IEEE Bangalore Section
Secretary Report, Annual General Meeting, 7\textsuperscript{th} January 2018
This report summarizes activities and initiatives by IEEE Bangalore section during the year 2017.

Logo Description
BLUE: LOYAL, TRUST, INTELLIGENCE
GREEN: GROWTH, FERTILITY, FRESHNESS
YELLOW: BRIGHT, ENERGY, INTELLECT, CREATIVITY
Circle with hands: Unity, Strength, Togetherness, Growth
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Executive Summary

Prof. Debabrata Das has taken charge as Chair along with 24 execom members in 2017. He on behalf of execom as well as various categories of members, presented suggestions in inaugural address to start few new initiatives and also continue well appreciated legacy events. The Chair focus on innovation and quality (IQ) is seen in lot of activities of 2017, like the technical talks during grand celebration of 40th year commemoration, research methodology workshops (across different society chapters), technical conferences and workshops, Technology awards, standards activities, innovation related workshops etc..

Major events of 2017 include Smart Tech workshop, iAIM 2017, Inauguration of IEEE-HKN Chapter in IISc, 40th year celebrations, IEI-IEEE awards for engineering excellence and many more with IEEE Chapters/Socities.

Student chapters have reported more than 500 events and chapters reported about 300 events. Membership remained static in last four years, but the number of events has increased many-fold. The membership number is 7186 by December 31st 2017.

Bangalore Sections Members have received prestigious IEEE global awards in 2017. Those are, IEEE Founders Medal by Mr. N. R. Narayana Murthy, IEI-IEEE Engineering Excellence Award received by Prof. Anurag Kumar, 2017 MGA Larry K. Wilson Transnational Award received by Mr. Ramakrishna Kappagantu, 2017 MGA Achievement Award received by Mr. Puneet K. Mishra, 2017 MGA Outstanding Branch Counselor Award to Mr. Shrikant S Tangade. Section’s affinity group, members and students have received many other laurels (given on award and recognition page of this report).

Eminent members from section also elected/nominated to Board of Governers of different IEEE societies. Some of them are, Prof. K V S Hari has been elected as BOG 2018-2019 for Signal Processing Society, Mr. Ravikiran A as BOG 2018 for TEMS and Prof. Anasuya Devi H K for SSIT.

The section received very good appreciation from IEEE president 2018, Dr. Jim Jefferies, during his visit.

Section initiated a new forum, called “Industry hubs” and it is approved in November EXECOM. The initiatives to operationalize this have started in December 2017. Many chapters/societies and student branches did excellent events in 2017 (available in this report).

A new chapter is started in 2017, Power Electronics Society. Also, a new student branch is started in Kristu Jayanthi College, Bengaluru. The over all financial condition of the section is stable like before – thanks to IEEE support, paid events and sponsorship.
The total AGM attendees were over 900 members and presented a full house.

- Mr. Mallikarjun C and Mr. Joshuva initiated the proceedings of the meeting by welcoming the Chairman, Vice Chairman, Secretary and Treasurer on to the stage.
- Mr. Sudeendra Koushik welcomed the gathering and explained in brief the agenda of AGM and thanked all for being present.
- The Chairman Prof. K V S Hari proposed minutes of AGM 2016 and requested for feedback from the members.
  - Mr. B N Pal proposed the acceptance
  - Mr. Kasi Rajgopal seconded the proposal
- Mr. R V Siva Reddy presented the activities report of the year 2016 by briefing on the number of activities executed and the success stories of R-10 fifty years celebrations
  - Mr. Raja Rao proposed the acceptance and was seconded by Mr. Keshav Bapat
- Mr. Puneet K Mishra presented the financial report of the year 2016.
  - Mr. Raja Rao proposed acceptance and was seconded by B N Pal
- Reports of society chapters and affinity group of the year 2016 was presented by Dr. Y V S Lakshmi. The report highlighted that there were more than 200 activities executed by society chapters and affinity groups.
- Mr. Koteshwar Rao presented the membership development activities of the year 2016.
- Mr. Sudeendra K presented the technical activities report for the year 2016.
- Mr. Puneet K Mishra awards and felicitation. The following items were covered.
  - Outstanding Chapter/AG: Jointly to ComSoc & EDS/SSC Chapters
  - Outstanding Large Student Branch: BEC Bagalkot
  - Outstanding Small Student Branch: Canara College of Engineering
  - Outstanding Branch Councillor Award: Shrikant Tangade of Reva University
  - Outstanding Students Volunteers:
    - Pratyush Kumar, PESCE Mandya
    - Ashwin Padmanabhan, TOCE
    - Rahul Kumar, BMSCE
    - Nitesh Nayak, CEC
  - Outstanding Student Branch Website: Jointly Given to SJCE & Reva University.
- Prof. K V S Hari briefed about proposed amendments in the by laws one by one. Following amendments in the existing were approved and adopted unanimously by members.
  - Item 6 sec 2
  - Item 6 sec 4
  - Item 6 sec 5
- Prof. K V S Hari concluded the proceedings for the amendments in the by laws and thanked all the members for actively participating in the overall process.
- Mr. Ravikiran A announced the slate for the year 2017 on behalf of the slate nomination committee.
- Proposed 2017 SLATE for IEEE Bangalore

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- Prof. Debabrata Das, Chair for year 2017 shared his experiences & vision and welcomed the new members.

- Mr. R V Siva Reddy gave vote of Thanks.
SECRETARY REPORT
Round up of activities in 2017

40th Anniversary of IEEE Bangalore Section

40th Anniversary of IEEE Bangalore Section was celebrated in a grand function at Hotel Sterlings MAC, Bangalore on July 16, 2017. Dr. S. Christopher, Distinguished Scientist, Chairman, DRDO and Secretary, Department of Defence R&D, Govt of India was the Chief Guest for the function. Prof. Anurag Kumar, Director, Indian Institute of Science was the Guest of Honor. Prof. Debabrata Das, Chair, IEEE Bangalore Section welcomed the members, invitees, all Past Chairs, Chief Guest, and Guest of Honor. He also briefed about significant achievements and major initiatives of IEEE Bangalore Section.

IEEE Bangalore Section felicitated Dr. S Christopher and Prof. Anurag Kumar, both members of IEEE Bangalore section for their R&D contributions and a section IEEE member reaching the highest position in institutions of repute, i.e., as Chairman, DRDO and Director, IISc during 40 Year celebration ceremony. Bangalore section also felicitated all its Past Chair by a Silver Plaque for their enormous contribution to section as section chair. 14 out of 20, Past Chairs were physically present to accept the felicitation. As part of celebration following 4 Technical Talks and 2 panel discussions were organized.

Technical Talks:

1. Success Stories and Future Challenges of ISRO by Dr. M Annadurai, Distinguished Scientist and Director, ISRO Satellite Centre
2. DRDO’s Indigenous Airborne Early Warning & Control System by Dr. S Christopher, Distinguished Scientist, Chairman, DRDO and Secretary, Department of Defence R&D, Govt of India
3. Communication Network and IOT by Prof Anurag Kumar, Director, IISc
4. Technology for Self-Driven Vehicle by Mr. Mihir Modi, DMTS, TI

Panel Discussions:
1. World Scenario and Technical Job/Research Path for youngster: Moderator, Mr. Ravikiran A., Panellist: Dr. Surendra Pal, Dr. V V Srinivasan, Dr. Sudeendra Kaushik, Dr. Prasant Misra
2. Vision 2027 -IEEE Bangalore Section 50th Year: Moderator: Prof. K V S Hari, Panellist: Ms. Pamela Kumar, Prof. Kasi Rajgopal, Dr. G S Javed, Dr. M Vidya Sagar, Ms. Bhargavi

More than 200 Members, Senior Members, Life Members, Fellows and Life Fellows attended the day long function. Function concluded with vote of thanks proposed by Mr. Puneet Kumar Mishra, Vice Chair, IEEE Bangalore Section and Co-Chair, 40 Yrs celebrations.
2016 IEI-IEEE AWARDS FOR ENGINEERING EXCELLENCE

The Institution of Engineers India (IEI) is a signatory and partner for the National Society Agreement (NSA) for India, as a part of the global initiative triggered by Institute of Electrical and Electronics Engineers (IEEE). As a part of this NSA, both these globally acclaimed engineering professional bodies, The IEI and IEEE have established a Joint Award titled the IEI-IEEE Award for Engineering Excellence which comprises of an exclusive medal and a certificate. This prestigious award has been instituted to give global recognition to local engineering contribution par excellence in various fields of engineering and technology under IEEE JANS program. The Award modalities were formalized by Cooperation Agreement signed in the presence of Presidents of the two leading Professional Associations during visit of IEEE President, Mr. Howard Michel in 2015 at Bengaluru. The Awardee will be shortlisted by eminent Jury comprising of experts from IEI and IEEE, India.

This National Level Award will recognize engineering excellence with benefit to society in the Electrical Engineering Fields and related Technical Areas. The Award would recognize the outstanding individual contribution either in the Government, Industry, Academia, or Research and Development organizations. Work done in India will only be considered for the Award. The contribution is expected towards innovative products and services, education, research or any other form of serving the community at large by his/her work. Nominees are required to reside in India for last 5 years.

The second edition of the Award for 2016 is being presented at the 40 Years Anniversary celebrations of IEEE Bangalore Section. Jury Comprising Prof. B S Sonde & Prof. V K Atre met on 3 December 2016 at IEEE India office in Bangalore and deliberated on 20 nominations received from eminent personalities. Jury unanimously came to the conclusion of conferring the IEI-IEEE Engineering Excellence Award-2016 on Dr. M Annadurai, Distinguished Scientist & Director, ISRO Satellite Centre. The citation says “For Contribution and leadership in space technology in service to humanity”.

2016 IEI-IEEE Award for Engineering Excellence presentation ceremony was organized on July 16, 2017. Prof. Debabrata Das, Chair, IEEE Bangalore Section welcomed the members, invitees, Chief Guest, Dr. S. Christopher, Distinguished Scientist, Chairman, DRDO and Secretary, Department of Defence R&D, Govt of India, Guest of Honor, Prof. Anurag Kumar, Director, Indian Institute of Technology and Award Recipient, Dr. M Annadurai, Distinguished Scientist and Director ISRO Satellite Centre, Bangalore. Award Medal and a Certificate Plaque were handed over to him by Chief Guest, Dr. S. Christopher. IEEE Board and IEEE Awards board was represented by Mr. Ramakrishna Kappagantu, Immediate Past Director, IEEE R10, whereas IEI Board was represented by Dr. M. Vasagam, Immediate Past Chairman, IEI-Karnataka Centre & Dr. Muralikrishna Reddy, Immediate Past President of IEI, India. Mr. Ramakrishna K and Dr. M Vasagam briefed the gathering about IEI-IEEE Award for Engineering Excellence and read the citation. One of the Jury member Prof. B S Sondhe was also present during the ceremony. Dr. M
Annadurai in his acceptance speech gave details of India Space Program and its impact on Society. Dr. S Christopher delivered a talk on DRDO’s Indigenous Airborne Early Warning & Control System. Program was attended by more than 200 IEEE Members. Vote of thanks was proposed by Mr. Puneet Kumar Mishra, Vice Chair, IEEE Bangalore Section.

L-R: Mr. B N Pal, Secretary, IEEE Bangalore Section, Mr. Puneet K Mishra, Vice Chair, IEEE Bangalore Section, Dr. Muralikrishna Reddy, Immediate Past IEI President, Dr. M Vasagam, Immediate Past IEI-Karnataka Centre Chair, Mr. Ramakrishna Kappagantu, IEEE Board & IEEE Awards Board representative, Prof. B S Sondhe, Jury Member, Dr. M Annadurai, IEI-IEEE Award 2016 Recipient, Dr. S Christopher, Secretary DRDO R&D, Chief Guest, Prof. Anurag Kuamr, Director IISc, Guest of Honour, Prof. Debabrata Das, Chair, IEEE Bangalore Section
IEEE-IISc HKN Chapter Induction Ceremony

The induction ceremony of IEEE-IISc HKN was held on 27 March 2017 at 4.00pm IST at The Electrical Communication Engineering Department, Indian Institute of Science, Bangalore, India. The “Mu Xi” Chapter of IEEE-HKN was successfully installed by Mr. Ramakrishna Kappagantu, IEEE R10 Director (2015-16), officially representing the IEEE-HKN Organization. It was carried out in the presence of Prof. K.V.S. Hari, Chairman of ECE Dept, Prof. T.Srinivas, Faculty Advisor of IEEE-IISc HKN Chapter, with the participation of the twenty inductees from comprising students, faculty and alumni, and invitees the audience.

The induction ceremony was carried out as per the prescribed procedure. It started with a welcome note from the Prof. T.Srinivas, Faculty Advisor, followed by opening remarks by the Prof. K.V.S. Hari, Chair of Department, and Mr. Ramakrishna Kappagantu, IEEE- HKN representative. The requirements for the installation of chapter were discussed by Mr. Ramakrishna Kappagantu, and acknowledged by Prof. K.V.S. Hari. The Roll of Honor was presented by Mr. Ramakrishna Kappagantu, implying successful installation of the “Mu Xi” Chapter of IEEE-HKN at Indian Institute of Science.

This was followed by the induction ceremony, which was carried out by the officers of the “Mu Xi” Chapter - Medha Dandu, President, Shubham Sharma, Chapter Vice President, Manu Krishnan, Treasurer, Ravali Pampala, Secretary and Prof. T.Srinivas, Faculty Advisor. The induction ritual was performed according to prescribed guidelines. The significance of the organization and the qualities, an HKN inductee should possess were presented/explained to all participants. In addition, all the participants were given a handout which had detailed description about IEEE-HKN and its importance. In the induction process, Mr. Ramakrishna Kappagantu has inducted Ms. Medha D as the President of the “Mu Xi” Chapter; further Medha has inducted all the other inductees by presenting their IEEE-HKN sealed certificates. All the inductees have made their mark by signing in the Signature book presented by the IEEE-HKN. This was followed by everybody taking the oath to stand by the ideals the organization has bestowed upon us.

At the end IEEE-IISc student branch acknowledged the support by IEEE HKN and IEEE India office toward the induction ceremony. The induction ceremony concluded with a group photograph and high tea.
IEEE SmartTech 2017

IEEE Bangalore Section, with support from NASSCOM IoT CoE and TiE Bangalore, organized the 4th edition of **IEEE SmartTech** on **4-5 August 2017** in **Hotel Sterling MAC (Bangalore)**, with a focus on the theme of "Digital Transformation with Cognitive Minds and Machines".

This workshop brought together technology leaders, innovators, entrepreneurs, and thought provokers who were passionate about addressing impactful problems by turning ideas into solutions. Industry stalwarts and technology practitioners shared their vision on future technologies and how they would disrupt/impact our way of working and living.

This edition of the workshop had two major segments: **Digital Transformation & Cutting Edge Technology**.

The “Digital Transformation” segment deep dived into two important verticals (from an Indian context): Energy and Agriculture. Experts provided specific actionable details on the current trends and future expectations in both these verticals, and shared their experiences on existing implementations and their challenges/opportunities.


**Sanjay Podder** (Managing Director and R&D Head, Accenture Labs India) and **Dr. Mayank Shrivastava** (Assistant Professor, DESE, IISc Bangalore) delivered key note addresses.

In total, 26 speakers (leaders and technical subject experts) from 24 companies, academia and startups (Accenture, Intel, IISc, IIM-B, TCS, Philips, Robert Bosch India, TI, Meher Energy, Avanto Ventures, Narnix, Ericsson, Imaginate, Samsunb, KPIT, NVIDIA, Innohabit, DataGlen, Green Robot, eXabit) participated shared their views and shared their experiences on the various chosen topics. Around 130 delegates attended the workshop over 2 days.
The 2017 IEEE International Conference on Antenna Innovations and Modern Technologies for Ground, Aircraft and Satellite Applications (iAIM 2017) was held in Hotel Sterlings Mac, Bangalore during November 24th – 26th (www.ieeiaim2017.org). This was the second iAIM and the first one was held in Ahmedabad in 2015.

(L-R) Prof. Ahmed Kishk, 2017 IEEE APS President, Dr Paul A Rosen, JPL/NASA, Dr. Sudhakar Rao, IEEE Life Fellow & Co-chair, iAIM, Prof. Debabrata Das, Chair, IEEE Bangalore Section, Prof. Debatosh Guha, IEEE Fellow & Co-Chair, iAIM, Puneet Kumar Mishra, Vice Chair, IEEE Bangalore section & General Chair, iAIM.

It was one of the largest conferences of IEEE in India, hosted by IEEE Bangalore Section and supported by IEEE AP/MTT Joint Bangalore Chapter and IEEE APS. More than 400 participants attended and shared their work on advanced antennas during the 3-day conference.

The keynote speakers were Dr. Sudhakar Rao, IEEE Life Fellow, Northrop Grummann, and Dr. Paul A Rosen, NASA/JPL. In addition there were 7 invited speakers that include Prof. Ahmed Kishk, 2017 IEEE APS President, Dr. Clency Lee Yow, President CMi, Mr. Rajeev Jyoti, SAC/ISRO, Dr. A K Singh, DLRL/DRDO, Dr. V V Srinivasan, ISTRAC/ISRO, Dr. NNSSRK Prasad, ADA/DRDO and Prof. Debatosh Guha, IEEE Fellow, Institute of Radio Physics and Electronics, Kolkata. This year focus of this conference was on Antenna Innovations and Modern Technologies for Ground, Aircraft and Satellite Applications. A workshop was organized during the conference with eminent speakers that included Prof. Prabhakar H Pathak, OSU, Dr. C J Reddy, Altair and Dr. Giancarlo Guida, IDS. An industry exhibition was organized in which 15 industries participated to showcase their product and recent developments in antenna technology. 176 research papers were originally submitted for review. 123 papers/posters were selected after rigorous peer review by the technical program committee with 40 reviewers. Selected papers were presented in 16 technical oral presentation sessions and 6 poster presentation sessions during the conference. The selected papers and posters have been sent to IEEEXplore for publication.

iAIM2017
To encourage the researchers, the conference committee instituted 27 different categories (iAIM Best Paper Award-1st, 2nd & 3rd, Mr. Franco Bernalli Best Student Paper Award, Dr. NNSSRK Prasad Best Female Student Paper Award, 16-Best Paper Award in a Technical Session and 6-Best Poster Award in a Poster Session) of awards with prize money of more than US $1500. Dr. Sudhakar Rao Travel Grant (INR 5000) was provided each to 1 Female and 1 Male researcher and 50 Students were provided iAIM Student Travel Grant (Sleeper Class Train Fare-To & Fro).

Three additional workshops on 5G Technology, Humanitarian Technology and Next generation Antenna measurements were introduced with an objective of providing the latest information on future technologies and encourage participants to involve with these technologies for the benefit of Humanity. Dr. Tim Lee, IEEE 5G Initiative Co-Chair, Prof. C Y Desmondsim, Fengchia University and Mr. Andy Chung, ETS-Lindren were speakers in workshop on 5G. Dr. Tim Lee, IEEE SIGHT Chair, Prof. Steve Reising, Corolado University, Dr. Ravinder Dahiya, University of Glasgow, Dr. Neha Satak, Astrom Technologies and Dr. Ashok Das, Sunmoksha were speakers for Workshop on Humanitarian Technology. Mr. Puneet K Mishra has conducted the workshop on Next Generation Antenna and Payload Measurements.
Panel discussions:

5G India 2020: Vision and Perspective with panellist as Mr. Rajesh Pathak, Director, DoT, Govt of India, Ms. Pamela Kuamr, Director General, TSDSI, Prof. A R Harish, IITK, Mr. Ratnakar VR, SAMSUNG and Mr. Ravikiran A. IEEE 5G Initiative.

Next Generation Industry and Academia collaboration in Antenna Technology: Dr. Tim Lee, Boeing, Dr. Sudhakar Rao, Northrop Grumann, Dr. Surendra Pal, DIAT, Dr. Hema Singh, NAL, Dr. S B Sharma, Indus University, Dr. DC Pande, DRDO, Prof. Ahmed Kishk, Concordia University. Both the panels were moderated by Mr. Puneet Kumar Mishra, General Chair, iAIM. The feedback from the student and professional participants was excellent.

The conference was successfully organized by help of volunteers. General Chair was Mr. Puneet Kumar Mishra, ISRO and General Co-Chairs were, Dr. Sudhakar Rao, Northrop Grumann, Prof. Debatosh Guha, CU and Mr. Rajeev Jyoti, SAC. TPC co-chairs Dr. Dhananjay Jahagirdar (RCI), Prof. A. Harish (IITK), Dr. M. B. Mahajan (ISRO), Dr. Chinmoy Saha (IIST), and Dr. Chandrakanta Kumar (ISRO) did an excellent job with paper reviews. Steering Committee Members were Prof. Debabrata Das, Chair, IEEE Bangalore Section, Dr. V V Srinivasa, Director, ISTRAC and Dr. M Nageaswara Rao, Associate Director, ISAC.
The IEEE Young Professionals in Space took place from Nov 24-26, 2017 in Bangalore. This unique program was conceptualized and organized by IEEE Bangalore Section in association with IEEE YP affinity Group, Bangalore Section.

“Space” being interdisciplinary and most challenging field of science and engineering provides huge opportunities for Start-ups, SMEs and Big Companies. RF/Microwave communication using “Antennas” is the only option to communicate from “Space”. Hence Antennas and related technologies are heart of Space based satellite applications. Initially it was added as a special session in 2017 IEEE International Conference on Antenna Innovations and Modern technologies (iAIM 2017), but due to its huge popularity it was converted as a parallel track of iAIM.

YP in Space program was designed to involve, innovate, and inspire participants through sessions focused on spacecraft design. The involvement was achieved through both hands-on activities assembling and testing a prototype for a CanSat and interactive discussions while learning about spacecraft subsystems, amateur radio, and payload design. Even with a sold out crowd of 130 participants, the instructors were able to engage individuals to think beyond their prototype, apply their knowledge to future projects, and find innovative solutions through space technologies. More importantly, the weekend was designed to inspire young professional by sharing personal experiences, lessons learned, and ambitions.

The event was attended by eminent researchers, scientists from different societies including Prof. KVS Hari from Signal Processing society, Prof. Steve Reising and Dr. Paul Rosen from GRSS, Dr. Lorenzo Lo Monte from AESS, Dr Quenton Bonds from NASA Goddard Space Flight center, Tim Lee from IEEE SIGHT, Dr. VeerMuthuvel from ISRO and many other startups working in area of space science and engineering. They have shared their knowledge and vision about Space Technology. The first day focused on establishing a baseline for subsequent activities through three sessions on space projects, spacecraft subsystems, an overview of CanSats, and a short presentation by Xovian on their journey as a startup company in the Indian space industry.
In addition, this session highlighted many of the inter-subsystem relationships and trade-offs that can drive the design process. In the last session, the students received a short overview of CanSats highlighting the similarities and differences with larger spacecrafts. Finally, each pair of students received a CanSat kit and spent some time identifying the components and learning about how it would work once it was assembled. In the presentation on startups, the founders of Xovian shared how the company got started, current projects, challenges, and future plans that served to motivate participants to think beyond the bootcamp.

The second day focused on hands-on activities. The morning began with a presentation on Amateur Radio that included some theory on communication systems, antenna design, and legislations. The instructors instrumented many live demonstrations aimed at visualizing the principles discussed using software defined radios and inspired many students to seek more information to get their license. The remaining time was spent assembling the CanSat kits consisting of a spacecraft and a ground station. The spacecraft was designed around an Arduino processor with a sensor board and a transmitter board to send wireless telemetry data at 433MHz frequencies. The receiver board consisted of an Arduino to process packets, send them to a serial port on a laptop, and plot them in real-time. The participants soldered the components for each board, programmed the boards, and then tested them by reading information from photodiodes and thermistors to transmit and plot on their receiving stations.
The last day started with a presentation from Magellan Aerospace focused on large spacecraft missions and the associated challenges of programs spanning many years from concept to launch. This presentation was followed by a presentation focused on Command and Data Handling Systems and Flight Software where the instructor highlighted principles, heuristics, and design philosophies that are seldom written down in textbooks. The discussion lasted longer than planned as it spawned many questions and conversations with participants who shared their own experiences, challenges the status quo, and proposed innovative solutions utilizing emerging technologies. After an engaging discussion on design principles, the focus shifted towards testing. The presenter provided an overview of unit, integration, and system level tests, while dwelling on environmental testing sharing experiences from both CubeSats, SmallSats, and Large Satellite missions. The afternoon featured a guest speaker from NASA who provided an overview of payload designs, highlighting how the instrument design process differs from the design of a spacecraft bus.

To enthrall the attendees with excitement and enlighten them about the upcoming opportunities in space exploration, a dedicated session was conducted by the dignitaries from Startups across India. Young Professionals in Space offered a unique opportunity to the attendees to hear about the trials and triumphs of these hustlers in the arena of new space in India. Overall, the first offering of the YPinSpace bootcamp was very successful and there was lots of positive feedback.
Overview of Section Membership

Membership development plays a key role in ensuring the future growth of IEEE and its members. MD team has focused goals and executed by volunteers through technical presentations, associating with conferences, visiting universities for educational activities and so on.

