomedical Applications”, by N.Moorthy, was organised at the The Institution of Engineers (India) Hall on 24-05-2017.

A talk on “History of Fracture Mechanics”, by Shri A.K. Asraf, Group Director, Structural Dynamics & Analysis Group, LPSC, ISRO, was organised at the The Institution of Engineers (India) Hall on 31-05-2017.

A talk on “Weaponization of the Code”, by Er.M.Harikumar, Retired Scientist, VSSC, ISRO, was organised at the The Institution of Engineers (India) Hall on 07-06-2017.

A talk on “Systems Approach towards Maintenance of Buildings and Allied Services”, by Er.P.A.Prabhakaran, Retd. Chief Engineer, ISRO, was organised at the The Institution of Engineers (India) Hall on 14-06-2017.

Talk on “Innovative Translational Initiative to Green Technology”, by Dr.Hema Ramachandran Faculty TPLC, GEC Barton Hill, Tvm, was organised at the The Institution of Engineers (India) Hall on 30-08-2017.

Talk on “Future of Transportation - Mobility as a Service”, by Dr.Ravi Kumar P., Joint Director, CDAC Thiruvananthapuram, was organised at the The Institution of Engineers (India) Hall on 01-11-2017.

DISTINGUISHED LECTURE PROGRAMS

The Section in association with various society chapters organized three Distinguished Lecture Programs during 2017. A brief summary is given here.

DLP of IEEE on “Security Challenges and Opportunities in SDN/NFV and 5G Networks” by Dr.Ashutosh Dutta, Lead Member of Technical Staff at AT&T’s Chief Security Office, NewJersey at IIST Trivandrum.
● DLP of IEEE APS Kerala Chapter by Dr. Karl F. Warnick, Professor, Department of ECE, Brigham Young University, USA “100 Years of Phased Array Antenna Modeling and Design: From the Array Factor to Network Theory and Array Signal Processing” – on 25th September 2017

● DLP of IEEE APS Kerala Chapter by Dr. Karu P. Esselle, Professor, School of Engineering, Macquarie University, Australia “Leaky-wave antennas: from niche applications to mass market”

● Distinguished Lecture of IEEE Solid State Circuits Society by Dr. Yong Ping Xu, on the topic “MEMS Inertial Sensors” on 20th November 2017, 10:00 am at Saintgits College of Engineering, Pathamuttom, Kottayam

❖ CONFERENCES

● IEEE TENSYP 2017

   ▪ IEEE TENSYP 2017, the 3-day Spring conference of IEEE Region 10, was held at Le Meridian Hotel, Cochin from July 14th to 16th, 2017.
   ▪ Spotlight on Energy, Intelligent Transport Systems, Digital Kerala, Software Industry and Technology Education
   ▪ Inaugurated by Dr. K. T. Jaleel, the Honorable Minister for Local Self Government, Government of Kerala
   ▪ 350 papers received
   ▪ 140 papers were presented from 22 countries
IEEE SPICES 2017

- Inaugurated by Mr. M Sivasankar IAS and Keynote Address by Prof A Chokkalingam, Professor, IISc Bangalore
- 200 Delegates from 5 countries participated in tutorials and plenary sessions.
- 95 papers presented in five tracks
- Cultural night and banquet dinner on Aug 9, 2017

Technically Co-sponsored International Conferences

- 2017 IEEE International Conference on Networks and Advances in Computational Technologies (NetACT 2017), Mar Baselios Institute of Technology, Trivandrum, Kerala. 20-22 Jul 2017

- 2017 IEEE International Conference on Technological Advancement in Power and Energy (TAP Energy 2017) scheduled to be held during December 21st to 23rd, 2017 at Amritapuri Campus, Amrita Vishwa Vidyapeetham, Kollam, Kerala, India. The conference is technically co-sponsored by IEEE Kerala Section and IEEE Kerala PES Chapter.
B.4 STUDENTS ACTIVITIES

The student Activities of Kerala Section is vibrant in organizing activities and promoting the vision of IEEE across the section. With 91 student branches and 8059 members, the student team led by the student activities chair support and volunteer to any activity that needs technological solutions.

For effective management of such a vibrant, geographically spread student membership, the section has been following the hub and spoke administrative model; the Local Integrated Network of IEEE in Kerala (LINK). The primary aim of LINK is networking student branches in an effective way, thereby increasing the value in IEEE Student membership. LINK has achieved tremendous results, causing an exponential increase in student branches and student activities in IEEE Kerala Section. The LINK and its subsidiary HUB teams (three in numbers divided as Travancore Hub, Kochi Hub and Malabar Hub for the geographic distribution of Kerala Section) are being trained with effective leadership skills which is being passed on to the student community, thus improving key skills like professionalism and ethics in students.

❖ TOTAL NUMBER OF STUDENT BRANCHES IN THE SECTION

The section has 91 student branches spread across the state, being monitored and mentored by the LINK team.

1. AWH Engineering College
2. Adi Shankara Inst of Engineering & Tech
3. Adoor College of Engineering
4. Al-Ameen Engineering College
5. Albertian Institute of Science and Technology
6. Amal Jyothi College Of Engineering
7. Amrita Vishwa Vidyapeetham
8. Aryanet Institute of Technology AIT
9. Baselios Mathews II College of Engineering
10. Bishop Jerome Institute
11. Caarmel Engineering College
12. Chengannur College Of Engineering
13. Cochin Univ of Science & Tech
14. College Of Engineering-Poonjar
15. College of Engineering - Attingal
16. College of Engineering - Karunagappally
17. College of Engineering - Kottarakkara
18. College of Engineering Kallooppara
19 College of Engineering Munnar
20 College of Engineering Trikaripur
21 College of Engineering, Thalassery
22 College of Engineering, Vadakara
23 College of Engineering-Cherthala
24 College of Engineering-Kidangoor
25 College of Engineering-Perumon
26 Federal Inst of Science & Tech
27 Gov Eng College - Sreekrishnapuram
28 Government College of Engineering - Kannur
29 Government Engineering College - Barton Hill
30 Government Engineering College - Kozhikode
31 Government Engineering College-Idukki
32 Government Engineering College-Thrissur
33 Government Engineering College-Wayanad
34 Heera College of Engineering and Technology
35 IES College of Engineering
36 Ilahia College of Engineering and Technology
37 Indian Institute of Space Science And Tech
38 Jawaharlal College of Engineering and Tech
39 John Cox Memorial CSI Institute of Technology
40 Jyothi Engineering College
41 K M C T College of Engineering
42 KMEA Engineering College
43 LBS College of Engineering
44 LBS Institute of Technology for Women
45 Lourdes Matha College Of Sci & Tech
46 MEA Engineering College - Perinthalmanna
47 MES College Of Engineering
48 Malabar College of Eng
49 Mangalam College of Engineering
50 Mar Athanasius College of Engrg
51 Mar Baselios Christian College of Engg & Tech
52 Mar Baselios College of Eng & Tech
53 Marian Engineering College
54 Model Engineering College
55 Mohandas College of Engineering & Tech
56 Mount Zion College of Engineering
57 Musaliar College of Engineering & Technology
58 Muslim Assoc Coll of Eng Venjaramood
59 Muthoot Institute of Technology and Science
60 NSS College of Engineering
61 National Institute of Electronics & IT Calicut
62 National Institute of Technology Calicut
63 Nehru College of Engineering and Rch Centre
64 Noorul Islam College Of Engineering
65 P A Aziz College Of Engineering
66 Rajagiri School Of Engineering & Tech
67 Rajiv Gandhi Inst Of Tech
68 Royal College of Eng and Tech - Akkikkavu
69 SCMS School of Engineering & Tech
70 SNS College of Engineering
71 Sahrdaya College Of Engineering & Tech
72 Saintgits College of Engineering - KOTTAYAM
73 Sarabhai Institute of Science and Tech
74 Sree Buddha College of Engineering
75 Sree Chitra Thirunal College Of Engineering
76 Sree Naranyana Gurukulam College Of Eng
77 Sree Narayana Gurukulam College Of Engrg
78 Sreepathy Institute of Management & Technology
79 St Joseph's College Of Eng & Tech-Palai
80 Thangal Kunju Musaliar Inst Of Tech
81 Thejus Engineering College
82 Tkm College Of Engrg
83 Toc H Institute of Science and Technology
84 Trivandrum College Of Engrg
85 UKF College of Engineering and Technology
86 Univ Of Kerala,Kariavattom
87 University Of Kerala - Kariavattom
88 Vidya Academy Of Science & Tech
89 Vimal Jyothi Engineering College
90 Viswajyothi College Of Eng & Tech
91 Younus College of Eng & Tech

