NATIONAL ENGINEERING COLLEGE

(AN AUTONOMOUS INSTITUTION, AFFILIATED TO ANNA UNIVERSITY, CHENNAI)

K.R.NAGAR, KOVILPATTI -628 503

EEE

NEWSLETTER

DECEMBER 2017 VOLUME NO 5 ISSUE 4

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Hi Budding Technocrats,

New month; new beginning

New mind-set; new focus

New starts; new intentions

New results

We are so glad to publish the new Volume No. 5 of Issue 4 of our EEE Newsletter. We have now stepped into a new island of knowledge, power and enthusiasm. This month December holds a pride of electrical engineer John Hopkinson's birthday, a British physicist and electrical engineer who worked on the application of electricity and magnetism in devices like the dynamo and electromagnets. Hopkinson's law (the magnetic equivalent of Ohm's law) bears his name.

Leaders are not born and they are made.

So we budding engineers let's start the month with a spirit and goal that we become leaders and masters of electrical engineering.

By

S.Meenakshi

Second Year EEE

CONTENTS

STAFF ACTIVITIES/PUBLICATIONS/ACHIEVEMENTS

ACTIVITIES:

S.No.	Name of the Staff	Events/Guest Lecture	Topic/Event	Date	College/ Company
1.	Mr. G. Kannayeram, AP(SG) Mr. T. Sivakumar, AP	AICTE – QIP sponsored Short term course	Nascent Generation and Distribution technologies and potential research problems in power system	04.12.2017 to 08.12.2017	Pondicherry Engineering College, Pondicherry
2.	Dr. M. Ravindran Asso. Prof	Two Weeks Short Term Course	Energy and Power Quality Audit Methodologies	27.11.17 – 10.12.17	Thiyagarajar College of Engineering, Madurai
3.	Mr.M.Gengaraj, AP	Two Weeks AICTE sponsored Faculty Development Programme	Recent developments in Modelling Design and Control of Power Converters and Drives	13.11.2017 – 25.11.2017	Mepco Schlenk Engineering College, Sivakasi
4.	Mr.M.Sivapalanirajan, AP	A technical symposium	NITS 2017	9th Nov 17	National Instruments Pvt. Ltd.
5.	Mrs.K.Gowthami, AP Ms.E.Anitha, AP	Three days AICTE sponsored seminar	Research perspectives and challenges in instrumentation aspects of IoT	25.10.2017 - 27.10.2017	NEC, Kovilpatti
6.	Dr.M.Willjuice Iruthayarajan, Professor/EEE Dr.R.V.Maheswari, Asso. Prof. Mr.N.B.Prakash, Asso. Prof. Mr.M.P.E.Rajamani, AP(SG) Mr.S.Sankarakumar, AP(SG) Mr.J.Sivadasan, AP(SG) Mr.S.Senthilkumar, AP Mr.B.Venkatasamy, AP Mr.P.Samuel Packianathan, AP	Two Days Training Programme	Training on Protection Relay-P14D	24.10.2017 – 25.10.2017	NEC, Kovilpatti

	Mr.M.Bakrutheen, AP Mr.B.Vigneshwaran, AP Mr.M.Gengaraj, AP Mrs. G.Shunmugalakshmi, AP Mr.M.Sivapalanirajan, AP Mr.T.Sivakumar, AP Mr.K.Kumar, AP				
7.	Mr.S.Sankarakumar, AP(SG) Mr.J.Sivadasan, AP(SG) Mr.S.Senthilkumar, AP Mrs.K.Gowthami, AP Mr.B.Vigneshwaran, AP Mrs.K.Gowthami, AP Mrs. G.Shunmuga lakshmi, AP Mr.T.Sivakumar, AP Mr.K.Kumar, AP Ms. A. Tamilarasi, AP Ms. S. Balakiruthiha, AP Ms. S. Muthukumari, AP Ms. J. Vinotha,AP	Two Weeks AICTE sponsored faculty development programme	" Recent trends and Applications of High Voltage Engineering"	6.11.2017 – 19.11.2017	NEC, Kovilpatti

TRAINING PROGRAMME IN INDUSTRY

S.No.	Name of the Staff	Company	Date
1	Mr.M.P.E.Rajamani, AP(SG)	M/s/ Power Gear Ltd, Chennai	24.11.2017
2	Mr.S.Sankarakumar, AP(SG)	L&T Rubber Processing Machinery, Chennai.	09.11.2017
3	Mr.J.Sivadasan, AP(SG)	M/s. ELGI Equipments Ltd., Coimbatore	21.11.2017
4	Mr.K.Kumar, AP	M/s. Mahindra Research Valley Pvt Ltd., Chennai	05.12.2017

ACHIEVEMENTS:

The following Staff members have certified in ***NPTEL Online Certification Course*** during September – October, 2017.