- Increasing IEEE membership by recruiting new members.
- Retaining current members
- Promoting grade elevations
- Increasing awareness of the values of IEEE membership
- Providing efficient and timely communications to all stakeholders

IEEE Bangalore section has seen a steady Membership in 2017 at -1% year over year. In 2017 MD team put together a plan to grow the membership base through promotions during IEEE events and MGM initiatives. Membership additions were tracked every month and efforts were made to drive growth in specific areas. The Senior membership has increased by 7%, whereas the members is stable with no change, the student membership dropped by a 1% and Graduate Student membership by 9% as of end of 2017.
### Bangalore section IEEE Membership by Grades

<table>
<thead>
<tr>
<th>Year</th>
<th>Student</th>
<th>GSM</th>
<th>Associate</th>
<th>Member</th>
<th>Senior Member</th>
<th>Honorary</th>
<th>Fellow</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>469</td>
<td>341</td>
<td>744</td>
<td>99</td>
<td>0</td>
<td>4</td>
<td>1657</td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>911</td>
<td>572</td>
<td>820</td>
<td>103</td>
<td>0</td>
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<tr>
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<td>1073</td>
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<tr>
<td>2003</td>
<td>861</td>
<td>96</td>
<td>1320</td>
<td>127</td>
<td>0</td>
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<tr>
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<td>5</td>
<td>2845</td>
<td></td>
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<tr>
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<td>1207</td>
<td>150</td>
<td>0</td>
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<tr>
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<td>1698</td>
<td>135</td>
<td>1234</td>
<td>169</td>
<td>0</td>
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<tr>
<td>2007</td>
<td>1692</td>
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<td>302</td>
<td>106</td>
<td>1512</td>
<td>177</td>
<td>10</td>
<td>4194</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>2438</td>
<td>476</td>
<td>87</td>
<td>1466</td>
<td>191</td>
<td>10</td>
<td>4669</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>2460</td>
<td>479</td>
<td>90</td>
<td>1723</td>
<td>216</td>
<td>12</td>
<td>4981</td>
<td></td>
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<tr>
<td>2011</td>
<td>2887</td>
<td>615</td>
<td>127</td>
<td>1890</td>
<td>232</td>
<td>13</td>
<td>5765</td>
<td></td>
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<tr>
<td>2012</td>
<td>3161</td>
<td>561</td>
<td>98</td>
<td>2025</td>
<td>269</td>
<td>17</td>
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<tr>
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<td>3744</td>
<td>807</td>
<td>102</td>
<td>1909</td>
<td>458</td>
<td>18</td>
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<tr>
<td>2014</td>
<td>3623</td>
<td>824</td>
<td>110</td>
<td>1985</td>
<td>475</td>
<td>18</td>
<td>7036</td>
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<tr>
<td>2015</td>
<td>3670</td>
<td>681</td>
<td>80</td>
<td>1927</td>
<td>523</td>
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<td>2016</td>
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<td>742</td>
<td>55</td>
<td>1777</td>
<td>580</td>
<td>17</td>
<td>7243</td>
<td></td>
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<tr>
<td>2017</td>
<td>4025</td>
<td>672</td>
<td>77</td>
<td>1775</td>
<td>618</td>
<td>18</td>
<td>7186</td>
<td></td>
</tr>
</tbody>
</table>
AWARDS

IEEE Founders Medal:
The IEEE Founders Medal, established in 1952, recognizes "outstanding contributions to the profession and to the Institute through wise and courageous leadership in the planning and administration of technical developments." Infosys founder Mr. N.R.Narayana Murthy has won 2018 IEEE Founders Medal. The citation says, “For visionary leadership at Infosys contributing to human progress through technology and for advancing corporate ethics and social responsibility.”

2017 IEI-IEEE Engineering Excellence Award
Prof. Anurag Kumar obtained his B.Tech. degree in Electrical Engineering from IIT-Kanpur, and was awarded the President of India's Gold Medal. He then obtained the PhD degree from Cornell University. He was a Member of Technical Staff at AT&T Bell Labs, Holmdel, N.J. He is Professor in the Dept. of Electrical Communication Engineering (ECE), and is also currently the Director of IISc. He has been elected a Fellow of the IEEE, a Fellow of the Indian National Science Academy (INSA), a Fellow of the Indian Academy of Science (IASSC), a Fellow of the Indian National Academy of Engineering (INAE), and a Fellow of The World Academy of Sciences (TWAS). He received the IISc Alumni Award for Excellence in Engineering Research for 2008. He has been awarded the DST J.C. Bose National Fellowship for the period 2011-2021.

2017 MGA Larry K. Wilson Transnational Award for dynamic leadership in building a vibrant IEEE Asia Pacific community.

Mr. Ramakrishna Kappagantu has over 33 Years of rich experience in Indian Power Sector viz. NTPC and POWERGRID. Presently he is an independent consultant and serving on the Advisory Committee of few Organizations & Institutions. His interests include Power System Economics, Smart Grids/Cities, Renewables and SACADA-EMS. He works for embedding Human Values in Technology and Management and believes that value induction alone can drive Students and YPs to develop technology for benefit of Humanity. He is a dedicated member of IEEE for over 27 years and currently a Senior Member & Eta Kappa of IEEE and a Life Fellow of Institute of Engineers (India).

He is a passionate and dedicated IEEE volunteer with excellent leadership/management skills, and successfully served in several responsible positions at the Chapter, Section, Council, Region, MGA and Board levels since 1997 which include elected leadership positions as
Chapter Chair, Section Chair, Council Secretary cum Treasurer and Region Director. The history and performance of these Geo-Units reflect his true involvement and multi-faceted contributions including several transnational assignments. His sincere contributions have been acknowledged by global IEEE Communities through various awards viz. IEEE MGA Innovation Award 2014, IEEE PES Outstanding Engineer Award for 2012, MGA Achievement Award 2011 and IEEE R10 & Bangalore Section Outstanding Volunteer Awards in 2010.

**2017 MGA Achievement Award- for exemplary contributions to increase member engagement & operational effectiveness within several Geographic Units.**

Mr. Puneet Kumar Mishra is with ISRO Satellite Centre, and is presently Heading Satellite Antenna Characterization, Test & Design Section. He has rich experience of RF characterization of 33 Satellites operating from UHF to Ka-Band. He has Played a pivotal role in establishing S/C level EMC chamber and has Developed a payload to study the RF blackout phenomenon. He has also contributed in Indigenously Developing BusBars for High power S/C. He has published more than 40 papers and won 3 best paper awards. He is a Senior Member of IEEE, and life member of Astronautical Society of India.

He is on the board of reviewers of journals like the IEEE Transactions on Antennas and Propagation, IEEE Antennas and Wireless Propagation Letters, and IET Microwaves, Antennas & Propagation. He is a passionate volunteers and served Bangalore section as Joint Secretary (2013), Secretary (2014,2015), Treasurer (2016). He is currently Vice Chair, Bangalore Section and Vice Chair (Industry Relations) for IEEE India Council. He has brought radical changes by introducing Perfromance Based and membership dependent Section Support Scheme for Student Branches and Chapters, online fund transfer, annual platinum sponsorship and unique IEEE Young Professional in Space Program. He was TPC Co-chair for INDICON 2016 and General Chair for IEEE iAIM 2017 and YPinSpace Program.

**2017 MGA Outstanding Branch Counselor Award**

Mr. Shrikant S Tangade is working as Assistant Professor in School of Electronics and Communication Engineering, REVA Univ. Bengaluru, India. He is also IEEE Student Branch Counselor. He has completed MTech in Computer Networking and BE in Comp. Sc. From Belagavi Univ. He is persuing PhD. He has 4.5 years of experience in teaching and 2 years of research experience in IISc. He had received 2016 outstanding branch counsellor award of Bangalore Section. He is member of IEEE VTS and Computer Society.
Other Awards

• IEEE PES Bangalore Chapter – Outstanding Chapter Award Runner Up 2017 from PES HQ

• Richard E. Merwin Student Scholarship in recognition of your exemplary involvement in student chapter activities by IEEE Computer Society for September 2017 to Ms. Lavanya of REVA Univ.

Young Professionals Affinity Group Hall of Fame Award

Bangalore Section Young Professionals Affinity Group has been selected as a winner of the 2017 IEEE Young Professionals Affinity Group Hall of Fame Award. The application was selected as one of the top 3 nominations out of a total of 26 submissions.

Appointment as Board of Governors

• Prof. K V S Hari is appointed as BOG 2019 for Signal Processing Society.

• Mr. Ravikiran A is BOG 2018 for TEMS.

• Prof. Anasuya Devi H K for SSIT.
Standards Special Interest Group

IEEE Bangalore section in 2017 initiated an execom member role of ‘standards coordination’ and it had a very good beginning in the first year itself. In along with Industry Relationships Execom members, some activities were conducted and put a new beginning going forward to involve more India based standards developments including IEEE members and others. Few initiates are mentioned below:

As part of “IEEE SmartTech 2017” we had two standards presentations. The first one, Mr. Ravikiran Annaswamy, CEO Innohabit technologies and former IEEE Bangalore section president, presented 'Role of IEEE in 5G'. In the other talk, Dr. Priya Ranjan Mishra, Principal Scientist Philips India, presented “Standards for accelerating Integration of Renewables and Storage in Power Systems”.

BIS (Bureau of Indian Standards) had a one day workshop on July 7th 2017 about India standards and IEEE Bangalore section very actively involved in it to collectively take India cloud standards to new dimension. More activities on these are in pipeline.

IEEE SA (Standards Association) conducted "Enabling Green Cities" Workshop which is sponsored by IEEE Bangalore Section and Dr. Debabatra Das, our current president, delivered a Key Note speech on “Green ICT Energy Efficient Medium Access Control Protocol for Base Station”.

By rounding off year, CCICI (Cloud Computing Innovation Council of India) conducted a workshop on Standards as part of its annual conference on Dec 13th which ws sponsored by IEEE Bangalore section. Several standards sessions were part of the half day workshop and some of the speakers were Prof. Dinkar Sitaram from PES University, Mr. Sri Chandra from IEEE SA India and IEEE P1931 standards Chair Mr. Syam, Director from NTT Data.

In the new year 2018, we hope to have more standards activities to be initiated by our section and involve more members to encourage contribution to IEEE standards. We believe there is a huge opportunity lies ahead for adopting emerging technologies for smart cities, etc. in India and IEEE can play a unique role in delivering some of those technology standards from India perspective.
IEEE Bangalore Section: Industry Activities

IEEE Bangalore Section’s Industry Activities team had taken two new initiatives towards enabling active participation from Industry in IEEE Bangalore Section Activities apart from continuing the existing programs.

**New Initiatives: IEEE Bangalore Section - Industry Hubs**

IEEE Bangalore Section is embarking on a new initiative and is setting up “Industry Hubs” in 2018. Each industry hub will bring together various companies and academia working on the same technologies (like Autonomous Driving, IoT, AI, contextual computing, AR/VR, etc.) and enable a common neutral platform for knowledge sharing and advancement. We are looking at establishing 2-3 industry hubs in 2018.

**New Initiative: IEEE Bangalore Section - Technology Awards**

In our effort to recognize technologists who have made an impact on society as a whole with their innovations, **IEEE Bangalore Section is embarking a new initiative of Technology Awards.**
Membership Development Report – 2017

The representatives of MD activities for the year 2017 are Prof. Raghu Krishnapuram, Mr Koteswara Rao, Ms Divya MG and EXECOM members (Bangalore Section).

Membership Promotional events:

1. Senior Membership PromotionaL Event – SIMPLE:
   Series of SIMPLE workshops coordinated through online for senior grade membership elevation. 52 members are elevated to senior grade till Oct 2017.

2. Senior Membership drive for WIE members:
   Coordinated a special drive for WIE members for IEEE Senior grade elevation.

3. RRCE- IEEE Student Branch inauguration on 10th May 2017:
   Divya gave presentation on “IEEE Student Membership Serving and Preparing our Next Generation of Leaders”. Explained about IEEE, benefits of IEEE membership and how it will help in nurturing leadership qualities to students.

   Divya delivered a talk on importance of IEEE in professional life on 24th May 2017 at GSSIT, Mysore. Explained about IEEE, benefits of IEEE membership and its importance in professional life to students. Interacted with faculty and students.
5. IEEE Membership Development booth at IDIYE 2017, 27th May 2017:
Interacted with IDIYE 2017 participants at demo area. Participants were from industry as well as academia. Explained about IEEE, benefits to IEEE members & student members, its importance in professional life etc.

6. IEEE Membership Development booth at iAIM, Bangalore, 24th and 25th Nov 2017:

7. New Senior Members Elevated in 2017:

<table>
<thead>
<tr>
<th>Last Name</th>
<th>First Name</th>
<th>Last Name</th>
<th>First Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Banu</td>
<td>Dr.Reshma</td>
<td>31 Sahoo</td>
<td>Shubhashisa</td>
</tr>
<tr>
<td>2 Dixit</td>
<td>Pradipkumar</td>
<td>32 Shankar</td>
<td>Kavitha</td>
</tr>
<tr>
<td>3 DWIVEDI</td>
<td>DEVESH</td>
<td>33 Sriramulu</td>
<td>Balaji</td>
</tr>
<tr>
<td>4 Gangwar</td>
<td>V S</td>
<td>34 Tandur</td>
<td>Deepaknath</td>
</tr>
<tr>
<td>5 Jayadhararajan</td>
<td>Anandhi</td>
<td>35 Ar</td>
<td>Rajanikanth</td>
</tr>
<tr>
<td>6 Kapila Venkata</td>
<td>Ramakrishna Rao</td>
<td>36 Arya</td>
<td>Arti</td>
</tr>
<tr>
<td>7 Kummamuru</td>
<td>Krishna</td>
<td>37 Gs</td>
<td>Javed</td>
</tr>
<tr>
<td>8 Lingappa</td>
<td>Triveni</td>
<td>38 Jayaram</td>
<td>Naganandini</td>
</tr>
<tr>
<td>9 Puri</td>
<td>Sumith</td>
<td>39 Kounte</td>
<td>Manjunath</td>
</tr>
<tr>
<td>10 Tantry</td>
<td>Shashidhar</td>
<td>40 Kulakkunnath</td>
<td>Pradeep</td>
</tr>
<tr>
<td>11 Vallur</td>
<td>Ramakanth</td>
<td>41 Muraleedharan</td>
<td>M</td>
</tr>
<tr>
<td>12 B D</td>
<td>Dr Parameshachari</td>
<td>42 N</td>
<td>Vasudev</td>
</tr>
<tr>
<td>13 Chakravarthy</td>
<td>Sriramana</td>
<td>43 Poddar</td>
<td>Deepak</td>
</tr>
<tr>
<td>14 Das</td>
<td>Pratap</td>
<td>44 Rao</td>
<td>Anand</td>
</tr>
</tbody>
</table>
IEEE Bangalore Section AGM Report 2017


IEEE Bangalore Section organized the 2017 version of the Fellow Identification & Nomination Exercise (FINE-2017) Workshop on December 9, 2017 at the Golden Jubilee Hall, ECE Department, IISc, Bangalore. The objective of this workshop was to create awareness among eligible senior members about the Fellows Elevation process, nomination guidelines, do’s and don’ts and minimum eligibility requirements. Bangalore being the hub of: (1) World class R&D activities of IT, Space, Aerospace, Defence, Semiconductor and other industries, (2) World-class Academic Institutions such as IISc, IIT-B, NIAS, NIMHANS, JNCASR and others, has excellent researchers, scientists, practitioners, educators and technical leaders. Many among them may deserve to be in the Fellow grade of IEEE.

The speakers were Dr. Prasad Kodali, Past IEEE R10 Director, Member IEEE Fellows Committee, Dr. Shiv Kalyanaraman, IBM Research India and Prof. Vijay Kumar, IISc. This event was successfully organized and conducted by Prof Raghu Krishnapuram and Prof K V S Hari by IEEE Bangalore section.
IEEE Bangalore Section Educational Activities

I. Report on IEEE VITM Collaborative Programmes held during 2017

MOU between IEEE & VITM: MOU signed between IEEE, Bangalore Section, IEEE India and VITM, Bangalore for doing various collaborative programmes was renewed for a further period of three years from 21st July 2017.

The following programmes were held for school and pre-university students at VITM in collaboration with IEEE Bangalore Section during 2017.

1. IEEE VITM Distinguished Lecture Series
   The IEEE VITM distinguished lecture on “Imminent Transformations in Health: P5 Cybernetic Health” was delivered by Prof. Ramesh Jain, University of California Irvine, USA on June 15th 2017, 3 pm at the museum auditorium for 250 participants.

2. App Development Course on Android
   App Development Course on Android was held at Visvesvaraya Industrial & Technological Museum in collaboration with IEEE & IEEE Bangalore Section for 22 high school students during May 5-7, 2017.
3. **IEEE VITM Young Innovators Workshop**

The IEEE VITM Young Innovators Workshop was held at Visvesvaraya Industrial & Technological Museum in collaboration with IEEE Bangalore Section for 30 high school students on 20th May 2017 from 10.30 am to 1.00 pm.
4. **Internet of Things (IoT)**

The Internet of Things (IoT) workshop was held at Visvesvaraya Industrial & Technological Museum in collaboration with IEEE Bangalore Section for 40 **Pre University students** on **7th November 2017** from 10 am to 1.00 pm.
II. Programmes done with R10 Education support Fund

The following programs were done with R10 Education support fund by IEEE Bangalore section.

1. Design Thinking for UG / PG Engineering Students

Design thinking workshop for UG / PG Engineering Students was held on 18th April 2017 at SJCE, Mysore.

2. IEEE Awareness Workshop on Accreditation in Engineering Education 2017

IEEE Awareness Workshop on Accreditation in Engineering Education 2017 was held on 3rd July 2017 at BMS College of Engineering Bangalore for 50 participants.

3. IEEE Teachers In-Service Program (TISP) 2017

IEEE Teachers In-Service Program (TISP) 2017 was organised at SSIT Tumkur on 19th August 2017 for 33 participants from various government schools in and around Tumkur district.
## FINANCE REPORT

### Round up of financial Transactions in 2017

### Balance Sheet as at 31st December 2017

<table>
<thead>
<tr>
<th>Schedule</th>
<th>31-Dec-17</th>
<th>31-Dec-16</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. SOURCES OF FUNDS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>II. Funds and Reserves</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corpus</td>
<td>20,000</td>
<td>20,000</td>
</tr>
<tr>
<td>Committed Funds</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Uncommitted Funds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Reserve</td>
<td>1</td>
<td>1,10,48,906</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>1,10,68,906</strong></td>
</tr>
<tr>
<td>II. APPLICATION OF FUNDS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Assets, Loans and Advances</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Fixed Deposits</td>
<td>3</td>
<td>51,41,295</td>
</tr>
<tr>
<td>(b) Cash and Banks Balances</td>
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<td>37,33,662</td>
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<tr>
<td>(c) Advances and other receivables</td>
<td>5</td>
<td>21,93,949</td>
</tr>
<tr>
<td>Less: Current Liabilities and provisions</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td><strong>Net Current Assets</strong></td>
<td></td>
<td><strong>1,10,68,906</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>1,10,68,906</strong></td>
</tr>
</tbody>
</table>

The accompanying schedules are an integral part of the financial statements.

For Usha and Associates
FRN 0130995
Chartered Accountants

For IEEE Bangalore Section

Usha.S.C
Proprietor
Membership No.: 224749

Debabrata Das
Y V S Lakshmi
Bhalanath Pal
Chairman
Treasurer
Secretary

Place: Bangalore
Date: 05.01.2018
## Income and Expenditure Account for the year ended 31st December 2017

<table>
<thead>
<tr>
<th></th>
<th>Schedule</th>
<th>31-Dec-17</th>
<th>31-Dec-16</th>
</tr>
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<tbody>
<tr>
<td><strong>INCOME</strong></td>
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<td>Rs.</td>
<td>Rs.</td>
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<tr>
<td><strong>I. Direct Income</strong></td>
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</tr>
<tr>
<td>I. Sponsorship received</td>
<td>32,19,591</td>
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</tr>
<tr>
<td>II. Registration Fees</td>
<td>14,25,206</td>
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<td></td>
</tr>
<tr>
<td>III. Support from HQ and other IEEE units</td>
<td>17,72,489</td>
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<td></td>
</tr>
<tr>
<td>IV. Support - YPINSPACE</td>
<td>64,302</td>
<td></td>
<td></td>
</tr>
<tr>
<td>V. Support from Signal Processing Society - YPINSPACE</td>
<td>1,41,190</td>
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<tr>
<td>VI. Support from Global Young Professionals - YPINSPACE</td>
<td>95,634</td>
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<tr>
<td><strong>Gross Income</strong></td>
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<td>69,09,292</td>
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<td><strong>Less: IAIM and YPINSPACE Expenditure</strong></td>
<td>46,95,338</td>
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<tr>
<td><strong>Surplus from IAIM and YPINSPACE Event (A)</strong></td>
<td>22,73,947</td>
<td>24,54,387</td>
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<tr>
<td><strong>II. Indirect Income</strong></td>
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<tr>
<td>Interest on Savings Accounts</td>
<td>1,38,852</td>
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<tr>
<td>Interest on Fixed Deposits (including accrued interest)</td>
<td>4,01,544</td>
<td>5,35,722</td>
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<tr>
<td>Interest on Income Tax Refund</td>
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<td></td>
</tr>
<tr>
<td><strong>Total Indirect Income (C)</strong></td>
<td>5,40,396</td>
<td>4,33,405</td>
<td></td>
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<tr>
<td><strong>Total Gross Income (A+B+C)</strong></td>
<td>80,70,688</td>
<td>80,55,864</td>
<td></td>
</tr>
<tr>
<td><strong>EXPENDITURE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Section Support</td>
<td>17,69,267</td>
<td>21,47,784</td>
<td></td>
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<tr>
<td>Programme and Event Expenditure</td>
<td>24,29,200</td>
<td>34,71,930</td>
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<td>Annual General Meeting Expenditure</td>
<td>6,80,040</td>
<td>8,24,172</td>
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<tr>
<td>Other Administrative and General Expenditure</td>
<td>4,90,145</td>
<td>5,55,955</td>
<td></td>
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<tr>
<td>R10 50 Years Celebration</td>
<td>-</td>
<td>25,81,640</td>
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<tr>
<td>SYWLC</td>
<td>-</td>
<td>56,29,400</td>
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<tr>
<td>WIEGS</td>
<td>-</td>
<td>5,97,259</td>
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<tr>
<td><strong>Total (E)</strong></td>
<td>53,87,658</td>
<td>3,58,15,728</td>
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<tr>
<td><strong>Excess of Income Over Expenditure transferred to General Fund</strong></td>
<td>26,83,026</td>
<td>(2,38,472)</td>
<td></td>
</tr>
</tbody>
</table>

### Summary of significant accounting policies

The accompanying schedules are an integral part of the financial statements.

For Usha and Associates
FRN: TIN99999
Chartered Accountants
Usha, S.C. Debabrata Das
Proprietor Y.V.S Lakshmi
Membership No. 22-4749 Chairman
Place: Bangalore Treasurer
Date: 03-01-2018 Secretary
Report on Affinity Group Activities

Young Professionals, Bengaluru

<table>
<thead>
<tr>
<th>Date</th>
<th>Name of Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>04/02/2017</td>
<td>Technical paper writing and publishing workshop at NIE Mysore</td>
</tr>
<tr>
<td>8/2/2017</td>
<td>Technical Writing and Publishing at SSIT Tumkur</td>
</tr>
<tr>
<td>5/3/2017</td>
<td>IEEE Bangalore Section Team Building and Networking Program</td>
</tr>
<tr>
<td>27-28 April 2017</td>
<td>Machine Learning Workshop at CDAC</td>
</tr>
<tr>
<td>3/7/2017</td>
<td>Awareness Workshop on Accreditation in Engineering Education.</td>
</tr>
<tr>
<td>29/7/2017</td>
<td>IEEE Ideation to Productization</td>
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<tr>
<td>19–29 July 2017</td>
<td>Make in India Entrepreneurship Bootcamp 2017 (MII EB)</td>
</tr>
<tr>
<td>19 August 2017</td>
<td>IEEE Teachers in Service Programme 2017</td>
</tr>
<tr>
<td>9/10/2017</td>
<td>Student Transition &amp; Elevation To Partnership (STEP)</td>
</tr>
</tbody>
</table>

Technical paper writing and publishing workshop at NIE and SSIT Mysore

NIE IEEE Student branch in collaboration with Young Professionals, IEEE Bangalore Section conducted a technical paper writing and publishing workshop. Enthusiastic students from in and around Mysore showed a great interest in this event in both the colleges.

The aim of this event was to provide impart knowledge of technical paper writing and publishing skills. The workshop also covered current scenario of research in India, factors to consider for publishing, where to publish, what is academic writing, ethics in technical writing, publishing, and many more. Since the workshop was hands-on, it helped them in knowing new platforms that they can work on.
IEEE Bangalore Section Team Building and Networking Program

The IEEE Bangalore Section “Team Building and Networking Program” was conducted on 5th March, 2017 at the picturesque hills of Kuntibeta, in the Mandya District of Karnataka. The event had received an overwhelming response during the registration and more than 150 students and young professionals had registered for the event out of which 65 students and young professionals were finally selected to be a part of the program.

The day started with the introduction session briefing the students about IEEE Bangalore Section and the agenda for the day. The introduction session was followed by breakfast and then the students gathered for the briefing session for the trekking. The event was managed by team of young professionals and professional trainers from Mysuru. The YP team briefed the participants about the ongoing initiatives of the IEEE Bangalore Section and the upcoming workshops, industrial visits and conferences.

Make in India Entrepreneurship Bootcamp 2017 (MII EB)

The event was sponsored by IEEE Young Professionals Bangalore Section, IEEE Region 10 Strategic Planning under Entrepreneurship Activities Support Funding and Aarogya Seva. The event received around 100 applications out of which 30 were selected after vigorous round of applications and interviews. The participants of IEEE MII EB were selected from an outstanding pool of applicants after vigorous rounds of applications and interview process. They were provided with an education based on the Massachusetts Institute of Technology (MIT) framework of Disciplined Entrepreneurship that combined rigorous academic study with the excitement of discovery, support and intellectual stimulation in an intense immersive experience. During the bootcamp, they were pushed to the limits, inspired, challenged by the faculties, Speakers, MIT GEB Alumni and Mentors from all over world. The participants were trained in analyzing 24 steps frame work of Disciplined Entrepreneurship discovered by Prof Bill Aulet of Massachusetts Institute of Technology. Apart from the MIT GEB alumni, Abhishek Appaji, there were around 30 speakers spanning over 11 days of the bootcamp. The participants were made to work on the deliverables every day on the concepts taught in the sessions and had to submit at the end of the day.

Workshop on Machine learning concepts and applications.
IEEE Bangalore Section in collaboration with C-DAC Knowledge Park organized a workshop on Machine learning concepts and applications. Knowledge partners C-DAC walked through all the concepts in the machine learning along with the hands-on session. The inaugural talk by given by Muralidhar Somishetty, CTO, Innohabit Technologies, explained about the industrial applications of machine learning concepts. It was followed by a hands-on session on R language was taken by Mr. Pavan Kumar, C-DAC. Rest of the workshop was mainly concentrated on the concepts in machine learning and hands-on sessions to experiment few examples on each algorithms like, K-Mean, KNN, Ensemble, etc..

**Awareness Workshop on Accreditation in Engineering Education.**

The aim of this event was to improve the awareness of accreditation in Indian scenario. There were participants from 12 different Institutes though out Bangalore section.

The speaker Abhishek Appaji shared the history of IEEE and Young Professionals along with the Importance of Educational Activities fund by R10. He also shared about the various funding from IEEE for students and faculties. Dr K Mallikharjuna Babu, Principal of BMSCE (pioneer in Accreditation with representatives in the National Board of Accreditation) share about the efforts required to improve accreditation of colleges in India and current scenario of Accreditation.

There were many other speakers who spoke about various process to be adopted by the engineering schools for continuous improvement. Improvement would be towards, Program Outcomes, Program Educational Objectives, Course Outcomes, Program specific outcomes, etc. Over all the event was appreciated for giving overview of accreditation process in India. The participants wanted to extend this workshop for two days rather than one day.

