



The Institution of Engineers (India)

DECEMBER- 2018

**KANCHEPURAM
LOCAL
CENTRE**

Agni College of Technology
campus,
off OMR Thalambur,
Chennai - 600130

ISSUE 6

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SECOND ANNUAL GENERAL IEI STUDENTS CHAPTERS MEET MEETING

Second Annual General Meeting of the Kanchepuram Local Centre held on Friday, October 12th 2018 at 5.00 pm in Sri Sairam Institute of Technology, Sai Leo Nagar, West Tambaram, and Chennai. Chairman shared the minutes of the 1st Annual General Meeting to all members, which was held on 24th October 2017. As no comments were received, Dr Srinivasan Alavandar, MIE proposed that the minutes may be confirmed. Mr. C. Balaji, MIE seconded the same.

IEI STUDENTS CHAPTERS MEET of the Kanchepuram Local Centre held on Friday, October 12th 2018 at 4.00 pm in Sri Sairam Institute of Technology, Sai Leo Nagar, West Tambaram, and Chennai. Dr K. Palanikumar, FIE, Chairman, IE (I), KLC Principal, Sri Sai ram Institute of Technology, Chennai welcomed the gathering and briefed about the IE(I) KLC activities with a video clip. Dr R Venkatesan, FIE, Scientist G & Head, NIOT, Chennai honored the chief guest Er T M Gunaraja, FIE, (IEI - Elected President) by presenting the memento and shawl. Er T M Gunaraja, FIE distributed IEI KLC Best students awards.





NEW OFFICE BEARERS OF KANCHEPURAM LOCAL CENTRE FOR THE SESSIONS 2018-2019 & 2019-2020

- **DrK. Palanikumar, FIE, Chairman, IE(I), KLC** Principal, Sri Sai ram Institute of Technology, Chennai (Mechanical Engineering Division)
- **Dr Srinivasan Alavandar, MIE, Honorary Secretary, IE(I), KLC**, Dean Academics, Agni College of Technology, Chennai (Electrical Engineering Division)

Committee members (Representing the Engineering Divisions given in the parenthesis)

1. **Mr S Aravindan, MIE**, Chennai (Agricultural Engineering Division)
2. **Mr Zacharia George, FIE**, Chennai (Architectural Engineering Division)
3. **Mr. R. Sundar, MIE**, Scientist C, NIOT, Chennai (Computer Engineering Division)
4. **Dr. M. Srividiya, MIE**, Prof & Head, Agni College of Technology (Chemical Engineering Division)
5. **Mr. C. Balaji, MIE**, Assistant Professor, SRM University, Chennai (Electrical Engineering Division)
6. **Dr. Mahesh Mannivakumar, MIE**, Prof & Head, SRR Engineering College, Chennai (Electrical Engineering Division)
7. **Dr. Anita Titus, MIE**, Associate Prof & Head, Jeppiaar Engineering College, Chennai (Electronics and Telecommunication Engineering Division)
8. **Mrs. Thamarai Selvi, MIE**, Prof & Head, Sri Sairam Institute of Technology, Chennai (Electronics and Telecommunication Engineering Division)
9. **Prof. Ramamoorthy, MIE**, Associate Prof & Head, Agni College of Technology, Chennai (Environmental Engineering Division)

10. **Dr R.S Kumar, FIE**, Principal, Agni College of Technology, Chennai (Mechanical Engineering Division)
11. **Dr. S. Ramesh, FIE**, Prof & Head, KCG College of Technology, Chennai (Mechanical Engineering Division)
12. **Dr. K. Arun Vasantha Geethan**, Professor & Head, St. Joseph Institute of Technology Chennai (Mechanical Engineering Division)
13. **Dr. D. Elango, FIE**, Prof & Head, Vallimmai college of Engineering Chennai (Civil Engineering Division)
14. **Dr. N. K. Rajan, FIE**, Prof & Head, MNM Jain Engineering college Chennai (Civil Engineering Division)
15. **Mr. Harish, MIE**, Ass. Prof JEPPIAAR Engineering College Chennai (Civil Engineering Division)
16. **Dr. R. Ramakrishnan, MIE**, Professor & Head, Tamil Nadu Sports University Chennai (Production Engineering Division)
17. **Prof. Venu Gopal**, Assistant professor, Anna University, Chennai (Mining Engineering Division)

EX-OFFICIO MEMBERS:

Er T M Gunaraja, FIE, (IEI - Elected President)
Er R Ramdoss, MIE, Consulting Engineer, Chennai. (Chairman- IEI TNSC)
Er P Gomathinayagam Honorary Secretary IEI TNSC Centre
Dr G Ranganath Council Member IEI TNSC Centre
Dr R Venkatesan, FIE, Scientist G & Head, NIOT, Chennai (Imm. Past Chairman, IEI KLC)
Er D Kumar (Mechanical Engineering Division)
Dr R Kumar (Electronics Tele communication Engg)
Er S Kannan (Marine Engineering Division)



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CHAIRMAN'S DESK



Dr. K.Palani Kumar M.E.,Ph.D.,F.I.E
Professor & Principal,
Sri SaiRam Institute of Technology
Affiliated to Anna University, Chennai
West Tambaram,
Chennai - 600044

I would like to pen down my sincere gratitude for electing me as the Chairman of Kancheepuram Local Centre for the year 2018-20. At this point of time, I assure that, I will tirelessly strive for betterment and excellence of IEI Chaptermembership activities in the coming years. Since, Engineering and Technology has become an indispensable one, I will take utmost actions to build this society as a high caliber engineering society in the forth coming years. On behalf of all of you, I applaud and appreciate the sincere growth of IEI KLC activities for the past few years. I also commemorate the untiring efforts of the coordinators and supporting team for organizing workshops, seminars, talks and other events.

“The essence of all beautiful art, all great art, is gratitude.”

- Fredrich Nietzsche

As per the quotes, once again I express my gratitude for giving me this great opportunity and I wish you all to achieve great success in the future.