Mr.M.Bakrutheen
Duration: 8 week course
Title: "Advances in UHV Transmission and Distribution" organized by NPTEL, IISC, Bangalore
Top 99%Gold + Elite
College: NEC,Kovilpatti
Date: July – September 2017

Mr.B.Vigneshwaran
Duration: 8 week course
Title: "Advances in UHV Transmission and Distribution" organized by NPTEL, IISC, Bangalore
Elite
College: NEC, Kovilpatti
Date: July – September 2017

Ms.S.Balakiruthiha
Duration: 8 Weeks Course
Title: "Introduction to Research" Organized by IIT, Madras.
Gold + Elite
College: NEC,Kovilpatti
Date: July – September, 2017

Ms.S.Muthukumari,
Duration: 12 Weeks Course
Title: "Power Systems analysis" Organized by IIT, Kharagpur
Elite
College: NEC, Kovilpatti
Date: July – October, 2017

Mr.P.SamuelPakianathan
Duration: 12 Weeks Course
Title: "Electrical Machines – I" Organized by IIT, Kharagpur
Elite
College: NEC, Kovilpatti
Date: July – October, 2017

Mr.M.Gengaraj
Duration: 12 Weeks Course
Title: "Electrical Machines – I" Organized by IIT, Kharagpur
Elite
College: NEC, Kovilpatti
Date: July – October, 2017

Mr.K.Kumar
Duration: 12 Weeks Course
Title: "Electrical Machines – I" Organized by IIT, Kharagpur
Elite
College: NEC, Kovilpatti
Date: July – October, 2017

Ms.S.Balakiruthiha
Duration: 12 Weeks Course
Title: "Electrical Machines – I" Organized by IIT, Kharagpur
Elite
College: NEC, Kovilpatti
Date: July – October, 2017

PUBLICATIONS:

1. ***T.Piraisoodi, M.Willjuice Iruhthayarajan, K.Mohaideen Abdul Kadhar***, "Application of Single and Multi-Objective Evolutionary Algorithms for optimal Nonlinear controller design in Boiler turbine System, International journal of Fuzzy set, September 2017. – ***Impact factor: 2.198***

2. ***M. Bakrutheen, M. Willjuice Iruthayarajan and S. Senthil Kumar***, "Investigation on the Properties of Natural Esters Blended with Mineral Oil and Pyrolysis Oil as Liquid Insulation for High Voltage Transformers", Intelligent and Efficient Electrical Systems, Lecture Notes in Electrical Engineering 446, https://doi.org/10.1007/978-981-10-4852-4_17.

3. ***G. Kannayeram***, P. S. Manoharan, ***M. Willjuice Iruthayarajan, T. Sivakumar*****,** UPFC Damping Controller Design using Multi-objective Evolutionary Algorithms, International Journal of Business Intelligence and Data Mining, Vol.13, Issue 1-3, Pg.52-74, 2018.

4. S. Nagalakshmi, R.C. Rohini and ***S. Balakiruthiha***, "Integration of Wind Power Generators for the Enhancement of Profit by Optimal Allocation of SVC", Intelligent and Efficient Electrical Systems, Lecture Notes in Electrical Engineering 446, https://doi.org/10.1007/978-981-10-4852-4_3

5. ***Mr. R. Muniraj and Dr.M.Willjuice Iruthayarajan,*** "Tuning of Robust PID controller with Filter for PLL system using HCLPSO Algorithm", International Conference on Cognitive Informatics and Soft Computing, Vignan Bharathi Institute of Technology, Hyderabad and Institute of Research and development , Bhubaneshwar, 20.12.2017 & 21.12.2017

6. Rajesh N.B, ***Prakash N.B***, "Co-Ordination Control Scheme for Reactive Power Sharing and Harmonic Voltage Distortion Compensation in Droop Controlled Micro-Grids", AICTE Sponsored International Conference on Power and Energy Systems (ICPES'17), Dept. of EEE, Velammal College of Engineering and Technology, Madurai

7. Rajesh N.B, ***Prakash N.B***, "Evaluation of Voltage Stability in Power System Network with Observability Using Phasor Measurement Unit (PMU)", AICTE Sponsored International Conference on Power and Energy Systems (ICPES'17), Dept. of EEE, Velammal College of Engineering and Technology, Madurai

DEPARTMENT ACTIVITIES

AICTE SPONSORED TWO WEEK FDP ON
"RECENT TRENDS AND APPLICATIONS OF HIGH VOLTAGE ENGINEERING"
06.11.2017 to 19.11.2017
PROGRAMME REPORT

Snap during Inaugural function of Faculty Development programme

Programme Details:

Department of Electrical and Electronics Engineering organized AICTE sponsored Two week FDP on "Recent Trends and Applications on High Voltage Engineering" from 06.11.2017 to 19.11.2017 with the following objectives.