**IEEE Ideation to Productization Organized by IEEE Young Professionals Bangalore Section**

The session started with each of the expert giving a talk on their expertise and What will the investor pitch would be like and what is that expected from them. A Vijayarajan spoke about the experience in mentoring many successful start ups and his experience in GE for around 20 plus years. Rajeev and Vikram told them the opportunities existing in virtual incubator which they had established. Mukesh and Gautham spoke about the myths and common pitfalls a startup would be while raising money from investors.

In the afternoon, each team got 8 min to pitch their ideas, and 7 min for question answer from the jury about their idea. The 6-team started their pitch at 2 PM and concluded the session by 5 PM. Out of 6 pitches 1st prize was awarded to team Beckon with prize money of Rs.10000/-
(team of 5) and 2nd prize was awarded to SARB with Rs.5,000/- (team of 3) as prize money rest of the 4 teams were given goodies to carry home. The event had Gala Lunch to all the participants and the guests who joined the event.

IEEE Teachers in Service Programme 2017 at SSIT Tumkur

The aim of this event was to make the participants understand the basics of science relating to engineering for high school teachers and students. There were 33 participants from 15 different government schools in and around Tumkur Districts.

After the inauguration, the participants were divided into 6 teams with teachers and students in every team.

Mr. Suraj, Treasurer YP, Bangalore Section spoke about parachute making and involving the participants to understand the basic science principals and concepts used in making a parachute and also after the teams prepared the parachute they were dropped from 3rd floor and was explained about the proper landing happened only when the design was apt. Speakers explained the working models and explained the participants how they worked as sensors and usage of technology in various everyday life. The students and teacher participants said they felt the techniques were very complicated whenever they imagined, but at the end these sessions they were very happy to know the concepts were simple.
Student Transition & Elevation to Partnership (STEP) – Program on Career Guidance at IEEE SB CEC

The need for empowering the youth with skillsets that would give them the necessary acceleration in riding the uphill journey after graduation has been more acutely felt in the rural areas. Students and graduates from CEC and neighbouring areas isolated from the mainframe, have been aware of this need for more exposure to interact with professionals and peers for a better orientation to industry needs. To encourage interactions with peers and professionals from the industry with aim of making the learning better and effective, speakers from different age groups and sections were chosen Mr Shishir -from the industry, has been in the startup and the multinational industry space and Prof Abhishek has himself been in both spaces of entrepreneurship and research probably as has Prof Ashwini , Miss. Ankita from the EFY group in a slightly different path by giving the students various interesting career options that can be pursued by an Engineer.
Women in Engineering, Bengaluru

IEEE Bangalore Section has 20 WiE Affinity Groups. They conduct activities like induction program, poster presentation, project competition, Women’s Day Celebration, Code-a-thon, IEEE Day, paper presentation, visits etc. The affinity groups organised over 50 activities during 2017. The following are section level events of WiE:

10th March 2017: Inauguration of GSSS Women in Engineering Affinity Group and Celebration of Women’s Day in GSSSIETW, Mysuru.

26th March 2017: “Parichaya — Get to know each other” was held along with Branch Counsellors Meet in PES University which included a meditation session from Heartfullness Foundation.

28th April 2017: One day workshop on “Building Skills for Women Entrepreneur” was organised in Vidya Vikas Institute of Engineering & Technology, Mysuru.
8th October 2017: Tree Planting program – Hasiru Bhanuvara held at Nimhans Hospital Premises. This 93rd Green Sunday program was organized by Adamya Chetana & was participated by WiE Members.

10th October 2017: Ada Love Lace Day Celebrations with the Inauguration of WiE Affinity group in St Joseph Engineering College, Mangaluru followed by Workshop on Entrepreneurship- “The Entrepreneur Zone (TEZ).”
16th- 17th November 2017: 40 WiE Students & 2 WiE faculty members from 20 + Engineering colleges were given scholarship to attend Grace Hopper Conference India held at Bangalore International Exhibition Centre. They attended all the sessions & participated in career fair.
STUDENT ACTIVITIES REPORTS FOR 2017
Round up of activities in 2017
BEC IEEE

- BEC-IEEE “Robust”

‘Robust’ was one of the event in NOVUS 17-a national level technical symposium. The event was led by Abhishek Y. The event was conducted for two days:

Day 1:

There were totally 9 teams participated in the first round and there was no elimination. Judgement was given according to the time taken by the bots to complete the arena. The bot taking least time would gain the highest score in the round. All the participants again competed in the second round in which 4 teams were eliminated by considering their scores from both first and second round. Other teams were qualified for the final round that was going to be held on the next day.

Day 2:

Arena for the final round was revealed to the qualified participants and the event was proceeded. All the five teams completed the task provided in the final round and the time was noted down. The judgement was given according to the time taken by the bots to complete the arena. The top two teams were declared as Winners and Runners respectively. Both the teams were awarded with cash prizes, Certificates and mementos. The event ended with a short photo session.

- BEC-IEEE “Overhaul”

Overhaul’ was one of the event in NOVUS 17-a national level technical symposium. The event was led by Kiran V. The event was conducted for two days:

Day 1:
20 teams were divided into 2 groups of 10 teams each. The first 10 teams were taken to the class room where the aptitude test was conducted for them. Simultaneously the other 10 teams were given with bicycles to assemble. Next the first 10 teams assembled the bicycles and other teams wrote the aptitude test. The event was concluded at 1:00pm.

Results were announced in the evening. Totally 6 teams were qualified. The qualified teams were asked to attend final round that was going to be held on the next day.

Day 2:
In final round of the event qualified teams were given with an engine to assemble and all the teams successfully assembled it. The judgement was given based on the time taken by each team to assemble the engine. Winners and runners up were announced and they were awarded with cash prizes, certificates and mementos. The event was concluded with a short photo session.

- **BEC-IEEE “IEEE day”**

On the occasion of IEEE day, The program was conducted by BEC -IEEE student branch for second year science students of Prarthana PU Science College and Basaveshwar PU Science College in Bagalkot. There was a PowerPoint presentation given on the topic "Choosing Engineering as a Career Path and also How IEEE can be a part of Engineering?“

The volunteers gave a brief explanation about the career, why engineering?, different branches of engineering, importance of engineers and how the engineers play role in the society and also possibilities of getting jobs in engineering. The next session was on mentioning about benefits of IEEE. There was an interactive session conducted by Vineet P G (chairman, BEC-IEEE ) and Shashank Bennur (vice-chairman, BEC-IEEE). The goodies were given for the students, it was ended with a photo session.
1. **Quantum communications** - Talk by Prof T Srinivas, Associate Professor, Dept of ECE, IISc, Bangalore.

Quantum Communication is the technology where information is represented and transmitted by quantum states of the system, such as spin of an electron or polarization of a photon. In classical communications we use current or voltage levels or light amplitude levels to represent information. In this lecture basic principles of quantum communication will be discussed, such as representation of information, properties of sources of quantum information, detectors and quantum channels, and some models of tackling interruption. Integrated optical devices for quantum communication applications will be dealt with, along with recent work done in our laboratory. It is expected that quantum communications will drastically change our communication scenario in the next decade, and photonics technology is going to play a crucial role.

2. **SPR based Optical Bio-sensor and SPR based Optical Storage** – Talk by Dr Preeta Sharan, Dept of ECE, The Oxford college of Engineering, Bangalore

Optical biosensors are a powerful detection and analysis tool that has vast applications in biomedical research, health-care, pharmaceuticals, environmental monitoring, homeland security, and the battlefield. They are immune to electro-magnetic interference, capable of performing remote sensing, and can provide multiplexed detection within a single device. Here we focus on the recent advancement in optical label free biosensors that are based on RI detection. The optical structures like surface plasmon resonance based biosensors represent the majority of research activities in optical label-free sensor development.

3. **MWP in Radar Applications** - talk by Dr. Meena Dasan, Scientist, LRDE, DRDO, Bangalore

Microwave photonics (MWP), a discipline which brings together the worlds of radiofrequency engineering and optoelectronics, has attracted great interest from both the research community and the commercial sector over the past 30 years and is set to have a bright future. The added value that this area of research brings stems from the fact that, on the one hand, it enables the realization of key functionalities in microwave systems that either are complex or even not directly possible in the radiofrequency domain and, on the other hand, that it creates new opportunities for information and communication (ICT) systems and networks. While initially, the research activity in this field was focused towards defense applications, including Radar. MWP has recently expanded to address a considerable number of civil applications, including cellular, wireless, and satellite communications, cable television, distributed antenna systems, optical signal processing and medical imaging.
AI ML Talk

Resource persons: Akash Murthy and Bharath from Euphrime

It was free and informative talk organised by IEEE RNSIT for students from all branches. 110 students attended the talk. Speakers were from a Data Analytics Firm called Euphrime Technologies. The session began with an Introductory verse by the IEEE Chairman, Prashanth Reddy. Then Bharath, from Euprime took the stage by discussing about Machine Learning – their applications in the field of Data Analytics, how they can predict the next output by analysing the previous outputs and how this could also mean that this could be a disaster to working population. Following him, Akash Murthy spoke in brief about the existing Artificial Intelligence Technology used worldwide to evaluate a person’s health and body behaviour and deliver the status, whether that person’s in need for a checkup or there’s an imminent threat to his health. He provided with accurate numbers, graphs and analysis by stating the unusual, thus providing an air of consensus that the talk should been for a duration. He concluded by promoting an App his company had created and advised us to look out and delve for different fields of Engineering and seek out to the answers to the unsolved questions.
NITK IEEE

- **Project EXPO**
  Project Expo was organised by the IEEE NITK student branch for the year 2017. The expo will showcase projects done by IEEE student members pertaining to the fields of:
  - Circuits and Systems
  - Computer Science
  - Signal processing
  - Mechanical and Automation Systems
  - Nano Tech
  Many of these projects have been recognized nationally and internationally for their impact on society. The expo was a huge success and students from all over the Mangalore subsection attended.

- **INSIGHT**
  Insight was held during August 2017. Various accomplished final years talked about their respective branches, the various opportunities they can avail in their branches, and gave suggestions about internship opportunities and placements to the juniors. They also spoke about projects to be taken up, and threw some light upon the various sources we could take up projects from. Insight was held for ECE, EEE, CSE, mechanical, chemical, IT, civil, metallurgy and mining branches. Students got an idea of how their branch is going to be, and how to prepare for it. Insight received a good response and was a good learning opportunity for all.
IEEE PESIT South Campus Student Branch

- IoT Workshop
A basic to intermediate Workshop on Internet of Things with speakers from IoTBLR and Module143.com.

The workshop was conducted in two phases. The first phase saw talks by some eminent speakers from IoTBLR, who used their skills and expertise in the field of IoT to drive home their point. The second half targeted the more practical aspects of IoT with a hands-on session using NodeMCU Devkits.

Talk Session 1: Introduction to IoT by Mr. Nihal Kashinath, Founder of IoTBLR

In the interim of an hour, the anatomy of connected devices, challenges facing IoT in India and elsewhere, key terms pertaining to IoT and also the IoT-focused meetup groups organised globally was explained in detail.

Talk Session 2: Engineering Through Design by Mr. Rishi Gourav Bhatnagar, creative technologist.

An eloquent talk session pertaining to problem solving. The audience was encouraged to digress a problem’s solution across all domains. They explored various aspects of problem solving skills, such as the ability to ask the question "why?"

Talk Session 3: IoT Security by Mr. Arun Magesh, IoT security expert, Attify.

The security issues facing IoT devices were discussed in this hour. Various real-world scenarios, along with past case studies and attacks were used as a reference for this session.

- Workshop: IoT using NodeMCU by Himesh Reddivary, Managing Director, Module143.com

The hands-on workshop was aimed towards teaching the audience, fundamentals of connected devices. The workshop enabled the audience to code a simple home automation system wherein the user is able to switch on/off lights using the phone. The basic functionality of the motion sensor and it’s usage in daily life was also one of the topics in the agenda.

- Kalpana 2017 | Humanitarian
The event’s sole purpose was to bring home the fact that education, is in fact, the central pillars of our society. We hosted 10th standard students from a government college and presented them with the prospects of pursuing a career in the science field. Prof. Anand M.S. a faculty member of PESIT-BSC with over 20 years of experience in the industry made the students aware of their dreams and goals. A small meal was provided in the interim. Basic necessities such as exam board, pencil, pen, notebook, scale, eraser and sharpener was handed over to them at the end of the event. At the end of the day, they were provided transportation back to their school.
Prof. Anand spoke to the students about the journey of an entrepreneur and how an entrepreneur is held in high esteem in the society. He also demonstrated mini-projects that can be started on a small scale and later scaled up. As a break they were also introduced to games involving English sentence forming etc.

Overall, the event sparked in these students, the motivation to complete their education and also innovate, learn as they grow in their field. Since it was a humanitarian event, we also made sure a complete package was delivered to them in terms of take-aways.
AMRITA SCHOOL OF ENGINEERING, STUDENT BRANCH

- Volunteering support for the workshop at Nokia- Software Defined Connectivity and Analytics- 9th September

The early morning hours of 9th September, 2017 saw unbridled enthusiasm and curiosity in the participants from various companies who came to attend one day interactive seminar on ‘Software defined Connectivity and Analytics’ in Nokia, L5 building, Manyata Tech. Park. The seminar witnessed more than 150 participants who came to attend the six diverse sessions.

The first session on ‘SDN/NFV in 5G Networks’ was taken up by Mr. Samir Satapathy, NPO Ericsson. The session gave a deeper insight to the participants on 5G Networks and other technological advances in the domain. Mr. Salil Agarwal, Nokia delivered on ‘Cloud/ Edge Computing’. He expounded on how this technology is helpful for industries and also the various challenges faced by industry in security related issues. The next session resumed after tea-break and the next speaker, Mr. Tarun Gupta, National Instruments kept the audience enthralled by his talk on ‘Standard Defined Radio (Prototyping C-RAN using Standard Off-Shelf Tools’. He gave a clear picture of Massive MIMO and Advanced Wireless Prototype with statistical facts and his experience. Mr. Aloknath De gave a detailed description on ‘Leveraging SDN for IoT’. He also introduced the attendees to IoT Business opportunities and Industry Trends. He concluded his session with a comprehensive summarization on hinderances in IoT. The next session after lunch on ‘Advanced Analytics through Artificial Intelligence/Machine Learning’ was taken by Dr. Madhan Kumar Srinivasan, Accenture in which he took the participants through the journey of IoT and Data Analytics. The last session was on ‘How Telecom can blend intelligence with AI’ in which Mr. Rajaraman Subramanian (Giri) introduced the concept of change blindness. His talk brought forth a new perception of data analytics for the participants. The seminar came to an end on a high note with networking, question-answer and photo sessions.

The Quest: Aarohan- 2k17- 12th October 2017

IEEE Student branch conducted treasure hunt for the senior category school students (11th- 12th standards) on first day of Aarohan. The Science day of 12th October witnessed senior category school students running, detecting and decoding clues all around Amrita Bengaluru campus. The students were made to participate in a team of three.
The game consisted of three rounds. First round being decipher, which eliminated many teams and only thirty teams could make to next round. The next round consisted of picture clues, word clues, ASCII and binary codes and the top three teams qualified for the final round. The three teams were given a real life problem and based on their answers, they bagged the ranking positions. The winning teams were felicitated during prize distribution ceremony.
IEEE Student Branch, V VIET, Mysore

- NATIONAL LEVEL SEMINAR ON "INNOVATION & ENTREPRENEURSHIP

On account of IEEE Annual Fest VVIET IEEE Student Branch had conducted National Level Seminar on "Innovation & Entrepreneurship" on 10th May 2017 at Vidya Vikas Institute of Engineering & Technology. The main objective of the seminar was to ideate the entrepreneurship skills among students. The resource Person for the seminar was Ms Jyothi Noronha, MD, Fulcrum Edu, Bengaluru. Ms.Jyothi gave insight about the skills one needs to have to become a successful entrepreneur. Later in the activity based sessions the students were asked to come up with ideas about new products/services they would like to introduce to the market. She taught them how to build a elevator plan and improvise them according to the current trends in the market and build a business canvas model. She also enlightened the students about various schemes government is providing for the startup companies. Around 63 Students from colleges like GSSS, ATME & VVIET attended the event.

- IEEE MEETING -NEW MEMBER ORIENTATION

VVIET IEEE Student Branch had conducted new member orientation program for IEEE members on 9th September 2017. The main aim of the program was to create awareness among the students about benefits of IEEE. Around 50 IEEE members attended the event. Ms.Namratha Dcruz IEEE Faculty Coordinator oriented the members. In the presentation students were told about the benefits of IEEE membership and how to use the IEEE website. The students were made to access the IEEE account and explore different features of IEEE account. The students were also motivated to participate in the IEEE activities actively.
On account of IEEE Day VVIET IEEE Student Branch had organised a talk on Right Spot!! Career Planning on 28th October 2017.

The main aim of the event was to help students in planning their career. The resource person for the event was Mr. Sarvesh Singh, Digital Marketing, Walnut Digital, Bengaluru. The event began with a brief introduction about the guest. Later Dr. Bindu A Thomas, Branch Counselor, VVIET addressed the students about importance of career planning.

In the session Mr. Sarvesh, enlightened the students about how they need to plan for better career and how to work towards achieving their goals. The students were motivated by the talk and had an interaction with the resource person. Around 25 students were present for the event.
IEEE-SJCE Student Branch

- Robotics 8.X

ROBOTICS 8.X workshop was hosted by EDS chapter of IEEE SJCE student branch. It was the most awaited workshop in SJCE. Every year the workshop has seen exponential improvements both in terms of organization and technical knowledge imparted in the workshop.

This workshop was primarily targeted at students who wish to discover the new technology by hands on training session. The participants were introduced to practical and designed oriented approach. At the end of the workshop we ensure that the participants get better understanding on automation technology. The workshop is so patterned that it is best suited for beginners taking their initial steps towards robotics, embedded systems and microcontroller technology and also for the intermediates who keen to know more about it. A total of 142 students among which 16 were from different colleges attended the workshop which had a volunteer strength of 40 and the workshop started on 15th February 2017 at 5:30pm.

Highlights of the workshop

Participants learnt to

- Build an all-terrain robot.
- Control the robot using an android cell phone or a PC through Bluetooth
- Obstacle avoiding robot using ultrasonic sensor.
- Bot using DTMF module.
- A demo on building line following bot.

The softwares for microcontroller programming- Energia and Code Composer studio CCS were installed on the first day. On the next day, session focused on introduction to MSP430G2553 architecture, MSP430 Launch pad and also about the usage of the installed software’s. Also, participants programmed a simple code to blink an LED on the board in CCS software. On day 3 the participants blinked the led by using bit addressing technique. Since the workshop had participants even from first year BE as well, we started the workshop by briefing them about basic digital electronics and number representation in binary and hexa decimal. Also, they were taught to read input to the microcontroller from push button. On day 4 the concept of interrupt was introduced to the participants and programming was done in CCS software.

Also, the participants were introduced to programming in Energia software. Blinking the led and button reading was done using energia. The last day
which was the most awaited day of the workshop started at 9 am. Concepts of ADC (analog to digital convertor), LCD (liquid crystal display), DTMF and ultrasonic sensor were introduced to the participants. And the most anticipated hands on session of bot building were started by noon.

- Cyberia’17

IEEE-SJCE conducts its annual technical festival ‘Cyberia’ every year, in the even semester. The motto of the festival is to promote the industry-academia balance, by bringing together professionals from all streams and rewarding talented ones. Every year there are many pre-festival events heralding the arrival of Cyberia, lining up to the grand inauguration. The pre-Cyberia events started with Wolf of Cyberia. The inauguration of ‘Bosch Cyberia-2017’, was held on the 31st of March, 2017. The three-day festival drew students and professionals from across the state.

All workshops and sessions were handled or judged by experts in the industry, had hundreds of participants and were witnessed by students from all streams. The festival successfully culminated on its third day, with the winners from every event, being awarded with great prizes.

Panel discussion

The inauguration function was succeeded by the panel discussion in which the panelists discussed on the topic ‘The student resource of India is being spent abroad with missions like make in India, digital India, rural India, should the students continue doing this? If this continues what can be the consequences? What measures can be taken to make the students not leave their country and contribute to nation building.’ The chief guest was Kiran Bettadapur. The guest of honour was Srikantaswamy Bisilawadi of Robert Bosch India.

The panel included

- Mr. M J Sampath Kumar
- Mr. B S Narayan
- Mr. Chethan M
- Mr. Ram Kumar
- Mr. Adarsh Ramesh
- Mr. Sudheendra Koushik

Wolf of cyberia

Wolf of Cyberia is a competition that tests the business aptitude of the contestants. The event is unique and challenging as it not only helps bring out the technical aspects but also
requires marketing skills to make it to the end. The competition was built in such a way that it tests the participants’ introspection and flexibility of mind. The competition required teams of two, and consisted of three rounds.

The first round was a quiz wherein the questions varied from perspective based to multiple choice questions on recent and popular happenings as well as some questions on the stock market. It was held on the 23rd of March.

There were thirty-seven teams that participated, which over shot our estimate. Twenty-six teams were chosen for the second round which required the contestants to come up with an idea to build their startup. The idea was judged based on its originality, feasibility as well as the clarity with which the plan was thought of and explained. The final round was conducted on the last day of Cyberia.

The teams have to come up with a market plan that ensured the success of their business. They then presented their idea to the judges who had years of experience in the field. The teams were judged based on various parameters such as segmentation: the demographic that the teams aimed for the improvements that could be incorporated, positioning etc. Also, the overall market plan had to be feasible and the exact steps to reach the final goal was evaluated. Teams were required to have a clear step by step plan to build the company and generate revenue enough to sustain it. After some very interesting presentations the contestants showcased that their ideas fit the judges’ criteria. The two teams that could prove that their plan would ensure success and convince the judges that it was almost complete in every aspect earned the highest score and won the competition.

**Jugaad**

Jugaad is a fun literary event conducted by the Editorial Board of IEEE-SJCE during the even semester technical fest Cyberia. This time, it was held on the 24th of March, 2017. The topics were given before hand to the participants to prepare. The topics were absurd and amusing, however, had no relation to one another whatsoever. The idea of the event was to pick any, some or all of the given topics and come up with a fun, crazy or even a silly logic to prove them right.

The participants were allowed to do so using any medium such as drawings, skits, power point presentations and so on. The participants were judged based on criteria such as creativity, exposition, presentation, relevance, etc. Based on these scores, a winner and a runner-up were chosen. All in all, the event was a grand success that not only opened up channels of imagination and creativity but also gave the audience a good dose of laughter.
E-innovation

As part of Cyberia 2017, a technical event Ennovation was held. The motto of the event was to test the practical problem-solving ability of engineers and reward the most innovative minds. Participants were required to be in a team of two. The event had a total of two rounds. In the first round, the participants were tested on a theoretical, aptitude-driven and innovative basis. The first round was held on the 25th of March, 2017.

There were 26 participating teams. Of these 26 teams, 13 teams from first second and third years, put together, were selected to the second round. The second round had two stages, both of which were held on Sunday, the 2nd of April.

The first stage was an interview. The selected team members were interviewed individually and were evaluated for a total of 25 points. The interviewers were the event leads themselves. The interview tested the innovativeness, creativity, knowledge of intellectual property and practical exposure of the participants. The second stage, the most important stage of the event, demanded a futuristic idea from the teams. They were not required to provide the nitty-gritty technical details, but had to substantiate their ideas with sufficient, technological necessities. They were free to present a PPT, as per their will. A total of seven ideas were presented. The stage was judged by students of 8th semester, department of ECE, SJCE. In the end two teams were declared winners.

Junkyard wars

Junkyard wars was one of the pre-fest events of CYBERIA’17 which tests participants’ creativity, technical skills, time management and the ability to present their models. The event was open for both circuit and noncircuit branches. The event got good response from both IEEE and nonIEEE members and also from the non-circuit branch members. Participants worked in teams and came up with extraordinary models. These models were built using the junk materials that were provided to them. The teams were asked to pick any 10 materials from the displayed junk materials that included scrap bottles, scrap metal wires, newspapers, straws, chopsticks, thermocol, plastic balls, bottle caps along with some useful materials like scissors, glue, balloons, chart/colour papers, ice cream sticks, cello tapes, rubber bands.

Every team was provided with batteries and dc motors so that they could come with a working model which satisfied the theme of the event. Teams were given 15 mins to select the junk materials and an hour to build their working model where in they put all their creative ideas to make the best out of the junk. Teams presented pretty impressive models like mary go round, giant wheel, vacuum cleaner, powered cars, powered boats, powered air plane, balanced dual motor car and these models put judges in tough situation. The models were
judged by Vivek keshava, Joint Secretary of IEEE-SJCE and H.Anusha, General Secretary of IEEE-SJCE on the basis of creative elements, unique techniques and extent of working of the model.

**El-Dorado**
An Online fun event subtly testing the logical thinking and creative extrapolation of given data. It was held from 25th of March to the 28th of March. Eldorado is largely a nontechnical, much enjoyable, online picture connect event. A set of images is shown to the user and the user has to input the right keyword in order to advance to the higher levels. The questions are mostly miscellaneous with no particular field or agenda to it. The question set will include picture connects concerning recent events, popular folklore, entertainment, sports, corporate giants, showbiz and well-known English phrases. More than 200 peoples from several parts of the world participated in the event.

**Mock placements**
Mock Placement is the one of the main events of CYBERIA. It was held on 27th of March. Participants go through different rounds of placement selection procedure for self-evaluation. It mainly consists of 3 rounds

1. Written Test
2. Group Discussion
3. Technical and Personal Interview

Winners were selected separately from each year. One from first and second year, two from third year.

**Code your way**
Code Your Way was a Coding event where geeks from different remote places participated. The event had no registration fee and was hosted on a well-known platform called “Hackerrank”. It was conducted on 28/03/2017 from 10p.m. to 4a.m. on the next day. Participants were given with coding challenges in popular and most important computer science domains – Data Structures, Algorithms, etc. There were questions that required the contestants to code a puzzle given, trace back the problem (code a problem, given the output) and debug a code with errors. The event saw a participation of 114 students across the nation.

**Just google it**
This pre-Cyberia event was held on 28th March at 6 PM. The event tests a participant’s capability to find answers to the questions, provided they have an internet connection. The event drew a good crowd, who were surprised to find the questions interesting and educative at the same time. The contest consisted of two rounds, the first one being a paper-pen round, in which the participants were given a set of questions to be solved in limited time. The top ten participants from the first round, made it to the second, where they had to battle each other for the two prizes. All the people who witnessed the event were enthusiastically waiting to find answers to the brilliant questions.
**Matholympic**

Matholympic was conducted on 1\textsuperscript{st} April at 5:30 pm, as one of the pre-Cyberia events. Participants from various branches took part in the competition which included students from other institutes as well. The event required meticulous thinking and smart work from the students and mainly focused on logical thinking.