HONORARY SECRETARY'S DESK



Dr. Srinivasan Alavandar ME PhD(IITR) MIET MIEEEE LMISTE
Dean, Academics Professor, Department of Electrical and Electronics Engineering
Dean i/c, Centre for Research and Development,
Agni College of Technology
Affiliated to Anna University Chennai
Thalambur
Chennai - 600130

My sincere thanks for electing as Honorary Secretary of Kanchepuram Local Centre for the year 2018-20. I will for sure work for increasing the membership and activities of the Centre. Kanchepuram Local Centre will take utmost measures to ensure that engineering & technology are promoted among all its members and the engineering society. I am extremely delighted to appreciate the IEI KLC activities growing in leaps and bounds in the last quarter. My congratulations to the coordinators and supporting team for organizing workshops, seminars, talks and other events. I wish the volume of activities should increase in the near future. Wish this newsletter will definitely be an inspiration and motivation for the engineers to perform better and add on the contributions in the forthcoming issues.



TECHNICAL ARTICLES

POLYMER MODIFIED BITUMEN



POLYMER MODIFIED BITUMEN

Mr.P.Govindarajan Asst. Professor
Civil Engineering Dept
Agni college of technology, Chennai

What is polymer modified bitumen??

Polymer modified bitumen (PMB) is one of the specially designed and engineered bitumen grades that is used in making pavement, roads for heavy duty traffic and home roofing solutions to withstand extreme weather conditions. PMB is normal bitumen with added polymer, which gives it extra strength, high cohesiveness and resistance to fatigue, stripping and deformations, making it a favorable material for infrastructure.

What are waste plastic roads?

The roads constructed using waste plastic, popularly known as Plastic Roads, are found to perform better compared to those constructed with conventional bitumen.



Need of study:

1. Disposal of waste plastic is a major problem.

4. To find its utility in bituminous mixes for road construction.

5. Burning of these waste plastic bags causes environmental pollution



6. Laboratory performance studies were conducted on bituminous mixes.

7. Studies proved that waste plastic enhances the property of the mix.

8. Improvement in properties of bituminous mix provides the solution for disposal in an useful way.

MATERIALS USED:

AGGREGATE:BITUMEN:



- Aggregate of 20mm, 10 mm.

Stone Dust and Lime as Filler
grade bitumen.

60/70, 80/100



Waste Plastic dumped on roads

- It is non-biodegradable.
- It mainly consists of low-density polyethylene.



WASTE PLASTIC:

WASTE



- Waste plastic in the shredded form are used.

Construction of plastic roads:

Step 1:

Heating Of Aggregates:



Step 3:

- At the mixing chamber, the shredded plastics waste is to be added.

It get coated uniformly over the aggregate within 30 to 60 seconds, giving an oily look.



Addition of shredded Plastics Coated aggregates

Step 4:

- The plastics waste coated aggregate is mixed with hot bitumen and the resulted mix is used for road construction.
- The road laying temperature is between 110°C to 120°C. The roller used is 8-ton capacity.

Plastics waste (bags, cups, bottles) made out of PE, PP and PS cut into a size between 2.36mm and 4.75mm using shredding machine.



Shredding

Shredded Plastics

Step 2:

- The aggregate mix is heated to 165°C (as per the HRS specification) and transferred to mixing chamber.
- Amount of plastic to be added is @8% of bitumen.
- Similarly the bitumen is to be heated up to a maximum of 160°C (HRS Specification) to have good binding property. (Monitoring the temperature is very important).

Field trials:

There are two types of field trials:

1. DRY PROCESS

2. WET PROCESS





1. Dry Process:

- The aggregate is heated to 170°C in the Mini hot Mix Plant .
- The shredded plastic waste is added in equal proportion.
- Immediately the hot Bitumen 60/70 or 80/100 grade (160°C) is added.
- The mixture is transferred to the road and the road is laid.

2. Wet Process:

- Waste plastics by direct mixing with hot bitumen at 160°C.
- Mechanical stirrer is needed.
- Addition of stabilizers and proper cooling.
- Since the wet process require a lot of investment and bigger plants.



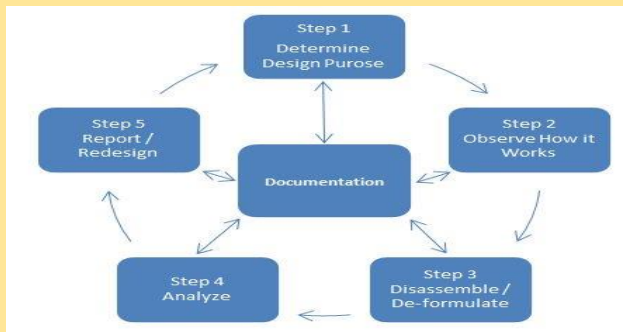
<div><p>Adding of Bitumen</p></div> <div><p>Laying and Compaction</p></div> <div><p>Mixing</p></div>		<ul style="list-style-type: none">• Not commonly used. <p>Uses:</p> <ul style="list-style-type: none">• The development of very stressed pavement• Roads for high and heavy traffic• High loading• High temperature amplitude• More durable pavement• Draining pavements <p>Advantages:</p> <ul style="list-style-type: none">• Improve of temperature sensitivity and resistance to rutting• Improve of low temperature properties and resistance to cracking• Better resistance to fatigue cracking• Better resistance to ageing of bitumen• The strength of the road/pavement is increase
<p>REVERSE ENGINEERING</p> <div><p>R. Mahesh, II-Mechanical-B, Department of Mechanical Engineering, St.Joseph's Institute of Technology, OMR, Chennai-600 119.</p></div>		

**DEFINITION:**

The process of duplicating an existing component, subassembly, or product, without the aid of drawings, documentation, or computer model is known as **reverse engineering**. **Reverse engineering** can be viewed as the process of analyzing a system to: Identify the system's components and their interrelationships.

NEED OF REVERSE ENGINEERING:

Reverse engineering can be mainly viewed as the process of analyzing a system to identify its components and their interrelationships, to create representations of it in another form or a higher level of abstraction. An important reason for **application of reverse engineering** is reduction of product development times. So it is an effective method.

