

Institution of Engineers (India)

KANYAKUMARI LOCAL CENTRE

கன்னியாகுமரி உள்ளூர் மையம்



KKLC NEWS

Er.V.SIVATHANU PILLAI F.I.E.
HON.SECRETARY

CONNECT KANYAKUMARI ENGINEERS

Er.G.SIVASUBRAMANIAN F.I.E.
CHAIRMAN

Year : 2018

No: 3

March-April 2018

From the Chairman's Desk.....



Dear Members

I am happy to contact you through the News Letter once again. Our local Centre is taking great strides in discharging the activities of our Local Centre.

More than 200 books have been added to our library. Members are requested to use the facility whenever they require. The Committee has approved proposals to start coaching classes to AMIE Students. Members who wish to take up coaching classes are requested to contact our Hon.Secretary.

A two days Seminar on Energy Efficient Technologies for Sustainability is proposed to be conducted at St.Xaviers Catholic College of Engineering, Nagercoil on 5th and 6th April.

St.Xaviers Catholic College of Engineering co-sponsoring the event. All Members are invited to attend the Seminar.

Er.G.Sivasubramanian, Chairman

INTERNSHIP FOR ENGINEERING GRADUATE

Organized by IEI KKLC and Riyasaa Labs,Nagercoil

The IEI Kanyakumari Local Centre, in co ordination with Riyasaa Labs, Nagercoil, collaborate with Professional bodies and Industries to promote Engineering Education to full fill the needs of the Industry through Internship program in the field of IoT. The Aim of this Internship program is to create awareness among the budding Engineering about the Engineering needs so that they will prepare themselves to be fit for the future ready job market.

Duration: One month(14-5-18to9-6-18) **Date of Registration:**14-04-2018 onwards

Venue:Seminar Hall, Riyasaa Labs ,Kottar, Nagercoil, Fees:Rs10000/-

Topics covered:PCB Design, Micro controller based application for Industry needs, IoT using raspberry Pi, Industrial IoT, NodeMCU based IoT kit (An open-source dirmware and development kit that helps you to prototype your IoT product)

Certification : Institution of Engineers (India), Kanyakumari Local Centre Members may recommend interested students of Engineering Colleges.

WISH YOU ALL

A

HAPPY

TAMIL NEW YEAR

இனிய

தமிழ் புத்தாண்டு

நல்வாழ்த்துக்கள்



Energy Conservation by Energy Accounting

Energy accounting is basically accounting the energy usage, as one would do for finance or for materials.

The accounting of the same form of energy can be termed as macro accounting, while accounting for the conversion of one form to another as micro accounting.

In energy accounting, three levels of energy usage gets estimated

- Absolute minimum theoretical energy
- Energy requirement, taking into account present minimum losses
- Present energy consumption

The difference between the present energy consumption and the energy requirement can be reduced by improved operating controls. The difference between the energy requirement and the theoretical minimum would be by equipment or process modification. In addition, the energy source replacement, equipment replacement, change in process can reduce energy.

Thus, good energy conservation should be able to implementation energy accounting, followed by periodic energy audit, which will ensure proper implementation of energy accounting.

Conclusion

Summing up, we need to use energy carefully because,

- Energy is Scare
- Energy is expensive
- Energy saving helps environment
- Energy saving does not Affect any other productivity measure.

Dr.M.Marsaline Beno

Head of the Department, EEE

St.Xavier Catholic College of Engineering, Sunkankadai

INTERNET OF THINGS – PROTOTYPE DESIGN

The Internet of things (IoT) is the network of physical devices, vehicles, home appliances and other items embedded with electronics, software, sensors, actuators actuators and connectivity which enable these objects to connect and exchange data. Each thing is uniquely identifiable through its embedded computing system but is able to inter-operate within the existing Internet infrastructure.

The IoT allows objects to be sensed or controlled remotely across existing network infrastructure, creating opportunities for more direct integration of the physical world into computer-based systems, and resulting in improved efficiency, accuracy and economic benefit in addition to reduced human intervention. When IoT is augmented with sensors and actuators, the technology becomes an instance of the more general class of Cyber-physical systems, which also encompasses technologies such as smart grids, virtual power plants, smart homes, intelligent transportation and smart cities.