**Fury road**

Fury Road was the Robo race competition conducted by IEEE-SJCE as a part of Cyberia’17. Fury road was a part of robotic competition. where we created a mud, track Consisting of various obstacles and terrain. Participants with their bots attended the competition. There were around 12 teams each consisting 4 members. There were three rounds finally 4 teams entered into finals, 1st and 2nd place Was announced and prizes was distributed.

Exquizzite was a quizzing event held on the last day of Cyberia. It was the last event of the fest. It was a general quiz consisting of a few technical questions also. Though it was a Sunday, the event saw good participation.

**Amaze**

Amaze, a line follower robotics competition was conducted by IEEE-SJCE EDS as a part of Cyberia 2017. Its objective was to make the participants of ROBOTICS 8.1 workshop, to get acquainted to the competitive robotics environment. In this competition, the robots built by the participants, with the digital sensors given to them, were supposed to follow a black track provided. Out of 17 teams that look part, every team was good and completed the track but best 9 were selected for round2. In the final round, the fastest team to complete the track was declared as the winner. The time taken by the winning team was 1:17 minutes
IEEE-HIT STUDENT BRANCH in association with IEEE BANGLORE SECTION is proud to announce that HIT-QUEST 2017 i.e. our 9th National level Technical Contest was successfully conducted on 21st April 2017. It is an annual event of IEEE-HIT which started with the inaugural function was followed by the auspicious Lamp lighting ceremony.

It included welcoming of the gathering, introduction of the chief guest, the overview of the HIT-QUEST 2017 was given by chief convener. The number of competitors were selected were announced in advance and the events being conducted throughout were been intimated. The coordinators of the events took up the agenda and beautifully put forward all the events with great responsibility. The events conducted were as follows:

A: Technical paper presentation - Under all the four branches We had 126 papers submitted by various colleges among 72 papers were selected and been presented. The event checked the student’s presentation and interests in research in a unique manner. The results and the references were strictly kept in mind.

B: Poster presentation on Smart India Theme: Around 36 students participated and were given 5 minutes to present the theme

C: Trouble Shooting: Around 29 groups were finding the problems in Electrical circuits.

D: Technical Quiz: We had 55 teams for technical quiz conducted in four rounds First round was written test with general technical questions and later three technical rounds including rapid fire questions

E: Circuit Debugging/Program debugging: Circuit debugging and program debugging were conducted differently for circuit oriented and program oriented students

F: Robo Race and Rob path finder: Robo race and Robo path finder events were organized and more than 100 students took part in these events.

G: FLIP-LA: A logic building and realization event conducted for ECE and EEE and CSE students
Many of the students from nearby colleges have participated and won the events. At the end of all the events feedback of the students were taken. The response was very positive and we are glad that they liked and got to learn lot of things from the events been organized.

At the end the formal valedictory was organized and the prizes were distributed to the winners. All the events received an overwhelming response and turned out to be a grand success adding colors to IEEE-HIT.

- **Workshop**

HIT, Nidasoshi, in association with IEEE Bangalore section and Computer Society of India has organized workshop on “Programming Skills”. Resource person for the workshop were Mr. Rama G Srinivas, Technology Consultant from Richman and Freeland, Hyderabad. The workshop was organized for Computer Science and Engineering students. Around 150 students have participated in the event. The session was started at 11.30 AM on 1st April 2017 and went up till 5.00 PM on 2nd April 2017.

On day 1, Programming structure and methodology, Data types, variables, operators, expressions, statements, blocks, Logic building with simple math and logical problems, Algorithms, flowcharts, Working with Arrays, Searching, sorting techniques, Working with Linked lists, Single, double, circular, Working with Stacks, Queues, priority Queues. Working with trees, Binary trees, Binary Search trees, Heap, Tree Traversals, Tree sorts(BST sort, Heap sort), Working with Post-Training Case Studies-Procedure Oriented programming, C-Language essentials topics were covered.

On day 2, Introduction to Advanced Data Structures, ADTs and Class Concepts, Objects, Object-Oriented Concepts-Abstraction- The Core Concept, Encapsulation, Inheritance, Polymorphism, Relationships (Dependency, Has-a, Is- a), Overloading, Overriding, Interfaces, Other OO concepts. UML Essentials, Working with Post-Training Case Studies, Object-Oriented Programming, C++/Java Language essentials were covered. The workshop was successful in enhancing the knowledge of the participants and hence the objective of the workshop was achieved after listening to the feedback during the feedback session after the presentation.
IEEE UVCE

- **KAGADA-2017**

Kagada is an Annual National Technical Symposium conducted by IEEE UVCE. It is a platform to showcase innovative ideas blended with technical knowledge to help the society. KAGADA-2016 was conducted on 21\textsuperscript{st} of October and was comprised of 5 sections.

1. Paper presentation (UG students)
2. Paper presentation (PG students)
3. WIE- women in engineering paper presentation
4. Poster presentation
5. Project exhibition session

The event got a very good response. Students from various colleges participated in the event in all the 5 sections. The winners were awarded with cash prizes.

Type of the event: Technical

No Of Participants: 212

- **IMPETUS**

IMPETUS 17\textsuperscript{th} a national level annual technical fest of IEEE UVCE was conducted on 24\textsuperscript{th} and 25\textsuperscript{th} of March 2017. It is a two-day inter collegiate fest.

IMPETUS 17.0, UVCE\textquotesingle s technical extravaganza was revved up almost a month before the actual days of the fest with its stimulating curtain raisers. The theme for this IMPETUS was “SMART ERA”. Mock placements, IT WIZ, Botnia 3.0, The Alchemist, Automania were some of the events that witnessed a huge number of participants.
Altogether, IMPETUS 17.0 along with all the well planned and organised events as well as the continued support and co-operation of the ardent participants and energetic volunteers turned out to be remarkable.
IEEE KSIT

- IEEE KSIT STUDENT BRANCH- REPORT ON WOMEN’S DAY(8th MARCH 2017)

Women in engineering is the affinity group of IEEE. IEEE WIE KSIT celebrated women’s day on 8th March 2017 in KSIT, Bangalore. The chief guest for the women’s day celebrations was Ms. Soumya Bhat, Gender activist. She recently co-organised and led the national “I Will Go Out” movement. Around 100 people had gathered for the event. The event started by lighting the lamp by the Guest Of Honour followed by an invocation song by WIE members and Ms. Soumya Bhat explaining the importance of women in today’s world. She also spoke about the role of gender in STEM (Science, Technology, Engineering, Mathematics) fields and the importance of actively supporting women in STEM sector of academia.

- ANTI HARASSMENT TALK

The talk on “ANTI HARASSMENT TALK.” was started with formal inaugural function. The participants were first year girl’s students (around 20 IEEE WIE members). Principal addressed the gathering. The inaugural function was upto 45 Minutes & it was followed by Dr. Hemavathi Srinivasan’s talk.

The Chief Guest Dr. Hemavathi Srinivasan explained about the meaning of sexual harassment, its types with different examples. She has presented Indian Penal code laws (IPC) & state initiatives in India against sexual harassment. She has marked out some safety tips for women to protect themselves from harassment.
The Summer School in Optics and Photonics (SOAP) 2017 was conducted during 12-16 June 2017 at the Golden Jubilee Seminar Hall, Department of Electrical Communication Engineering, Indian Institute of Science, Bangalore. It is organized by Applied Photonics Initiative, which is a coalition of photonics oriented professional organizations functioning in the campus - SPIE, OSA and IEEE Photonics Society.

This summer school was meant for graduate students, research scholars, post docs and faculty members doing research or planning to do research in optics and photonics. The school brought together the experts in the field from India and abroad and provided a platform for interaction with them and networking. There were eight speakers. Four speakers were from the host institute, IISc - Prof. P.K. Das (Department of Inorganic and Physical Chemistry), Prof. Varun Raghunathan (Department of Electrical Communication Engineering), Prof. Supradeepa and Dr. Gopal Hegde (Centre for Nano Science and Engineering). Two speakers were from other Indian universities – Prof. Anil Shaji (Indian Institute of Science, Education and Research Thiruvananthapuram) and Prof. Joby Joseph (Indian Institute of Technology Delhi). Two speakers were from Foreign Universities – Prof. Murukeshan V M (Nanyang Technological University Singapore and Dr. Peter Rohde (Univerity of Technology Sydney, Australia)

Prof. Murukeshan Vadakke Matham of NTU was invited as SPIE travelling lecturer. His lectures were live streamed in the institute. Dr. Peter Rohde was sponsored by IEEE Photonics Society IISc Chapter. The other speakers were sponsored by SPIE IISc Chapter. 65 delegates from all over India attended the event and a couple of them from abroad. 22 Lectures were delivered which covered the topics in Non-linear Optics, Nano photonics and Quantum Optics. Participants also visited IISc labs and Centre for Nano Science and Engineering. A cultural programme, Hindustani Classical Concert was also arranged as part of the event which was followed by a gala dinner. Dr. Gopal Hegde, Faculty, Center for Nano Science and Engineering, IISc, was the chief co-ordinator of the summer school, supported by Dr. T. Srinivas, ECE Dept, Factulty Advisor, and Mr. Rohit K R, Ph D Scholar, Student Chair, Applied Photonics Initiative, IISc.
KRISTU JAYANTI COLLEGE IEEE STUDENT BRANCH

• BUILDING CHATBOTS FROM SCRATCH

Name and details of the Resource Person: Mr. Srushith, Software Engineer, Codeops Technologies, Bengaluru

Objective: This session covers how to build a chatbot step-by-step through a demo. The topics covered were Writing serverless code, creating bot, and integrating with FaceBook Messenger/Slack.

The first session of Tech Talk Series for this academic year was held on “Building Chatbots from the scratch”. Mr. Srushith in his talk stated that Chatbots are artificial intelligence systems that we interact with via text or voice interface. Those interactions can be straightforward, like asking a bot about the weather report, or more complex, like having a bot troubleshoot a problem with your internet service. He explained how to Identify the opportunities for an AI-based chatbot, Understand the goals of building a chatbot, Designing a chatbot conversation and Building a chatbot using frameworks or development (non-coding) platforms. He gave overview of the technologies which helps in building bots which include Amazon Web Services, AWS Lex – for Natural Language Processing (NLP), AWS Lambda – for the back-end serverless function(s), Python 2.7 – for the serverless function code, Python- Amazon-simple-product- API 2.2.11 - A Python wrapper for the Amazon.com Product Advertising API (for getting book information from Amazon). Finally Srushith demonstrated the Integration with Facebook on the Facebook developer Portal, create a Facebook application and a Facebook page.

Learning Outcome:

The participants learnt about Chatbots and Building and integrating Chatbots on their own easily.
Workshop on “Research Methodology”

Name and details of the Resource Person:

1. Dr. Srinivas T, Professor, Department of ECE, IISc, Bengaluru
2. Mr. Dhanukumar P, IEEE Client Services/ University Partnership Program Manager, IEEE Bangalore Section
3. Dr. Ambika P & Prof. Jyothi Manoj, Department of Computer Science [PG], Kristu Jayanti College

Objective: To create a platform for learning and sharing foundational methods and techniques of academic research in various discipline. Participants would examine and be practically exposed to the main components of a research framework i.e., Problem definition, Research design, data collection, ethical issues in research, report writing, and presentation.

On the 4th August 2017, Workshop on Research Methodology was conducted in association with IEEE. Dr. Srinivas, Associate Professor, ECE Department, IIS was the key resource person who spoke on topics like: Preliminaries, registration: Topic, Guide; course work and background study, literature Survey-Generic and technical, comprehensive exams, actual research, publications as in where exactly research work need to be published, thesis writing, delivery, and defense.

Preliminaries include basic motivation, practical requirements and Broad area of interest etc. Factors such as directives of government, employment conditions, curiosity about new things, desire to understand causal relationships, social thinking and awakening, and the like may as well motivate (or at times compel) people to perform research operations and report writing etc. Conviction while pursuing challenges is the core ingredient to significant learning. QIP/ERP programs are an ideal platform to enhance the process. The workshop set an atmosphere for the future symposium that is going to take place.

The second session was handled by Mr. Dhanu, an enthusiastic IEEE consultant. He spoke of how a quality technical paper can be developed and what are the significant forums, where they can be put up. The speaker was enthralled and encouraged by the response of the audience.

The afternoon sessions were handled by Dr. Ambika who listed and explained aspects like Interdisciplinary research and Prof. Jyoithi Manoj who Specifically spoke of the formulation of research problem, formulation of research hypothesis and testing of hypothesis, conducting literature review, data collection methods, selection of appropriate parametric or non-parametric statistical method for analyzing data, and so forth. The workshop ended by a hands-on session in data analysis using EXCEL.
Haptic Robotic ARM Workshop:
IEEE SIT SB has been conducting technical workshops from past many years to spread awareness regarding various technical concepts and motivate the students to learn these concepts to build a strong technical foundation. This is a platform where students of first and second years learn technical aspects of electronics. This year IEEE SIT SB organized a 2-day workshop on 21st and 22nd Jan 2017 on HAPTIC ROBOTIC ARM. The workshop was conducted by a resource person from ROBOKART.COM. 29 students attended the workshop.

Women’s Day Celebration
The Women in Engineering team celebrated International Women’s Day on March 8th 2017 with our lady faculties who were the well-known women engineers for us. There were some fun events organized in which our faculties enthusiastically participated. First there was a simple welcome to our beloved faculties with roses. There were some snacks arranged. Following to this we had all our fun events. The first game was dumb charades in which teachers actively participated. The second one was the guessing game. In this the teachers had to identify the places shown in the images. Finally, there was mannequin challenge where the teachers had to dress up volunteers using newspaper and then walked on the ramp. Every event had some winners and they were given a bouquet of flowers each.

The coordinators of this event were IEEE WIE members Harshitha, Kirti, Pooja and Jhancy. This event was a grand success and a memorable for us and also to our faculties.
SSIT IEEE

- **IEEE Technical Fest, SAAMARTHYA**

This Technical fest cum workshop was attended by 80 plus students, not only SSIT students but students from other colleges also actively participated in. This event crossed boundaries of SSIT and reached other colleges as well.

This fest is conducted by IEEE members of SSIT every year with new ideas updating students about current trends and technologies. Even we publish our annual magazine “ENQUESTA” on this auspicious event.

This was a two day festival cum workshop. First day we conducted a workshop on personality development along with many technical events like:

- Blind coding
- Paper presentation
- Circuit puzzle
- Technical quiz
- Mock interview

These events were all judged by knowledgeable faculty and guest member.

- **IEEE Day celebrations**

This was the proud celebration of being an IEEE member we made it bit social by visiting a deaf and dumb school as it is said that kindness begins from home we followed the same and visited a deaf and dumb school in our place ie Tumakur itself.

This social event helped our members to find that humanity within them which was lost they participated actively and gave their best shot to make those kids happy, also we conducted some fun events such as:

- Lemon & spoon
- Kabaddi
- Cricket

video games all the winners were given pen chocolate and an IEEE jute bag. since we wanted to make it special for them so we did cut a cake and distributed cupcakes also we provided them with food.
IEEE Student Branch REVA University

- Awareness Program on “IEEE Student Member Benefits”

1. Dr. R. Venkata Siva Reddy, Professor, School of ECE, REVA University & Secretary-2016, IEEE Bangalore Section; 2. Prof. Shrikant S. Tangade, Asst. Prof., School of ECE, REVA University & Branch Counselor, IEEE Student Branch RU; 3. Prof. Praveen V. Vijapur, Teaching Associate, School of ECE & Program Head, Incubation Center, REVA University

The resource persons presented various benefits of IEEE student members. Some of the benefits like: (1) GoogleApps @ IEEE: students can create their own email id with IEEE domain, (2) IEEE ResumeLab: IEEE students can develop a resume or curriculum vitae using a wide array of resume templates, (3) IEEE Xtreme 24-Hour Programming Competition, (4) Global Student Website Competition, and (5) IEEE Student Awards & Scholarships.

HAM Boot-Camp, 11th February, 3.30 pm

Resource Persons:
1. Mr. S. Sathyapal, Director of Indian Institute of HAMs, Karnataka Chapter.
2. Mr. Nithin Muttin, Secretary of AMSAT India & Working at Intel, India

About The Event: The “HAM Boot-Camp” was held for students and faculty of all schools of REVA University to experience the live demonstration of HAM (Amateur) Radio within REVA University campus. The event starts with setting up antennas like omni directional antenna on top of the roof of our University building. All students and faculty took part in live demonstration of HAM Radio and had conversation with other HAM Licensed persons from different parts of India and also from Srilanka. All had hands on experience of using walky talky. The IIH team also demonstrated BITx kit. Mr. Nithin has given a seminar on “Decoding Telemetry from Amateur Radio Satellites” at 9 PM. Mr. Sathyapal Sir has demonstrated how HAM communication works on Android Mobile.
IEEE-PESCE as its annual technical fest organized Cresco, CRESCO 17.0, a technical symposium on April 21st and 22nd 2017 in Placement Auditorium. As the name, Cresco, itself says we grow, expand and rise forth. We hold competitions to encourage hidden talents of these students.

The various Events conducted in the Fest are listed below:

1. **SAMVAAD**: It’s is a parliamentary debate competition. The topics were purely based on current affairs and general social issues.

2. **BYTE THE BITS**: It’s the contest consisting of a written round of both objective and subjective questions and a lab round related to assembly level programming of 8086 Microprocessors and 8051 Microcontroller.

3. **MAIDAAN**: It is an event organized by IEEE PESCE to encourage the gaming & innovative skills of the students. The games played were: NFS, FIFA

4. **CODE QUEST**: It was an industry oriented C coding contest. The questions were of both objective and subjective type.

5. **EUREKA**: This event is all about presenting all your ideas on a platform to come altogether to spread and seed ideas worth sharing in a TED talk like event, “EUREKA”. The ideas could be related to anything that would amuse the judges.

6. **PANORAMA**: This is a contest on the best video making based on the theme given. The themes given to the teams were “Mother Earth” and “Cresco in your vision”.

7. **SNAPSTER**: This is a contest on the best mobile photography. The given themes are: Nature, Wild through your lens, IEEE in Your View

8. **PATRIKA**: Patrika is a National Level Technical Paper Presentation contest. The papers were scrutinized by our Branch Counselor, Dr. K A Radhakrishna himself. The selected papers were then allowed to be presented by the teams.

9. **VTH**: This is an online treasure hunt competition in which participants have to hunt for their answers based on the given clues. There were two rounds in this event as general and online

10. **QUIZZINE**: This was an interesting event, in which the best quizzers were found. The questions were purely based on current affairs and general topics.

11. **TECH TALK**: At the descend of the CRESCO, we had a technical talk on few of the trending technologies.
12. **AURIFERA RELEASE**: IEEE PESCE publishes its annual magazine about its yearly events and picture galleries under the name, Aurifera. The best articles from all over the college are printed in this yearly release.

- **IEEE DAY PESCE**

IEEE PESCE Celebrated its IEEE Day on 22nd October 2016. The event was head started by a Flash mob from IEEE PESCE members. The flash mob was held in the college premises. The flash mob was conducted for 15 minutes which attracted a huge crowd and got people swaying to the rhythmic moves. The flash mob had a good impact on the crowd and more people turned up for the IEEE day celebration.

The Orientation day started in the afternoon and a good number 60 people turned up for the celebration. The chief guest of the event Dr. Padma (WIE Mentor) addressed the gathering and created the awareness amongst attendees about the benefits of joining the IEEE. The Secretary of IEEE PESCE Student branch showcased the reports of events and workshops conducted by the IEEE along with the cherishable moments that IEEE had during the previous academic year. Finally the last round of Qfiesta that was conducted previously was continued. The finalists were given a scenario and asked to give a solution for it. The team which gave the best solution was recognized and awarded a cash prize of 500rs.
NIE IEEE Student Branch

- **6th Sense workshop**

Objectives:
- Introduce basic Arduino programming
- Introduce Matlab and basic of Image processing

Date: 16th and 17th of Sept 2017.

Guests: Sameer, Trainer from Robokart.

Student Participation: About 131 students attended the workshop.

Event details: The event started with the introduction of the Arduino working principles and sampling theorem. On the first session of the day 1 the students were taught about the basic coding syntax of Arduino and blinking program. In the next session, the students were able to learn the serial communication principle and successfully built a serial communication channel between Arduino and their laptop.

In the morning session they built the PC Controlled bot in which the bot was controlled by the serial data given by the user. After a small break the students were taught the basic of Matlab image processing by capturing an image of a ball given to them. In the noon session, the students were able to build the gesture controlled robot, which controls the robot with the gesture in front of the camera. At the last a small competition was held with the question that to make gesture controlled media player. The wonderful workshop ended with students having great exposure to the Arduino and image processing.

Conclusion:

The workshop successfully concluded with the wonderful coordination with NISB and IIT Bombay E-cell. Inspired by overwhelming response, NISB looks forward to host many more events like this.

- **IISc Industrial Visit**

NIE IEEE Student Branch conducted its industrial visit to “Indian Institute of Science”, Bangalore on 30th March’17 as a part of NISB’s even semester technical fest *Ankura’17.*
There were a total of 42 enthusiastic students from NISB who were a part of this visit. The journey started at 7.30 am sharp from Golden Jubilee Complex, NIE, Mysuru. By 11.00 am, they reached the IISc campus. After reaching the campus, they all had delicious refreshments at the IISc canteen itself.

After the refreshments, they all headed to the Super Computer Education and Research Centre (SERC), Computation and Data Sciences Division, IISc where the total students where divided into two groups. The main instructor Mr. Prabhu helped the students to understand the basics and pre-requisites for working on a Super Computer for any type of research activities. Mr. Prabhu was indeed a great instructor. He made the students aware about the Computational efficiencies of the Super Computers and the recent fields of researches where the Super Computers are being used.

The main source of attraction for everyone at Super Computer Education and Research Centre (SERC), IISc was SahasraT (CRAY XC40) – The fastest Super Computer in India. Mr. Prabhu took everyone on a tour to the Super Computer CRAY XC40 and helped them understand some basics of maintaining and using the machine. After this informative session at SERC, the students headed towards the Robert Bosch Centre for Cyber Physical Systems, IISc.

This centre is purely devoted to robotics and automation, and students work here on interdisciplinary fields of researches to automate the stuffs and to make the world a better place to live.

Students listening to the introduction about the Robert Bosch Centre by Mr. Stefan Ipach. Mr. Stefan Ipach introduced the students with the kinds of researches and developments going on at the Robert Bosch Centre for Physical Systems and what are the scopes of researches in near future. He talked about the automation, Robotics, Artificial Intelligence and also how they are going to affect our lives.

Drones and water supply & leakage tracking systems being developed at Robert Bosch Centre.

After that Dr. Ashish V. Joglekar took us to have a look on latest developments and research works going on for Smart city Projects. They are working on a Water Supply and leakage tracking System which will help people to use water in an efficient and sustainable way. This project has already been implemented at the IISc campus.
Dr. Ashish V. Joglekar showing students the research works going on at Robert Bosch Centre for Cyber Physical Systems and their working prototype. A 3D printer is also installed there. Most of the gadgets and parts used for making a working prototype were 3D printed.

- **BASIC PROGRAMMING WORKSHOP ON C++**

OBJECTIVE: The first event conducted by the Computer Society, was to introduce coding to those who are new to programming and to create awareness about the importance of coding.

NIE IEEE Computer Society conducted a Basic Programming Workshop on C++ to introduce students to coding. It was a three day event on basics of C++ which gave an idea to those who are new to coding of what it really is. The session was started with an introduction to C++ and its importance. We went on teaching them about header files, variables etc to object oriented programming. We organised a competitive coding competition on the last day and the winners were awarded with cash prizes and T-shirts. The participants who performed well were awarded with coupons.

The event ended successfully with a lot of positive feedback from the participants.
GIT IEEE Student Branch

• **IEEE DAY CELEBRATIONS 2017**

The student branch at KLS's GIT celebrated IEEE Day on 7th October.

Prof. Dr. Swetha I Goudar, former Secretary at IEEE Student Branch of a University at Malaysia. She gave a talk on different practices at Malaysian University followed by the student branch for membership development, technical events, student leadership programs, workshop, seminars and conferences. As a secretary she explained her duties and roles. She took all of us through pictorial presentation. She also explained to students about YP membership and for faculties how they can approach ahead for Senior Membership.

• **HAM Radio: An effective scientific hobby**

One-day workshop on HAM Radio Communication was organized in association with IEEE-GIT Student Branch and IEEE Bengaluru Section on 22nd April 2017. Mr. Manjunath Shinde, Senior Radio engineer at Doordarshan Kendra GOA addressed the students about the history of HAM Radio and its application during calamities. Mr. Amey Pandit gave an insight about Software Radio and Satellite Communication. Hands-On sessions were conducted and about 15 HAM Radio Trans-receiver kits were prepared by the students. Live image capturing from the satellite crossing KLS’s GIT campus geographical coordinates were demonstrated. Mr. Omprakash Kiyani and Mr. Ashok Kulkarni, member of HAMBEL, HAM Club Belagavi guided the students.
• WORKSHOP ON “Python for network programming”

The hands-on workshop on “Python for Network Programming” was conducted on Saturday, 3th and 10th December 2016 under BMSCE IEEE Student Chapter at Department of Information Science and Engineering, BMSCE. The speaker for the event was Mr. Shashank Narayan, Senior Network Solution Architect, Akamai, Bangalore.

Initially Mr. Shashank Narayan talked about how Python makes the programming and implementation of the ideas easier with the packages available. Started with basics of Python with simple programs. Students also started writing and executing the programs simultaneously. Then worked on various simple and complex commands with different applications. Later continued with the designing of simple Clients and Servers using the application programming interfaces available in Python. Then he moved on to explaining the clients and servers for simple iterative, single and concurrent server applications. Students requested him to extend the workshop for one more day. He also discussed and gave assignment problems to work on. He concluded this workshop discussing how Python could also be used to write different gaming and fun programs.

• IEEE Day - 2017 11th October 2017

BMSCE IEEE, in association with BMSCE Illuminati Organisation, organised IEEE Day in the college campus. The day was inaugurated by the Dean and sponsorship for the event was done by Marks and Spencer. IEEE Day involved various events and competitions conducted by several clubs of BMSCE and also, a cultural performance to cap it all off. The event was widely publicized both on social media and in-campus in the form of attractive posters.