**PROCESS:**

When performing reverse engineering, there are a variety of tasks that one might perform to aid in the understanding of the product. Below are just a few.

- Visually inspect the product
- Take pictures
- Subject it to load tests
- Disassemble the product
- Sketch an “exploded view”
- Measure both the system and components (weight, dimensions, color, material, etc.)
- Operate the product in its current form
- Operate each of components to understand their function
- Catalogue parts in a Bill of Materials

BENEFITS:

- 1) Extending the life of older equipment.
- 2) Making an improved copy of something.
- 3) Involves taking an existing part and extracting the design data or other information and then creating an improved copy of it.
- 4) Saves money from not having to replace an older piece of machinery or equipment.

Two main disadvantages: You can never really disassemble an application fully to its original state before being compiled. Additionally, it can be very difficult to make anything of a disassembled application due to the Obfuscation of the critical and important source code. Essentially, they load a ton of relevant code into the application to throw off reverse engineers and make it even more difficult than it already is to perform the reversal. These two disadvantages only make the feeling of successfully reversing an application all that better.



AUGMENTED REALITY



M. Atharsh
Student
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Augmented reality is made up of the word “augment” which means to make something great by adding something to it. Basically, augmented reality is a method by which we can alter our real world by adding some digital elements to it. This is done by superimposing a digital image on the person's current view thus it enhances the experience of reality.

Difference between Augmented Reality and Virtual Reality

Virtual reality makes a virtual environment and puts the user in it whereas Augmented reality just adds the virtual components into the user's real-world view. Virtual reality sends a person into a virtual place created by computer whereas augmented reality brings the digital world into our real world. To experience virtual reality the person needs to wear a special VR headset which is connected to a computer like the **Oculus Rift** or a gaming console like **PlayStation VR** but there are devices that work with a smartphone like **Google Cardboard**. In this, all you have to do is insert a smartphone, wear a headset, and immerse in the virtual reality. For Augmented reality you only need a modern smartphone then you can easily download an AR app like Google's “**just a line**” and try this technology. There's also a different way to experience augmented reality, though special AR headsets, such as “**Google Glass**”, where digital content is displayed on a tiny screen in front of a user's eye or “**Microsoft HoloLens**” which displays the information in real-world all you have to do is wear the headset and you can see the digital images.

The Reality-Virtuality Continuum

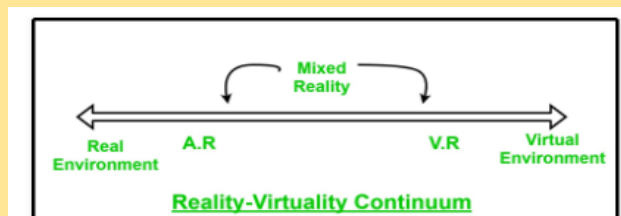
The **reality-virtuality continuum** is a scale which was given by Paul Milgram. It is a scale which has two extremes one part depicts the ‘virtuality’ or an environment which is completely virtual and, the other part describes a real environment or ‘reality’ and the middle part is termed as “mixed reality”, thus this scale contains all possibilities for one object or plane being completely digital or completely real.

Why Augmented Reality is Important Development of AR technology is set to revolutionize



Industries from retail to military to education to tourism and transform the way we interact with the digital world every day. Augmented reality has many uses in different fields like in archaeology, architecture, visual arts, commerce, education, video games and military training etc. some applications of AR are

1. AR is being used to aid research in archaeology. AR can be used to recreate different structures and overlay them on the real environment so that researchers can study it correctly.
2. AR applications in smartphones include Global Positioning System (GPS) to locate the person's location and its phone's inbuilt compass to find device orientation.
3. Augmented reality can be used in the field of tourism to enrich visitor's experience during visits like the Eiffel tower has an AR app that can show you it looked throughout history when it was being built.





EVENTS CONDUCTED OF IEI – KLC

Name of Centre / Overseas Chapter:		Kanchepuram Local Centre	
Title of Activity:		One Day Seminar on "Industrial Robotics"	
Activity under Divisional Board		Mechanical Engineering Division	
Date:	17.10.2018	Venue:	Smart Room (Theory Session) & Robolab 4.0 (Hands-on) Agni College of Technology, Chennai





Photo of Inaugural Session with banner of IEI	Photo of Technical Session and valedictory
<p><u>Report of One-Day Seminar/Workshop</u></p> <p><u>Brief Details about the Programme:</u></p> <p>This report captures presentations, interactive discussions and Real time applications at the “One Day seminar on Industrial Robotics” sponsored by The Institution of Engineers (India) was organized by The Institution of Engineers (India), Kanchepuram Local Centre in collaboration with the Department of Mechatronics Engineering, Agni College of Technology, October 17th 2018. There were 40 Participants including both students and Faculties of various colleges and internal participants. The Program started by 9.30 am. Dr. M. Prince, Prof & Head/Mechatronics, ACT welcomed the Chief Guest and Resource Persons Mr. GokulChandrasekar, Head/L&D, Prag Robotics. He welcomed the Principal Dr.R.S.Kumar, Principal, Dr.SrinivasanAlavandar, IEI KLC Honorary Secretary & Dean-Academics, and Head from various Department and Participant of Students and Faculties of various colleges and as well Internal Participants. Dr.R.S.Kumar, Principal, ACT gave presidential address to the gathering. He insisted that, there is a lot of opportunities in the field of robotic technology. So this seminar will give amazing opportunity to get on the ground floor of some really powerful technology. He also stated that this seminar will discover amazing and recent applications of deep learning that will inspire participants to get started in robotics applications Dr.SrinivasaAlavandar IEI KLC Honorary Secretary & Dean Academics felicitated the gathering. He talked about IEI.</p>	<p>He stated that the Institution of Engineers (India) (IEI) is the national organization of engineering professionals in India. IEI has over 0.5 million members from 15 engineering disciplines in 99 centers/chapters in India and overseas; it is the largest multi-disciplinary engineering professional society in the English-speaking world. He insisted everyone to become member of IEI and enjoy the benefits of IEI. Morning Session was handled by First session handled by Dr. M. Prince Head/Mechatronics, ACT initiated the technical session. He started the session on Introduction to Industrial Robotics. After Interval in Morning Session Mr. GokulChandrasekar, Head/L&D, Prag Robotics handled session on topic Robotic Programming, which includes direct and inverse kinematic analysis. Afternoon Session was handled by Mr. R. Ohmsakthivel, AP/Mechatronics, Agni College of Technology on simulation and man machine interface. Mr. R. Nandhakumar, AP/Mechatronics, Agni College of Technology on Hands-on training After Interval in Afternoon Session was handled by Mrs. D. Pinky, AP/Mechatronics, ACT on career opportunities in Robotics field. Valedictory Function was started by 3.30 pm and Certificates were distributed by the Dr.M.Prince Prof & Head/Mechatronics at 3.45 PM. The response of the participants was tremendous and their enthusiasm last until last session.</p>