- To impart specialized training towards understanding and improving the overall design of high voltage power apparatus and transmission systems
- To discuss about the advanced and fundamental research, operational reliability, and application of high voltage to allied areas
- To analyze the breakdown phenomena in different insulation media, arc studies in SF6 circuit breakers, pollution and flashover studies on external insulation and studies in gas-insulated systems.
- To study about the insulating material characterization and its aging, partial discharge detection techniques data analysis, interpretation, multifactor stress analysis and application of pattern recognition.
- To provide a platform to share cutting-edge technology and up-to- date knowledge and experience in pulsed power engineering. Covers research problems in latest technology in

insulation technology, nano materials, vehicular electronics and electromagnetic interference and compatibility. Make them aware about modern teaching tools and software.

- To acquire knowledge about current technological developments in high voltage engineering fields. Motivates the faculty to achieve competitive teaching and learning environment, thus channelizing development with respect to academic qualifications and personal matters.
- To discuss about the latest development and research on liquid insulation for high voltage apparatus.

Inaugural Function:

Inaugural function for the FDP was held on 06.11.2017 at EEE Seminar Hall. ***Dr.G.R.Nagabhushana, Professor Emeritus and Former Chairman, High Voltage Engineering, IISc, Bangalore*** was the chief guest. The ***Director Dr.Kn.K.S.K.Chockalingam*** presided over the function. ***Dr. R.V.Maheswari, Associate Professor/EEE*** welcomed the gathering. ***M. Bakrutheen, Assistant Professor/EEE*** introduced the chief guest to the gathering. ***Dr. M. Willjuice Iruthayarajan, Prof.& Head/EEE*** address the preamble of the Faculty Development Program. He mentioned the necessity and features of high voltage engineering in current scenario, and also he discussed various research issues going in high voltage field. The Chief Guest in his address illustrates the current scenario of high voltage application oriented equipments. He also discussed the recent issues of high voltage engineering for defense applications.

Resource Person Details:

Various research topics related to this FDP were presented by the following expert members in the field of high voltage engineering.

External Members:

- ***Dr. G.R. Nagabhushana****, Professor Emeritus and Former Chairman, High Voltage Engineering, IISc, Bangalore.*
- ***Dr. K. Elanseralathan****, Professor/EEE, Pondicherry Engineering College.*
- ***Dr. Santosh Kumar Annadurai****, R&D Head/GIS, GE T&D India Ltd., Chennai.*

Internal Members:

- *Dr. R.V. Maheswari, Associate Professor/EEE*
- *Mr. N. B. Prakash, Associate Professor/EEE*
- *Mr. M. P. E. Rajamani, Assistant Professor (SG)/EEE*
- *Mr. G. kannayeram, Assistant Professor (SG)/EEE*
- *Mr. S. Senthil Kumar, Assistant Professor/EEE*

- *Mr. P. Samuel Pakianathan, Assistant Professor/EEE*
- *Mr. M. Bakrutheen, Assistant Professor/EEE*
- *Mr. B. Vigneshwaran, Assistant Professor/EEE*
- *Mrs. G. Shunmuga Lakshmi, Assistant Professor/EEE*
- *Mr. K. Kumar, Assistant Professor/EEE*

Session Details:

To meet out the objectives of this FDP, various research topics related to the field of high voltage engineering were presented.

- Lightning Physics, Effects & Protection - Dr. G.R. Nagabhushana
- Introduction and Research Issues in HVE - Dr. R.V. Maheswari
- HVE Lab, Instrument Precautions and Earthing Connections - Mr. M. Bakrutheen
- Breakdown Study in Dielectrics - Mr. P. Samuel Pakianathan
- Characterization of Solid Insulation - Mr. B. Vigneshwaran
- Outdoor Insulator: General Aspects - Mr. K. Kumar
- Pollution Flashover Studies on Transmission Line Insulator - Mr. B. Vigneshwaran
- Overvoltage Phenomena in Power Apparatus & System - Mr. P. Samuel Pakianathan
- EMI/EMC - Mr. M. P. E. Rajamani
- High Voltage Equipments - Mr. N. B. Prakash
- Recent Development in Liquid Insulation - Mr. M. Bakrutheen
- Partial discharge - Mr. B. Vigneshwaran
- Simulation Tools for Field Computation - Mr. B. Vigneshwaran
- Effect of Antioxidants in Insulating Oil - Mr. P. Samuel Pakianathan
- Reclaiming of used Liquid Insulation - Mr. P. Samuel Pakianathan
- Introduction to High Voltage Switchgear - Mr. S. Senthil Kumar
- EHV/UHV Transmission and Distribution Network – Mrs. G. Shunmuga Lakshmi
- Recent Trends in HVDC/FACTS - Mr. G. kannayeram
- Numerical Field Computation - FDM - Dr. K. Elanseralathan
- Gas Insulated Substation - Dr. Santosh Kumar Annadurai,
- Application of Signal Processing Techniques to Condition Monitoring - Dr. R.V. Maheswari