Events and Competitions-
1. Inksanity, The literary society, conducted a debate competition in the CS hall at 1.45 pm.
2. Rotaract Club of BMSCE organized Open Mic and put up a stall, Minute To Win It, which, as the name suggests featured one minute games at the C-bench at 1:00 PM.
3. The Quiz Club of BMSCE hosted a quiz competition at the MESH Hall at 1:45 PM. The questions covered topics ranging from World of Science, Inventions, Technology to Brands, Entertainment and Social Media.
4. Pravrutthi hosted IMPROV at the B.S. Narayan Hall at 1:30 PM.
5. The Fashion Team of BMSCE held a Head Gear Making and Makeup/Face-painting contest at 1:00 PM in the passage between Library and CR Block.
6. CodeLocked organized a Mobile Gaming contest aimed at gamers at 2:00 PM in the CAD Lab. The Mobile Games played were CSGO and Mini Militia.
7. The Photography Club of BMSCE held a photography competition for all budding photographers. The competition required participants to spread all over the campus and click photographs.
8. The Mountaineering Club of BMSCE hosted activities like Rappelling and Wall Climbing at the CR Block and Gopi Wall respectively at 1:00 PM.
9. The Fine Arts Club of BMSCE put up a stall at the library lawn and exhibited their work. The event was a grand success with a large number of participants for all the competitions.
SOCIETY AND CHAPTER REPORTS FOR 2017
Round up of activities in 2017

This section outlines brief reports from various IEEE Society Chapters of Bangalore Section

IEEE Bangalore Section has the maximum number of Society Chapters. Several have been started in the last couple of years. Most of them have done excellent activities, like technical talks, workshops, outreach programs, support of local, national and even real international conferences. They promoted interaction among members, interaction among society chapters themselves and with other IEEE units. Most of the chapters claimed from Bangalore section, the annual grants and seed grants where applicable. However we need to improve a lot, particularly in their reporting, website, executive committee, and membership. Future targets should be on attracting DLTs, contesting for awards and grants and attracting international conferences. We have a brief listing of activities of different society chapters in the following pages.

1. Aerospace and Electronic Systems society chapter
2. Circuits and Systems Society chapter
3. Consumer electronics chapter
4. Communications society Chapter
5. EP (Components, Packaging and Manufacturing Technology) Society Chapter
6. Computational Intelligence society chapter
7. Computer Society Chapter
9. Geoscience and Remote sensing Society Chapter
10. Nanotechnology council chapter
11. Photonics society chapter
12. Power and Energy Society chapter
13. Robotics and Automation society chapter
14. Signal Processing Society chapter
Circuits and Systems Society

<table>
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<tr>
<th>Date</th>
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<tbody>
<tr>
<td>January 13, 2017</td>
<td>(DL) A Seminar on <strong>Authentication and Functional Obfuscation of Integrated Circuits</strong></td>
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<tr>
<td>February 4-5, 2017</td>
<td>(WS) A Two-day Workshop entitled <strong>Science Editathon</strong></td>
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<tr>
<td>March 18, 2017</td>
<td>(Cour) A One-day Course on <strong>Analog System Design</strong></td>
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<td>April 10, 2017</td>
<td>(DL) A Seminar on <strong>From Power Management to Energetic Intelligence: An evolutionary challenge for students, educators and designers</strong></td>
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<td>April 25, 2017</td>
<td>(DL) A Seminar on <strong>CMOS Manufacturing in India – Issues and Challenges</strong></td>
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<tr>
<td>May 27, 2017</td>
<td>(Conf) A one-day conference on <strong>INNOVATION &amp; DO-IT-YOURSELF ELECTRONICS (IDIYE-2017)</strong></td>
</tr>
<tr>
<td>July 1-2, 2017</td>
<td>(Conf) A two-day conference on <strong>ELECTRONICS MAKERS - 2017</strong></td>
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<tr>
<td>August 30, 2017</td>
<td>(Cour) A seminar on <strong>Analog Design and Test - Challenges and Opportunities</strong></td>
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<tr>
<td>September 7, 2017</td>
<td>(DL) A Seminar on <strong>Challenges in Developing Semiconductors for Power Products</strong></td>
</tr>
<tr>
<td>October 24, 2017</td>
<td>(DL) A Primer on <strong>Machine Learning and Artificial Neural Networks</strong></td>
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**January:** Seminar ON AUTHENTICATION OF INTEGRATED CIRCUITS

A Seminar on **Authentication and Functional Obfuscation of Integrated Circuits** was organized by PragaTI (TI India Technical University) in cooperation with IEEE CAS Society, Bangalore Chapter on January 13, 2017, 2:00 PM to 3:00 PM at Texas Instruments India, Bagmane Tech Park, CV Raman Nagar, Bangalore. The invited speaker was Prof. Keshab K. Parhi (Dept of ECE, University of Minnesota, Minneapolis).

The talk focused on the important aspect of hardware security. Prof. Parhi discussed the recent results that his team has unearthed in this area in two parts.
**February: SCIENCE EDITATHON**

A Two-day Workshop entitled **Science Editathon** was organized by IEEE-CAS Bangalore Chapter, in cooperation with Wikipedia Foundation and Texas Instruments, India on 4-5 February, 2017, 9.00AM to 5.00PM at Texas Instruments India, Bagmane Tech Park, CV Raman Nagar, Bangalore.

The intent of this two-day workshop was to educate participants on how to edit Wikipedia articles on science-related topics. Renowned writers Nagesh Hegde and U.B. Pavanaja were among the attendees. 13 science articles were added to Wikipedia, and during February, more articles were added. The workshop was open to IEEE members. We had 5 participants who participated in person and three who joined us remotely.

**March: ONE-DAY HANDS-ON WORKSHOP ON ANALOG SYSTEM DESIGN**

A One-day Course on **Analog System Design** was organized by IEEE-CAS Society, Bangalore Chapter in cooperation with Texas Instruments India on March 18, 2017, 9.00 AM - 5.00 PM at Texas Instruments India, Bagmane Tech Park, CV Raman Nagar, Bangalore. The speaker was Dr. K.Radhakrishna Rao (TI India), with Sagar Juneja (Chitkara Univ.) as the Co-faculty.

This hands-on course was intended for teachers and student members of IEEE only, and attracted 34 participants from various engineering colleges, and certificates were issued at the end of the day.

**April: Seminar ON Power Management to Energetic Intelligence: An evolutionary challenge for students, educators and designers**

A Seminar on **From Power Management to Energetic Intelligence: An evolutionary challenge for students, educators and designers** was organized by PragaTI (TI India Technical University), in cooperation with IEEE CAS Society, Bangalore.
Chapter on 10 April, 2017 at Texas Instruments India, Bagmane Tech Park, CV Raman Nagar, Bangalore. Nicola Femia (University of Salerno, Italy) was the invited Speaker. The seminar was intended to overview power management design issues and to propose a vision of the knowledge and tools needed to win the challenges of Energetic Intelligence. We had a full house including some IEEE members, with a lively Q&A session.

Seminar ON CMOS Manufacturing in India – Issues and Challenges

A Seminar on CMOS Manufacturing in India – Issues and Challenges was organized by PragaTI (TI India Technical University), in cooperation with IEEE CAS Society, Bangalore Chapter on 25 April, 2017 at Texas Instruments India, Bagmane Tech Park, CV Raman Nagar, Bangalore. HS Jatana (Sci/Engr 'SG', Group Head – Design & Process Grp, SCL /Dept of Space, Govt of India) was the invited Speaker. The talk focused on CMOS manufacturing activities in India, and gave brief details of Infrastructure and capability pertaining to CMOS manufacturing (design, process, etc), activities and research work carried out, academic interaction at SCL. We had around 25 participants from TI, CDAC and a few educational institutions including some IEEE members.

May: One-day conference ON INNOVATION & DO-IT-YOURSELF ELECTRONICS

A one-day conference on INNOVATION & DO-IT-YOURSELF ELECTRONICS (IDIYE-2017) was organized in cooperation with IEEE CAS Bangalore Chapter and IEEE Bangalore Section, with support from Texas Instruments India on 27 May, 2017 at Texas Instruments India, Bagmane Tech Park, CV Raman Nagar, Bangalore. C.P.Ravikumar (Texas Instruments India) was the Conference General Chair. Twenty DIY projects were presented at the conference with demos. These projects were on diverse topics, such as healthcare, education, agriculture and smart cities. The DIYers employed various technologies such as state-of-the-art microcontrollers, sensors and wireless communication. In particular, "Internet of Things" was a recurring theme in many projects. There was a good mix of projects from academia and industry. We had around 80 participants including some IEEE members, and the event attracted positive feedback with a suggestion to conduct it yearly.

July: Two-day conference ON ELECTRONICS MAKERS - 2017

A two-day conference on ELECTRONICS MAKERS - 2017 was jointly organized by IEEE India Council, Centre for Embedded Product Design, Centre for Electronics Design & Technology,
NSIT; In Association with IEEE-CAS, Bangalore Chapter July 1-2, 2017 at Netaji Subhas Institute of Technology, New Delhi.

The keynote address on **Bridging Academic R&D with Product Innovation - a few case studies and a way forward...** was by Prof.V.Ramagopala Rao (Director, IIT Delhi) and a talk by Prof.Prabhat Ranjan (TIFAC-CORE, Department of Science and Technology).

Two panel discussions, the first on **“Do It Yourself” to “Make in India”: A Leap of Faith** moderated by C.P.Ravikumar (Texas Instruments, India) with Prof. Dhananjay Gadre (NSIT, New Delhi), Ajit Singh, Anup Rajput, Nidhi Sharma, and Sanjay Dixit (TI, New Delhi), with the second on **Project based Engineering Education for “Make in India”** on education by A. Paventhan (ERNET, Bangalore) were held on the first day.

Three workshops entitled **Microcontroller Learning Platform on a Shoestring Budget using MSP430 LunchBox & Beaglebone and Linux - Open-Source Hardware and Software for DIY** by Texas Instruments India and **VXWorks** by CGCore-El were conducted on both days.

Fifteen DIY projects were presented at the conference with demos. These projects were on diverse topics, such as healthcare, education, agriculture and smart cities. The DIYers employed various technologies such as state-of-the-art microcontrollers, sensors and wireless communication.

**August: Seminar on Analog Design and Test - Challenges and Opportunities**

A seminar on **Analog Design and Test - Challenges and Opportunities** was organized by IIIT (Indian Institute of Information Technology) Bangalore in association with IEEE-CAS Society, Bangalore Chapter on 30 August 2017 at IIIT Bangalore Campus, 26/C, Electronics City, Hosur Road. **Dr.C.P.Ravikumar** (Director of Technical Talent Development, Texas Instruments India) was the invited speaker. Over 50 participants, including M.Tech students and faculty members of IIIT Bangalore attended the event.
September: Seminar on Challenges in Developing Semiconductors for Power Products

A Seminar on Challenges in Developing Semiconductors for Power Products was jointly organized by IEEE PES and IEEE CAS Bangalore Chapter on 7 September 2017 at the Seminar Hall, DESE, Indian Institute of Science, Bangalore. Ebenezer Vidyasagar (Director APP, TI India) was the invited speaker. We had around 70 participants that comprised students, faculty and the industry-based, with some IEEE members. Snacks were served after the seminar.

October: Seminar on Authentication of Integrated Circuits

A Primer on Machine Learning and Artificial Neural Networks was organized by: PragaTI (TI India Technical University) in association with IEEE-CAS Society, Bangalore Chapter on 24 October 2017 at Texas Instruments India, Bangalore Campus. Osheen Nayak (Texas Instruments) was the invited speaker. We had around 20 participants including some IEEE members. The event was also covered over the Internet, and many who couldn't attend in person participated through the TI webex portal, with 15 from Singapore and 15 from India.

December: C-CUBE 2017

C-CUBE 2017: IEEE Second International Conference on Circuits, Controls and Communications, RNSIT, Bangalore, India during December 15-16, 2017


ICAECC 2018 - Second International Conference on Advances in Electronics, Computers and Communications

Organized by: REVA University, Bengaluru, India February 9-10, 2018

Technical Sponsors: IEEE Bangalore Section, IEEE ComSoc (IEEE Communications Society) Bangalore Section, IETE (Institute of Electronics and Telecommunication Engineering) and IEEE-CAS Society, Bangalore Chapter
Consumer Electronics (CE) has become a deeply ingrained part of our daily lives, and encompasses a wide variety of technologies that are constantly being refined to be at the leading edge of every field. Building a product - from conceptual design to meeting all the use-cases in real life scenarios, is a tough task for every person in the CE field.

It is highly important for all of us to be in the forefront of technological progress, to understand the right mix of technologies to be used in the right problem domain, and create the best products. It is with this larger goal that ICCE-Asia 2017 was put together, with the theme – “Intelligent Living through Smart Technology”. Starting from mobile phones and tablets, wearables, connected devices and services, advanced visualization, the field of Consumer Electronics requires understanding of various domains. To this end, ICCE-Asia 2017 had a variety of technical topics and focused events in the conference, as outlined in the final Program schedule at http://icce-asia2017.org/icce-program-final.pdf.

ICCE-Asia 2017, the first ICCE-Asia conference in India, was organized by the Bangalore chapter of the IEEE Consumer Electronics society, in technical collaboration with the Robotics and Automation society.

The event was conducted at the Courtyard Marriott, Outer ring road, Bengaluru, from Oct 5-7 2017. The pre-conference tutorials were conducted by Khronos.org Bangalore chapter, led by Mr. Kumar Katragadda (on Vulkan API), and on Machine learning (from Google), and attracted vast interest. ICCE-Asia 2017 had more than 50 paper presentations, more than 10 invited talks from industry and technology leaders. Close to 150 delegates registered and participated in the proceedings.

The conference was inaugurated by Dr Sharon Peng, Director of Lifestyle Engineering at Harman and IEEE Fellow, who presented on latest trends in Consumer Audio. The conference banquet keynote was provided by Bob Frankston, IEEE Fellow, on “Living the future, and Consumer Electronics in the age of software”. The keynote speakers were Dr Ajit Rao (Senior Director, Qualcomm), Mr Avinash Kaushik (Founder, Revvx), Dr Varadhan SKM (IIT-Madras), and Mr. Suman Narayan (Sr Vice President, Cyient).

The conference had session keynotes from Mr Ramesh Babu (Cyient), and from IEEE Standards Association. The WiE (Women in Engineering) track was chaired by Prof Sujatha, and had Ms Pallavi Srinivasa (Cisco), and Ms Sai Geetha (Tesco) as the key speakers.
The Panel Discussion on “Innovation in the new era” highlighted the challenges, and future directions of innovation. The panel had key members of the industry – Mr Suman Narayan (Cyient), Mr Sudeendra Kaushik (Prasu consulting), Mr. Arun (FormulateIP), Mr. Ashish Sinha (Pluggd.in), and Mr. Avinash Kaushik (Revvx)

GFX2017 – Advanced Graphics Workshop

The sixth edition of Advanced Graphics Workshop, GFX2017, was conducted by the IEEE Consumer Electronics Society, Bangalore chapter per below details:

Venue: Hotel Citrus, Cunningham road
Date: April 29, 2017
## LAUNCH OF COMSOC NEWSLETTER

The first ever newsletter of ComSoc Bangalore-India is started and released on 1<sup>st</sup> May, 2017. Initially planned for two issues in one year. The second issue is planned on 15 Dec, 2017. The IEEE ComSoc Chapter Bangalore Newsletter (ComSoc- News) includes news useful to its members, nonmembers and highlights most important technology development. It also highlights important concluded and upcoming events.

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<thead>
<tr>
<th>S.No</th>
<th>Event Name</th>
<th>Date</th>
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<tr>
<td>1</td>
<td>2nd Int’l Workshop on 5G-FWT in association with IEEE ANTS 2017</td>
<td>19 Dec</td>
<td>C V Raman College of Engr</td>
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<td></td>
<td>Bhubaneswar, Odisha</td>
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<td>2</td>
<td>Green Smart City Workshop Training (one week, 1 day ComSoc)</td>
<td>10 Oct</td>
<td>Vikaasa Soudha, Govt. via SCIF</td>
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<td>3</td>
<td>One day workshop on Big Data Analytics</td>
<td>23 Sep</td>
<td>SJCE Mysore</td>
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<td>4</td>
<td>One day workshop on Software Defined Connectivity and Analytics</td>
<td>9 Sep</td>
<td>Nokia, Manayata park</td>
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<td>5</td>
<td>One day workshop on Smart City Conclave</td>
<td>1 Sep</td>
<td>BMIT, Davanagere</td>
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<td>6</td>
<td>Two Days Workshop on Research Methodology (Jointly with Section)</td>
<td>8-9 Jul</td>
<td>Amrita School of Engr Bangalore</td>
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<td>7</td>
<td>Two days workshop on Research Methodology (jointly with VTU)</td>
<td>8-9 May</td>
<td>CMRIT, Bangalore</td>
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<td>8</td>
<td>Half day workshop on Insights into Cloud Security and Creating and Managing Cloud Infrastructure</td>
<td>29 Apr</td>
<td>Avaya India Pvt Ltd. AMR Tech Park Bangalore</td>
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<tr>
<td>9</td>
<td>One day workshop on Workshop on Advances in 5G and HetNet</td>
<td>20 Mar</td>
<td>IISc, Bangalore.</td>
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<tr>
<td>10</td>
<td>One day workshop on Global 5G tutorial Series</td>
<td>9 Jan</td>
<td>Taj by Vivanta, Bangalore</td>
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2nd International Workshop on 5G and Future Wireless Technologies (5GFWT 2017)

http://ants2017.ieee-comsoc-ants.org/workshops/5gfwt/

Smart City Workshop Partnering with SCIF at Vikash Saudha, Govt of Karnataka

One day of 5 days workshop/training was given by ComSoc representatives on 10th Oct 2017 to the Smart City working group from Karnataka Govt. People from different proposed smart cities like Davangere, Belagavi, Hassan etc. took part in the training program.

Different aspects of methodologies and testbed designs were discussed by Dr Aloknath De, Dr Navin Kumar, Dr Dilip K, Mr Syam M, Mr SriChandra. Munir and few more witnessed the workshop on 10th Oct. While Dr Dilip spoke in detail about the the framework of Smart City, Dr Alok talk about how to leverage IoT effectively and solution for IoT based management. And, Dr Navin explained how different wireless technologies can help building and designing smart cities.

Big Data Analytics One Day Workshop at SJCE Mysore

This is the second event outside Bangalore conducted by ComSoc. A well established university SJCE organized this workshop. Dr Niranjan led the event as host organizer. ComSoc took the responsibility to speakers and we travelled all along from Bangalore to Mysore. The director of the university and faculty also discussed about the how IEEE or ComSoc expert can help them to develop post graduate level course on data science and analytics. It was a great experience. The workshop was well appreciated by host institution. Over 100 students and faculties attended the workshop.

Software Defined Connectivity and Analytics Workshop at Nokia

The early morning hours of 9th September, 2017 saw unbridled enthusiasm and curiosity in the participants from various companies who came to attend one day interactive seminar on ‘Software defined Connectivity and Analytics’ in Nokia, L5 building, Manyata Tech. Park. The seminar witnessed more than 150 participants who came to attend the six diverse sessions.

The seminar commenced with Mr. Sridhar, Nokia formally welcoming the gathering and Shaambahvi Shrivastava, IEEE ComSoc Bangalore Chapter introducing the first speaker. The first session on ‘SDN/NFV in 5G Networks’ was taken up by Mr. Samir Satapathy, NPO Ericsson. The session gave a deeper insight to the participants on 5G Networks and other technological advances in the domain. His talk was approved by the audience and he was thanked for the informative session by Mr. Munir Mohammad, IEEE Bangalore.

The next speaker of the day, Mr. Salil Agarwal, Nokia delivered on ‘Cloud/ Edge Computing’. He expounded on how this technology is helpful for industries and also the various challenges faced by industry in security related issues. He was felicitated by Mr. B.N. Pal, Secretary, IEEE Bangalore Section.
The next session resumed after tea-break and the next speaker, Mr. Tarun Gupta, National Instruments kept the audience enthralled by his talk on ‘Standard Defined Radio (Prototyping C-RAN using Standard Off-Shelf Tools’. He gave a clear picture of Massive MIMO and Advanced Wireless Prototype with statistical facts and his experience. Mr. Vinayak, Location Development Head, Bangalore, Nokia thanked him with a token of gratitude.

Mr. Aloknath De, the next speaker gave a detailed description on ‘Leveraging SDN for IoT’. He also introduced the attendees to IoT Business opportunities and Industry Trends. He concluded his session with a comprehensive summarization on hinderances in IoT. He was appreciated with a memento by Mr. Krishna Pramod A., Innovation Realization Lead, Nokia.

The next session after lunch on ‘Advanced Analytics through Artificial Intelligence/Machine Learning’ was taken by Dr. Madhan Kumar Srinivasan, Accenture in which he took the participants through the journey of IoT and Data Analytics. His session proved to be very helpful for the attendees as he gave brief overview of Advanced Analytics. He was felicitated by Sandeep R K, R & D Architect, Nokia.

The last session was on ‘How Telecom can blend intelligence with AI’ in which Mr. Rajaraman Subramanian (Giri) introduced the concept of change blindness. His talk brought forth a new perception of data analytics for the participants. Mr. Kishore A T, Secretary, IEEE ComSoc Bangalore Chapter thanked him with a token of appreciation.

SMART CITY CONCLAVE

This was the first event conducted by ComSoc outside the Bangalore, at Bapuji Institute of Engineering and Technology, Davangere, on 1st September 2017. Our target is to get associated with prospective smart city in the list of government. We are targetting to closely work with them to ensure good productivity.

RESEARCH METHODOLOGY TWO DAYS WORKSHOP JOINTLY WITH SECTION

An intensive workshop on Research Methodology, sponsored by IEEE Bangalore Section and ComSoc Chapter, Bangalore was hosted by IEEE Student Branch, Amrita School of Engineering Bangalore on 8th and 9th of July, 2017. The event was well planned with an aim to improve Research and Paper Publication ability for all the participants. More than 160 participants attended the workshop. The objective of the workshop was to introduce the audience to some basic concepts of research and its methodologies, identifying appropriate research topics, selecting and defining appropriate research problem and parameters, preparing a project (thesis) proposal (to undertake a project/thesis), organizing and conducting research (advanced project) in a more appropriate manner, writing a research report, article/paper and thesis and reviewing articles and submitting the report (peer review process).

The morning of 8th July witnessed unbridled joy and enthusiasm on the face of the participants and the volunteers where they were found busy with the registration and other formal procedures.
At 10 a.m. the workshop started with the traditional lighting of the lamp by all the honourable dignitaries including Mr. B.N. Pal, Secretary- IEEE Bangalore Section, Dr. Navin Kumar, Chair- ComSoc Bangalore, Mr. Anand M., Treasurer- ComSoc Bangalore, Dr. N.S. Murty, HOD, Dept. of ECE, Amrita School of Engineering, Bengaluru and Dr. G.S. Javed, the guest speaker to invoke the blessings of Goddess Saraswati and Mata Amritanandmayi Devi.

Ms. Sreebha B., Faculty Advisor, IEEE Student Branch formally welcomed the gathering and introduced the first speaker of the day, Dr. G.S. Javed.

The first half of the session focussed on identifying and defining a problem. The main views of the speaker emphasized on connecting the ideas to bring out a research product with societal applications. The second half of the session after the tea break, witnessed Dr. Javed conducting a practical session to solve the problem of the participant which not only gave her a solution but also the pros and cons of her research. The session became way too interactive when other participants also started suggesting. Having learnt the first-step, the workshop broke for lunch. The third half of the session gave a deeper insight on the steps to be followed during research and finding solution to the problem. The guest was felicitated with a token of appreciation.

The next session resumed with the next speaker, Dr. Kanmani on the dais and she continued on the topic of problem statement analysis. She also took the participants through her journey of research and the way it is conducted in BMS College of Engineering. With various examples, she well expounded on the research activities at undergraduate and post graduate levels. Encouraging the participants with the ups and downs she faced during her research, she was felicitated with a token of appreciation and the workshop looked forward for second day.

The workshop commenced on next day with Dr. Navin Kumar welcoming the next speaker, Prof. D. Das with a bouquet. In his short session, Prof. Das summarized the modules discussed the day before and covered the entire Do’s and Don’ts of Paper Publication which proved to be very helpful for participants.

The next speaker of the day was Dr. Saroj Meher, Assistant Professor, ISI who elaborated upon transforming research results into manuscripts of publishable standards. He gave a detailed explanation on what to avoid during publication by quoting several examples from his personal experience.

The last module of the workshop was taken up by Dr. Navin Kumar. He expounded on the process of peer review. His examples which often compared good and bad review satisfactorily concluded the workshop.
RESEARCH METHODOLOGY WORKSHOP JOINTLY WITH VTU

Organized jointly by the Department of Telecommunication Engineering, CMRIT, Bangalore; IEEE Bangalore Section; IEEE Communications Society, Bangalore; and Visvesvaraya Technological University, Belgaum

A two-day workshop on research methodologies was organised by the Department of Telecommunication Engineering, CMRIT, Bangalore; IEEE Bangalore Section; IEEE Communications Society, Bangalore; and Visvesvaraya Technological University, Belgaum on 8th and 9th of May 2017. This event was inaugurated by Dr B. N. Pal, Secretary of IEEE Bangalore Section. Several dignitaries of IEEE Communications Society, Bangalore and CMRIT, Bangalore attended this event. More than 100 participants registered and attended this event.

Day 1 of the workshop was organized by IEEE. The executive committee members of IEEE Communications Society of Bangalore chapter were actively involved in the event. The Chair of IEEE Communications Society of Bangalore chapter Dr Navin Kumar, ex-chair Dr T. Srinivas and IEEE Bangalore Section Treasurer Dr Y. V. S. Lakshmi took lead roles in the event. Dr Y. V. S. Lakshmi delivered a lecturer on Patents, Copyrights and IPR related issues. Dr T. Srinivas presented several key issues of research methodologies and its utilities for the PhD students and researchers. Dr Navin Kumar presented on how to write a paper for journals, transactions, letters and conferences.

Day 2 of the workshop was organized by VTU. Dr S. N. Sridhar delivered three talks on research methodologies. VTU e-learning centre Special Officer Dr H. S. Prabhakara and e-learning Officer Mr B. Lokesh also attended the workshop on Day 2. Overall, this workshop was very informative for the PhD students and researchers.

CLOUD SECURITY AND CREATING AND MANAGING CLOUD INFRASTRUCTURE

Avaya network closely works with ComSoc. Like Nokia, we have very understanding and collaboration with Avaya Networks. Previous year, we organized 3-hald days workshop (meet up). Avaya Networks in conjunction with ComSoc organized half day workshop in the form of meet up to increase the awareness on Cloud security. Two of the industry speakers spoke on security aspects while another two discussed about cloud infrastructure management, the
challenges and scopes.