rer NUMBER OF STUDENT BRANCHES FORMED IN THE CURRENT YEAR:

1. Muthoot Institute of Technology, Kochi
2. Albertian Institute of Science and Technology, Kochi
NEW STUDENT BRANCH CHAPTERS

a. Robotics and Automation Society S B Chapters
   1. SCT College of Engineering

b. Instrumentation and Measurement Society S B Chapter
   1. College of Engineering, Chengannur

c. Computer Society S B Chapters
   1. MES College of Engineering, Kuttippuram
   2. Model College of Engineering
   3. TKM College of Engineering
   4. SCT College of Engineering

d. Power & Energy Society S B Chapter
   1. College of Engineering, Adoor
   2. College of Engineering, Karunagappally
   3. MBC College of Engineering, Kuttikkanam
   4. College of Engineering, Thrikkarippur
   5. Vimal Jyoithi College of Engineering, Kannur
   6. College of Engineering, Trivandrum
   7. St Gitts College of Engineering, Kottayam
   8. MES College of Engineering, Kuttipuram
   9. RIT Kottayam
   10. College of Engineering, Trivandrum

e. Industrial Electronic Society S B Chapter
   1. Vimal Jyoithi College of Engineering, Kannur

f. Control Systems Society S B Chapter
   1. NIT, Calicut

g. WiE SB Affinity Group
   1. Mar Baselious Christian College

SECTION LEVEL STUDENT ACTIVITIES

• Highlights

• 23% increase in Student membership during 2017: 8059 student members as on Dec 2017.
• 7 LINK Events, 15 Hub events, 1066 student community events.
• 2 new SBs formed, 18 new SB Chapters & 1 new WiE AG formed
• 77 teams from Kerala participated in IEEEXtreme competition

• **Face 2 Face:**
  - The Section sponsors an officer training program to newly inducted SB officers. Three separate Officer Trainings were held at Travancore, Kochi and Malabar hubs of Kerala Section to training student officers on effective student branch administration and planning.
  - Malabar Hub on the 25th of March 2017 at SIMAT
  - Travancore Hub on 2\textsuperscript{nd} April, 2017 at College of Engineering, Karunagappally
  - Kochi Hub on 19th March 2017 at University College of Engineering, Thodupuzha

• **Branch Counselors Congress:**
  - In recognizing and appreciating the efforts of the Branch Counselors, Kerala Section offers its counselors an opportunity to network and improve their professional sphere. Industry experts deliver talks on industry requirements and try to bridge the Industry-Institute gap. Volunteer Leadership and Training for branch counselors on student branch life cycle are emphasized upon.
The Branch Counselors Congress 2017 was organized by the IEEE Region 10 Student Activities Committee (R10 – SAC) jointly with IEEE Kerala Section Student Activities Committee as the Student Activities Track held on the sidelines of TENSYMP 2017.

As part of the R10 SAC Track, SB Counselors and Society Chapter Faculty advisors were invited to attend Day 3 of TENSYMP. It is indeed overwhelming to note that close to 60% Counselors turned up for the Branch Counselors Congress and discuss on various aspects of effective SB operations. IEEE Region 10 Director, Dr. Kuckjin Chun delivered the plenary session after which counselors split into two teams, New and Incumbent Counselors in one team, experienced SB Counselors in the second. The Second team was free to attend any of the technical sessions at multiple centers at the venue. A workshop on Effective SB administration was organized for the first team. After lunch, all counselors re-assembled to attend further rounds of discussions on effectively taking Student Activities forward, both at the Section and at the Regional levels.

R10 Director, Dr. Kuckchin, R10 SAC Chair Dr Rajesh Ingle, and GIEEE India Director Mr. Harish Mysor addressed the gathering. The event offered personal professional development and improved understanding of the financial aspects in the Indian IEEE perspective.

- Kerala IEEE Technical Symposium (KITeS)

The flagship event of IEEE LINK, Kerala IEEE Technical Exhibition and Symposium took place on 11th and 12th November, 2017 at College of Engineering, Trivandrum.

Workshop on
- Block Chain - by the Computer Society Chapter
- Energy Auditing - by Power and Energy Society Chapter
- Radio Frequencies - by Circuits and Systems Society Chapter
- OpenCV - by Signal Processing Society Chapter

A paper presentation and Project presentation competition were also conducted.
- **All Kerala Student Congress (AKSC)**
  - All Kerala Student Congress lays special emphasis on boosting student careers through IEEE.
  - The IEEE All Kerala Student Congress 2017 was held at Sahradaya College of Engineering and Technology, Kodakara from 26th to 28th of August, 2017. The annual flagship event of IEEE LINK gave the delegates from around Kerala, a wonderful platform to enhance their technical knowledge and cater a passion for volunteering.
  - AKSC had 400 + participants from 42 student branches in Kerala.

- **IEEE Day** : With more than 100+ events pinned in Kerala Section at the student branch level, the 2017 IEEE day saw wide spread activity throughout the section.

- **IEEE LINK CAMP**
  - LINK CAMP is a two day introspection event where all the student branch executive committee members come together to present the activities at their SBs in the previous year. It also plays a major role in developing a strong network between the new executive committee members of different student branches.
Held at Govt College of Engineering Wayanad on December 29, 30
Annual election for student leadership 2018 was also held.

- **All Kerala Computer Society Student Congress (AKCSSC)**
  - All Kerala Computer Society Student Congress was organized at MES College of Engineering, Kuttipuram during 6-8 October 2017
  - An opportunity for Computer Society Student Chapter Officers to meet and discuss with the Section Society Chapter executives.
  - Also provided technical takeaways in the form of workshops on AI, Block Chain and IoT.