EEE ASSOCIATION – INTRA COLLEGE TECHNICAL SYMPOSIUM – TESLA 2K17


Snap during Inaugural function of Technical Symposium

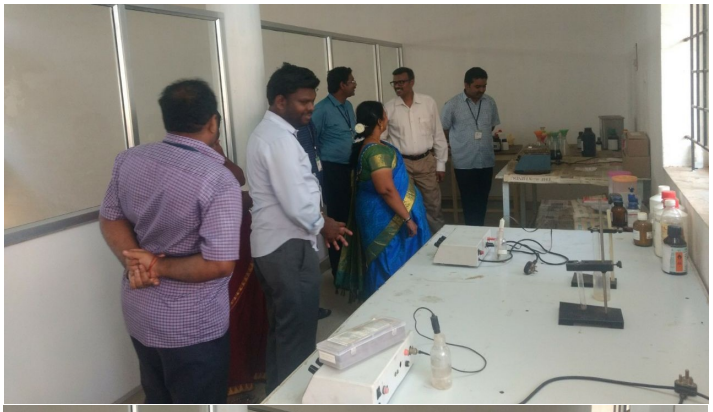
A One day Intra college symposium TESLA 2K17 was conducted by EEE Association in EEE department on 27.12.2017 from 10.00 am to 5.00 pm. Mr.D.Anesh Kavi, Deputy Chief Engineer, NLC India Ltd, Neyveli was the chief guest. The inaugural function was held at EEE seminar hall. The inaugural function began with a prayer song. The inaugural function was led by Mr.D.Anesh Kavi, chief guest, Dr.S.Shanmugavel, Principal, Dr.M.Willjuice Iruthayarajan, Head of EEE Department, Mr.N.B.Prakash, EEE Association Staff Incharge and Mr.P.Saravana Kumar, Secretary, EEE Association. Mr.P.Saravana Kumar welcomed the gathering. Presidential address was given by Dr.S.Shanmugavel. Mr.S.Arun Jeyakumar, Treasurer, EEE Association introduced the chief guest. The inaugural address was given by Mr.D.Anesh Kavi, Chief Guest. Finally Dr.S.Shanmugavel honoured the chief guest with a memento.

Followed by the inaugural function, various technical and non-technical events such as paper presentation, tech hunt, sherlock ohm, techie crackers, wheels of fortune, word-o-philic, clik a classy, idea mani were conducted. Students from various departments participated in the events enthusiastically. The events brought out Innovating minds, speaking potentiality and benefited students to gain knowledge and creativity

The valedictory function of the One day Intra college symposium TESLA 2K17 held at 5.00 pm in EEE seminar hall. The winner of various events was announced in the valedictory function. The prizes were distributed to the winners by Dr.M.Willjuice Iruthaiyarajan and Mr.N.B.Prakash. Finally the symposium was concluded by vote of thanks delivered by Mr.M.Jothi Basu, III year student.

INTERACTION WITH OUTSIDE WORLD

The interactive interaction program was conducted by EEE department with ***Dr.G.R.Nagabhushana, Professor Emeritus and Former Chairman, High Voltage Engineering, IISc, Bangalore*** on 06.11.2017 at Seminar hall. He visited the high voltage engineering laboratory and interacted with faculties who currently pursuing their research work in the area of multiple partial discharge pattern recognition, outdoor insulator performance analysis with and without pollution layer, transformer oil analysis with nano particles and antioxidants, and statistical parameters analysis in high voltage equipments. He also gave some suggestion and new ideas related to their research areas for the corresponding faculties on particular topics. Finally he congrats all the faculties for their research publications in reputed journals.



The interactive interaction program was conducted by EEE department with ***Dr. K. Elanseralathan, Professor/EEE, Pondicherry Engineering College*** on 17.11.2017 at Seminar hall. He visited the high voltage engineering laboratory and interacted with faculties about the generation of HVAC, HVDC and impluse circuits, and then he had a discussion about the partial discharge measurement techniques used in the laboratory and also about the recent issues in pattern recognition process. Then he had a visit in Liquid dielectrics laboratory and discuss about the equipments like breakdown voltage kit, flash point and fire point, pour point, resistivity, permittivity, viscosity, tan delta, conductivity, ultrasonic, UV Spectroscopy and moisture content measurement. Also he also gave some suggestion and new ideas related to their research areas in high voltage discipline.

TRAINING ON PROTECTION RELAY




Snap during the Session

Department of EEE organized a two day training program on "Training on Protection Relay" during 24th and 25th October 2017. The training was handled by ***Mr. Vijaykarthik.V (Manager, Training Institute, GE T&D Ltd, Pallavaram, Chennai) and Mr.Anandanarayanan.G (Engineer, Training Institute, GE T&D Ltd, Pallavaram, Chennai).*** 15 faculty members from EEE department attended the two day training program.