The applications for internet connected devices are extensive. Multiple categorization have been suggested, most of which agree on a separation between consumer, enterprise (business) and infrastructure applications. George Osborne, the former British Chancellor of the Exchequer, posited that the Internet of things is the next stage of the information revolution and referenced the inter-connectivity of everything from urban transport to medical devices to household appliances.

The ability to network embedded devices with limited CPU, memory and power resources means that IoT finds applications in nearly every field. Such systems could be in charge of collecting information in settings ranging from natural ecosystems to buildings and factories, thereby finding applications in fields of environmental sensing and urban planning.

Intelligent shopping systems, for example, could monitor specific users purchasing habits in a store by tracking their specific mobile phones. These users could then be provide with special offers on their favorite products, or even location of items that they need, which their fridge has automatically conveyed to the phone. Additional examples of sensing and actuating are reflected in applications that deal with heat, water, electricity and energy management, as well as cruise-assisting transportation systems. Other applications that the Internet of Things can provide is enabling extended home security features and home automation. The concept of an "Internet of living things" has been proposed to describe networks of biological sensors that could use cloud-based analyses to allow users to study DNA or other molecules.

IoT devices are a part of the larger concept of home automation, also known as demotic. Large smart home systems utilize a main hub or controller to provide users with a central control for all of their devices. These devices can include lighting, heating and air conditioning, media and security systems. Ease of usability is the most immediate benefit to connecting these functionalities. Long term benefits can include the ability to create a more environmentally friendly home by automating some functions such as ensuring lights and electronics are turned off. One of the major obstacles to obtaining smart home technology is the high initial cost.

Dr.S.Arumuga Perumal

Head of the Department, Computer Science

ST.Hindu College, Nagercoil

Diploma Engineers can become life-time members of IEI

To attract diploma engineers who do not desire to appear in Section A and B examinations conducted by the Institution, the council, at its 694th meeting held in Aurangabad during March25-26, 2017 decided that Diploma Engineers from approved AICTE / State Board of Technical Education can also become life-time members of our Institution under Non-Corporate category under the grade **Associate Member Technologist (AMTIE)** and **Member Technologist (MTIE)**. They will enjoy all the benefits and rights of Non-Corporate Members.

NOTE: For further details and download application form please visit www.ieindia.org.

Member Technologist (MTIE)

Member Technologist is a senior grade of membership applicable to technologist who does not possesses an engineering degree or equivalent but engaged in engineering or industrial profession of responsibility. They are eligible to use designatory words MTIE after the name.

Eligibility:

1. Should have 32 years of age.
2. Diploma in Engineering from approved AICTE / State Board of Technical Education or B.Sc. degree in Applied Science or B.Sc. with Physics, Chemistry and Mathematics and Postgraduate degree in Applied Science / Technology / Computer Science / Computer Application or equivalent.
3. Shall have been engaged in engineering or industrial profession at least for a period of ten years in a position of responsibility.

Associate Member Technologist (AMTIE)

Associate Member Technologist is an initial grade of membership applicable to technologist who does not possesses an engineering degree or equivalent but engaged in engineering or industrial profession of responsibility. They are eligible to use designatory words AMTIE after the name.

Eligibility:

1. Should have 26 years of age.
2. Diploma in Engineering from approved AICTE / State Board of Technical Education or B.Sc. degree in Applied Science or B.Sc. with Physics, Chemistry and Mathematics and Postgraduate degree in Applied Science / Technology / Computer Science / Computer Application or equivalent.
3. Shall have engaged in engineering or industrial profession at least for a period of five years in a position of responsibility.

Thrust areas of Environmental Engineering Division Board (ENDB) Technical Activities

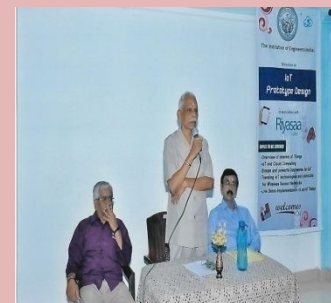
Green Power.	Abatement & Mitigation of Water, Air and Noise Pollution.	Cost Effectiveness and Emerging Effluent Treatment Technologies.
Waste to Energy Technology.	Recycle and Reuse of Waste Water.	Clean Development Mechanism Complaint Technology.
Environment Impact Assessment and Environment Management Plan for Different Engineering Sectors.	Challenges and Issues in Urban Water Conservation.	Urban Sewerage System through Trenchless and Micro Tunneling technology
Green House Gases and Their Adverse Effect on Environment.	Hazardous Waste Management.	Green Technology.

