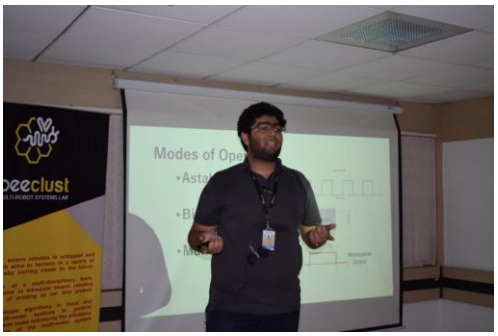
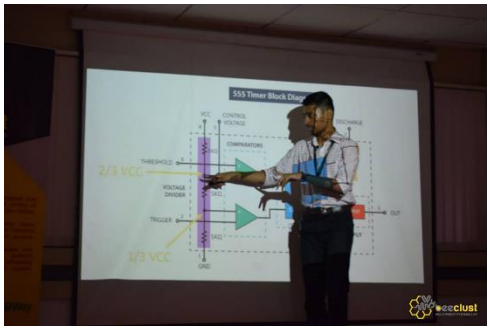
REPORT OF ONE-DAY SEMINAR/WORKSHOP ORGANISED BY CENTRES/OVERSEAS CHAPTERS

Name of Centre/Overseas Chapter:	Kanchepuram Local Centre

Title of Activity:	One day Workshop on "**PCB design, fabrication and assembly**"		
Activity under Divisional Board	Electronics and Telecommunication Engineering Division, IEI		
Date:	18.07.2018	Venue:	ECE Seminar Hall, Tech Park, SRM Institute of Science and Technology, Kattankulathur 603203

	
Dr. R Venkatesan, chairman of IEI, Kanchepuram Local center was felicitated by Dr. T Rama Rao, HOD of ECE and Dr. S Dhanalakshmi, faculty advisor of IEI, SRM Insitute of Science & Technology	Dr. R Venkatesan, chairman of IEI, Kanchepuram Local center felicitating a participant
	
Mr. Amrit, computer vision engineer, beeclust multi robot systems lab giving an introduction of the workshop	Mr. Puranjay, Jr Hardware engineer at Beeclust multi robot systems lab explaining about the electronic components and its types used in PCB's

	
Mr. Dhanush, Jr. hardware engineer of Beeclust multi robot systems lab explaining the circuitry of the workshop.	Mr. Kedar Karpe, senior engineer of Beeclust multi robot systems lab delivered a lecture on PCB designing using Autodesk Eagle.
	
Mr. Anson Bao, Manager of PCBWay delivered a lecture on PCB manufacturing	The participants during the workshop.

Report of One-Day Workshop on "PCB design, fabrication and assembly"

Brief Details about the Programme:

A one-day national workshop on "PCB design, fabrication and assembly" organised by The Institution of Engineers (India) on 18th July, 2018. The workshop was conducted in SRM Institute of Science and Technology, Kattankulathur campus. The workshop was inaugurated by Dr. R Venkatesan, chairman of IEI, Kanchepuram Local Centre. Dr. Venkatesan, chairman of IEI, Kanchepuram Local Centre enlightened the participants on the various uses of PCB's, and particularly about the recycling of the discarded PCB's. Further, Dr. Venkatesan, chairman of IEI, Kanchepuram Local Centre also explained about the various activities of IEI in great detail. Mr. Amrit, computer vision engineer, beeclust multi-robot systems lab delivered an introduction of the workshop. He explained about the use of PCB in our everyday lives. He further discussed about the basic electronic concepts involved in PCB design and development.

After the introduction, the first session was a technical talk presented by Mr. Puranjay, Jr. hardware engineer at beeclust multi-robot systems labs about the components used in PCB's. The difference between PTH and SMD electronic components were illustrated. The participants were able to grasp that SMD proved to be more handy and supported stability. This was followed by a talk on electronic circuitry by Mr. Dhanush, Jr. hardware engineer. The general concepts for circuit designing was covered first, which involved the choice of components and the advantage and disadvantages of selecting a particular component. Then, the circuitry of the PCB present in the kit was discussed. This consisted of a talk on the main IC used and associated components along with their working. Many participants were able to produce circuits performing a different role with the same components.

The next session was a talk on Autodesk Eagle by Mr. Kedar Karpe, senior engineer of beeclust multi-robot systems lab. During this session, the participants were taught how to construct circuits and make their own PCB designs on Eagle software. Participants designed two layer PCB's by themselves during this session. Participants worked with designing circuits containing parts of different dimensions and were demonstrated the importance of choosing a particular package to obtain the most optimized PCB.

Post-lunch, a guest lecture was delivered by Mr. Anson Bao who is the manager at PCBWay. He spoke to the audience about the industrial production of PCB's and explained the various process involved in producing a PCB upon making the design. Mr. Anson took the participants to a tour of PCBWay's factory in China through his videos. He also explained how PCB's come in different models and the future developments in the field of PCB manufacturing.

After the guest lecture, the participants were involved in a hands-on session during which they assembled their PCB's with SMD components and fabricated them. All the participants were able to make their own fully functional printed circuit board.

Finally, an interaction between the participants and the engineers of the workshop happened and the participants were able to clarify their doubts and also provide a feedback about the workshop. This was followed by the valedictory session and feedback was received from the participants. Through this workshop, the participants were able to make a fully functional board that they designed, fabricated and assembled. All the participants learnt the latest trends in PCB designing and the components used and the workshop was immensely successful.

Details of the sessions:

Day-1 (Forenoon) Inaugural Programme Two lectures	1. Inaugural Programmme 2. Lecture by: Mr. Amrit, Topic: Introduction to the workshop 3. Lecture by: Mr. Puranjay, Topic: Components used in PCB's 4. Lecture by: Mr. Dhanush, Topic: Circuitry used in the workshop 5. Lecture by: Mr. Kedar Karpe, Topic: PCB design using Autodesk Eagle
Day-1 (Afternoon) Guest Lecture Hands-on session	1. Guest Lecture by: Mr.Anson Bao, Topic: Industrial production of PCB's 2. Hands-on session: Assembly and fabrication of PCB 3. Valedictory Programme