First session of day one was handled by ***Mr. Vijaykarthik***.. He discussed about the basics of protection and overcurrent protection in practical aspects. The second session was handled by ***Mr.Anandanarayanan***, he explained the features of MiCom software and demonstrated the setting that has to done in MiCom software for feeder protection numerical relay.

Second day training was handled by Mr. Vijaykarthik.V and Mr.Anandanarayanan**.** They demonstrated the various electromechanical over current relays and Numerical Feeder protection relay purchased in our department. The two day training program was very useful for the staff members to update their practical knowledge in protection relay.

SPECIAL INTEREST GROUP

HIGH VOLTAGE ENGINEERING (SIG-REPORT)

Session-I (10.00AM – 11.15PM)

The special interest group of high voltage engineering was held on 16.12.2017in lecture hall 3. Session I was handled by ***Mr.K.Kumar AP/EEE*** by 10.00AM on the topic **"Insulators for Outdoor Applications".** Initially he pointed out the necessity of insulation systems in high voltage engineering. Then he elaborately classified the types of insulators used for transmission and distribution purposes, the design, and specification for a certain usage and the dimensioning of the insulator for that usage in an outdoor environment are usually dominated by the need to take account of wetted pollution on its surface. Following that he explained the flashover mechanism happening in insulators under Surface wettability, hydrophilic case, hydrophobic case, ice and snow conditions. Finally he explained the Supplements, palliatives and other mitigating measures like Booster sheds, shed extender, and Shed protector, Coatings. Washing etc.

Session-II (11.30AM – 12.30PM)

The session II was started by ***Mr.S.Senthil Kumar, (AP/EEE)***, on the topic "**Recent Trends in Liquid Dielectric Engineering**", in Lecture hall 3 (EEE). He pointed out the necessity Liquid dielectrics are widely used in high-voltage electric apparatus because of their special physical and electrical properties, the transformer oil is one of the most important liquid dielectric, which has been likened to the blood of power generation, transmission and distribution. So it is widely employed in oil-immersed electrical equipment. Later, the new kind of the mineral oil obtained by refining crude oil is utilized, and whose products are mainly naphthenic-based and paraffin-based components, respectively. However, the electric performance of the liquid dielectric is needed to reach higher level due to the continuous improvement of voltage grade of power system, and then the low flash point, poor biodegradability and non-renewable shortcomings of the mineral dielectric have not met requirements.

EMBEDDED SYSTEMS

EEE department Embedded Systems Special Interest Group (SIG) conducted the Introduction Class, on Internet of Things Architecture for 15 number of pre-final year SIG students on 16thDec 2017 in the Hall 3, EEE Department.

Session (11.00AM -12.00 PM)

Mr. F. Antony Jeffrey Vaz, ***AP/EEE*** gave the introduction to the Internet of Things and its importance in real life. He briefed the about the need, architecture and concepts behind the internet of things. He also explained about the technologies that can be used for doing projects in Internet of Things applications. He encouraged the students to do real time projects based on Internet of Things and motivated them to utilize the Arduino and Raspberry PI open source tools for implementation their innovative ideas.

ALUMNI INTERACTION

Date : 04/12/2017

Mr.P. Selvam Batch:(2012-2016) ***Data pattern pvt Ltd, Chennai*** interacted with EEE students. He said about his company and how to get prepared for joining his company

Date : 05/12/2017

Mr.Pradeep Batch:(2012-2016) interacted with EEE students, he explained about his company and asked the students to improve their practical knowledge

Date: 22/12/2017

Mr.V.Manikandan Batch:(2011-2015) working as industry sales executive in ***M/s Spares4u*** interacted with EEE students. During his interaction he shared his experience in his career, and how communication skills are important to reach the heights

Mr. Gulasekarapandian (2009-13) batch working as Electrical Engineer in Al Turki Enterprises LLC(P.D.O) Muscat, Oman ineacted with EEE students and he shared about his nature of work and explain about his company.

Date : 27/12/2017

Mr.D.Anesh kavi, Passed Out (2003), Deputy Chief Engineer, NLC India Ltd has interacted with EEE students. He explained about the key features of NLC India ltd and scope of placement in his concern. He briefed about the switchgear mechanism in NLC. Also he interacted with students regarding their goal, objective and how to prepare themselves for competitive exams.