WORKSHOP ON IOT PROTOTYPE DESIGN

REPORT



Audience



One day Workshop on Internet of Things was conducted on 17-02-2018 at Riyasaa Labs Hall, Kottar, Nagercoil.

By 10AM the Workshop started with Introductory Meeting. Er.G.Sivasubramanian, Chairman presided. Dr.S.Arumuga Perumal Welcomed the participants. Er.G.Sivasubramanian in his presidential address explained what is IoT. He also streamlined the importance of IoT network in the recent technology world. After Vote of Thanks by Er.V.Sivathanu Pillai, Hon.Secretary, The Workshop started.

Dr.S.Arumuga Perumal gave the Introductory about IoT. Then Er.Venkat Subramanian, IoT Solution Architect, Panasonic, Singapore, deliberately explained the IoT network of physical devices, vehicles, home appliances and other items embedded with electronics, software, sensors actuators and connectivity which enables these objects to connect and exchange data.

In the Second session with Printed circuit boards he practically demonstrated how it is able to inter operate with in the existing Internal Infrastructure. In the interaction, for many questions, clear clarification were given by Er.Venkat Subramanian.

Certificates were issued to the Participants.

Er.G.Sivasubramanian
Chairman

Er.V.Sivathanu Pillai F.I.E.
Hon.Secretary

Technical Activities in Future

1. One month program "Internship for Engineering Graduate", in co-ordination with Riyasaa Labs, Kottar, Nagercoil, 14-05-2018 to 09-06-2018.
2. World Telecommunication and Information Society Day on 17-05-2018.

KKLC COMMITTEE MEETING

Kanyakumari Local Centre 21st Committee Meeting on 09-05-2018 by 6pm at No.18/23, Vanchi Aathithan New Street, Vadasery, Nagercoil-1

WORLD WATER DAY

உலக தண்ணீர் தினம்

On 22-03-2018 the World Water Day was celebrated at Madaththammai Mandapam, Nagercoil by 5 pm.

Welcome address was delivered by Er.V.Muthum Perumal M.I.E. Committee Member

Self Introduction was made by all the members.

The function was presided over by Er.G.Sivasubramanian F.I.E., Chairman, Kanyakumari Local Centre. In his presidential address chairman stated the importance of water Management. With the increase of population the consumption of water is also increasing. At the same time water bodies are increasingly polluted. The major pollutants are untreated industrial effluents, untreated human and animal wastes, dumping of water in rivers etc. He read some excerpts from the Article written by Sri. Ramasamy Regional Hydrologist UNESCO. Mr. Ramasamy had discussed various water management practices using Nature as a source. He also pointed out unplanned urban development without proper water management, planning, thus making cities water starved. The Chairman introduced the Chief Guest Er.M.R.Moham M.E., Deputy Superintending Engineer, PWD Tamil Nadu and is at expert in Irrigation System Planning and Execution.

Er.P.Gopal, Rtd. CE PWD and Er.S.Natarajan Rtd. CE PWD, Committee Member, Kanyakumari Local Centre made a speech on Water scarcity and how to overcome that.

Er.M.R.Mohan Deputy Superintending Engineer, PWD was the Chief Guest, In his address he explained various lapses in water management, difficulties in carrying out irrigation, sources maintenance, drying of water bodies, elimination of water bodies in the process of urbanization etc. He also explained in detail the irrigation system in Kanyakumari district and informed that the irrigation system in Kanyakumari district is one of the best system in Tamil Nadu. He also explained urgent maintenance work required in Kanyakumari Irrigation System strengthening of Anicuts and irrigation channels, cleaning the water bodies of vegetation growth.

Vote of Thanks was delivered by Er.V.Sivathanu Pillai, Hon.Secretary, Kanyakumari Local Centre. He thanked the Chief Guest Er.M.R. Mohan for his valuable keynote address and thanked all the members who were present.

After National Anthem the function concluded.

Er.G.Sivasubramaniam F.I.E.
Chairman

Er.V.Sivathanu Pillai F.I.E.
Hon.Secretary