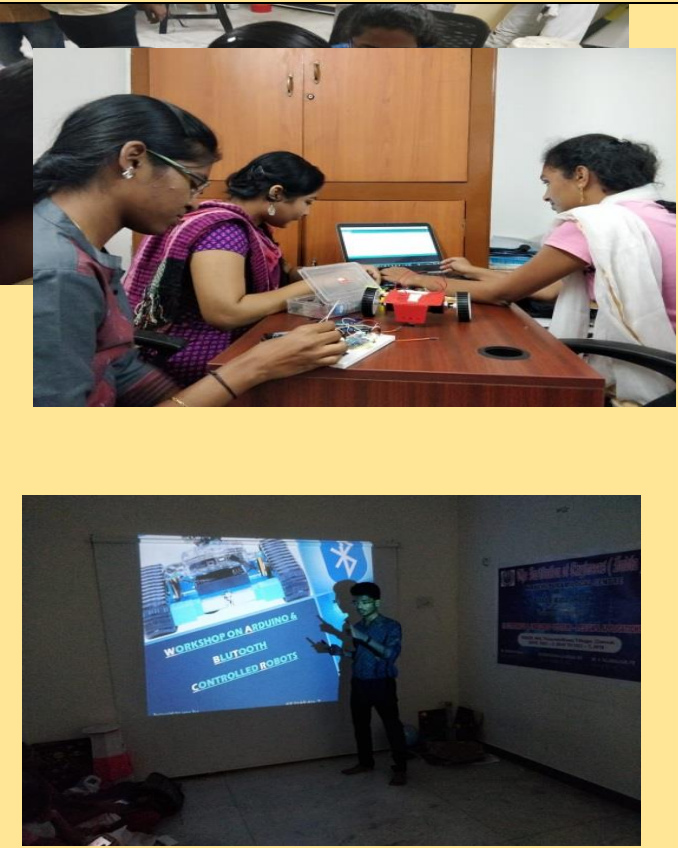
Name of the Centre			Kanchepuram Local Centre
Title of Activity			Energy Conservation Day
Activity Under Divisional Board			General
Date	14-12-2018	Venue	Library Conference Hall ,St.Joseph's Institute of Technology
<p>Dias</p>		<p>Banner</p>	<p>Special Address by Mr. K. Vijay Raju., Deputy Director, National Productivity Council Chennai</p>
<p><u>Energy Conservation Day</u></p> <p>Energy Conservation Day" was celebrated on 14-12-2018 at Library Conference Hall ,St.Joseph's Institute of Technology . The function started with TamilThaaiVazthu. Mr. K. Vijay Raju.presided over the function. In the Presidential address Mr.SrinivasanAlavandar explained, The Institution of Engineers (India)'s achievements and the dedicated Technical Activities to the Engineering Community and thereby to the Nation.Mr. K. Vijay Raju , Deputy Director, National Productivity Council Chennai Energy and Energy conservation has been the predominant global issue. With the ever changing demographic dimensions of the world, it is imperative for the global community to give immense significance to energy conservation.</p>		<p>Developing country like India, to meet its insatiable thirst for energy, it needs the out of the box thinking in not only to make hands reach the mouth but also to sustain the pace of our growth. The environmental issues, the global pressure to get away with the carbon conquered nonrenewable energy resources and the depletion of resources make each one of us to look in to this most important, Puzzle ridden challenge of "Energy conservation and sustainable growth". Vote of Thanks was delivered by Dr.K.ArunVasanthaGeethan HOD, Department of Mechanical Engineering. He thanked all the Members for the participation. He conveyed Special Thanks to Mr. K. Vijay Raju.</p>	



Name of Centre / Overseas Chapter:		Kanchepuram Local Centre	
Title of Activity:		Five Days Workshop on “Electronics and Embedded Systems Design and Applications”	
Activity under Divisional Board		Mechanical Engineering Division	
Date:	17.10.2018	Venue:	Space kids India, T.Nagar, Chennai





	
<p>Photo of Inaugural Session with banner of IEI</p>	<p>Photo of Technical Session and valedictory</p>
<p><u>Brief Details about the Programme:</u></p> <p>As a student in the field of Electronics Engineering one should have a basic knowledge in the field of Embedded Systems, Which is one of the fastest growing field in the modern world. In today's trend core industries don't have time to hire and train the fresher's for years to work in their field, So they are expecting the fresher's to have at least basic knowledge in their field. So they can have a shorter period of training.</p>	<p>This workshop provides a spark to ignite the idea on embedded systems, how to design and implement in the practical environment. This can further provide the basics required in the field of Internet of Things (IOT).</p>



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Name of Centre / Overseas Chapter:	IEI Kanchipuram Local Centre
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Title of Activity:	One Day Seminar on Applications of Nano materials in Chemical Engineering		
Activity under Divisional Board		Department of Chemical Engineering	
Date:	21- Dec - 2018	Venue:	AGNI COLLEGE OF TECHNOLOGY



Photos of Inaugural Session



Dignitaries on Dias from Right Dr.SrinivasanAlavandar , Honorary Secretary of IEI & Dean Academics ,Agni College of Technology, Dr.R.S.Kumar, Principal, Agni College of Technology, Dr.K.Sathish Kumar ,ASP/CHEM, SSN College of Engineering, Dr.M.Srividhya, Prof & Head of Department of Chemical Engineering, ACT. Principal and Honorary Secretary of IEI & Dean Academics , Agni College of Technology presenting Memento to the Chief Guest.