ADVANCES IN 5G NETWORKS AND HETNET

The event was successfully organized along with Distinguished Lecture visit of Dr Ashutosh Dutta and Special guest, Prof Lajos Hanjo, University of Southampton, UK. The event was attended by over 100 participants from industry and academia. The main focus of the workshop was a details session on HetNet with Prof Lajos. Lot of challenges were put on table and discussed. In addition, Dr Aloknath De, discussed on key 5G development, landscape and Samsung 5G drive and testbed.

Other speakers included Mr Prasad from TIETO, Mr Santosh who spoke on architecture and physical layer part respectively. While, Dr Ashutosh gave a detail explanation of security aspect of 5G.

GLOBAL 5G TUTORIAL SERIES
ComSoc Chapter hosted 5G Tutorial and jointly organized the first event of 2017 on 5G at Taj Vivanta Bangalore. The Global IEEE 5G Learning Series is designed to demystify 5G and train technology and industry teams with the knowledge of current 5G technologies and developments. The following topics are presented at the tutorial:

- Introduction to 5G
- Technology Evolution, Performance Requirements, and Metrics
- Conventional and Massive MIMO including mmWave Communication
- IT and Telecom Convergence Driving 5G
- Frugal 5G for India
- SDN-NFV
- OSS/BSS Impact
- 5G Applications
- 5G Security

**EXPERT LECTURE**

Our ExCom members have been doing a lot of invited talks. Perhaps we ComSoc experts lead and giving invited speech. Dr Dilip, Dr Aloknath De and Dr Navin, Mr Syam have been pioneer in this. In addition, few talks were also delivered by Mr Kishore and Dr Sambit, Prasad Mantri, Mr Anand.

Over **38 technical talks** have been delivered by ComSoc ExCom members at different platform be it at International conference, workshop, 5G Summit, Guest lecture, Invited and Keynote. This is one of the mere achievements and commitment by ComSoc members.
## PHOTONICS SOCIETY

<table>
<thead>
<tr>
<th>No.</th>
<th>Date</th>
<th>Location</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>12-05-2017</td>
<td>Sai Vidya Institute of Technology</td>
<td>One day workshop on Recent Advances in Bio-photonics and optical bio sensors</td>
</tr>
<tr>
<td>2</td>
<td>20-03-2017</td>
<td>ACS College of Engg</td>
<td>Talk: Lab on chip based optical sensor</td>
</tr>
<tr>
<td>3</td>
<td>04-02-2017</td>
<td>New Horizon College of Engg</td>
<td>Talk: Advances and Opportunities in Photonics</td>
</tr>
<tr>
<td>5</td>
<td>24-28 July 2017</td>
<td>CBIT Kolar</td>
<td>Talk in one week FDP: Patent in Photonics domain</td>
</tr>
<tr>
<td>6</td>
<td>26 April 2017</td>
<td>PESIT South Campus</td>
<td>One day talks: MOEMS Applications overview</td>
</tr>
<tr>
<td>7</td>
<td>27-28 Jan 2017</td>
<td>RNSIT</td>
<td>Two days workshop on Special topics in optics and Photonics (STOP)</td>
</tr>
<tr>
<td>8</td>
<td>12 May 2017</td>
<td>NMAM, NItte</td>
<td>Key note: Photonic Crystals and Applications</td>
</tr>
<tr>
<td>9</td>
<td>22-23 June 2017</td>
<td>Dayananad Sagar Univ</td>
<td>Key note: Nano Biosensors</td>
</tr>
<tr>
<td>10</td>
<td>21 July 2017</td>
<td>Geetanjali Inst of Science and Tech, Nellore</td>
<td>Keynote: Biosensors for IOT Applications</td>
</tr>
<tr>
<td>11</td>
<td>18 March 2017</td>
<td>MCE Hassan</td>
<td>One day Workshop on MOEMS and Applications</td>
</tr>
<tr>
<td>12</td>
<td>21 March</td>
<td>MCE Hassan</td>
<td>One day workshop on High Speed optical networks</td>
</tr>
<tr>
<td>13</td>
<td>1 April 2017</td>
<td>JSS Science and Tech Univ, Mysore</td>
<td>Keynote: Photonic Bandgap crystal sensors and applications</td>
</tr>
</tbody>
</table>

### One-day workshop on Recent Advances in Bio-Photonics and Optical Biosensors, 12 May 2017

One day workshop on Recent Advances in Bio-Photonics and Optical Biosensors along with inauguration of IEEE Photonics and IEEE Engineering in Medicine and Biology (EMBS) student chapters of SaiVidya Institute of Technology was conducted on 12-05-2017. The chief guest for the event was Dr. T. Srinivas., Chairman IEEE Photonics Bangalore Chapter. Dr. Gopal Hegde, Associate Faculty, Centre for Nanoscience and Engineering (CeNSE), IISc was guest of Honour.
The IEEE Photonics and IEEE Engineering in Medicine and Biology (EMBS) student chapters of SVIT, were inaugurated by Dr. T. Srinivas, who also spoke on the occasion. Dr. T. Srinivas congratulated SaiVidya Institute of Technology for opening student branches and emphasized the point that none of the engineering colleges in Karnataka for that matter in India have a separate IEEE EMBS Student Chapter and very few institutions have IEEE Photonics Society Student Chapters expect for selected IIT”s and IISc. Dr.GopalHegde spoke about importance of student chapters. Dr. H.S. Ramesh Babu, Principal of SVIT, also spoke on the occasion and expressed his happiness. Presidential address was delivered by the Honourable Director Prof. M.R. Holla.

The Inauguration was followed by expert talks delivered by

1. Dr.GopalHegde, from CeNSE IISc (Topic: Recent Advances in Photonics)
2. Dr. Narayan .K. from SVIT (Topic: Graphene based SOI waveguide for Integrated Sensing Applications)
3. Ms.Srivani Padma from IISc (Topic: Sensors based on Fiber Brag Grating)
4. Dr.PreetaSharan from Oxford College of Engineering (Topic: SPR based Biosensors and Photonic Crystals)

There was panel discussion was held at the end of the workshop, Dr. T. Srinivas, Dr. Narayan .K. and Dr.PreetaSharan were the panellists. The students view was represented by Ms.Ananya Chair, IEEE Photonics Society Student Branch of Bangalore Section. Dr. T. Srinivas was the moderator. Dr. Narayan emphasized on importance of IEEE Membership, Dr.PreetaSharan emphasized about the interim-ship opportunities available for Photonic student members.
The workshop was attended by Ninety Two participants including participants from MVJ, SJCIT and Oxford Engineering Colleges.

**Guest lecture on “Lab-on- chip based Optical Sensor”, 20th March 2017**

ACS College of Engineering, Bangalore has organized a guest lecture on Advancements and Opportunities in Photonics for students, faculty and for members of IEEE Photonic society, Bangalore section.

The first Speaker for the lecture was **Dr. Preeta Sharan** who is presently working as Professor and Head of R&D at Department of Electronics and Communication and Engineering, The Oxford College of Engineering, She having 20 years of research and administrative experiences and published many technical papers in reputed journals and attended and awarded many conference and awards. She has specialized in the area of Photonics and Optoelectronics, Optical Networking, Optical Sensor, GPS/INS Integration, Embedded system based Wireless Mouse, optical networking, Smart Health Monitoring sensor using fibre Bragg grating.

In her lecture Dr Preeta sharan discussed about emerging applications of photonics in lab on chip, case studies challenges and Application of photonics in and opportunities in photonics field in lap on chip optical sensor. She shared her own experiences while dealing with many research activities related to lab on chip optical sensor technology.

Basically all students, faculty enjoyed the guest lecture and many of students got motivated towards photonics.

**Guest lecture on “Advancements and Opportunities in Photonics”, 4th Feb 2017**

New Horizon College of Engineering, Bangalore has organized a guest lecture on Advancements and Opportunities in Photonics for students, faculty and for members of IEEE Photonic society, Bangalore section.

The first Speaker for the lecture was **Dr. Preeta Sharan** who is presently working as Professor and Head of R&D at Department of Electronics and Communication and Engineering, The Oxford College of Engineering, She having 20 years of research and administrative experiences and published many technical papers in reputed journals and attended and awarded many conference and awards. She has specialized in the area of Photonics and Optoelectronics, Optical Networking, Optical Sensor, GPS/INS Integration, Embedded system based Wireless Mouse, optical networking, Smart Health Monitoring sensor using fibre Bragg grating.

In her lecture Dr Preeta sharan discussed about emerging applications of photonics, case studies challenges and Application of photonics in and opportunities in photonics field. She shared her own experiences while dealing with many research activities related photonics technology.
Basically all students, faculty enjoyed the guest lecture and many of students got motivated towards photonics.

**Faculty Development Programme – Patent in Photonics Domain, 24th – 28th July 2017**

CBIT Kolar, has organized a Faculty development programme on Patents in Photonic Domain for faculty and for members of IEEE Photonic society, Bangalore section.

The first Speaker for the lecture was **Dr. Preeta Sharan** who is presently working as Professor and Head of R&D at Department of Electronics and Communication and Engineering, The Oxford College of Engineering, She having 20 years of research and administrative experiences and published many technical papers in reputed journals and attended and awarded many conference and awards. She has specialized in the area of Photonics and Optoelectronics, Optical Networking, Optical Sensor, GPS/INS Integration, Embedded system based Wireless Mouse, optical networking, Smart Health Monitoring sensor using fibre Bragg grating.

5 Days workshop conducted for faculties. Maximum faculties utilized the patent in phonics domain workshop. Basically all faculty enjoyed the workshop and many of faculties motivated towards to know more about photonic patent benefits.

**Guest lecture Title: Mechatronics – MOEMS Application Overview**

PESIT South campus, Bangalore has organized a guest lecture on Mechatronics – MOEMS application overview for students, faculty and for members of IEEE Photonic society, Bangalore section.

The first Speaker for the lecture was **Dr. Preeta Sharan** who is presently working as Professor and Head of R&D at Department of Electronics and Communication and Engineering, The Oxford College of Engineering, She having 20 years of research and administrative experiences and published many technical papers in reputed journals and attended and awarded many conference and awards. She has specialized in the area of Photonics and Optoelectronics, Optical Networking, Optical Sensor, GPS/INS Integration, Embedded system based Wireless Mouse, optical networking, Smart Health Monitoring sensor using fibre Bragg grating.

Second speaker for the lecture was **Mr Anup M Upadhyaya** who is presently working as Assistant professor in the Dept of Mechanical Engineering, The Oxford college of Engineering, Bangalore. He having one year of experience in automotive engineering service industry as FEA analyst and worked for different reputed OEM clients. And also served in teaching profession for different engineering institutions and published several papers. His area of research interest is, Mechatronics, MEMS, MOEMS, and Photonics.

**Mr.AnimeshGiri**, Assistant professor, Dept of Information science and Engineering, PESIT South campus, introduced the guest speakers and welcomed all delegates to the lecture.
In her lecture Dr Preeta sharan discussed about emerging applications of MEMS and MOEMS in mechatronics and MOEMS application case studies challenges and Application of photonics in MOEMS and job opportunities in Mechatronics field. She shared her own experiences while dealing with many research activities related to MOEMS and MEMS technology.

In his lecture Mr Anup M Upadhya discussed about supporting software in MEMS or MOEMS and its role in respective application. And he also discussed about basic principle of MOEMS in mechanical engineering and emerging areas with mechanical systems.

At the end of session Dr Annapoorna, HOD, Information science and Engineering, PESIT south campus appreciated and gave closing address to guest speakers, students and to all faculty members.
ICSPACEx2017

IEEE International Conference on Smart Grids, Power and Advanced Control Engineering (ICSPACEx2017) was organized by the Department of Electrical and Electronics Engineering, Global Academy of Technology, Bengaluru, Karnataka, India in association with IEEE Power and Energy Society (IEEE PES), Bangalore Chapter & IEEE Bangalore Section, as the Technical Sponsor during 17 – 19 August 2017. This conference was designed to deliberate on technological advances in Smart grids, Power and Control Engineering. These three areas have major applications in Electrical Engineering. Participation from both industry and academia made the conference a vibrant and successful event. The participants were academicians, researchers, renowned engineers and scientists.

As a part of the conference a pre - conference tutorial was organized on 17th August 2017 for formal learning and it has created a platform to interact and exchange ideas. The pre-conference tutorials were, “Power Grid Technologies for an energy system with electricity generation from renewable energy sources and new solutions for energy storage and integration of electrical vehicles” by Dr. Lina Bertling Tjernberg, Professor, KTH Royal Institute, Sweden and “Power swing phenomenon and Out of step protection design considerations” by Dr. Nagaraja R, MD, PRDC, Bengaluru. The conference was a blend of keynote address, plenary sessions, panel discussions and paper presentations and has attracted good number of research papers from across the globe presented.
**APPEEC 2017 (9th Asia Pacific Power and Energy Engineering Conference 2017)**

APPEEC is an annual event organized by IEEE PES in Asia-Pacific region, which provides a premium platform to present research work and share experiences and ideas in the areas of power and energy systems across the globe. This year, the event was held at Hotel Le Meridien, Bangalore, in association with IEEE PES Bangalore Chapter and co-organized by National Institute of Technology, Karnataka (NIT-K). The event started on November 8th, 2017 with a series of tutorials, followed by two days of talks by eminent speakers, panel discussions, technical paper presentations and poster sessions. As part of the event, a technical visit was also organized to Kolar HVDC station of Powergrid Corporation of India, Kolar on November 11th. More than 200 participants took part in the conference including overseas delegates from Australia, Bangladesh, China, Egypt, France, Malaysia, New Zealand, Philippines, Sri Lanka, Singapore, Sweden, Thailand and USA.

The event was conducted with technical support from IEEE Bangalore section and financial support from various organizations, with NIT-K taking the lead as the Main Supporter followed by ABB as Platinum supporter, BESCOM, CPRI, POSOCO & PRDC as Silver supporters and KPCL as Tutorial Supporter. Opal-RT also supported the event along with a demo of their system. Ministry of Power, Government of India extended non-financial support.

**Chapter Chairs Meeting**

IEEE PES R10 Chapter Chairs meeting for the year 2017 was hosted by IEEE PES Bangalore
chapter and held on 7th November 2017 at Hotel Le Meridian, Bangalore. The members discussed the various future plans for chapter at length in this meeting.

**Distinguished Lecture Program**

One DLP held on 9th November 2017 at Hotel Le Meridian and the talk was given by Dr. Vahid Madani, IEEE Fellow on wide area monitoring systems.

**Student Congress**

IEEE Power & Energy Society Christ University Student Branch in association with Department of Electrical & electronics Engineering hosted the IEEE PES Student Congress 2017 at Faculty of Engineering, Christ University on 5 September 2017. It was one of the flagship events of IEEE PES Bangalore Chapter. The event was attended by 73 participants from various Universities and Engineering Colleges. The theme chosen for the Student congress 2017 was “Innovations in Power and Energy Sector”.

The Events began with an Invocation dance by the IEEE-PES student members. It was a tribute to the Heavenly powers in imbibing the newly formed student branch to excel in its field. Dr. Joseph Rodrigues welcomed all the dignitaries and other faculty members and IEEE delegates who had come and graced the occasion. This was followed by Lighting of the Lamp by the dignitaries and the student representatives.

Mr. Parag Jose, Faculty Advisor IEEE PES SB talked about the activities conducted by IEEE PES SB Christ University over the past year and also about the future aspirations of the Student Branch. This was followed by a video presentation of the promotional video that the students of IEEE PES SB Christ University had developed as part of the Student Congress. Mr Sethuraman Ganesan delivered the Presidential address and emphasized on the requirement of societies like IEEE PES in forming the future of an engineering graduate. Mr. Kiran Joseph, IEEE PES SB Chair delivered the vote of thanks.

Mr. Ajit Kumar Eega delivered the keynote address. He talked on the modern power systems and the methods undertaken globally to enhance the efficiency of power transmission and distribution. It was followed by a keynote address by the guest of honor Mr. Sethuraman Ganesan. The advances by power system industries in the field of power system reliability and enhancement were touched upon, thus giving the students an industry perspective.

The events for the day began at 12.00 P.M. The different events held under the Student Congress were Startup Pitch, Project Demo Contest, Poster Presentation and Technical Quiz. The areas were in tune with the theme “Innovations in Power and Energy Sector”. The students were accompanied to different venues by the volunteers. The events concluded at 4. P.M. The valedictory function was held and the winners for different events were announced. This was
followed by prize and certificate distribution. The event proved to be a platform for students and industry representative to interact and network and thereby develop a better perceptive towards Power and energy sector.

WIPE 2017

A panel discussion on ‘Women in Power Engineering’ is scheduled on 8th Nov from 14:00 – 17:30. The panel consisted of invited women achievers from Power & Energy Industry. Each panelist spoke on the different themes and shared their success stories. This was a great opportunity for women professionals from academics, industry, research organizations, entrepreneurs and students to network with successful women in the field of power and energy. It is meant to provide a platform for networking and share the issues and challenges faced by women professional.

YRM: 2017 Young Researcher’s Meet (YRM), 7, October 2017, Manipal University.
The Department of Electrical and Electronics Engineering of Manipal Institute of Technology, Manipal University, India, organized the “2017 Young Researcher’s meet (YRM)”, an annual event of IEEE Power and Energy Society, Bangalore Chapter. Forenoon session had several invited talks by experts from prestigious organizations like POSOCO, PRDC, ABB, and reputed academic institutes. Experts spoke about ongoing research as well as proposed research work in the area of Power and Energy Systems. The afternoon session focused on mentoring of young researchers.

A mentor worked with a group of researchers in a particular area on ways to tackle various challenges encountered in research. Mentors were devoted to active research in the field of Power and Energy Systems such as Smart Grids, Micro Grids, Power Quality and Reliability, Power System Planning & Operation, Power System Dynamics, FACTS, Renewable Energy Integration, Solid State Lighting and Controls, Energy Management etc.

The keynote speech on ‘Research Methodology’ was delivered by Dr. Suresh Jangamshetti, Senior Member IEEE & Fulbright Alumni, Professor, BEC Bagalkot. The experts had addressed future challenges in Power and Energy research; various topics for discussion were PMUs, Emerging Trends in Power System Planning/ Operation with Renewable Energy Sources and Micro Grids as fundamental Building blocks and enablers of natural energy. The mentoring session was chaired by Senior IEEE PES Members from Bangalore and South Canara region.

**New Student Branch Chapters**

Following Student Branch Chapters were opened in the year 2017:

1. Sai Vidya Institute of Technology, Bangalore
2. Dayananda Sagar College of Engineering, Bangalore

**Tech Talks**
Various technical talks were organized by the chapter in academic institutions and industries and the details are tabulated as under.

<table>
<thead>
<tr>
<th>Venue</th>
<th>Topic</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 RVCE</td>
<td>HVDC Transmission/ FACTS controllers/ Reactive power compensation</td>
<td>28-Oct-17</td>
</tr>
<tr>
<td>2 MSRIT</td>
<td>Emerging issue in power systems Protection</td>
<td>14 Sept. 2017</td>
</tr>
<tr>
<td>3 BMS College</td>
<td>Technological Review on Electrical Generators for Renewable Energy Applications</td>
<td>June(2th week)</td>
</tr>
<tr>
<td>4 PRDC</td>
<td>SCADA Security in Smart Grid and Relevance of Communication Technologies in Smart Grid</td>
<td>23-Jun-17</td>
</tr>
<tr>
<td>5 REVA University</td>
<td>Energy Storage devices</td>
<td>July</td>
</tr>
<tr>
<td>6 CPRI</td>
<td>Transformer Testing, Testing &amp; Certification and on Standards/Importance of Standards</td>
<td>11/8/2017</td>
</tr>
<tr>
<td>7 Global Ins of Tech</td>
<td>Artificial neural networks application in Power Engineering</td>
<td>22-09-2017</td>
</tr>
<tr>
<td>8 GE</td>
<td>DC grid, Internet of Energy, Storage technologies, Microgrid</td>
<td>Sept.(2nd week)</td>
</tr>
<tr>
<td>9 Bagalkot, BEC</td>
<td>Renewables</td>
<td>Nov.(4th week)</td>
</tr>
<tr>
<td>10 Amrita University</td>
<td>Dr Pramila Manohar</td>
<td>Dec.(2nd week)</td>
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</table>
Robotics & Automation Society

<table>
<thead>
<tr>
<th></th>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8-9 April, 2017</td>
<td>Robodium @ Amrita School of Engineering (RASE’17)</td>
</tr>
<tr>
<td>2</td>
<td>5-7 October, 2017</td>
<td>International Conference on Consumer Electronics - Asia 2017 (ICCE) Co-organized with IEEE CE Bangalore Chapter</td>
</tr>
<tr>
<td>3</td>
<td>24-25 November, 2017</td>
<td>Workshop On IoT Application Development 2017</td>
</tr>
</tbody>
</table>

**RASE’17 (National Level Robotics Competition)**

The 8th and 9th of April 2017 saw robotics enthusiasts from Karnataka and other states assemble in Amrita Vishwa Vidyapeetham, Bangalore campus. The National Level Robotics Competition RASE’17 hosted by Amrita School of Engineering, Bengaluru was organized by the students of ACROM (Amrita Club for Robotics and Mechatronics) in association with IEEE Robotics and Automation Society (RAS), Bengaluru Chapter.

The National Level ROBODIUM @ ASE - RASE’17 is an Annual National Level Robotic Competition in which participant’s technical ingenuity was put to test through several innovative and challenging events. The event saw 83 team registrations from 40 Engineering colleges from Karnataka and other southern states. The four events conducted were: LIFO (short for Line Follower), Death Race, Robo Soccer and Robo Wars.

**Robo Wars participants with their robots**

This 2-day event saw the best 3 teams in each of the four events winning a total whooping amount of Rs.92000/- which was given to the best 3 teams in each of the four events. The two day event came to a close after the distribution of certificates and prizes for all the events in their respective arenas. These two days just marked the beginning of a whole new era of competitions and events related to Robotics.
ICCE-Asia 2017 Bengaluru, provided an unique opportunity to present, exhibit and network with a world-class audience. The conference was sponsored by Cyient (Diamond Sponsor), Qualcomm (Platinum Sponsor) and supported by Revvx, Anita Borg, Path Partner and IEEE Standards Association.

The conference was kicked off with a pre-conference tutorial on Deepdive into TensorFlow by Manoranjan Padhy, Google Developer Ecosystem India and Moving to Vulkan - Next Generation Graphics and Compute by Experts from Samsung R&D Institute India - Bangalore, NVidia and Qualcomm Technologies (QTI).

Six key note sessions spread across two days was delivered by industry and academia experts in the field of consumer electronics. Overall 35 papers were presented. The best paper award among all papers presented at the conference, went to the paper titled Novel OpenVX Implementation for Heterogeneous Multi-Core Systems, by Kedar Chitnis, Jesse Villarreal, Jr, Brijesh Jadav, Mihir N Mody, Lucas Weaver, Victor Cheng, Kumar Desappan, Anshu Jain and Pramod Swami. Apart from paper presentation, product demonstration and IEEE Women in Engineering track was few of the key highlights in the conference.

IEEE IoTAD 2017 is a joint initiative of PES University, Bengaluru, IEEE CE Society Bengaluru Chapter, IEEE RAS Bengaluru Chapter and Future Tech Lab, India. This two-day international workshop will bring together academic and industry experts from India and abroad to share their expertise on IoT Application Development for Smart Cities, Connected Cars, Intelligent Transportation System and much more. The workshop is also endorsed by IEEE CE Society Future Directions Committee.

Thus, the workshop aims at forming a platform to create secure, connected and interoperable consumer IoT applications. We invite participants from Academia and Industry to advance their understanding on IoT application development with a consumer focus. Participating in the workshop will be valuable in terms of professional development, ameliorating your understanding of IoT and Smart Cities, business networking and learning novel areas of research. Bangalore Chapters of IEEE Robotics and Automation Society (RAS) and IEEE Consumer Electronics Society (CESoc) together with PES University and Future Tech Lab, India are organizing the 2017 IEEE IoTAD workshop in PES University, Bengaluru. Future Tech Lab is supporting the workshop through its “Academy for IoT” (A4IoT) initiative, a training and certification program.
### Computational Intelligence Society

<table>
<thead>
<tr>
<th>Date Range</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>18th – 20th Jan 2017</td>
<td>3 day FDP on Emerging Topics on Computational Intelligence and its applications</td>
</tr>
<tr>
<td>3rd – 4th Mar 2017</td>
<td>2 days hands on training on VMware</td>
</tr>
<tr>
<td>5th May 2017</td>
<td>1 day workshop on Computational Intelligence</td>
</tr>
<tr>
<td>17th – 19th Aug 2017</td>
<td>3 days Conference on SmartTech 2017</td>
</tr>
<tr>
<td>15th Sep 2017</td>
<td>1 day technical event on Smart Grid Technology</td>
</tr>
<tr>
<td>23rd Sep 2017</td>
<td>1 day technical event on Big Data analytics</td>
</tr>
<tr>
<td>13th Oct 2017</td>
<td>1 day workshop on Arduino &amp; Robotics</td>
</tr>
</tbody>
</table>

Three day faculty programme in SVCE on "Emerging Topics in Computational Intelligence and its applications, at SVCE, Bangalore, 18-20, 2017.
Hands on training on VMware, vSphere and vSAN. 3rd Mar - 4th Mar 2017, MSRIT

The details on the training are given below:

<table>
<thead>
<tr>
<th>Day 1</th>
<th>Virtualization 101: vSphere with Operations Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>By</td>
<td>Kumara Murali, VMware Academy Instructor</td>
</tr>
<tr>
<td></td>
<td>This lab will explore the components and their capabilities within vSphere with Operations Management. It will cover how to implement these in addition to basic administration topics. This is an excellent place to begin your experience with VMware vSphere</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Day 2</th>
<th>Virtual SAN 6.2 from A to Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>By</td>
<td>Kumara Murali, VMware Academy Instructor</td>
</tr>
<tr>
<td></td>
<td>VMware Virtual SAN (VSAN) is a radically simple, enterprise-class shared storage solution for hyper-converged infrastructure optimized for today’s all-flash performance. In this lab you will learn how easy it is to enable VSAN and use it to store your VMs. Also, explore VSAN’s features including All-Flash configurations, deduplication and compression, RAID 5/6 erasure encoding, stretched-clustering.</td>
</tr>
</tbody>
</table>

NOTE: Students will receive a VMware certificate upon successfully completing the tasks assigned.