- **IEEE SIGHT Events**
  - **Saasthra Vismaya, Manjeri**
    IEEE Kerala Section SIGHT in association with Women in Engineering (WiE), Young Professionals and Life Member Affinity Group on 04 June 2017 at Manjeri. The event was organized to inculcate interest in science among girl school students.
  - **Technology Interventions for Protecting Coastal Communities from Sea Incursions**
    IEEE Kerala Section SIGHT in association with IEEE Kerala Section SSIT, IEEE ADSF SIGHT, IEEE Madras Section SIGHT, ADFSF and ISOC Trivandrum Chapter organized a Half Day consultation on “Technology Interventions for Protecting Coastal Communities from Sea Incursions” at IEEE Kerala Section office, Trivandrum on Saturday, 17th June 2017.
  - **Accessibility Challenge**
    IEEE Kerala Section in collaboration with IEEE Kochi Hub and Maker Village organized a Accessibility Challenge project contest as part of annual Hub WiE Congress on 27 October 2017 at Maker Village Kalamassery and sponsored the prize money.
• HUB Events

  ▪ Travancore Hub Meet 2017
    – Organized by Marian college of engineering, Trivandrum on august 4,5,6
    – 300+ Students participated
    – 10+ Sessions, 4 workshops

  ▪ WIE Congress - IGNITE
    – Organized By UKF college of engineering, November 10,11,12
    – 200+ Participants
    – Focused on Women in Entrepreneurship
    – 10+ Sessions

  ▪ Kochi Hub Meet
    – Organized by VJCET on July 21st to 23rd
    – 240+ Students participated
    – 10+ Sessions, 4 workshops

  ▪ WIE Congress - SHE
    – Organized by FISAT Oct 10th & 11th
    – 175+ Participants
    – Focused on Women in Technology
    – 10+ Sessions

  ▪ WIE - Womens Day Week
    – Organized By Sreepathy Institute of Management And Technology, Vavanoor
    – March 25th
    – 32+ Participants
    – Sessions on Administration and Membership Development.

  ▪ Malabar Hub Meet – 2017
    – Organized by Vimal Jyothi Engineering College, Chemperi on 10 -12 November
    – 150+ Students participated
    – 5+ Sessions and 4 workshops.

  ▪ Malabar Hub WIE Congress 2017 - AVENESIS
    – Organized By MEA Perinthalmanna on july 29 ,30
    – 150+ Participants
    – Focused on Women in Technology
    – Sessions on Empowering women into technology
    – Session on science of happiness

  ▪ Contessa 2.0 - Malabar Hub
    – Organized and executed by several student branches
    – Focused on enlightening young minds about Engineering as a degree and profession
– Sessions on helping school students choose the best stream of engineering
– Session on Engineering roles in Society

**WiSE 2.0 - Malabar Hub**
– Organized and executed by several student branches
– Focused on teaching the use of technology to elderly women in society and other senior citizens
– Sessions on teaching basic working of smartphones, laptops, internet, different govt e-services and entertainment
– Session on self-learning and motivation

**HUB/LINK Initiatives**

**WiE WAVE, Rhea and Shein**
"For women, by women"; a series of events conducted exclusively by girl volunteers across Kerala Section. Around 70 + events were organized at various schools across Kerala to this effect.

**IEEE JOB FAIR**

* Job fair is a stage where potential employees from 70+ technical institutions meet with employers of diverse disciplines to meet each others objectives.
* IEEE Job Fair 2017 was held on 25th and 26th February at MACE, Kothamangalam.
* 350+ students participated; three rounds of preliminary tests were conducted.
* 17 employers participated.
* 42 students landed in their dream jobs.

**NUMBER OF ACTIVE STUDENT BRANCHES**

Of the 91 student branches in the section,
* 75 SBs have required student membership strengths
* 45 Student Branches have completed all mandatory reporting.
SUMMARY OF STUDENT ACTIVITY AWARDS

The section student activities received the following awards in 2017

- **IEEE Day – Short Video Contest Winner**
  - TKM College of Engineering won the IEEE Day Short Video Contest

- **IEEE Darrel Chong Award**
  - Amrita Vishwa Vidyapeetham was listed in the GOLD category.

- **Richard E Merwin Scholarship**
  - 9 students from Kerala Section was awarded REM scholarship in 2017
  - Ms. Megha Ben won the REM Scholarship twice (in 2016 and 2017)

- **Section Student Awards**
  
  - **Outstanding Student Branch Counselor**
    - Ms. Gomathy S, Adi Shankara SB - for continued service to the SB over the years and in motivating students towards achieving a high student retention rate
  
  - **Outstanding Student Branch**
    - GEC Barton Hill Student Branch - for organizing high impact technical and professional activities and setting a new standard in student activities.

  - **Outstanding Student Volunteer Award**
    - Mr. Midhun C and Ms. Jiby Krishna, Sahradaya College of Engineering SB - for exemplary volunteering efforts in taking IEEE Kerala Section student activities forward, in perfect alignment to the mission and vision of IEEE and Kerala Section, all the while exhibiting high level of professional maturity, leadership and joy of volunteering.

  - **Best Student Volunteer Award - WIE**
    - Ms. Liyana Shirin, MES College of Engineering and Ms. Juliana Biju, Model Engineering College - for exemplary volunteering efforts in taking IEEE Kerala Section WIE student activities forward, in perfect alignment to the mission and vision of IEEE and Kerala Section, all the while exhibiting high level of professional maturity, leadership and joy of volunteering.
**Special Appreciation Award**

- **Ms. Megha Ben** - for continued contributions to the student activities over the past years and her exemplary services to the Computer Society Chapter which effected in bagging the REM scholarship twice

![Image](image1.jpg)

**STUDENT BRANCH EVENTS**

Over 1066 events reported by SBs across Kerala, evenly spread across the 3 hubs. 2017 was one of the milestone years for IEEE Kerala Section, touching 1000+ events for its 8059 student members with adequate geographic spread so as to improve student membership benefits to a high extent.

![Activity Analysis and Membership Pie Charts](image2.jpg)
B.5 AFFINITY GROUP ACTIVITIES

❖ YOUNG PROFESSIONAL (YP)

EXCELLENTIA

The Excellentia was conducted as two editions, one in Kochi and the other in Trivandrum. The aim of Excellentia was to prepare the student attendees and to impart insight on how to appear for a placement drive. The combined participation of 60+ student members was seen in the events.

The Excellentia 1.0 was conducted on 29th January 2017 at Albertian Institute of Science and Technology, Kalamassery. The program was organized for the student members of IEEE, intending to improve a candidate’s performance and to give an insight on how to prepare and present oneself for a placement drive.

EXCELLENTIA 2.0: The Excellentia 2.0 was conducted on 11th February 2017 at Heera College and Technology, Thiruvananthapuram. The program was organized for the student members of IEEE, aimed at imparting information to improve a candidate’s performance and to give a full-fledged insight on how to appear for a placement drive, delivering the rightly chosen information by reputed industry and subject experts.
IEEE Job Fair 2017

IEEE Job Fair was an opportunity for the attendees to evaluate different organizations and whether the opportunity they've applied for aligns with their professional interests, skills, values, and goals. The event had participation from 51 student branches across the IEEE Kerala Section and was held on 18th, 25th and 26th of February 2017. With 350+ IEEE volunteers support in various stages of the event, Job Fair laid the foundation for an array of career paths. The entire squad of volunteers was well appreciated for all determination and well coordination of the event.