Dr.R.S.Kumar , Principal, Agni College of Technology presented the presidential address and Honorary Secretary of IEI presented the felicitation address to the gathering.

Photos of Technical Sessions



The Dignitaries and Chief Guest on the Dias Lighted the Traditional Kuthuvilaku

Photos of Valedictory function



Dr.R.Jayavel, Director, Centre for Nanoscience & Technology, Anna University Distributing Certificates to Participant.

Brief about the Programme:

This report captures a One day seminar with presentations, interactive discussions and Real time applications at “Applications of Nanomaterials in Chemical Engineering” sponsored by The Institution of Engineers (India) was organized by The Institution of Engineers (India), Kanchepuram Local Centre in collaboration with the Department of Chemical Engineering, Agni College of Technology, December 21, 2018. There were 102 Participants including both students of various colleges and internal participants as well enthusiastically attending the one-day seminar and gained knowledge on the area of Nanomaterials. The Program started by 9.30 am. Dr. M. Srividhya ,ASP/ CME,ACT welcomed the Chief Guest and



Dr.K. Sathish Kumar ,ASP/CHEM ,SSN College of Engineering Handled Session On Applications of Nanomaterials in Pharmaceuticals & Drug Delivery



Dr.R.Jayavel, Director, Centre for Nanoscience & Technology, Anna University Handled Session On Industrial Applications of Nanoparticles.

. He insisted everyone to become member of IEI and enjoy the benefits of IEI. Morning Session was handled by First session handled by Dr.K.Sathish Kumar, ASP/CHEM, and SSN College of Engineering, initiated the technical session. Dr. M. Srividhya, ASP/CME, Agni College of Technology on topics like Introduction to Nanotechnology. After Interval in Morning Session Mr.K.Bogeshwaran gave lecture on Advancements in Nanotechnology.

Resource Persons .He welcome d the Principal Dr.R.S.Kumar ,Principal ,Dr.SrinivasanAlavandar, Honorary Secretary of IEI & Dean-Academics and Participant of Students of various colleges and as well Internal Participants. Dr. R. S. Kumar, Principal, ACT gave presidential address to the gathering. Dr.SrinivasaAlavandar , Honorary Secretary of IEI felicitated the gathering. He talked about IEI .He stated that the Institution of Engineers (India) (IEI) is the national organization of engineering professionals in India. IEI has over 0.5 million members from 15 engineering disciplines in 99 centers/chapters in India and overseas; it is the largest multi-disciplinary engineering professional society in the English-speaking world.

Afternoon Session was handled by Dr.R.Jayavel, Director, Centre for Nanoscience & Technology, Anna University on topics like Industrial Applications of Nanoparticles.After Interval in Afternoon Session was handled by Mr.K.Kadambanathan ,AP,CME ,ACT on Future Advancement in Nanotechnology Valedictory Function was started by 3.30 pm and Certificates were distributed by the Dr.R.Jayavel, Director, Centre for Nanoscience & Technology, Anna University at 3.45 PM. The response of the participants was tremendous and their enthusiasm last until last session.



St. Joseph's student's chapters Inauguration



The Institution of Engineers (India), Kancheepuram Local Centre student chapter was inaugurated at St. Joseph's Institute of Technology, Chennai on 19.12.2018. The student membership was registered by Department of CSE & IT. The Inaugural function was started at 11:00 AM at the AV Hall and the inaugural address was given by Dr. S. Kalarani, HOD, and Department of IT.

The Honorary Secretary Dr. Srinivasan Alavandar IEI (I)-KLC gave the presidential address to the students and he also stated the benefits of the student membership. The Principal Dr. P. Ravichandran, St. Joseph's Institute of Technology gave a memento to the Honorary Secretary. The student membership certificate was distributed to the Department of CSE & IT. The IEI (I) ID cards were distributed to the students by the Honorary Secretary. There are totally 210 student members comprising of both CSE & IT. The inaugural function was ended at 11:30AM with the vote of thanks given by Dr. J. Dafni Rose, HOD, and Department of CSE.

Name of Centre / Overseas Chapter:	IEI Kancheepuram Local Centre
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Title of Activity:	Technical Talk on Human Intelligence to Artificial Intelligence		
Activity under Divisional Board		Computer Science Division	
Date:	21.12.18	Venue:	St. Joseph's Institute of Technology, Chennai - 119



Photo of Inaugural Session with banner of IEI



Photo of Technical Session by Dr. ArunJanarthanam, Qualcomm

Report of One-Day Seminar/Workshop

Brief Details about the Programme:

Institution of Engineers India (IEI) KLC sponsored one day workshop on the topic of "Human Intelligence to Artificial Intelligence" was successfully conducted by department of Computer Science and Engineering & Information Technology on 21st December 2018, as planned at AV Hall, St. Joseph's Institute of Technology, Chennai. The technical talk on Human Intelligence to Artificial Intelligence was discussed by Dr. ArunJanarthanam, Qualcomm, Chennai. His session started with the question ***Can Artificial Intelligence (AI) ever surpasses Human Intelligence?***

Human intelligence is not just about the brain, education is an essential part of our intelligence too and we can improve human intelligence with better education. But it seems like we are much more successful in training machines than we are in training humans. He also stated that Understanding the present state of AI capability (or limitations of) and speed of development, computing power and associated resources, it is critical to consider the possible implications and opportunities of AI, as well as actively shape the development and application of these technologies in a way that better serves humanity rather than negatively impacting it. His session ended with the future aspect that Machines are so far just very bad in generalization, but for now the biggest nets, as far as I know, are by the number of neurons comparable with a simple insect - nobody knows what's going to happen if we build bigger ones