ALUMNI FEEDBACK

LAMDA ENGINEERING & TECHNOLOGIES PRIVATE LIMITED (LETs)

I am ***Vigneshwaran (2017th passed out)*** and I am pleased to inform you that I having worked in ***Lamda Engineering and Technologies Pvt Ltd*** as Business Development Engineer for last one week. I know that you are happy to hear this. I want to give some suggestion to my junior brothers and sisters from my interview experience as well as industrial expectations. Firstly, A great engineer has great communication skills. They can translate complex technical lingo into plain English and also communicate verbally with clients and other engineers working together on a project. During college days, I am not good in communication that's why more struggle in my previous interviews. Now, I am improving my communication with reading newspapers and talking with my friends. And one more thing, sometimes they have good in both reading, writing and understanding in English, but it is totally different when they came to speak.

In core companies, technical engineers are directly contact with the customers to resolve their queries if it is in tamil nadu then it's no problem. In case they have been working in other states or countries means, difficult to understand the query from customer side as well as resolve over phone. Next thing is, desire to learn. Any diligent professional who is passionate about what they do makes an effort to keep abreast of industry changes and developments. They take it upon themselves to learn new techniques and new technologically advanced pieces of equipment in order to perform their job to the best of their abilities.

Be able to demonstrate that you know the current state of the engineering industry and can work effectively within it. Anticipate where it might go in the future. In my company, we are doing industrial automation. Almost every task needs to be approached with an analytical mind. The solution has to be developed so that it meets all of the requirements with as little risk in the construction process as possible. This might involve experimentation and testing before work actually begins so budget isn't wasted on failed attempts. I hope it will helpful to the students who are currently studying in our college.

Thanks and regards,

M. Vigneshwaran,
Business Development Engineer,
Lamda Engineering and Technologies Pvt Ltd.,
Bangalore – 560 100.
Phone No.: *8807834711.*

TIME TO KNOW OUR ALUMNI

MUTHUPANDI S
Batch: 1999-2003

Chief Engineer at Samsung R&D Institute India - Bangalore
Email ID:muthupandi.s@gmail.com

Summary

Working in a challenging environment, which has potential for progress and research where my skills and experience will be used for improving myself and organizational productivity

Experience

Chief Engineer
November 2012 - Present
Consultant at Siemens information Systems Limited
January 2011 - November 2012 (1 year 11 months)
Associate Consultant at Siemens information Systems Limited
January 2008 - December 2010 (3 years)
Senior Systems Engineer at Siemens information Systems Limited
February 2006 - December 2007 (1 year 11 months)
Software Developer
June 2004 - January 2006 (1 year 8 months)

ANESH KAVI D
Batch: 1999-2003

Deputy chief engineer in Mines1 of NLC INDIA ltd.

Here is my biodata Completed BE in EEE at 2003 at National Engineering College, kovilpatti.

Experience

- ✓ *Worked at lecturer in Arason Ganesan poly. College sivakasi for 3 years from 2004-07*
- ✓ *Joined as Graduate Engineer trainee at Neyveli Lignite corporation India ltd on 2007.*
- ✓ *Right now working as Deputy chief engineer in Mines1 of NLC INDIA ltd.*

Placement Details

TATA CONSULTANCY SERVICES
Experience certainty.

TATA

On behalf of the Chairman, Managing Director, Director, Principal, Head of the Department and staff members, we heartily congratulates the final year students who placed in ***TATA Consultancy Services*** and ***M/s. Indus Teqsite Private Ltd., Chennai*** Campus drive in our campus during the month of December 2017.

M/s. TATA Consultancy Services Private Ltd., Chennai

Mr. Chellakili Manoharan. K

Mr. Mohamedsarjun. S

Mr. Rajesh Kannan. R

I·N·D·U·S
TEQSITE
Leading manufacturer of electronic boards and systems

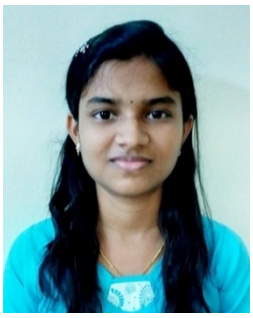
M/s. Indus Teqsite Private Ltd., Chennai