STEP 1.0

IEEE Kerala Young Professionals Affinity Group in association with IEEE Student Branch of Government Engineering College, Barton Hill, Thiruvananthapuram conducted STEP 2017 v1.0 (Student Transition & Elevation Partnership) on 22nd April 2017. It aimed at bringing together IEEE members graduating in 2017. There was a participation of 20+ student attendees for the event.
IEEE Kerala Young Professionals Meet ups

IEEE Kerala Young Professionals have been conducting regular meet-ups which are mostly monthly and the frequency has been changed to bi-weekly from September 2017 as part of increasing the activities. Various meet-ups had been taken place at Trivandrum and Kochi. The meet ups have happened in May, June, July, August, September, November and December after a series of meet-ups which happened on the first quarter of the year at Trivandrum and Kochi. Some of the meet ups had brainstorming sessions and discussions on upcoming events. Some were purely tech meet-ups which had sessions focused on IOT, Block chain, Basics of Python, Machine Learning, Graphic Designing, MatLab, Javascript etc. The meet-ups also had experience sharing sessions by volunteers who are currently abroad for higher studies.

IEEE Kerala Young Professionals VOLT – Volunteer Training

One of the main events of IEEE Kerala Young Professionals in 2017, VOLT – Volunteer Training was held on the 1st & 2nd of July 2017 at the Santhigiri Ashram in Aluva, supported by IEEE Region 10 Young Professionals. It was a well-organized residential event, aimed at training volunteers and educating them about IEEE's activities and ethos, highlighting the journey of Kerala Section to its current status of glory. There were several presenters from the Industry and Academia who tackled and simplified various topics related to volunteering as a whole while using the case studies of the previous successes of IEEE Kerala Section as a foil along with fun group activities for team bonding.
IEEE TENSYMP 2017 – IEEE Kerala Section YP Track

IEEE TENSYMP is the Spring conference of IEEE Region 10 was held at the picturesque location in Cochin, Kerala, India. Young Professionals had a dedicated track for the conference. The YP track started with talks on “Artificial Intelligence” & “Solar Powered Ferries”, by technical experts from the industry. They were followed by a panel discussion on “Smarter Professionals for Smart Cities”, an event open for all IEEE Young Professionals and delegates of TENSYMP 2017, where eminent and distinguished personalities from various industries and academia were the panelists, including Dr. Kukjin Chun, Director IEEE R10.

Young Professional Annual Meetup

The annual meetup of Young Professionals took place at Club Mahindra Resort, Cherai, Kochi on 26th November 2017. It was a day of bonding and coming together for the ever-so-vibrant Kerala Young Professionals Community and was full of fun, games, brainstorming, activity planning and lots more. The event also aimed at bringing up more young professionals into the mainstream of Section activities.
Women In Engineering (WIE)

- Urjja Kiran - Energy conservation drive at Veeranakavu, Aruvikkara in association with IEEE PES & IEEE LMAG
- Energy Conservation Drive at Kilimanoor Panchayat Hall in association with Vidya Academy of Science and Technology
- As a part of Kombukuthy Pilot Project, a Sastravismaya session was organized by LMAG Kerala jointly with IEEE PES & IEEE WIE Kerala at Kombukuthy Tribal High school
- Women In Computing track as a part of AKCSSC ’17 at MES College of Engg, Kuttipuram

Shastra Vismaya

- ‘Shastra Vismaya’ is a unique initiative by IEEE Kerala Section and the Dept. of Social Welfare, Govt. of Kerala for school going children in the age group 10-15 yrs. The main focus of the event is to inculcate interest towards Science and Engineering among students of the Government shelter homes.

- The event was a joint venture of IEEE Kerala Section WIE, SIGHT and Young Professionals and active volunteers of these groups were present 'Shastra Vismaya’ is a unique initiative by IEEE Kerala Section and the Dept. of Social Welfare, Govt. of Kerala for school going children in the age group 10-15 yrs. The main focus of the event is to inculcate interest towards Science and Engineering among students of the Government shelter homes.
Mr. Ranjit R Nair Volunteer IEEE Kerala Young Professionals welcomed everyone to the event. Prof. V.K Damodaran, Advisor, IEEE Kerala young professionals, introduced the importance of science to the children. He also mentioned briefly about the event and its purpose. Mr. Hareendralal A G, Prof. Sunitha Beevi, Ms. Mini Ulanat and Ms. Jyothi Ramaswami were part of the inaugural team and each spoke to the students about the importance of science and how it can improve the students.

• ENERGY CONSERVATION DRIVE 2017


Eminent personalities including Dr. V Gopakumar, Principal VAST-TC; Ms. Rajalekshmi Ammal, President, Kilimanoor Grama Panchayat; Mr. A. Devadas, Vice President, Kilimanoor Grama Panchayat, Mr. R.P. Prasad, Energy Consultant, EMC, Mr. R.P. Prasad, Energy Consultant, EMC, and Mr. Asokan Asari, President, PTA.

Practical demonstration for energy conservation was carried out by Mr. Chandu C B [AP in ECE], which helped the participants to familiarize what they have learned from the session. The demonstration included posters, electrical kits to find out the power of various devices etc. Flairs were distributed which were given by the EMC, TVM regarding the energy conservation.
• **TECHNOSTHRI**

TECHNO STHRI is a Program conducted by IEEE WIE SB TKMCE in association with IEEE WIE Kerala Section. The vision was to inspire lifelong learning, advance knowledge and strengthen our communities by spreading technological awareness to the women and girls. The mission was

- To educate the common women and girl students in the society about the basic technologies.
- To provide every girl and woman with opportunity to participate and contribute to the dynamic technological revolution.
- To fulfill our role as women in engineering.
**LIFE MEMBER AFFINITY GROUP (LMAG)**

- **ShastraVismaya on 4 June 2017 at Manjeri**
  ‘ShastraVismaya’ is a unique initiative by IEEE Kerala Section and the Dept. of Social Welfare, Govt. of Kerala for school going children in the age group 10 - 15 yrs. The main focus of the event is to inculcate interest towards Science and Engineering among students of the Government shelter homes. The event was a joint venture of IEEE Kerala Section LMAG, WIE, SIGHT and Young Professionals and active volunteers of these groups were present.

- **Pilot Project on Humanitarian Technology Interventions for Improving the Welfare of the Scheduled Tribes in Kerala**

  Based on the discussions on the “Report on Socio-economic Status of Scheduled Tribes of Kerala”, IEEE decided to evolve some activities in five selected regions in the State from Wayanad to Thiruvananthapuram to help improve the situation of members of Scheduled Tribe communities. Before finalising the broader project for 5 sites, LMAG Kerala decided to run a pilot project in one such area. After a few rounds of discussions with the management and faculties of Marian International Institute of Management, Kuttikkanam, it was decided to run a pilot project in the Kombukuthy ST Settlement in Koruthodu Panchayat.

  To establish rapport with the community, a SastraVismaya session at Kombukuthy Tribal High School, was organised on (Saturday) 18 Nov 2017. Separate parallel activities for UP & LP sections were also conducted.

- **Energy Conservation Awareness Programme on 16 Dec 2017 at Kilimanoor Grama Panchayat Community Hall**

  As a part of World Energy Conservation Day (December 14), IEEE PES Kerala Chapter celebrated ‘National Energy Conservation Day’ and organized an Energy Awareness Program at Kilimanoor Grama Panchayat Community Hall in association with Social Initiative Team of Vidya Academy of Science and Technology Technical Campus, Kilimanoor, IEEE Life Member Affinity Group, IEEE Women in Engineering AG, IEEE Young Professionals AG, Kilimanoor Grama Panchayath, Energy Management Centre, Kerala and NSS unit of college. The intent of the program was to make the people aware about the importance of energy as well as saving and conserving it.