Name of Centre / Overseas Chapter:	SRM INSTITUTE OF SCIENCE AND TECHNOLOGY

Title of Activity:	All India workshop on Design of Solar Photo Voltaic (PV) Power System for Rural Applications		
Activity under Divisional Board		Electrical Engineering Division Board, IEI	
Date:	28-29 March 2019	Venue:	SRM INSTITUTE OF SCIENCE AND TECHNOLOGY , Kattankulathur



Photo of Inaugural Session with banner of IEI



Photo of Technical Session

Report of One-Day Seminar/Workshop

This report captures a two-day programme of presentations, interactive discussions and demonstrations at the All India workshop on Design of Solar Photo Voltaic (PV) Power System for Rural Applications organized by The Institution of Engineers (India), Kanchepuram Local Centre in collaboration with the Department of Electrical & Electronics Engineering, SRM Institute of Science and Technology during March 28-29, 2019. The inaugural ceremony of the workshop commenced with the lighting of lamp by a group of dignitaries of from IE (I)-KLC and SRM Institute of Science and Technology, and Guest of Honor Mr. B.Tripati Patro, Executive Director, Visom Power Solutions Pvt Ltd, Chennai. Dr. K. Vijayakumar, Prof & Head /EEE and convener of the workshop welcomed the gathering Dr. K. Palanikumar, Chairman, IEI-KLC and Principal, Sri Sairam Institute of technology, gave the presidential address. He highlighted about IE (I), its various programs aimed for the development of students and opportunities that IEI presents to its members,

Guest of honor Mr. B.Tripati Patro, Executive Director, Visom Power Solutions Pvt Ltd, Chennai, inaugurated the workshop. His valuable address expressed the importance of Solar PV systems in the present situation. Followed by him, Dr. K. Vijayakumar, Prof & Head /EEE, felicitated the guests. Mr. C. Balaji, Advisor, IE (I) student chapter, EEE later on proposed vote of

After the inaugural session Mr. P. Veeramuthu, Certified Solar PV Energy Professional, Resource person of the workshop, initiated the technical session. He threw some light on overview of solar PV system and its need, design of PV power system for various applications. He explained the detailed designing of Off-grid system i.e., Solar PV fed UPS system used for home applications in the next technical session. On the same day the participants visited the Stand alone Off grid PV plant installed on the roof top. In addition, the solar PV fed water-pumping system and OFF grid PV system are demonstrated with the Real time setup. In the next session, Participants had a discussion with Dr. R. Sridhar, Associate Professor, EEE.

In the first session of Day 2, We visited the 100 kWp Grid tied PV plant installed in the Administrative Building, SRM IST, Kattankulathur. The participants saw the various components used in the system and understood the function and working of those components. In addition, Participants visited the control room where all the strings are connected through the inverter. In the remaining sessions, the design calculations of the ON grid and Grid tied system has been explained by Mr. P. Veeramuthu. In between Mr. C. Balaji, AP/EEE Coordinator of the workshop conducted some Q&A rounds where participants who answered correctly were given gifts.

Certificates distributed at 4:15 PM by the Dr. A. Rathinam, Professor/EEE. The response of the participants was tremendous and their enthusiasm last until last session



thanks. The objective of this workshop is to give the participants an intuitive understanding of solar PV systems, its design and procedure to develop cost effective solar PV systems for rural applications.

REPORT OF ONE DAY WORKSHOP ORGANISED BY KANCHEPURAM LOCAL CENTRE

Name of Centre / Overseas Chapter:	IEI Kanchepuram Local Centre
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Title of Activity:	One Day Seminar on Block Chain & Crypto currencies		
Activity under Divisional Board		Department of Computer Science & Engineering	
Date:	13– March - 2019	Venue:	St. JOSEPH’S INSTITUTE OF TECHNOLOGY



Photo of Inaugural Session with banner of IEI



Photo of Technical Session

Report of One-Day Seminar/Workshop

Brief Details about the Programme:

This report captures presentations, interactive discussions and Real time applications at the “One Day seminar on Block Chain and CryptoCurrencies” sponsored by The Institution of Engineers (India) was organized by The Institution of Engineers (India), Kanchepuram Local Centre in collaboration with the Department of Computer Science & Engineering, St. Joseph’s Institute of Technology, March 13th 2019. There were 80 Participants including both students of II year and III year IEI(I) members.

The Program started by 9.30 am. Dr. J. Dafni Rose, Head/CSE, SJIT welcomed the Chief Guest and Resource Persons Mr. Kishore Abishek, Managing Director, ZRAE. She welcomed Dr. K. Palani Kumar, IEI KLC Chairman & Principal-Sri Sairam Engineering college and the students of II and III Year IEI members

Dr. J. Dafni Rose, Head/CSE SJIT gave presidential address to the gathering. She insisted that, there is a lot of opportunities in the field of Block Chain technology. So this seminar will give amazing opportunity to get on the ground floor of some really powerful technology. She also stated that Blockchain is a leading software platform for digital assets and this seminar will discover Opportunities and Challenges of Cryptocurrencies that will inspire participants to explore more about this.

Dr. K. Palani Kumar, IEI KLC Chairman & Principal of Sri Sairam Engineering College felicitated the gathering. He talked about IEI. He stated that the Institution of Engineers (India) (IEI) is the national organization of engineering professionals in India. IEI has over 0.5 million members from 15 engineering disciplines in 99 centers/chapters in India and overseas; it is the largest multi-disciplinary engineering professional society in the English-speaking world. He insisted everyone to become member of IEI and enjoy the benefits of IEI.

Morning Session was started by 9:30 AM and was handled by Mr. Karthik, Engineer, ZRAE who gave a brief introduction about block chain technology with few real time examples.

After Interval in Morning Session was handled by Mr. Vineeth, Developer., ZRAE, he spoke about the security analysis of Block Chain

Afternoon Session was handled by Mr. Rahul, Engineer, ZRAE, he spoke about the Application scenarios in banking and governance. Mr. Kishore Abishek, Managing Director, gave hands on training on Permissioned / Permissionless Blockchains.

After Interval in Afternoon Session was handled by Mr. Comet Developer, ZRAE, on Opportunities, Social Impact and Challenges.