Mr. Prem Kumar. R

MAT Score

Mr. JOELJOSHUVA.P
655.5/800 – 85.56 Percentile

Mr. ABDUL HAMEED SHARIK.M
500.5/800 – 37.2 Percentile



Ms. DEEPA.N
639.5/800 – 82 Percentile

Ms. SURIYA.S
671.5/800 – 88.96 Percentile

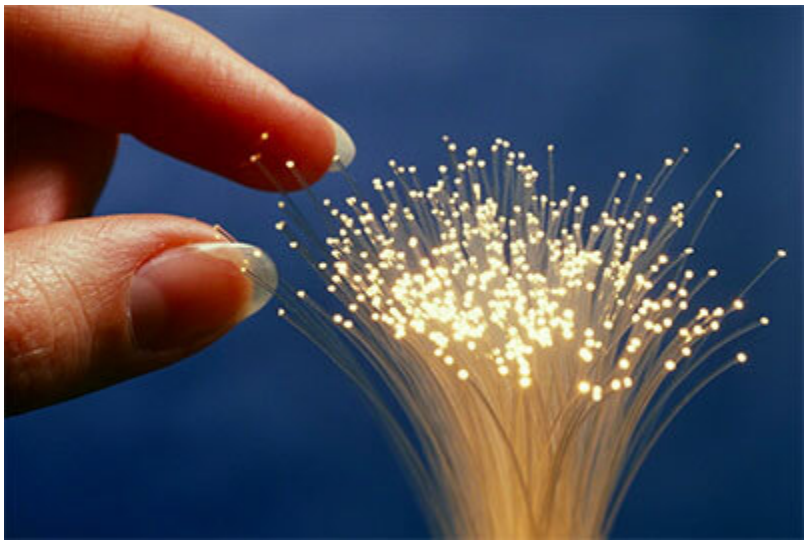
STUDENT ARTICLES

Top Recent Inventions in Electrical Engineering

Electrical engineers are at the forefront of some of today's most important innovations. Whether working for the private sector, government, or major research institutes, electrical engineers are always pushing the boundaries of the possible. Recently, they've contributed to huge strides in energy efficiency, mobile technology, accessibility, transportation, telecommunication, and much more. Let's take a look at some of the most exciting new ideas in the field.

High Efficiency Photovoltaic Cells

One of the enduring challenges of modern electrical engineering is to find an implementation of photovoltaic technology that is efficient, effective under varying operating conditions, and highly resistant to damage – while not being cost-prohibitive. Different engineering approaches have been used to raise collection and distribution efficiency, though perovskite-based cells have recently captured the most attention at major research facilities.



Green Energy Electrical Power Converter

Once you collect energy, converting it for use in the electrical system is an essential next step. A new power converter developed in the Department of Electrical Engineering at the University of Arkansas will now make it easier for users of renewable energy to shunt excess energy into the power grid. This has the potential to make rooftop solar initiatives much easier and to further incentivize homeowners to pursue energy efficient technology.

Smart Electrical Grids

As energy systems become more complex and energy sources become more diverse, smart grids are growing in importance worldwide. Smart grids integrate innovative electrical technology at multiple levels to improve flow control, detect malfunctions, and automate service delivery. With end-to-end communication between power plants, distribution sites, and the end user's electrical point-of-presence, it becomes possible to raise efficiency and reduce costs.

Virtual Reality

Virtual reality draws on multiple disciplines, but in terms of providing a sensory experience that maps effectively to "real life," electrical engineering is crucial. The earliest VR technologies consisted of a headset with gloves as an input device, rendering the user mostly stationary. Positional tracking is now making VR more interactive, but the market has yet to develop a solution using a complete array of sensors.

Wireless Wearable Tech

The idea of the "Personal Area Network" has been around in computing science for a long time, but it's only now becoming a practical reality. Devices can now operate on a smaller scale than ever and interface seamlessly with the wider environment. Wearable devices have been developed to authenticate access to vehicles and machinery, improve reading comprehension while engaged in exercise, and provide communications information without the use of a phone.

Graphene

As electrical engineers reach the performance constraints caused by the fundamental properties of matter, advances in materials science become essential. Graphene is perhaps the most

important recent innovation. Graphene consists of a single layer of carbon atoms one million times thinner than paper. It's so thin that it is actually considered two-dimensional.

Graphene's unique characteristics make it the strongest known material on Earth. It can stretch by 20%, making it as pliable as rubber. It will provide immense gains in battery life for portable devices and is uniquely well-suited for wearable technology that collects biometric information from the user. In short, it may be essential to the future of electrical engineering.

Ion Thruster Energy

It comes as no surprise Star Trek was a defining force in inspiring thousands of people around the world to develop and pursue an interest in engineering. One of the engineering challenges presented by that vision of the future was this: What kind of novel propulsion technology would be necessary to allow manned spaceflight to distant worlds?

NASA and others have been working on the prototype ion engine for years, envisioning a way to carry large amounts of supplies and equipment through space. It uses solar power as a charging mechanism and expels xenon gas. Electrons from the solar panel will be trapped in a magnetic field and then used to ionize the xenon propellant for total thrust of 13kW.

Personal Flying Cars

People – engineers and others – have been thinking about flying cars since The Jetsons. Now, a private U.S. firm called Terrafugia is tackling the engineering challenges necessary to deliver a personal flying craft that offers the control and safety required for regular civilian use. It calls its flagship product The Transition, which combines driving and flying in a single vehicle.

To create a commercially viable dual-use vehicle, Terrafugia has had to combine best practices in automotive technology and aeronautics. This includes a number of innovations of keen interest to electrical engineers, including an engine that successfully powers both the rear wheels and the propeller using unleaded gasoline. It also incorporates advanced carbon fiber construction.