- **Urja Kiran, a Two Day Awareness Program on Energy Conservation, Distribution of LED Bulbs and Exhibition for the Community in Veeranakavu, Near Kattakkada on 21 and 22 Dec2017.**
A Two Day Energy Conservation Program, Exhibition and distribution of LED bulbs was organized for a community in Veeranakavu, near Kattakkada. The program got support from Energy Management Centre (EMC), ANERT and Centre for Environment and Development (CED). The program started with the inauguration of an Exhibition of Energy and Energy Conservation related slogans and displays and a power measuring instrument which can measure wattage of different types of lamps.

**Other Activities by Life Member Affinity Group Includes:**

- International Conference on Small Hydro
- Kerala Energy Congress
- Faculty Development Program - Design of Electrical System
- Faculty Development Program - Sustainable Engineering
- Boot Camp on “Making India”
- One Day Workshop on 'Energy Conservation Building Code (ECBC)'
- One Day Workshop on Design of an Electrical System of Multi Storey Building Complex
- Training on Energy Efficient Dream Home Contest
- Challenges in the Power Sector
- LMAG Volunteer Workshop
- Workshop for Architects "Energy Considerations in Buildings"
- Potential for Renewable Energy Generation in Kerala
- Energy Conservation Day – Why?
- Mentoring on House Remedy for Climate Change.

**CONSULTANT NETWORKS**

- IEEE USA Consultants Network Affinity group acts as bridge to connect the professionals in IEEE Kerala Sections interested to connect to Industries and Academia to serve as consultants for various projects and initiatives. It also aims at mentoring budding entrepreneurs in getting started to the business eco system of Kerala
B.6 AWARDS & RECOGNITION ACTIVITIES

❖ AWARDS CONSTITUTED BY THE SECTION

- As IEEE Kerala Section stepped into 2017, we are reminded of the flamboyant milestones we set, back in 2016. Along with being adjudged the "Outstanding IEEE Section in the World", we had a lot other achievements being attained, all thanks to the vibrant bunch of volunteers and members in our Kerala Community.

- During the Annual General Meet of IEEE Kerala Section for the year 2017, held on 10 Jan 2018 at Trivandrum, the achievements of a few pioneering contributors to the society in the field of Engineering, Governance and Education were honored by bestowing special awards. Also as always, exceptional volunteers of IEEE Kerala were recognized, for their excellent services to the IEEE Kerala Community.

The Special Award Winners for 2017 are as –

- **KPP Nambiar Award**: Er. E Sreedharan, popularly known as the “Metro Man” of India who was the instrumental force and leader of all recent and upcoming metro rail projects in India, - In recognition of his humongous contributions to the IEEE Vision of “Advancing Technology for Humanity”.

![Image of people receiving an award]
• **Friend of IEEE Kerala** – Dr. Ramani, Executive Director, CDAC, Trivandrum and Prof (Dr.) K.Poulose Jacob, Pro-Vice Chancellor (Retd), Cochin University: In recognition of their outstanding contributions as an eminent educationist, administrator, and academician, and for their consistent support to IEEE.

![Image of award ceremony](image1.png)

• **IEEE Kerala Section Best Teacher Award**: Prof. Dr Lillikutty Jacob, NIT Calicut, Kerala - In appreciation of her dedicated efforts in dissemination of scientific knowledge among students, faculty and society at large.

![Image of award ceremony](image2.png)

Apart from these, the Section also gave special recognition awards as given below:

• **Special Leadership Award**: Er. A.G. Hareendralal - For his continued visionary guidance and unwavering leadership over the years and contributions to the IEEE community as a whole, especially in bringing out IEEE Kerala PES Chapter to be the largest in whole IEEE.

• **Best Researcher Award**: Dr. C.K. Aanandan - In recognition of his outstanding contributions as an academician, distinguished researcher and international collaborator in the area of Antennas and Propagation.
• **Best Volunteer Award (Industry):** C. M. Varghese - In recognition of his outstanding and sustained contributions to the Power and Energy industry through establishing best practices & guidelines and innovative product design.

• **Section Outstanding Volunteer Award**
  
  - **Mr. Nandan S., LBS Institute of Technology for Women** - For his outstanding contributions to IEEE Kerala Section and the Students community, particularly towards Educational Activities, Young Professionals, and Technical Conferences.

• **Outstanding Young Professional Volunteer**
  
  - **Jishnu K., IEEE Kerala YP** - For exemplary services to the Young Professionals Community of Kerala and going beyond expectations in his contribution towards his peers.

• **Section Outstanding Student Award**
  
  - **Midhun C. and Jiby Krishna** - For exemplary volunteering efforts in taking IEEE Kerala Section student activities forward, in perfect alignment to the mission and vision of IEEE and Kerala Section, all the while exhibiting high level of professional maturity, leadership and joy of volunteering.

• **Section Outstanding Student WIE Award**
  
  - **Juliana Biju and Ms. Liyana Shirin** - For exemplary volunteering efforts in taking IEEE Kerala Section WIE student activities forward, in perfect alignment to the mission and vision of IEEE and Kerala Section, all the while and bringing out new innovative ideas.
• **Section Outstanding Student Branch Award**
  
  - **IEEE SB-Government College, Barton Hill, Trivandrum** – For organizing high impact technical and professional activities and setting a new standard in student activities.

• **Section Outstanding Branch Counselor Award**
  
  - **Mrs Gomathy S, Adi Sankara College**, for continued service to the SB over the years and in motivating students towards achieving a high student retention rate.

• **Best Event Award**
  
  - **Shastra Vismaya**, For initiating, a Structured STEM Training Program, “Shastra Vismaya” for igniting passion for Science & Engineering and related disciplines among preuniversity students by effectively engaging the Young professionals, Women Engineers and Humanitarian activities volunteers and thereby providing value to their IEEE membership.

• **Special Appreciation Award**
  
  - **Megha Ben**, For her continued contributions to the student activities over the past years and her exemplary services to the Computer Society Chapter which effected in bagging the REM scholarship twice.
• Newsletter (name and number of issues in the year)
  - Kerala Section regularly publishes annual newsletter for the last 26 years:
    1 annual print copy is distributed to all members in the section by post

• Home Page of the Section
  - http://www.ieeekerala.org/ :: updated regularly as required

• Other means of contacts with Section members
  - Regular e-mail updates and invites to section activities
  - Season’s Greetings sent by Post
  - E-notices for all important activities
  - Annual General Meeting
  - Section LinkedIn page
  - Facebook page:
    - https://www.facebook.com/IEEEKerala : Section Facebook Page
    - https://twitter.com/ieeekerala : Section Twitter Page
    - https://www.instagram.com/ieeekerala : Section Instagram Account
    - https://www.linkedin.com/company/13182671 : Section LinkedIn Page

B.8 INDUSTRY RELATIONS

❖ MEMBERSHIP GROWTH AND RETENTION
  - Value adds to Professional Members of the section were introduced by way of MoUs.
  - 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.