Valedictory Function was started by 4.30 pm and Certificates were distributed by the Dr. J. Dafni Rose Head/CSE SJIT and at 4.45 PM, a group photo was taken along with the students. The response of the participants was tremendous and their enthusiasm last until last session.



REPORT OF ONE DAY WORKSHOP ORGANISED BY KANCHEPURAM LOCAL CENTRE

Name of Centre / Overseas Chapter	IEI Kanchepuram Local Centre
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Title of Activity:	TECHNICAL SEMINAR ON Edge computing in IOT Automation Using ARM Cortex M0+		
Activity under Divisional Board		Department of Mechanical Engineering	
Date:	30.01.2019	Venue:	AGNI COLLEGE OF TECHNOLOGY



Photo of Inaugural Session with banner of IEI

Report of One-Day Seminar/Workshop

The Technical Seminar on “Edge computing in IOT Automation Using ARM Cortex M0+” under the aegis of Institution of Engineers (India) has been organised by Department of Mechanical and Automation Engineering on 30.01.2019 held at Seminar Hall From 9 am to 12 noon. The lecture was delivered by Mr.R.Raja, Project Lead, Sands Centre for Innovation.

The lecture was inaugurated by Dr.R.S.Kumar, FIE, Principal, Agni College of Technology and Dr.Srinivasan Alavandar, MIE, Hon Secretary IE(I) KLC, Dean Academics, Agni College of Technology felicitated the gathering. The Event began with the Welcome Address given by Mr.T.N.Suresh kumar, Head, M&A Department followed by the Chief Guest Introduction read by Mr.K.Mahesh Kumar, Assistant Professor, M&A Department.

The Technical Session was divided into two Sessions. The Speaker elaborated and given insight about Sensors and its working principles, ARM Processor, Embedded in Automation Field and Industrial products using IoT. The Session-II was focussed on creating real, digital and the virtual converging to create smart environments that make energy, transport, cities and many other areas more intelligent. The lecture was concluded with the Vote of Thanks rendered by Mr.Shorn Phillip of IIIrd year M&A Student.





<p>1. One day technical lecture on recent trends in artificial intelligence and machine learning at SRR Engineering College on 07th January 2019, Department of Electrical Engineering, Chennai.</p> <p>2. One day Technical lecture on 'Natural Disaster (Drought) Forecasting is using Fuzzy logic Technique' on 30th January 2019 at Valliammai Engineering College, Department of Civil Engineering, Chennai</p> <p>3. One day Technical Lecture on Edge Computing in IoT Automation using ARM Cortex M0+, on 30th January 2019, at Agni College of Technology, Chennai organized by Department of Mechanical and Automation Engineering.</p> <p>4. One-Day Workshop on "Instruments for Solar Photovoltaic (PV) Systems Monitoring and Conditioning" on 20-02-2019 under the aegis of Electrical Engineering Division at SRM University.</p>	<p>5. One day Technical lecture on 'Urbanization and Water quality issues, challenges and possible Solutions' on 25th February 2019 at Valliammai Engineering College, Department of Civil Engineering, Chennai</p> <p>6. One day Guest lecture on 'Water Resources on 01st February 2019 at Agni College of Technology, Department of Civil Engineering, Chennai.</p> <p>7. One Day Workshop on 'Block chain and Cryptocurrencies' on 13-03-2019 under the aegis of Computer Engineering Division at St. Joseph Institute of Technology</p> <p>8. All India Workshop on "Design of Solar Photo Voltaic (PV) Power System for Rural Applications" during March 28-29, 2019, under the aegis of Electrical Engineering Division at SRM University.</p>
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REPORT OF ONE DAY WORKSHOP ORGANISED BY KANCHEPURAM LOCAL CENTRE

Name of Centre / Overseas Chapter	IEI Kanchepuram Local Centre
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Title of Activity:	One Day Seminar on Block Chain & Crypto currencies		
Activity under Divisional Board	Department of Computer Science & Engineering		
Date:	13- March - 2019	Venue:	St. JOSEPH'S INSTITUTE OF TECHNOLOGY





Photo of Inaugural Session with banner of IEI



Photo of Technical Session

Report of One-Day Workshop

This report captures presentations, interactive discussions and Real time applications at the “One Day seminar on Block Chain and CryptoCurrencies” sponsored by The Institution of Engineers (India) was organized by The Institution of Engineers (India), Kanchepuram Local Centre in collaboration with the Department of Computer Science & Engineering, St. Joseph’s Institute of Technology, March 13th 2019. There were 80 Participants including both students of II year and III year IEI(I) members.

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Valedictory Function was started by 4.30 pm and Certificates were distributed by the Dr.J.Dafni Rose Head/CSE SJIT and at 4.45 PM, a group photo was taken along with the students. The response of the participants was tremendous and their enthusiasm last until last session.



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REPORT OF ONE DAY WORKSHOP ORGANISED BY KANCHEPURAM LOCAL CENTRE

Name of Centre / Overseas Chapter	IEI Kanchepuram local Centre
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Title of Activity:	ONE DAY Seminar on Provision of SCADA in Transmission and Distribution		
Activity under Divisional Board		Electrical Engineering Division Board, IEI	
Date:	18 March 2019	Venue:	SRI SAIRAM INSTITUTE OF TECHNOLOGY, WEST TAMBARAM, CHENNAI-44.



Photo of Inaugural Session with banner of IEI



Photo of Technical Session

Report of One-Day Seminar

Report of One day Seminar on “Provision of SCADA in Transmission and Distribution” was organized by “The Institution of Engineers (India)”, Kanchepuram local centre under the aegis of Electrical and Electronics Engineering Division in association with Sri Sairam Institute of Technology, Chennai on 18th March, 2019.

During the inaugural session Dr. K. Palanikumar, Chairman - IEI KLC & Principal Sri Sairam Institute of Technology welcomed the gathering. He highlighted about IE (I), its various programs aimed for the development of students and opportunities that IEI presents to its members. Token of felicitations were presented to Chief Guest Dr. J. Balamurugan Assistant Engineer/ Electrical, TNEB, Chennai by Dr. K. Palanikumar, Chairman - IEI KLC & Principal Sri Sairam Institute of Technology.