One day workshop on "Computational Intelligence", 5th May 2017, REVA University.

One Week
Faculty Development Programme
ON

“Machine Learning Techniques
& Advances for Cognitive Computing”

31st July – 5th August 2017

Organized by
Department of Information Science &Engg.
Ramaiah Institute of Technology
VidyaSoudha, MSR Nagar, MSRIT Post, Bengaluru – 54
www.msrit.edu

In Association with
IEEE Computational Intelligence Society
(IEEE-CIS), Bangalore Chapter
<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>24-02-2017</td>
<td>Tech talk on Using Machine Intelligence for Healthcare Applications at PARCOMPTECH INDIA 2017</td>
<td>NIAS, Bengaluru</td>
</tr>
<tr>
<td>08-03-2017</td>
<td>Chief Guest talk at IEEE International Women’s Day</td>
<td>SVCE, Bengaluru</td>
</tr>
<tr>
<td>05-04-2017</td>
<td>Support to IEEE CS Rock Stars of Blockchain and Cybersecurity - India</td>
<td>Le Méridien, Bengaluru</td>
</tr>
<tr>
<td>01-04-2017</td>
<td>Workshop on Machine Learning</td>
<td>PESIT South Campus, Bengaluru</td>
</tr>
<tr>
<td>20-04-2017</td>
<td>Tech Talk at IoT Summit 2017</td>
<td>Novotel, Bengaluru</td>
</tr>
<tr>
<td>01-06-2017</td>
<td>LaTeX Workshop</td>
<td>IISc, Bengaluru</td>
</tr>
<tr>
<td>04-08-2017</td>
<td>IEEE Smart Tech 2017</td>
<td>Sterlings MAC Hotel, Bengaluru</td>
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<tr>
<td>16-09-2017</td>
<td>Technical Talk on IoT</td>
<td>KSIT, Bengaluru</td>
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<tr>
<td>23-09-2017</td>
<td>InGenius 2017 Hackathon</td>
<td>PESIT South Campus, Bengaluru</td>
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<tr>
<td>06-10-2017</td>
<td><strong>IEEE Symposium on Drone Computing</strong></td>
<td>Sterlings MAC Hotel, Bengaluru</td>
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<tr>
<td>08-11-2017</td>
<td>Tech Session on IoT Security at IoT Next 2017</td>
<td>Park Plaza, Bengaluru</td>
</tr>
<tr>
<td>21-12-2017</td>
<td>International Conference on Computational Systems and Information Technology for Sustainable Solution [CSITSS]</td>
<td>RVCE, Bengaluru</td>
</tr>
<tr>
<td>05-12-2017</td>
<td>Invited talk on Application of Predictive analytics in Business Applications</td>
<td>IFIM Bangalore</td>
</tr>
<tr>
<td>01-09-2017</td>
<td>Workshop on linear Algebra and Applications- 40 Hour Course</td>
<td>PESIT South Campus, Bengaluru</td>
</tr>
<tr>
<td>27-07-2017</td>
<td>Invited talk on &quot;My experiences of writing successful and unsuccessful research proposals&quot; as a part of Faculty Development Program</td>
<td>BMS College of IT &amp; M, Bengaluru</td>
</tr>
<tr>
<td>18-08-2017</td>
<td>Invited talk on &quot;Complexity Theories of Consciousness&quot;</td>
<td>PES University Campus, Bengaluru</td>
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<td>19-08-2017</td>
<td>Invited panelist on &quot;Student-Scientist interaction on Modeling and Research in Neuroscience&quot;</td>
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<td>08-01-2017</td>
<td>Invited talk on IoT and Sensor-FDP</td>
<td>SVCE, Bangalore</td>
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<td>21-09-2017</td>
<td>Webinar on Machine Learning</td>
<td>Webinar</td>
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<td>26-08-2017</td>
<td>AI Meetup</td>
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<td>23-12-2017</td>
<td>Convex optimization and applications in Internationality modeling--Keynote @IOS2017</td>
<td>Institute of Scientometrics</td>
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<td>27-12-2017</td>
<td>Technical Talk titled &quot;Brain, Mind &amp; Machine: Perspectives from Information and Complexity Science&quot; as a part of Minds &amp; Machines Workshop</td>
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<td>01-09-2017</td>
<td>Workshop on Num,py and sci,py libraries and handling complex mathematical equations in python-a viable alternative to MaTLab</td>
<td>PESIT South Campus, Bengaluru</td>
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<tr>
<td>Date</td>
<td>Title</td>
<td>Speaker/Resource Person</td>
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<td>13/02</td>
<td>Model-Based Iterative Algorithms for Tomographic Reconstruction of Time-Space Scalar and Vector Fields</td>
<td>K. Aditya Mohan</td>
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<td>02/06</td>
<td>Data Driven Conversational Dialog</td>
<td>Prof. Alan Black</td>
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<tr>
<td>05/07</td>
<td>Wearer Activity Recognition From Egocentric Videos</td>
<td>Dr. Chetan Arora</td>
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<td>28/11</td>
<td>Towards automatic learning of gait signatures for people identification in video</td>
<td>Prof. MANUEL J. MARON - JIMENEZ</td>
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<tr>
<td>22/12</td>
<td>Connecting vision and language for Interpretation, Grounding and Imagination</td>
<td>Ramakrishna Vedantam</td>
</tr>
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</table>

**Title**: Data Driven Conversational Dialog  
**Speaker**: Prof. Alan Black, Language Technologies Institute, Carnegie Mellon University, USA  
**Venue**: Multimedia Classroom (Room: C241), 1st floor, Department of Electrical Engineering  
**Date and time**: Friday, June 02, 2017, 4:00 PM

**Abstract**: Historically, successful spoken dialog systems were hand crafted sets of explicit rules that defined a set of paths through potential turns between a user and machine. Although often very successful, these are expensive to develop and require substantial work to expand to new domains. Recently there have been attempts to try to use databases of existing conversations to learn dialog structure thus making the build process easier. There are some successes here, but there are also significant problems. Finding the right data is hard, or may even be impossible, solutions to finding the “right” data has become a research goal in itself. This talk will present the current techniques in statistical and neural conversational models in dialog systems, their successes and their limitations as well as potential research directions to addressing these shortcomings.

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**Title**: Wearer Activity Recognition from Egocentric Videos  
**Speaker**: Dr. Chetan Arora, IIITD  
**Venue**: CDS Seminar Hall (Room No: 102), IISc.  
**Date and time**: Wednesday, July 5th, 2017, 11:30 AM

**Abstract**: Wearable cameras like the GoPro are one of the bestselling cameras these days. The always on nature and the first person point of view are the unique characteristics of such egocentric cameras giving access to the information not possible with traditional point and shoot cameras. Recognizing wearer's activity is one of the core tasks in many egocentric applications. In this talk I will present some of our work in this area starting with our earlier work on long term activity recognition using traditional machine learning methods. I will then go on to explain how deep learning helped us to generalize the recognition to much larger class of activities for which designing hand tuned features was unthinkable.
Title: Towards automatic learning of gait signatures for people identification in video

Speaker: Prof. MANUEL J. MARON – JIMENEZ, University of Granada, Spain

Venue: CDS Seminar Hall (Room No: 102), IISc.

Date and time: Tuesday, Nov 28, 2017, 11:30 am

Abstract: This talk targets people identification in video based on the way they walk (i.e. gait). While classical methods typically derive gait signatures from sequences of binary silhouettes, in this talk we present the use of convolutional neural networks (CNN) for learning high level descriptors from low level motion features (i.e. optical flow components). We carry out a thorough experimental evaluation of the proposed CNN architecture on the challenging TUMGAID dataset. The experimental results indicate that using spatiotemporal cuboids of optical flow as input data for CNN allows to obtain state of the art results on the gait task, with an image resolution eight times lower than the previously reported results (i.e. 80x60 pixels).

In the second part of this talk, we support that, although gait is mainly used for identification, additional tasks as gender recognition or age estimation may be addressed based on gait as well. In such cases, traditional approaches consider those tasks as independent ones, defining separated task specific features and models for them.

Title: Connecting vision and language for Interpretation, Grounding and Imagination

Speaker: Ramakrishna Vedantam

Venue: CDS Seminar Hall (Room No: 102), IISc.

Date and time: Friday, Dec 22, 2017, 11am

Abstract: The goal of this talk is to explore how modeling deep interactions between vision and natural language can derive more humanlike inferences from machine learning models. We will consider various situations where humans are able to make intuitive inferences, but where machines are not, and show how appropriate algorithmic or computational choices can improve the inferences made by machines and make them more humanlike.

In pursuit of this overarching goal, I will look at three focus areas: interpretation, grounding, and visual imagination. In interpretation, I will study how to go from computer vision to natural language. Specifically, the focus will be on image captioning: the problem of describing an image with a natural language description. Here, I study how to formalize the task of image captioning and create evaluation schemes to make progress towards generating more ‘human-like’ descriptions and generate image captions which are more aware of the context in which we want to describe an image. In the second part, I will consider the inverse problem of “grounding” -- associating symbols such as “car” with what they refer to in the physical world. A key focus will be on learning word representations grounded in vision or sound, and a study of how such representations can lead to improved retrieval and commonsense reasoning.

Finally, I will talk about recent work on the problem of imagination -- consider how easy it is for people to imagine what a “purple hippo” would look like, even though they do not exist. If we instead said “purple hippo with wings”, they could just as easily create a different internal mental representation, to represent this more specific concept. To assess whether the person has correctly understood the concept, we can ask them to draw a few sketches, to illustrate their thoughts. We call the ability to map text descriptions of concepts to latent representations and then to images visually grounded semantic imagination. My work will explore how one can modify a class of joint latent vibrational auto-encoder models to perform such grounded semantic imagination.
### Workshop Indian Cybertariats

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<tr>
<th>Date</th>
<th>Event Description</th>
<th>Speakers</th>
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<td>29.07.17</td>
<td>Workshop Indian Cybertariats</td>
<td>Pawan Duggal, N Vijayashankar, Greg Adamson</td>
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<tr>
<td>14/10/17</td>
<td>Expert lecture on “Reinforcement Learning Algorithms: An overview and some applications”</td>
<td>Dr. Shalabh Bhatnagar, Prof. H. K. Anasuya Devi, IISc, Bengaluru</td>
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<tr>
<td>16/10/17</td>
<td>Faculty Development Program on “Project Based Learning”</td>
<td>Dr. N. G. S. Udupa, Dr. Kumar, Dr. Kapilan</td>
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<tr>
<td>17/10/17</td>
<td>Faculty Development Program on “Flip Teaching”</td>
<td>Dr. S. G. Gopala Krishna, Prof. Sharada, Prof. Sunil Kumar</td>
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<tr>
<td>17/11/17</td>
<td>Workshop on Research methodology</td>
<td>Dr. G S Javed, Prof. H. K. Anasuya Devi</td>
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<tr>
<td>14/09/17</td>
<td>Membership development program at NCET</td>
<td>Prof. H. K. Anasuya Devi,</td>
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<td>26/10/17</td>
<td>Inauguration student branch program at MVJCE</td>
<td>Prof. H. K. Anasuya Devi,</td>
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1. **Indian Cybertariats:**

   One day workshop on Indian Cybertariat has been organised covering wireless networking, cyber security, and resource management to social aspects such as per-to-peer relationships to social networking. This workshop is organized by IEEE-IISc student branch in association with the IEEE- Society for Social implications of technology, Bangalore Chapter. It is designed to be of interest to wide ranging participants from students of ICT to government and industry officials interested in using ICT in their office environment. Pawan Duggal, Advocate, Supreme court of India, New Delhi, N Vijayashankar ebusiness consultant and Cyber law specialist, gave talk on Cyber law and Indian Cybertariats, Three dimensional Information Security approach respectively. Greg Adamson, Dept of Electronics and Comm Engg, Univ of Melbourne gave talk through Skype. T V Gopal, Dept of Computer Science, Anna Univ coordinated the workshop. Panel discussion moderated by HK Anasuya Devi followed workshop.
2. Report of expert lecture on 14th October 2017:

Dr. Shalabh Bhatnagar, Professor in the Department of Computer Science & Automation, IISc, Bengaluru, gave an expert lecture on “Reinforcement Learning Algorithms: An overview and some applications” on 14th October 2017. 34 students, who are members of IEEE SSIT, attended the lecture. Dr. H. K. Anasuya Devi, member BOG, IEEE SSIT, Dr. S. G. Gopala Krishna, Principal, NCET and Prof. B. Roopashri Tantri, Treasurer, IEEE SSIT ES Joint Bangalore Chapter were also present. The talk was of one hour duration, following which, there was question and answer session. Lots of questions were posed by the students. The questions were answered by Dr. Bhatnagar and some of them were jointly answered by Dr. Anasuya Devi and the Principal. There was also a brain storming session, where students were asked to shoot project proposals, based on the algorithms explained in the expert lecture. The entire event was very fruitful, as it threw lots of opportunities for the students to think of projects on traffic control and intrusion detection.

3. Report of Faculty Development Programme on 16th October 2017:

One day Faculty development programme on “Project Based Learning” was held on 16th October 2017. Principal Dr. S. G. Gopala Krishna, Vice Principal – Administration Dr. N. G. S. Udupa, Treasurer of IEEE SSIT ES Joint Bangalore Chapter and Coordinator of all IEEE activities of NCET Prof. B. Roopashri Tantri, Vice Principal – Academic Dr. Srikanat Murty and faculty members were present. The event was inaugurated at 10 am by all the dignitaries. The sessions began at 11 am. The first session was hosted by Dr. N. G. S. Udupa. He gave an overview of project based learning and mentioned many projects on latest technologies, which can be carried out by the students. In the second session, Dr. Kumar, Dean R&D of NCET, explained the concept of project based learning through some videos and case studies. He also gave some tips in designing
curricula for project based learning and some methods of assessment. Many questions were 
raised by the faculty members in both the sessions. Some suggestions were also made by the 
Principal and the participants. In the afternoon session, Dr. Kapilan, Head of the department of 
mechanical engineering enlightened the faculty members by explaining the opportunities given 
to the students through project based learning and the advantages of incorporating them in the 
course. 50 faculty members attended the programme. The valedictory function was held from 
3.30 pm to 4 pm.

4. Report of Faculty Development Programme on 17th October 2017:
One day Faculty development programme on “Flip Teaching” was held on 17th October 2017. 
The sessions began at 10 am. 50 staff members attended the programme. The first session was 
held by Prof. Sharada, Head, Department of Physics. She explained the concept of flip teaching 
in detail and elaborated on how the experiments carried out in the laboratories can reach 
students through flip teaching. In the second session, Prof. Sunil, Department of Computer 
Science, elaborated both classroom and laboratory lectures through flip teaching. The concepts 
were also demonstrated by making use of Moodle. Staff members were demonstrated to upload 
the study materials through the use of Moodle. Principal Dr. S. G. Gopala Krishna also explained 
his views regarding the same. Dr. Krishna Murthy, Professor in the department of Civil 
Engineering demonstrated how study materials can be uploaded online using Google drive.

5. Workshop on Research methodology

One day workshop that was organized by the Electrical Department BMSCE on 17-11-2017 on 
research methodology by Dr.G S Javed, was an interactive session that started around 10.30 A.M 
which gave us a brief insight about the method of carrying out an effective research. The speaker
imparted knowledge on research problem and definition and provided real time examples that made students to understand it and grasp easily. The program was then concluded by Dr. Anusuya Devi from IISC Bangalore who gave us an introduction about the IEEE conferences and IEEE SSIT ES Joint Bangalore Chapter.

6. Inauguration student branch program at MVJCE

The Chief Guest of the function, Dr. H.K Anasuya Devi, Professor, & Immediate Past Chair, IEEE SSIT ES Joint Bangalore Chapter then addressed the gathering where she shared several useful tips for organizing a student branch effectively. She even spoke about the importance of IEEE in acquiring the professionalism required in any Engineering student these days. She expressed his happiness and appreciated the student members for taking the lead and initiating the Student Branch at this college. She also invited faculty members and students to join IEEE Student Branch and explained briefly about the importance of IEEE SSIT ES Student Chapter.

On this auspicious Occasion, she is delivered key note address on “artificial Intelligence and its progression” & discussed about various mini projects related to all the fields.

On this auspicious Occasion, The Student executive committee members organized “Technical Quiz”. The Entire event was differentiated in three respective rounds. In this event around 54 teams participated and a total of 137 students had registered.
Flying Cars – Challenges and Propulsion Strategies

Professor Kaushik Rajashekara, University of Houston, USA, Fellow IEEE, NAI, Member NAE, INAE gave a Distinguished lecture on 17th July 2017 3:00 pm at MMCR, Electrical and Electronics department, IISc, Bangalore.

The technology and interest in the flying cars is as old as airplanes and automobiles. However, with the rapid advancement and commercialization of airplanes and automobiles, and with many technical challenges associated with flying cars, the interest in flying cars declined. In recent years, with the advances in technology of engines, electric motors, power converters, and communications, there is an increasing interest in flying vehicles and more electrification. Several companies are already developing these vehicles with the intent of commercialization. In this presentation, the history of flying cars including some of the on-going developments will be presented. The technical challenges, particularly related to lift and propulsion, and the problems related to making it a wide scale adoption will be discussed.

Challenges in Developing Semiconductors for Power Products

Speaker: Ebenezer Vidyasagar (Director APP, TI India)
Date: 7 September 2017
Time: 2.30PM - 3.30PM
Venue: Seminar Hall, DESE, Indian Institute of Science, Bangalore

Abstract: Providing electrical power to modern-day electronic systems is in itself a challenging task due to the complexity of these systems. The number of transistors in these systems has been steadily increasing, resulting in an increased need for power, necessitating power management. Systems integrate diverse IP from multiple vendors, including digital, analog and mixed-signal IP, which require different levels of power. Increasingly, many electronic systems operate on battery power and harvested energy. Further, it is important to consider the footprint of the solution and thermal dissipation when powering modern gadgets. TI offers
complete power solutions with a full line of high-performance products, ranging from standard linear regulators to highly efficient DC/DC converters and battery management ICs.

Current Research in Power Electronics
Speaker: Dr. Kaushik Basu (Assistant Professor Department of EE, IISc Bangalore)
Date: 29 November 2017
Time: 3:00PM – 4:00PM
Venue: Texas Instruments (India), Bangalore Campus

Abstract: The talk presented some of the research projects currently being worked on at the Department of Electrical Engineering, Indian Institute of Science, along with some of the power electronic hardware that has been developed. It highlighted some of the recently developed power converter topologies along with modulation strategies that result in power-efficient, cost efficient, reliable and low footprint solutions for the grid integration of utility-scale solar. A solution for direct interconnection to medium-voltage grid integration was also presented. The talk covered other research topics including split-phase induction machine drive, hardware emulation of flexible transmission line, analytical loss estimation of SiC devices and gate driver design of iGaN540, a normally-on GaN switch developed at the Indian Institute of Science. The speaker also mentioned the recent research work on hardware development, which includes an SoC-based embedded platform and a Si IGBT-based modular converter.

DLP Talk by Prof Sudip Majumdar (University of Illinois at Chicago): Control of Power Electronics Systems using Predictive Switching Sequences and Switching Transitions, on 22/12/2017 at EE, IISc.
## GRSS Chapter

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<td>12-06-17</td>
<td>Workshop on Satellite Remote Sensing and Image Analysis: Activities at the Bangalore Section IEEE GRSS Chapter at Indian Statistical Institute-Bangalore Centre</td>
<td>Dr. Paul A. Rosen, JPL-NASA, Prof. William Emery, Colorado University, Dr. B. S. Daya Sagar, and Dr. Jaya Nair</td>
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<td>27–30 Dec. 2017</td>
<td>Ninth International Conference on Advances in Pattern Recognition (ICAPR-2017), at Indian Statistical Institute-Bangalore Centre <a href="http://www.isical.ac.in/~icapr17">http://www.isical.ac.in/~icapr17</a></td>
<td>Prof. Robert M. Haralick, Edwin R Hancock, Prof. Sargur Srihari, Prof. Laurent Najman</td>
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Members of Organizing Committee and Speakers: Workshop at the Bangalore Section IEEE GRSS Chapter during 12th June 2017
Electronics Packaging Society

The IEEE Electronics Packaging (EP) Society (formerly Components, Packaging and Manufacturing Technology -CPMT) isthe leading international forum for scientists and engineers engaged in the research, design and development of revolutionary advances in microsystems packaging and manufacturing. The EP Society promotes close cooperation and exchange of technical information among its members and others through technical conferences and workshops, peer-reviewed publications, and collaboration with other organizations. It is one of 38 technical Societies within the IEEE. The IEEE EP Society’s Bangalore Chapter was founded in Dec 2004.

This year, three events were organized by the IEEE EP Bangalore Chapter till date. Their details are provided below:

On 16th March 2017, the IEEE EP Bangalore chapter organized an executive committee meeting to discuss the following agenda- change of office-bearers for 2017, events planning for 2017 and support for IEEE EDAPS 2018. This was the first and only administrative meeting held this year and was attended by 10 IEEE members (picture 1).

The first technical event organized by the society this year was on 12th May 2017 (picture 2). It was a technical talk titled “Power Delivery & Machine Learning: Their Role in IC, Package & System Design” by Prof. Madhavan Swaminathan (IEEE fellow), School of Electrical and Computer Engineering, Georgia Tech, USA. The talk covered ongoing research and thoughts based on two major programs, namely Power Delivery for Electronic Systems (PDES) consortium at Georgia Tech and Center for Advanced Electronics through Machine Learning (CAEML), a collaborative NSF Center between UIUC, GT and NCSU. The event was attended by 37 guests including 6 IEEE members.

A felicitation event followed by a technical talk was organized by the society on 3rd November 2017. The event commenced with the felicitation of Mr. S.L.N.Murthy for his contributions to the field of Electronics Packaging (picture 3). It was followed by a technical talk by two of the co-founders of a tech start-up SimYog Technology Pvt. Ltd- Dr. Dipanjan Gope, Asst. Professor, Indian Institute of Science and Mr. BibhuPrasad Nayak, Architect, Robert Bosch Engg., Bangalore (picture 4). The talk titled “Electronic Design Automation for Automotive Electronics Packaging” focused mainly on two key technologies in the area of Radio Frequency applications in Automotive Electronics: (a) virtual lab on a PC to test for compliance at an early design stage (b) virtual reality interface to look inside the PCB. The event was held at Indian Institute of Science, Bangalore and was attended by 36 guests across industry and academia including 25 IEEE members.
IEEE AESS Bangalore Chapter started a student chapter of AESS (the first in Asia) at the PESIT, Bangalore, on March 16, 2017. The chapter was inaugurated with three technical talks.

Firstly, Dr. Nagendra Rao, Director Laboratory for Electro Optic Systems (LEOS), ISRO, spoke on “The Role of Electro Optic Sensors in Space Missions of ISRO” highlighting the advances made in the field while giving examples of the technical challenges faced.

Second, G. Viswanthan, Director (Retd), ISRO Radar Development Unit (ISRAD), spoke on “ISRO Radar systems - Electronic Engineering Aspects” giving an overview of the electrical / electronic design constraints faced with real life examples.

Finally, B. Sambasiva Rao, Group Director (Retd) Mechanical Engineering ISRAD, ISRO spoke on “ISRO Radar Systems and its Mechanical Engineering Aspects”. The talk covered aspects of how mechanical engineering plays its part in successful system deployment and the challenges faced.

IEEE AESS Bangalore Chapter organized the above DL from Dr. George T Schmidt, Ex-MIT, FIEEE, FAIAA on Nov 15th 2017 at ECE Golden Jubilee Seminar Hall, ECE Department, IISc, Bangalore. The event was presided by Sri. A.S. Kiran Kumar, Chairman – ISRO. In his presidential address, Sri. A. S. Kiran Kumar highlighted the importance of satellite based navigation systems and the progress in India achieved by ISRO.

The DL covered aspects of how to deal with GNSS outages and the kind of errors that one can anticipate.
Nanotechnology Council

1. Prof. Larry Nagahara, a Distinguished Lecturer of IEEE Nanotechnology Council for 2017 on cancer detection and treatment use Nanotechnology in CeNSE Seminar Hall on Tuesday, 22nd August.

2. A Talk on VLSI and Nanotechnology relationship by Vaibhav in KLEIT HUBLI on July 21\textsuperscript{st}, 2017
MANGALORE SUB SECTION REPORT

A.1 Executive Summary
Geographical location of Sub-Section-Coastal Karnataka, INDIA consisting of 6 Districts as shown in the Google Map marked and date of formation vide IEEE MGA Board effective from 10th July 2013 vide communication dated 10th Jan.2014. Name of parent IEEE Section- IEEE Bangalore.

MAJOR EVENTS
It is heartening to see that most of the events planned at the outset for the year have been undertaken. The most exciting event that brought IEEE Mangalore Sub Section (MSS) together cohesively as one unit was the IEEE Conference on Distributed Computing, VLSI, Electrical Circuits and Robotics (DISCOVER) organized in association with RAS and IEEE Bangalore Section, with 237 – eligible applicants from which 55 were selected for presentation. Work for the Second DISCOVER 2018 is now underway to be conducted at MITE Moodabidri. Though several more activities are still in the pipeline, the major activities taken up by MSS are as listed below.

I2 CONECCCT 2017
I2 CONECCCT 2017 an Inter collegiate Project Competition for M.Tech students was organized by IEEE Mangalore sub-section in NMAMIT. Dr. Niranjan U.C., Director, Training Manipal
Dotnet, Mr. Anil Kumar Prabhu, Senior General Manager, Lamina Founadaries judged the 25 Project proposals that were presented during the competition. Winners in the Circuit Category Mr. Bharavi U M.Tech (DEC), NMAMIT, with Ms. Vasundhra Acharaya, from MIT, Manipal coming a close second. In the Non-Circuit Category, Mr. Praveen, M.Tech (Mechanical Engineering) NMAMIT, Mr. Shisir, M.Tech (Bio-Technology), NMAMIT, won the first and second places. The winners received a citation and a cash award of 5000Rs and first runners up – Rs 3000 and the second – Rs2000 respectively.

Workshop on Inculcating Research and Paper Publication culture among UG Students
IEEE Mangalore Sub-Section in association with Research and Consultancy (R&C), M.I.T., Manipal organized this one day workshop on Sunday 24th September. The inaugural by Dr. Niranjan N. Chiplunkar, Chairman MSS was witnessed by the ExeCom members who were also involved in it. Resource Persons – all from MSS: Research familiarization and Intellectual property rights and its importance - Dr. Manohara Pai MIT. Ethical issues in Publication -Dr. Pallavi Mane, MIT. Publication Process- Dr. Manjunath K.N, MIT. The registrants were asked to select from among 5 subjects and based on their choice, 5 research articles were communicated to them, after the theory session, they were asked to write a paper based on any topic of their interest. They were grouped in twos and in two days of extra time were asked to email the paper. The papers were checked for plagiarism and double-blind peer-reviewed by the ExeCom members. The event was well appreciated by the 59 participants who benefitted. The prize winners received a cash award of 5,000, 3,000 and 2,000 respectively and citations on IEEE day held at Robosoft Technologies, Udupi on 3rd October.