❖ ACTIVITIES FOR/WITH INDUSTRIAL MEMBERS
  - A Session on “Management System Auditing” by Mr.Dinesh K Menon, UNFAO Consultant, was organised at the The Institution of Engineers (India) Hall on 11-01-2017
  - A Session on “Towards Effective Project Management” By Mr.P.A. Prabhakaran, Rtd.Chief Engineer, ISRO, was organised at the The Institution of Engineers (India) Hall on 01-02-2017
A Session on “Skills for Jobs- Walking the Tight Rope”, by Er.P.Vijayachandran, Past Chairman, IEI Kerala State Centre, was organised at the The Institution of Engineers (India) Hall on 05-04--2017

A talk on “Personality Development and Awareness”, by Prof.Sisily Thompson, Police Training College, was organised at the The Institution of Engineers (India) Hall on 12-04--2017

Technical Talk on “Bit Coin, Block Chain and Beyond”, by Mr.Satish Babu, President, InApp, Technopark, Thiruvananthapuram, was organised at the The Institution of Engineers (India) Hall on 05-07-2017

Talk on “Project Management”, by Er.K.M.Muthanna, Assistant Vice President, IL &FS Townships & Urban Assets Limited (ITUAL), was organised at the The Institution of Engineers (India) Hall on 26-07-2017

Talk on “Project Management – Back to Basicst”, by Er. E.J.Francis, Retired Group Director, CCQG, VSSC, Thiruvananthapuram, was organised at the The Institution of Engineers (India) Hall on 23-08-2017

Talk on “Lean Manufacturing for Manufacturing Competitiveness”, by Er S.Venugopal, DGM, HLL Lifecare Ltd, Thiruvananthapuram, was organised at the The Institution of Engineers (India) Hall on 11-10-2017

B.9 HUMANITARIAN TECHNOLOGY ACTIVITIES

❖ SASHTRA VISMAYA

‘Shastra Vismaya’ is a unique initiative by IEEE Kerala Section and the Dept. of Social Welfare, Govt. of Kerala for school going children in the age group 10-15 yrs. The main focus of the event is to inculcate interest towards Science and Engineering among students of the Government shelter homes. The event was a joint venture of IEEE Kerala Section WIE, SIGHT and Young Professionals and active volunteers of these groups were present.

❖ TECHNOLOGY INTERVENTIONS FOR PROTECTING COASTAL COMMUNITIES FROM SEA INCURSIONS

IEEE Kerala Section SIGHT in association with IEEE Kerala Section SSIT, IEEE ADSF SIGHT, IEEE Madras Section SIGHT, ADSF and ISOC Trivandrum Chapter organized a Half Day consultation on "Technology Interventions for Protecting Coastal Communities from Sea Incursions" at IEEE Kerala Section office, Pulimoodu, Trivandrum on Saturday, 17th June 2017 from 10:00 am to 1:30 pm.
• The meeting was organized to take stock of the situation in the coastal zone and examine geological, oceanographic as well as administrative perspectives, and to explore, from an IEEE point of view if any technological mitigating measures can be considered.

B.10 COMMUNITY ACTIVITIES

• Social activities (Family day, IEEE day, Engineers Week)

❖ IEEE DAY

• 140+ events
• Approximately 15% of total events (936) reported globally
• 35+ Student Branches, 7 technical societies and 3 affinity groups
• IEEE Day Selfie Contest
• IEEE Day Network Challenge
• Distributed IEEE Day Promotional goodies
• Entry from IEEE SB TKMCE won second prize in global IEEE Day Short Video contest
PART C - OTHERS

C.1 SPECIAL EVENTS

- IEEE TENSYMP 2017, the 3-day Spring conference of IEEE Region 10, was hosted by IEEE Kerala Section, at Le Meridian Hotel, Cochin from July 14th to 16th, 2017. Spotlight on Energy, Intelligent Transport Systems, Digital Kerala, Software Industry and Technology Education

C.2 RELATIONSHIP WITH NATIONAL SOCIETIES

Kerala section works closely with the following Societies in Kerala.

- THE INSTITUTION OF ENGINEERS (INDIA) KERALA STATE CENTRE
- COMPUTER SOCIETY OF INDIA TRIVANDRUM CHAPTER
- AERONAUTICAL SOCIETY OF INDIA TRIVANDRUM BRANCH
- SYSTEMS SOCIETY OF INDIA THIRUVANANTHAPURAM CHAPTER
- IETE THIRUVANANTHAPURAM LOCAL CENTRE
- PROJECT MANAGEMENT INSTITUTE – TRIVANDRUM - KERALA CHAPTER
- INDIAN NATIONAL SOCIETY FOR AEROSPACE AND RELATED MECHANISMS, THIRUVANANTHAPURAM CHAPTER
- SOCIETY OF AEROSPACE MANUFACTURING ENGINEERS, THIRUVANANTHAPURAM

C3. COLLABORATION WITH OTHER IEEE SECTIONS

❖ SUPPORT EXTENDED TO NEIGHBORING SECTIONS

- Volunteering - Sameer S M, Vice Chair, Kerala Section is the Treasurer of IEEE India Council

❖ JOINT ACTIVITIES WITH ANY OTHER SECTION

- R10 Execom meeting was held on the sidelines of TENSYMP at the same venue.
- As part of the R10 SAC Track, SB Counselors and Society Chapter Faculty advisors were invited to attend Day 3 of TENSYMP. It is indeed overwhelming to note that close to 60% Counselors turned up for the Branch Counselors Congress and discuss on various aspects of effective SB operations. IEEE Region 10 Director, Dr. Kuckjin Chun delivered the plenary session.
• R10 Director, Dr. Kuckchin, R10 SAC Chair Dr Rajesh Ingle, and GIEEE India Director Mr. Harish Mysor addressed the gathering. The event offered personal professional development and improved understanding of the financial aspects in the Indian IEEE perspective.

C.4 SUPPORT EXTENDED TO SUB-SECTIONS & SOCIETY CHAPTERS WITHIN THE SECTION

• Kerala Section has 2 Sub Sections (Kochi Sub Section and Malabar Sub Section) and 10 Society Chapters. All activities organized by the subsection / society chapters are supported both financially and technically by the Section.

C.5 BEST PRACTICES OF YOUR SECTION (WHICH YOU WOULD LIKE TO SHARE WITH OTHER SECTIONS FOR THE BENEFITS OF MEMBERS)

• Active participation of senior members as well as young professionals in the section activities
• Mentoring of new and young professionals
• Participation in academia, R&D, Industry and in Governance
• Formation of Student Activities Board to provide a sense of direction and guidance to the Student Activities in the Section
• Online fund transfer for speedy disbursement of section financials
• Pivotal advisory role by section’s senior member
• Life members and senior members involved in section governance
• Enhanced Student network
• Student Representation in Sections decision making process
• Appreciating young professionals with appropriate guidance by life senior members
• **Job Fair 2017** - Aimed to educate, advise and connect young engineers to opportunities in the Industry has been continuing with resounding success for last two years 100+ getting offers.