40GB Wi-Fi

The maximum speed of Internet connectivity, whether wired or wireless, has always been defined by foundational challenges in electrical engineering – semiconductor size and composition, for example. Each advance in speed represents a fundamental shift in engineering processes, whether from applying novel materials, new transmission media, or other technology.

The Karlsruhe Institute of Technology in Germany broke the speed limit for Wi-Fi by delivering 40 gigabytes of data per second over a distance of more than half a mile. The key innovation was a new set of chips capable of processing signals at higher-than-usual frequencies. The shorter the wavelength, the more powerful Wi-Fi can theoretically be.(NASA has made ESnet,a secret shadow network of scientific labs which has wifi speed of 91 GB,but the technology not released to public and it remains hidden among the NASA labs).

By

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TECHNICAL ARTICLE BY STAFF MEMBER
SOLARMILL

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Combining solar PV and vertical axis wind turbine into a single modular unit, the SolarMill is billed as "world's first integrated hybrid technology". Small-scale and urban wind power hasn't seen nearly the same adoption rate as small-scale solar has, but that hasn't seemed to stop anyone from working on advancing the technology for rooftop wind power and micro-wind generators.

Small-scale solar works great for generating renewable energy especially placed in rooftop. The technology is mature, the cost is dropping, and panel efficiencies are rising. Even though the sun isn't shining half of the time, when it is shining, solar panels will produce clean power dependably and silently for many decades, with minimal maintenance. Small-scale wind power generation isn't nearly as predictable, especially in the urban environment, such as placing a turbine on a rooftop, where low wind speeds and variable wind directions may not be optimal for producing electricity.

However, an advantage that wind has over solar power is that turbines can continue to generate electricity when the sun goes down, so one solution is to combine the two into a hybrid renewable energy system, such as wind stream has done with their SolarMill devices.

The SolarMill hybrid energy system integrates solar panels and vertical axis wind turbines (VAWTs) into modular units that can be installed on rooftops or other appropriate locations, promising to be an easy-to-install "highly efficient, low-cost, renewable energy hybrid device for any environment".

"The world's largest hybrid renewable energy project" was installed on the roof of a building in Kingston, Jamaica. The installation, which is on the roof of law firm, is expected to generate 106,000 kWh of renewable energy per year (25 kW from wind and 55kW from solar) and to pay for itself in just four years. This hybrid energy installation is expected to deliver over $2 million in energy cost savings to the owners over its expected 25-year lifespan.

STUDENTS ACTIVITIES

S.No	Reg.No	Students Name	Year	Event	Date
1	1513020	Gopalakrishnan.S	III	Orientation Program in Entrepreneurship (WFNEN 100)	27.12.2017 to 30.12.2017
2	1513036	Karan.M	III		
3	1513035	Kanika.K	III		
4	1513063	Nishanthi.R	III		
5	1513066	Padmavathy.V	III		
6	1513071	Priyadharshini.S	III		
7	1513119	Veeraputhiran.E	III		
8	1513123	Viswanath.G	III		
9	1613062	Muralitharan.R	II		
10	1613005	Amarnath.S	II		
11	1613038	Solaiprakash.R	II		
12	1613098	SivaBalaji.L	II		

STUDENT IN PLANT DETAILS 2016 - 2017

Sl. No	Student Name	Class	Company Name	Duration
1	Aswin.R	IV 'A'	Power Grid Corporation of India Limited, Tirunelveli	16.12.2017 to 26.12.2017
2	Rajesh.S	IV 'B'	IPT, ZOHO Corporation, Chennai	(28.11.17 to 28.12.17)
3	MurugaPerumal @ Subash.R	IV 'B'		
4	Padmavathi.R	III 'B'	IPT, U.N.I.Q Technologies, Tirunelveli	(13.11.17 to 22.11.17)
5	Rama Lakshmi.S	III 'B'		
6	SelvaLakshmi.S	III 'B'		
7	SindhuMuhila.S	III 'B'		
8	Aarthy.B	II 'A'	IPT, Kayathar Substation	(15.11.2017 to 20.11.2017)
9	ChermaJeya.K	II 'A'		
10	EswariPrabha.P	II 'A'		
11	LeelaNivashini.M	II 'A'		
12	Madhumitha.K	II 'B'		
13	Meenakshi.S	II 'B'		
14	Nivetha.M	II 'B'		
15	Priyadarshini.A	II 'B'		
16	Saranya.S	II 'C'		
17	Sindhu.S	II 'C'		
18	PoornaPushkala.A	II 'B'		
19	Logeswarabalan.K	II 'B'	IPT, Rail Net Software Solutions, Madurai	(08.11.17 to 14.11.17)
20	MafinRijoe.M	II 'B'		
21	NallaSelvaPrakash.V	II 'B'		
22	Shanthakumar.S	II 'C'		
23	Siva Sankar.P	II 'C'		
24	Vasanthan.R	II 'C'		

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