IEEE day -Inaugural Lecture series in memory of Late Prof K M Hebbbar (Fellow IEEE).
IEEE day on October 3rd was observed at MSS by inaugural of a lecture series organized at Robosoft Technologies Udupi in the loving memory of Prof K M Hebbbar, as suggested by the Chairman Prof N N Chiplunkar. Dr Hebbbar besides being Fellow IEEE, was a well known teacher, a great philanthropist and above all a great exponent of the spirit of IEEE. The celebrations began with the Chairman Dr Niranjan N Chiplunkar addressing the gathering about the relevance of organizing the Memorial Lecture on IEEE day followed by Dr Annappa briefing out the IEEE MSS activities so far. Mr. Purushottam Bhat, Director at Robosoft Technologies recalled his association with Late Dr.K.M.Hebbbar this was followed by a lecture on “India Stack”, by Dr Singhan Sathu AGM Corporation Bank and another interesting address on “the Latest Technology Trends in the sphere of mobile banking and how it could impact the economy” by
Mr. **Rohit Bhat**, CEO & MD, Robosoft Technologies. The prizes were given away to the winners of the competition on best paper drafted in the workshop held at IEEE SB MIT by the chief guest Dr. S S Sathu. The event had around 200 participants, students and professional members alike.

**STEP at IEEE SB Canara Engineering College**

IEEE Student Transition & Elevation To Partnership (STEP) –developed to provide a dynamic program for facilitating the transition from student member to Young Professional (YP) by introducing the opportunities and benefits of IEEE membership during the onset of a STEM career. The need for empowering the youth with skillsets for the uphill journey after graduation has been more acutely felt in the rural areas hence students and graduates from CEC and neighboring areas have been very grateful to IEEE Bangalore Section (BS) and the YP team who graciously convened a STEP activity at SB CEC on 9th October 2017. 134 participants from 8 colleges apart from CEC participated in the STEP event which had 9 speakers from different age groups and fields of industry, sharing their views and key lessons in their career journeys- Mr. Shishir Bhat Head International Sales Hacker Earth, Mr. Atul Kudva Director Omnesys, Mr. M. Padmanabha Pai –MS Pai precision tools, Mr. Anil Hegde, Jatin Nayak Headstart and eCell NITK, Mr. Aditya Kulkarni, Mr. Abhishek Appaji Chair YP IEEE BS, Dr Ashwini AM YP IEEE BS and Miss
Ankita K S Secretary YP IEEE BS. The event had speakers talking about diverse set of topics all related to the journey after graduation -Entrepreneurship the skills needed in the corporate world, avenues in research and the role of ethical values in business models and how to time the key decisions that could make or break one’s career. The event was conducted at the Seminar Hall CEC Miss Mahathi Kamath Vice chair WIE SB CEC mastered the Ceremonies.

**Ada Lovelace day at SJEC by WiE and YP Bangalore Section**

Ada Lovelace Day was celebrated in SB SJEC by the inaugural of WiE AG on 10th of October by Dr DN Sujatha, Chair WIE, IEEE Bangalore section and Professor & Head, Deptment of Computer Applications, BMSCE. Following her address a workshop was arranged by the WiE Affinity group in association with YP, Banglore Section called the “The Entrepreneur Zone(TEZ) “ with resource people Mr Abhishek Appaji, Chair, YP IEEE Bangalore section, Dr Ashwini A M, Member, IEEE YP, Ms Ankitha K S, Secretary YP that was well received by 181 participants.

**State Level Student Symposium on Industrial Internet of Things (IIOT – 2K17) and invited talk by Rajeev Srivastava, IIT BHU.**

A Student Symposium on Industrial Internet of Things was organized at the Shri Madhwa Vadiraja Institute of Technology & Management, Bantakal, on 10 November 2017 with MSS organizing for experts to deliver talks and sponsored the prize money for the event. Thirty teams from various Engineering colleges across the state participated in the project exhibition. The inaugural was by Dr. Narendranath Udupa, Head, Department of Lighting Research at Philips Lighting and Mr. Bhuvan K Shetty, Senior Manager, Enterprise Internet of Things (IoT), Bosch Engineering and Business Solutions, Bengaluru. The four guest lectures held as apart of the symposia - “Lighting sensors”, by Dr. Udupa, “IoT and Block chain”, - Mr. Bhuvan Shetty “IoT Architecture and Protocols” – by Dr. Mohit Tahiliani Execom member IEEE MSS, (Dept of CSE, NITK Surathkal) and “Image Processing, Computer Vision and its Medical Applications: A Machine Learning perspective” by Dr. Rajeev Srivastava (Department of CSE, IIT (BHU), Varanasi).

Dr. Rajeev Srivastava in his talk gave foundational insight on the basics of computer vision and image processing and how machine learning could be used in these areas to get optimum accuracy and efficiency. He elaborated the recent research trends in these fields. Mr. Praveen Kumar Kalbhavi, Mangaluru Member, Executive Committee, IEEE MSS and MD & CEO, Novigo Solutions Pvt. Ltd. was the chief guest who addressed the Valedictory function. The projects were reviewed by Dr. Radhika M Pai, member ExeCom IEEE MSS, Dr. D K Sreekantha, Dept of CSE, NMAMIT and Mr. Karthik K, Robosoft Technologies.
Talk by Sajjal Kumar Das.
An invited talk was benefitted by 50 academicians and researchers in the SubSection on the Topic of Higher Education: Teaching, Research and Mentoring by Daniel St. Clair Endowed Chair, Department of Computer Science, Missouri University of Science and Technology, USA Prof. Sajal K. Das, on 11 Dec 2017, at LHC-A seminar hall, NITK Surathkal. The talk was organized by Prof Pushparaj Shetty. Chairman IEEE-MSS Prof. Niranjan Chiplunkar, presented the memento on behalf of IEEE MSS along with Mrs. Saumya Hegde, Asst. Prof., CSE dept. NITK. Other IEEE members of the ExeCom were also present. The talk encompassed various aspects of reearch and mentoring involved in a career of higher education
NEW INITIATIVES:
This year MSS has started and planned to roll out following new initiatives:

1. Making Distributed Computing, VLSI, Electrical Circuits and Robotics - DISCOVER an annual conference, the organisers of 2018 DISCOVER hope to better last years count of 237 papers received.

2. Support for product building exercises focused on Humanitarian activities as in Project Expo for UG students via Industry Institute Conclave on Communication and Computing Technology - I2CONECCT

4. Support of Honoraria for each student branch to have Distinguished lectures by IEEE MSS members

5. IEEE day to be celebrated in all Student Branches

6. A memorial Lecture series in the name of Late Prof K M Hebbar that was proposed to be instituted by Chairman Dr. Niranjan Chiplunkar, to be a regular feature for IEEE Day in the years to come

7. To initiate WiE Affinity Group and at least 2 technical societies.

8. Year end meet for rejuvenating and discussing fresh ideas.


10. A Collaboration for engaging younger minds to take up STEM fields by way of Teacher In Service Program TISP or any such activity
## FINANCIAL STATEMENT OF IEEE MSS

IEEE Mangalore Sub Section: Statement of Accounts for the year 2017 as on 16 December 2017

<table>
<thead>
<tr>
<th>RECEIPTS</th>
<th>Amount in Rs</th>
<th>PAYMENTS</th>
<th>Amount in Rs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Opening bank balance Canara Bank A/c No.10175367839 as on 09/02/2016</td>
<td>467454</td>
<td>1. Refreshments AGM 08-04-20 17 (Janani caterers Harish)- paid to Pushparaj</td>
<td>3481</td>
</tr>
<tr>
<td>2. Interest credited 01-11-2016 to 31-01-2017</td>
<td>4713</td>
<td>2. Old bill settlement (paid to Dr. Annappa)</td>
<td>532</td>
</tr>
<tr>
<td>3. Interest credited 01-02-2017 to 30-04-2017</td>
<td>4605</td>
<td>3. NMAMIT I2Connect expenses</td>
<td>36000</td>
</tr>
<tr>
<td>5. Workshop on instilling research culture @MIT Manipal: registration amount collected - 354<em>47+795</em> 13=20473</td>
<td>20474</td>
<td>5. Banner IEEE MSS (paid to Pushparaj)</td>
<td>400</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6. Prize money for Manipal workshop winners: 5000+3000+2000</td>
<td>10000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7. MIT Manipal workshop expenses paid</td>
<td>15383</td>
</tr>
<tr>
<td>6. Interest credited 01-08-2017 to 31-10-2017</td>
<td>3396</td>
<td>8. SMVIEMT Bantakal, IIOT Prize sponsorship amount</td>
<td>10000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9. Payment to S.K. Das expert talk</td>
<td>5000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total Payments</td>
<td>89418</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Balance in Saving account</td>
<td>415478</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>504,896</td>
</tr>
</tbody>
</table>

Closing Balance as on 16/12/2017 Rs. **4,15,478/-**
## EXECUTIVE COMMITTEE MEETINGS

<table>
<thead>
<tr>
<th>Sl No</th>
<th>Date</th>
<th>Meeting venue</th>
<th>Significant outcome / Co located event if any</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8/4/17</td>
<td>NITK Suratkal</td>
<td>AGM, Talk on Innovation by S Koushik @ NMAMIT</td>
</tr>
<tr>
<td>2</td>
<td>13/5/17</td>
<td>NMAMIT Nitte</td>
<td>Meeting with Prof. D Das reg the roadmap of activities, Cash prizes for the winners of I2CONECCT 2017 were given and the judges felicitated</td>
</tr>
<tr>
<td>3</td>
<td>21/6/17</td>
<td>SJEC Vamanjoor</td>
<td>Proposal for I2CONECCT18 at SJEC for UG students</td>
</tr>
<tr>
<td>4</td>
<td>25/7/17</td>
<td>AJIET Kuloor</td>
<td>Release of MSS Website</td>
</tr>
<tr>
<td>5</td>
<td>19/8/17</td>
<td>MITE Moodbidri</td>
<td>Petition for IEEE DISCOVER 2018</td>
</tr>
<tr>
<td>6</td>
<td>24/9/17</td>
<td>MIT Manipal</td>
<td>Instilling Research culture for UG students Workshop</td>
</tr>
<tr>
<td>7</td>
<td>3/10/17</td>
<td>Robosoft Udupi</td>
<td>IEEE day and inaugural lecture in the memory of Late K M Hebbar</td>
</tr>
<tr>
<td>8</td>
<td>10/11/17</td>
<td>SMVITM Bantakal</td>
<td>IIOT2K17 Symposia and Project Expo</td>
</tr>
<tr>
<td>9</td>
<td>9/12/17</td>
<td>PESITM Shimogga</td>
<td>Year end meet to rejuvenate and start new SBs at Shimogga</td>
</tr>
</tbody>
</table>
## CONSOLIDATED REPORT OF INDIVIDUAL STUDENT BRANCHES
### IEEE Student Branch MIT Manipal

<table>
<thead>
<tr>
<th>Date</th>
<th>Activity</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/04/16</td>
<td>Competition</td>
<td>MEGA WATTS - This was a sci-fi tech biz quiz with 2 rounds</td>
</tr>
<tr>
<td>11/04/16</td>
<td>Tech Fest</td>
<td>Techweek lasts for 4 days and has 26 events with 4 workshops, Competitions like - Computex: a computing event K.O.DERS a coding event, Incode 2.0 – A higher level problem solving event, Webyard, Electronica, Tathva:, Mechanized:, Into The Deck:, CAD Crane: etc are held.</td>
</tr>
<tr>
<td>11/04/16</td>
<td>Workshop</td>
<td>Bluetooth communication (HC-05) module, HC-12 module, NRF module (long range reliable communication).</td>
</tr>
<tr>
<td>2/9/17</td>
<td>Workshop</td>
<td>Workshop on Data Structures by IEEE SB for 40 second year students</td>
</tr>
<tr>
<td>1/9/17</td>
<td>Workshop</td>
<td>PCB Design Workshop: held on basics of Multisim and Eagle softwares 50 students</td>
</tr>
<tr>
<td>20/10/17</td>
<td>AGM</td>
<td>For the 1st time since its inception SBM general body meeting happened with a turnout of 120 people. Board transfer and annual activities were presented in detail.</td>
</tr>
<tr>
<td>21 – 22/10/17</td>
<td>First Year Recruitment</td>
<td>The recruitment had 2 rounds. First the students are tested on basic aptitude, electronics and coding skills and an interview round follows where the members of SBM interview the candidates and on selection are inducted in Local Committee SBM.</td>
</tr>
<tr>
<td>Date</td>
<td>Activity</td>
<td>Details</td>
</tr>
<tr>
<td>------------</td>
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<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>18-20/1/17</td>
<td>3 day FDP</td>
<td>The FDP - Recent Trends in Multimedia computing and Security was Participated by 36 IEEE, 100 non IEEE students</td>
</tr>
<tr>
<td>25/1/17</td>
<td>Talk</td>
<td>“Attitude sensors for Indian spacecraft” by Mr. Nagesh G., Reflective optics Division, LEOS/ISRO Bangalore. Participated by 36 IEEE, 100 non IEEE students</td>
</tr>
<tr>
<td>31/1/17</td>
<td>Talk</td>
<td>The talk on “Electrochemistry and its Applications.” by Prof. N. Munichandraiah, Dept of Chemistry IISc had 36 IEEE, 100 non IEEE participants.</td>
</tr>
<tr>
<td>2/2/17</td>
<td>Technical Talk</td>
<td>Dr. T. Srinivas, EC Department IISc Bangalore delivered a talk on “Photonics Technology”, Participated by 36 IEEE, 100 non IEEE students</td>
</tr>
<tr>
<td>8/4/17</td>
<td>Talk</td>
<td>Mr. Sudheendra Kaushik, Chief Innovator &amp; Co-Founder at PRASU, Vice Chair IEEE Bangalore Section addressed the 36 IEEE, 100 non IEEE students on “Innovation”.</td>
</tr>
<tr>
<td>22/4/17</td>
<td>Talk</td>
<td>The talk on “EXPERT SYSTEM” by Dr. D.K. Sreekantha, Professor, E&amp;ECE Department, NMAMIT, was Participated by 36 IEEE, 100 non IEEE students</td>
</tr>
<tr>
<td>13/5/17</td>
<td>Competition</td>
<td>I2 CONECT 2017 an Inter collegiate Project Competition for M.Tech students was organized by IEEE Mangalore sub-section.</td>
</tr>
<tr>
<td>6/9/17</td>
<td>Talk</td>
<td>Dr. Ananth A. G. Former Deputy director, ISRO, delivered a talk on Research Areas of Interests for ISRO project proposals. Participated by 36 IEEE, 100 non IEEE</td>
</tr>
<tr>
<td>3/10/17</td>
<td>IEEE Day celebration</td>
<td>The Chairman MSS &amp; Principal NMAMIT Dr. Niranjan Chiplunkar, addressed the gathering, commending the Branch Councilor Dr. Sairam on fresh Membership. also in attendance were Dr. Rekha BhandarkarHOD ECE, NMAMIT and Dr. U.C. Niranjan,</td>
</tr>
<tr>
<td>3/10/17</td>
<td>Talk</td>
<td>Dr. U.C. Niranjan, Director-Research &amp; Training, MDN &amp; founding member IEEE MSS delivered a talk on DSP Applications in Embedded Systems to the 36 IEEE, 100 non IEEE students</td>
</tr>
</tbody>
</table>
IEEE Student Branch Canara Engineering College

Though 50+ activities were done in the SB this year only the highlights of some selected activities are shown here, happy to report a huge increase in activities since last year thanks to the support and guidance from the Section by recognizing the SB as Outstanding small SB of the section 2016, and our SB Chair Nithesh Nayak as the Best Volunteer 2016.

<table>
<thead>
<tr>
<th>Date</th>
<th>activity</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-6/11/16</td>
<td>Competition</td>
<td>Makeathon -24 hour product building competition guests Mr Ravikran Annaswamy, Mr Prabindh Sundaresan, Mr Hrikrishna Rai, Mr Vikram Sharma, Mr Vamsi Krishna, ... on virtual attendance talked about product building and problem solving as key skill for entrepreneurship. 90 participants (65 IEEE non IEEE 45)</td>
</tr>
<tr>
<td>5/11/16</td>
<td>Competition</td>
<td>Thought Pot 2.0 for high school students with 4 events had 177 participants from 22 neighboring schools(20 IEEE)</td>
</tr>
<tr>
<td>19/11/16</td>
<td>Project expo</td>
<td>Smart City project expo for better and safe alternatives for domestic electrical appliances(46 IEEE, non IEEE 60)</td>
</tr>
<tr>
<td>1-4/3/17</td>
<td>Tech Fest</td>
<td>Events under Can Tceh – a technical fest of 4 days organized with 36 technical competitions and 12 workshops in all (8 nontechnical )</td>
</tr>
<tr>
<td>4/3/17</td>
<td>Cyclothon</td>
<td>To create awareness on the “Go Green Campaign” (11IEEE,Non IEEE49)</td>
</tr>
<tr>
<td>7-11/03/17</td>
<td>Women’s week</td>
<td>7th Lecture-How To Break Barriers by Dr. Malini Hebbay, 9th Self Defence workshop, Mr. Karthik S Kateel, 10th Talk on Stress management Dr. P V Bhandary.</td>
</tr>
<tr>
<td>10/3/17</td>
<td>Felicitation</td>
<td>-Felicitation by IEEECan to Dr. Rajalakshmi Samaga, Mrs. Chandravathi.-Best Volunteer award in the Loving memory of Christabelle Saldanha – Anjali Bharath</td>
</tr>
<tr>
<td>11/3/17</td>
<td>Purple day</td>
<td>A total of 429 students and 42 faculty participated in 13 events for developing leadership skills of the WiE volunteers</td>
</tr>
<tr>
<td>1/4/17</td>
<td>Arduino Day</td>
<td>Project expo, Guest Lecture to promote better product building, Prajval Kumar, CEO Robautonics, Robo soccer league, Arduino workshop on the Arduino Day</td>
</tr>
<tr>
<td>27/5/17</td>
<td>Participation</td>
<td>Innovative Do It Yourself Electronics -17 organized by TI India and CAS Technical Society IEEE Bangalore section, (IEEE 2)</td>
</tr>
<tr>
<td>6/6/17</td>
<td>Manan</td>
<td>The handing over and oath taking ceremony of new office bearers (39)</td>
</tr>
<tr>
<td>7/06/17</td>
<td>Book Drive</td>
<td>Science Books Collected and donated to 2 schools (96 IEEE, 428)</td>
</tr>
<tr>
<td>3/10/17</td>
<td>IEEE Day</td>
<td>Ungoogle IEEE(31, IEEE, non IEEE 74), 2 more competitions held offline</td>
</tr>
<tr>
<td>5/10/17</td>
<td>Outreach</td>
<td>Science Quiz at Snehasadhan – a rehab centre and orphanage (36 IEEE, non IEEE 0)</td>
</tr>
<tr>
<td>9/10/17</td>
<td>STEP by YP</td>
<td>Organised for IEEE MSS BS for Career Guidance (134)</td>
</tr>
<tr>
<td>10/10/17</td>
<td>Competition</td>
<td>LADY ADA LOVELACE DAY celebrations (6 IEEE, 85 non IEEE)</td>
</tr>
<tr>
<td>14/10/17</td>
<td>Competition</td>
<td>IEEE Xtreme -11(6)</td>
</tr>
<tr>
<td>Date</td>
<td>activity</td>
<td>Details</td>
</tr>
<tr>
<td>--------------</td>
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<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>24-25/01/17</td>
<td>Two day workshop</td>
<td>The workshop on Python Programming, by Mr Shashank G K, CDO - EZ Technologies, Mangalore had – 6 IEEE, 35 non IEEE, 6 faculty Participants.</td>
</tr>
<tr>
<td>30/1/17-4/2/17</td>
<td>1 week workshop</td>
<td>The workshop on <em>Industrial Automation with PLC &amp; SCADA</em> by Mr Himanshu &amp; Mr Amith of Indwell Institute of Technology, had 11 IEEE, 54 non IEEE Participants.</td>
</tr>
<tr>
<td>30/1/17-4/2/17</td>
<td>Seminar</td>
<td>Seminar on Project Ideas based on Internet of Things resourced by Mr Shashank G K, and Mr Santhosh - EmTantra, Mangalore with - 10 IEEE, 100 non IEEE Participants.</td>
</tr>
<tr>
<td>7/4/17</td>
<td>workshop</td>
<td>The user awareness workshop on “IEEE Explore Digital Library” by Mr. Akshay Prasanna, GIST Bangalore, was participated by 10 IEEE, 20 non IEEE, 35 faculty</td>
</tr>
<tr>
<td>05/05/17</td>
<td>Guest Lecture</td>
<td>The talk “Professional Etiquette” by Mr Clinton Herbert Lobo, Adjunct Faculty, Department of MBA, SJEC, Mangaluru had - 10 IEEE, 100 non IEEE student members.</td>
</tr>
<tr>
<td>08/05/17</td>
<td>IEEE Lecture</td>
<td>The talk “Applications of Fourier and Z transforms” addressing the EEE students was resourced by Dr. M R Arulalan, Assistant Professor, ECE, NITK, Surathkal.</td>
</tr>
<tr>
<td>13/05/17</td>
<td>IEEE Lecture</td>
<td>The talk “Switchgear and Protection” by Mr Santhosh J, Additional Director, CPRI, Bengaluru was a part of IEEE Lecture series. Participants - 5 IEEE, 50 non IEEE.</td>
</tr>
<tr>
<td>14/8/17-19/8/17</td>
<td>1 week workshop</td>
<td>A 7day student workshop on PLC &amp; SCADA by Mr Himanshu Kumar &amp; Mr Amith Kumar of Indwell Institute of Technology, Pune, had 52 student participation.</td>
</tr>
<tr>
<td>10/10/17</td>
<td>Inaugural of WIE AG</td>
<td>The Women in Engineering Affinity Group was inaugurated by Dr DN Sujatha, Chair WIE IEEE Bangalore, Professor &amp; Head, Deptment of Computer Applications, BMSCE.</td>
</tr>
<tr>
<td>10/10/17</td>
<td>Half day workshop</td>
<td>The YP Banglore Section conducted “The Entrepreneur Zone(TEZ)” with resource people - <em>Mr Abhishek Appaji</em>, Chair YP IEEE Bangalore, <em>Dr Ashwini A M</em>, Member IEEE YP, <em>Ms Ankita K S</em>, Secretary YP. Participants - 50 IEEE, 180 non IEEE.</td>
</tr>
<tr>
<td>14/10/17</td>
<td>Guest lecture</td>
<td>Mr Sourabh Jain - 99 Games Online Pvt. Ltd Udupi, interacted with -20 IEEE, 30 non IEEE students reg necessary skills for employability in the field of gaming softwares</td>
</tr>
<tr>
<td>27/10/17</td>
<td>Seminar</td>
<td>Dr Purushothama Chippar, Asso Prof.Dept of Mech Engg, SJEC, delivered a talk to encourage innovation in engineering projects– 25 IEEE, 60 non IEEE Participants.</td>
</tr>
<tr>
<td>Date</td>
<td>activity</td>
<td>Details</td>
</tr>
<tr>
<td>------------</td>
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<td>----------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>02/2/17</td>
<td>Workshop</td>
<td>‘UNITY’ was resourced by Mr. Mohammad Azzan, Founder and Director, Pace Wisdom Solutions Bangalore. The talk with demo focused on developing apps in quick time.</td>
</tr>
<tr>
<td>22/03/17</td>
<td>Talk</td>
<td>On ‘Internet of Things’ was delivered by Mr. Ajith Kumar, General Manager, ITC Infotech India Ltd, Bengaluru</td>
</tr>
<tr>
<td>13/5/17</td>
<td>Project Expo</td>
<td>Annual Student Project Exhibition : Innovation 17 - for the Final Year Students of all branches. Top Three Projects of each branch were awarded with Cash Prizes</td>
</tr>
<tr>
<td>10 – 12/4/17</td>
<td>Workshop</td>
<td>On ‘Introduction to Data Mining and Analytics’ was conducted by Dr. Sang Woon Yoon, Assoc Prof, Systems Science &amp; Industrial Engineering, Thomas J Watson School of Engineering and Applied Science, Binghamton State University of New York, USA.</td>
</tr>
<tr>
<td>15-17/4/17</td>
<td>Talk</td>
<td>On ‘Entrepreneurship’ by Mr. Mohammad Azzan, Director, Pace Wisdom Solutions.</td>
</tr>
<tr>
<td>4 - 7/8/17</td>
<td>Workshop</td>
<td>On Python - Mr. Diganth, Software Engineering, Nokia Siemens Network, Bengaluru</td>
</tr>
<tr>
<td>28/8/17</td>
<td>Talk</td>
<td>On ‘Effective and Productive Project Management’ was conducted by Mr. Mohammad Azzan, Director, Pace wisdom Solutions, Bangalore</td>
</tr>
<tr>
<td>4/9/17</td>
<td>Talk</td>
<td>On ‘Don’t remain Yet Another Engineer’ was delivered by Mr. Mohammad Saqib, Senior Software Engineer, Evry India, Bengaluru</td>
</tr>
<tr>
<td>7/9/17</td>
<td>Workshop</td>
<td>A Team of 10 IEEE Student Members of MITE attended the IEEE Tutorial on ‘IoT and Wearable Devices’ at Bengaluru.</td>
</tr>
<tr>
<td>24/9/17</td>
<td>Workshop</td>
<td>15 IEEE Student Members of MITE attended the workshop on ‘Instilling Research and Paper Publication culture, organised by the IEEE Mangalore Sub Section at MIT Manipal.</td>
</tr>
<tr>
<td>14/10/17</td>
<td>Talk</td>
<td>Introductory Talk on ‘Hackathon’ was done for the V Sem Students. The Talk was presented by Hackerearth Student Ambassador Mr. Clyde Sheldon Bangera.</td>
</tr>
<tr>
<td>28/10/17</td>
<td>Competition</td>
<td>A Hackathon was conducted by Pace Wisdom in association with HackerEarth. 87 teams with 247 Students participated. Winning Candidates were given merchandise from Hackerearth &amp; a selected few received Job and Internship opportunity at Pace Wisdom.</td>
</tr>
</tbody>
</table>