C.6 PROBLEMS ANTICIPATED AND SUGGESTIONS FOR SOLUTIONS, IF ANY

No specific issues to be reported.
## PART D - GOALS AND PLANS

### D.1 CONTINUATION OF PROJECT/ACTIVITY IN PROGRESS AND THEIR IMPLEMENTATION PLANS

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Activities</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>To bring in more students towards pursuing Engineering Studies.</td>
<td>Roadmap to Success is a regular annual event organised at various places of the Section, where pre-university students are given an insight into various disciplines of engineering, and their future prospects.</td>
<td>Section organises an event for high school students where experts in respective engineering disciplines describe about what one is going to learn in Engineering, job prospects as well as career prospects. These students are also given a tour of various engineering schools within the University.</td>
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<tr>
<td>Bring in more active Young Professionals in IEEE activities</td>
<td>Organises Young professional meets on regular basis.</td>
<td>One to two day programs organised for Young professionals and leadership trainings are imparted.</td>
</tr>
<tr>
<td>To provide forums for Researchers and Academicians for interaction and exchange of ideas</td>
<td>Conference Activities, with papers being published in IEEEXPlore</td>
<td>High quality conferences are organized directly by Section (TENSYMP, RAICS, SPICES) and several conferences technically co-sponsored by Section (around 5-6 every year).</td>
</tr>
<tr>
<td>Category</td>
<td>Description</td>
<td>Details</td>
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<tr>
<td>Advise for young entrepreneurs</td>
<td>Promotion of Innovation and Entrepreneurship (PIE); IEEE Consultants Network to join hands with Young Professionals</td>
<td>IEEE Consultants Network is expected to play a great role in bringing together the Engineering Consultants, SMEs, Startups (to Be Defined) in Kerala Section and offer a venue for making available their services to the world. Also, it is planned to offer Engineering Consultancy to the Government, Quasi Government and Private institutions.</td>
</tr>
<tr>
<td>Technology for humanity</td>
<td>Community Engagement Workshops and Eyes free Science Camp for the Blind &amp; Low Vision Students</td>
<td>Planning to organize a CEW (Community Engagement Workshop) as an independent track along with the EEE International Symposium on Technology and Society, planned to be held in Kerala this year. In association with Chakshumati, an NGO working towards the upliftment of the visually impaired, and Young Professionals AG, it is proposed to organize an eyes-free camp, a training session for school students for inculcating confidence in them for pursuing science and</td>
</tr>
</tbody>
</table>

Industrial Automation, Power Electronics, Signal Processing, Antenna Propagation, Robotics & Automation, Engineering in Medicine & Biology Society
D.2 GOALS AND FUTURE PLANS

The Section has formed Task Forces on the following subjects and the recommendations are being implemented in the coming year.

MEASURES TO ACCELERATE GROWTH AND MEMBER BENEFITS

1.0 Introduction
In order to vitalise the activities within Kerala Section and to plan future strategies and goals to achieve them, five major points were identified to focus upon. A special Execom was conducted on 17th September, 2017 at Alleppy, where the members discussed and deliberated on these points. This report consolidates various suggestions came through these deliberations and the proposed actions.

2.0 Focus areas
Chair, IEEE Kerala Section proposed five major areas to be deliberated and this was circulated among Execom members as well as the members within Kerala Section. A few more points came up as suggestions by a few members, like improvements in Engineering education, but these are kept at abeyance for future discussions.

2.1. Task Force 1: Bringing more Young professionals to the main stream:

IEEE has recognised the potential of Young Professionals, and wanted to bring them into main stream of governance including their position in Board of Governors. In line with this, Kerala Section also felt the need to bring up more and more Young Professionals into main stream of volunteer ship, and expose them to the global activities. It is felt that, we
should not just limit nurturing to our existing/present visible active and vibrant volunteers only but also identify more volunteers. As a gearing up process, Kerala Section needs to train, nurture and bring up more and more good Young professional Volunteers, ready and fit to take up global lead roles.

2.2. Task Force 2: Increasing Public visibility to IEEE:

Public visibility of IEEE to public is minimal as of now. This is true among all IEEE sections globally. We need to plan some activities to bring IEEE Kerala Section known among public or common man. Our SIGHT and Humanitarian and Society activities need to be more publicised. Publicity shall not be limited to just appearing some reports on print media, but something more than that.

2.3. Task Force 3: Involving more Startups in IEEE:

The recent trend for youngsters is to have startups, and there are many start ups within Kerala, and we need to reach out each one of them. Can IEEE Kerala Section provide a platform for them to speak to others, like Ted talk. Will it be fine if we organise an event for 2 days or join with organisations like TiE and plan events.

2.4. Task force 4: Popularity among Student Community:

A statewide Quiz program among Engineering Students, where the finals are aired in media channel. Need to discuss with TV channels on this. We need to hype the event and even get famous Quiz masters. This can form a prestigious and sought after annual event with good prize money. Need to get good sponsors to make this success.

2.5. Task force 5: Project of social relevance:

Identify and carefully draft a major project of high societal relevance and submit to IEEE Foundation.

3.0 Report by task forces

3.1. Report by Task Force 1: Bringing more Young professionals to mainstream:

3.1.1. Member Benefit Events: Young Professionals AG must conduct more events that are directly beneficial to its members. This will help in member retention and in increasing the IEEE membership counts. Local meetups with micro workshops need to be conducted at various locations more frequently.
3.1.2  **Survey and Data Updation**: A survey and data updation campaign is to be done among Young Professional members through phone call / mail to get their updated contact details, their volunteering preferences and the benefits they expect from IEEE membership.

3.1.3  **Volunteer Engagement**: All those members who are interested in volunteering should be given opportunities to volunteer. Call for volunteers are to be done on a regular basis and those interested members should be given opportunity to volunteer in various activities conducted by the section (not just on Young Professional Activities). Those student members who passed out in the current year should be invited to volunteer for various events of the section and its sub-units.

3.1.4  **Leadership through Focussed growth path**: Section should identify and mentor Young Professionals who have the potential to take up various leadership roles in Region and MGA levels. They should have a well-defined and focused growth path.

3.1.5  **Presence at National and international events**: IEEE Kerala Young Professionals should be given opportunities to show their presence at Regional, MGA and India level events. There should be a fund earmarked for this every year.

3.1.6  **Kerala Young Professionals Meetup**: An informal meetup of IEEE Kerala Young Professional members is to be held and they should be briefed about the various volunteering opportunities at Section, Council, Region, MGA levels.

3.1.7  **Visibility via Newsletters**: The activities of the Kerala Young Professional AG should have more visibility through newsletters, social media and other publications of various entities of IEEE.

3.1.8  **Internships for passed outs**: Most of the final year students drop their membership after graduation. To give a special benefit to final year students and thereby increase membership retention, an internship drive could be planned for the graduates of that particular year. IEEE Kerala Section will facilitate an internship drive and help the students to find out 3 month internships at different industries. This can increase visibility of IEEE in the industry also.

3.1.9  **Sessions for Academicians**: Special training programs and volunteering opportunities to be brought in for the IEEE Young Professional members from the Academia.

3.1.10 **Focus groups at Tech Parks**: Special activity teams must be formed at various tech parks in Kerala to regularly conduct IEEE events there and to attract more members.
3.2 Report by Task Force 2: Increasing Public visibility to IEEE.

Following are the suggestions on increasing public visibility of the activities done by IEEE after incorporating the corrections by Mohandas Sir:

3.2.1 Public Events - IEEE should try and organize public events on technology topics which are of interest to the common people. These events if possible should be organized in association with government authorities and take help from local MPs or MLAs for the conduct of these events.

3.2.2. Visual Media - Try and get some recurring time slots in the visual media for conducting technology related talks and bring in experts from IEEE circles for these talks.

3.2.3. Partnership with G-Tech / CII - IEEE should try and have formal tie-up with industry organizations like G-Tech (now has links with InfoPark in Kochi and CyberPark in Kozhikode) and CII. This will help IEEE to have visibility and presence in the Industry circles. This will help to reach-out to potential members in the industry.

3.2.4 Strengthen Social Media Presence - ECC of the section should be strengthened to have a continuous presence in the social media with appropriate content. A YouTube channel for the section will be useful with regular uploads of videos of all possible events organized by any group coming under Kerala Section. There should be a team of Execom members to review and approve these videos before uploading to the channel.