Mr.A. Anbazhagan, Head of Department, Electrical and Electronics Engineering presented inaugural address. His valuable address expressed the importance on the application of SCADA in transmission and distribution.

The Key note address was delivered by Dr.J.Balamurugan, Assistant Engineer/ Electrical, TNEB, Chennai and Ms.G.Ezhilarasi Assistant professor, EEE Department, Sri SaiRam Institute of Technology has proposed the vote of thanks.

Session I: After inaugural session, Dr.J.Balamurugan, Assistant Engineer/ Electrical, TNEB, Chennai, initiated the session. He focussed on application of SCADA in power system, monitoring of transmission and distribution using SCADA and function of SCADA in power system. He also focused on Implementing SCADA systems for Electrical Distribution.

Session II: The next session was handled by Mr. A. Anbazhagan, Prof. and Head/ EEE, SSIT, Chennai. He explained SCADA basics include Human-machine Interface (HMI), Remote Terminal Units, Supervisory System, Programmable Logic Controllers and SCADA programming, communication interface.

Session III: The third session was handled by Ms.G.Ezhilarasi, Assistant Professor/EEE, SSIT. She explained applications which are being used in Manufacturing Industries, Waste Water Treatment and Distribution Plants, SCADA in Power System, Electrical heating and cooling system, Water distribution and reservoir system.

Session I V: Afternoon session was handled by Mr.Praveen, M.E,M.Tech, Application Engineer, Technocrat Automation Solutions Pvt Ltd, Chennai. He explained about SCADA and its Role in Industrial Automation.

Session V: The Last session was handled by Ms. Komalachitra, Associate Professor/EEE, SSIT. She concentrated on Hardware and Software Architectures in SCADA.

Finally the valedictory session was conducted by Mr.A.Anbazhagan, Head of Department, Electrical and Electronics Engineering. Feedback received from the participants and Certificate of participation were issued to all the participants by Mr.Praveen, M.E, M.Tech, Application Engineer, Technocrat Automation Solutions Pvt Ltd, Chennai. The program ended at 4.00 pm with National Anthem.



REPORT OF ONE DAY WORKSHOP ORGANISED BY KANCHEPURAM LOCAL CENTRE

Name of Centre / Overseas Chapter	SRM INSTITUTE OF SCIENCE AND TECHNOLOGY
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Title of Activity:	All India workshop on Design of Solar Photo Voltaic (PV) Power System for Rural Applications		
Activity under Divisional Board		Electrical Engineering Division Board, IEI	
Date:	28-29 March 2019	Venue:	SRM INSTITUTE OF SCIENCE AND TECHNOLOGY , Kattankulathur



Photo of Inaugural Session with banner of IEI

Report of Two-Days Workshop

This report captures a two-day programme of presentations, interactive discussions and demonstrations at the All India workshop on Design of Solar Photo Voltaic (PV) Power System for Rural Applications organized by The Institution of Engineers (India), Kanchepuram Local Centre in collaboration with the Department of Electrical & Electronics Engineering, SRM Institute of Science and Technology during March 28-29, 2019..

The inaugural ceremony of the workshop commenced with the lighting of lamp by a group of dignitaries of from IE (I)-KLC and SRM Institute of Science and Technology, and Guest of Honor Mr. B.Tripati Patro, Executive Director, Visom Power Solutions Pvt Ltd, Chennai. Dr. K. Vijayakumar, Prof & Head /EEE and convener of the workshop welcomed the gathering Dr. K. Palanikumar, Chairman, IEI-KLC and Principal, Sri Sairam Institute of technology, gave the presidential address. He highlighted about IE (I), its various programs aimed for the development of students and opportunities that IEI presents to its members,

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Photo of Technical Session

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In the first session of Day 2, We visited the 100 kWp Grid tied PV plant installed in the Administrative Building, SRM IST, Kattankulathur. The participants saw the various components used in the system and understood the function and working of those components. In addition, Participants visited the control room where all the strings are connected through the inverter. In the remaining sessions, the design calculations of the ON grid and Grid tied system has been explained by Mr. P. Veeramuthu. In between Mr. C. Balaji, AP/EEE Coordinator of the workshop conducted some Q&A rounds where participants who answered correctly were given gifts.

Certificates distributed at 4:15 PM by the Dr. A. Rathinam, Professor/EEE. The response of the participants was tremendous and their enthusiasm last until last session



SINCERE THANKS TO IE (I) KLC TEAM 2016-18:

Members of IE (I) KLC appreciated the efforts & activities conducted under IE (I) KLC during 2016-18. Members congratulated Dr. R. Venkatesan, FIE, Chairman- IEI KLC, Er. S. Ramamoorthy, MIE, Honorary Secretary- IEI KLC and the committee members of 2016-18 for their relentless service provided for IE (I) KLC during 2017-18.

WELCOME TO NEW CORPORATE MEMBERS

MS BANUPRIYA S	CV	AM183810-8
MR RAKESH V	CV	AM184064-1
MR PERIYASAMY T	ET	M-163307-9
DR (MS) GUNASELVI S	CV	M-163430-5
MR VAMSI KRISHNA MALLISETTY	CV	M-163438-5
MS DHAKSHAYENI P A	CP	M-163460-1
MS SONIA R	CP	M-163461-5
MS MURUGA RADHA DEVI D	CP	M-163501-2
DR SRI HARI DODLA	MC	AM184212-1
MR SELVAN Y	CV	AM184389-6
MR VIMAL KUMAR M	CV	AM184399-3



MR R RAMESH	ET	M-163577-2
DR B RAMESH	MC	M-163591-8
MR KARTHIK J	MC	M-163617-5
MR CHANDRU N	CV	M-163624-8
MR E VIJAYARAGAVAN	MC	M-163637-5
MR J SAMUEL	CV	M-163703-1
MR SASIKUMAR A B	MC	M-163746-5
MR BALAMURUGAN M	ET	M-163787-2
DR (MS) SHARMEELA C	EL	F-124786-3