3.2.5 Mentor India Program - Explore the possibilities of associating with the Mentor India program where IEEE members can possibly add a lot of value and will get good visibility.

3.2.6. IEEE Kerala Section can initiate a discussion with other professional societies to conduct a technology exhibition for the public.

3.2.7. A short video showing various activities being conducted by the Kerala Section to be made and all those who are attending different IEEE meeting should try and show this video to share our activities among the IEEE community.
3.3. Report by Task Force 3: Involving more Startups in IEEE:

3.3.1 For student community
- Use PIE as a structure for this executing this and we will ask the PIE to come up with DO’s and DONT’s.
- MoU’s and NDA by PIE with other communities and organizations.
- We will be focusing on pre-incubation phase in helping student community in the ideation stage to the proof of concept and giving a basic idea of entrepreneurship.
- Access to network of expert mentors we have for clearing their doubts.
- Showcasing the events and opportunities which is useful to them.
- Capacity building sessions for the student community.

3.3.2 For professional community
- Sensitive the our community (including our EXECOM) about this and ensure that Entrepreneurship related activities in all the chapters.
- As part of charter, PIE needs to identify the specific contributions such as events on Marketing, Finance.
- Website specifically for PIE.
- Mentor pool.
- Showcase events and opportunities.

3.4 Report by Task Force 4: Quiz programs
Participation group: Students of Std VIII – Plus 2

Stage – 1
Zonal level Competition: The 14 districts are divided in to 8 zones given as below.
Zone - 1: Trivandrum & Kollam
Zone – 2: Alleppey & Pathanamthitta
Zone - 3: Kottayam & Idukki
Zone – 4: Ernakulam
Zone -5: Trissur & Palakkad
Zone – 6: Malappuram
Zone -7: Calicut & Wayanad
Zone – 8: Kannur & Kasargod
We with the help of Student Branches across Kerala request all School Head Masters / Principals of each zone to send one team from their School for the Zonal level competition to be held on the same date.
Student Branches are entrusted to work on this to get maximum School participation for the zonal level competition.

Preliminary: a written test. Top 5 teams are selected for the finals.
Finals: On stage final
Winner & two runner-up team qualifies for the state level finals
Prize money: 5K, 3K & 2K respectively.
Total Prize money at zonal level: 80K
24 teams from the 8 zones qualifies for the finals. We Pick 6 more team with highest score from among the zonal level finalist. The score sheets are collected for this purpose from the zonal level coordinators. A consolation Prize of 1.5 K is given too these six team. Zonal level Prize money & Consolation Prizes are given at the state level finals.

Stage – 2
State level final
Prelims: a written test. Top 5 teams are selected for the finals.
Finals: On stage final
Prize money: 50K, 30K & 20K respectively for the winner & runner-up 1 & 2.

We have to try our best to get media partners (News paper / FM radio) & Sponsors (Platinum, Gold &silver).

3.5 Report by Task Force 5: Project of Social relevance
In line with the slogan of IEEE of Advancing Technology for Humanity, and reviewing the current technology needs of the Kerala community, the group suggested the following ‘Big projects’ for the rest of activity year for IEEE Kerala Section, to be continued in subsequent years too as appropriate

3.5.1. E-Farming (Intervention in Agriculture)
IEEE Kerala Section may join hands with appropriate agencies to demonstrate the potential of Kerala to become self-sufficient in food and agri-, horti-, and flori- culture production and ensure availability, affordability and safety ucts, learning from the successful efforts of Netherlands in becoming a major exporter of agricultural products, in spite of land constraints, and climate severities, using e-Farming technologies.

3.5.2. Mentoring at Pre University Education Level
School students especially at the HS and HSS levels should receive special attention from the IEEE Kerala Section through what could be called as Mentoring for getting motivated students to enter engineering schools, to inspire and handhold them for socially relevant innovations, and to alleviate the difficulties in appreciating the fundamentals of engineering science in their early years. To begin with, mentoring to the Atal Tinkering Labs promoted by Niti Ayog, for contests like Junior TechTop, School science Fests, Tinker Fests etc, in association with organizations like TechTop Trust, Experience Foundation, several IITs and Engineering colleges etc. Several scattered members and student members of the Section can actually be involved in these tasks in their own respective areas as Volunteers of IEEE.

3.5.3 ECFDP Pattern intervention in Engineering Teaching and Learning
With thrvention of online learning, inadequate resources and facilities at several teaching institutions, the young teachers as well as most students now crave for making teaching and
learning an easy task. Section should embark on a project like the ECFDC in the past and help make the technical education arena to be successful, with every student being able to go through their studies with ease and facing their career with confidence.

3.5.4 Skill Development for public to benefit from modern technologies
The invasion of continuously emerging and fast evolving technologies in daily life has left the general public in Kerala as well as in developing countries like India, looking for help in understanding the fast unrolling technology vistas. There are several schemes currently progressing in the country for equipping workers with better sets of skills as well as others to make best use of such technologies. IEEE Kerala should complement and supplement skill development activities on the one hand and specially have programmes to address the dilemmas faced by housewives, aged citizens, and daily wage workers in the face of technology invasion – through lectures, reference literatures, training or demonstration classes etc.

3.4.5 Promoting Permanent Technology Exhibitions in CUSAT’s C-SiS pattern
In order for teachers and students to have a sound basis on practical knowledge in Cochin University has been doing yeomen service for over two decades and it is where the E-Scientia exhibit of IEEE now running. At IEEE Kerala, this work should be supplemented by a gallery on engineering and technology and similar units should be attached to other such museums and practical learning centres and made open to students and teachers of all regions in the State. This will be a rewarding investment in ensuring the quality of engineering course aspirants in the future.

D.3 ANY INNOVATIVE IDEAS TO MAKE IEEE MORE CREATIVE AND VALUE ADDED FOR SUSTAINING THE MEMBERSHIP RETENTION AND RECRUITMENT GOALS

a. Popular Awards
IEEE Kerala Section has instituted Popular Awards namely KPP Nambiar Award, Friend of IEEE from Academic, Industry and Government as well as Best Teacher Awards. These are open to even Non IEEE members, and thus a good relation is built with academia, Industry as well as Government agencies. This helps in having more IEEE Members as well as sponsorship to events and membership supports to existing members. Media attraction has reached to the top by having such awards and IEEE becomes popular among public.

b. Activities Spread across the Section
It is seen that most of the Execoms as well as events are concentrated around a few institutes or few cities. This makes the members spread across abstain from activities. In Kerala Section, it was implemented to have Execoms across the Section as well as events in all parts of teh Section, thus bringing in more members active in the main stream. This also demonstrated democratic way of having the Execom members instead having only a bunch of people always.
c. IEEE Loyalty Pins
It is now decided to get the IEEE Pins from HQ office with year categories, and planned to personally supply to the loyal members.

d. News letters
Even though variety of events are happening within the section, it is more important to spread these words to show the vibrancy. Quarterly News letters are planned from various societies as well as Section.

e. Job Fair
Kerala section started a new initiative namely Job Fair, where, we bring in recruiters as well as IEEE Student members, who are the potential employees on single platform, and they can get their dream job of their choice. This has been very successful, and IEEE thus facilitates another member benefit to start a career. We expect these student members to continue as professional members, once they get job through this initiative and membership count improvement happens.