

K S R INSTITUTE FOR ENGINEERING AND TECHNOLOGY



DEPARTMENT OF
ELECTRICAL AND
ELECTRONICS ENGINEERING

BEES NEWS LETTER

November 2017

FPGA & EMBEDDED SYSTEMS AND INFORMATION APPLIANCES

Seminar on the topic of FPGA & Embedded Systems and Information Appliances was organised by IEI Students Chapter (EEE Department) on 19 & 20 July 2017. Embedded system is a combination of computer hardware, software and, perhaps, additional mechanical parts, designed to perform a specific function. Embedded systems are not always standalone devices. Many embedded systems consist of small parts within a larger device that serves a more general purpose. Field Programmable Gate Arrays (FPGAs) are semiconductor devices that are based around a matrix of configurable logic blocks (CLBs) connected via programmable interconnects. FPGAs can be reprogrammed to desired application or functionality requirements after manufacturing.

Ms. N.Thilagavathi, DIC, Namakkal delivered a seminar on the importance of Embedded Systems and Information Appliances. Her seminar covers various classification of embedded systems and wide area of applications of embedded systems. Unlike usual computers, embedded systems use different underlying software that cannot be modified by consumers. Since they will be used for long periods of time and cannot be programmed easily, they're expected to run without any problems. Based on performance and functional parameters, she classified embedded systems into the following four categories such as Standalone Embedded Systems, Real-time Embedded Systems, Networked Embedded Systems and Mobile Embedded Systems. Through her speech the students got the clear idea on importance of embedded systems in day today activities.

COMMERCIALIZING SUSTAINABLE ENERGY TECHNOLOGIES

BEES Association organised a seminar on "Commercializing Sustainable Energy Technologies" in association with IEI Students Chapter on 21.07.2017 for the benefits of EEE students. The role of technology in the sustainable economic development of a country is crucial. In general, technology is viewed as a mechanism, which transforms the natural resources into goods and services useful for the survival of human life.

The technologies are expected to facilitate improvement in living standards, promotion of efficient use of resources, adaptation to local conditions and needs, and integration with other existing technologies. In short, the technologies should meet both the livelihood and lifestyle needs of people in a sustainable manner.



Mr. P. Vijayakumar, Proprietor, Green Resource Enterprises elaborated about the various sustainable energy technologies available and how to commercialize the sustainable energy. The seminar started with Stages of Commercialization of SETs in India which involves the table showing types of sustainable energy technologies available and their potential capacity and various subsidy schemes.

SETs have a crucial role to play in the realm of sustainable development either through conservation of natural resources and environment or through contributing to the economic growth via advanced technology, increased productivity, improved life style and lower risk of fossil fuels. At present, the SETs in India are at a very low level of commercialization. Barring a few SETs like solar water heaters, wind energy, small hydro and solar PV, most of the SETs in India have fallen inside the valley of death, where the cost of production is high and scale of production is low.

Thus the seminar helped in creating awareness about the various sustainable energy technologies available and their commercialization. This seminar created a path for student entrepreneur to get involved in sustainable energy technology.

HT LINE TRANSMISSION AND DISTRIBUTION

On Behalf ISTE Students Chapter organised a guest lecture in the topic of HT Line Transmission and Distribution on 19.08.2017. Electricity is transmitted at high voltages (115 kV or above) to reduce the energy loss which occurs in long-distance transmission. Power is usually transmitted through overhead power lines. Underground power transmission has a significantly higher installation cost and greater operational limitations, but reduced maintenance costs. Underground transmission is sometimes used in urban areas or environmentally sensitive locations.



Mr. M. Kalai Raja, Assistant Executive Engineer-TNEB from dindugal delivered the guest lecture and his lecture aimed at providing in-depth knowledge for the students in the areas of transmission and distribution of high tension electrical energy. The students from second, third and final year gained clear knowledge on real time terminologies and problems associated with various types of transmission and distribution systems. The various modes of transmission of electrical power were clearly explained by the resource person. His presentation attracted the students. They showed keen interest towards the topics delivered.

IDEA CONTEST

To motivate our department students for developing the new ideas “Idea Contest”, an intra department mini project show cum exhibition was organized by BEES Association on 19.08.17. Second, third and final year students displayed and demonstrated their ideas in various fields of electrical engineering. The theme for their ideas covered various areas such as advancement in farming, servicing the societal needs etc.,



Chief guest **Mr. M. Kalai Raja, B.E., M.S., Assistant Executive Engineer, TNEB** made a grand opening for the project expo. He have gone through the various ideas exhibited by the students in form of prototype and encouraged the students through his valuable suggestions and motivation towards the advancements they have to include in their prototype. The best project teams were selected by the jury and they will be provided with awards and certificates.

POWER QUALITY

On behalf BEES association a one day seminar on Power Quality was organised on 17.08.2017 for our department students in association with IEI Students Chapter. The main objective of this seminar was understanding a number of power quality issues including electrical harmonics, poor power factor, voltage instability and imbalance impact on the efficiency of electrical equipment. Thus as a electrical engineer, the awareness on power quality has to be incorporated among the students for satisfying industrial requirement and thereby enabling the students to do project in the area of power quality.



Mr. V. Mohan from Swam Systems, Karur delivered lectures on Power Quality and various terminologies. The seminar covered wide areas including harmonics transients voltage variations and flickering etc.,

The student's attention was good and the session was very much interactive. The participant's interaction was very much appreciated by the resource person. He also discussed on various areas need to be concentrated on industrial sectors for the power quality improvement and industrial projects with the scope of power quality improvement.

POWER SYSTEM ANALYSIS

The objective of power system analysis is to make sure the equipment work together so that the required power is delivered to the load centres at the prescribed voltage and frequency.



Dr. R Raghavan, Advisor, Equip Foundation elaborated the areas of power system analysis with all main divisions such as load flow analysis, short circuit studies and Stability studies

Besides these the concepts like maintaining correct voltage using automatic voltage regulators and capacitor/reactance banks, maintaining correct frequency by load frequency control, selecting generators optimally were also explained.

Introduction to various specialized software like ETAP, PSCAD, MI power etc., were found to be useful for the students for various power system analyses. If more power is produced than consumed the frequency will rise and vice versa. Even small deviations from the nominal frequency value will damage synchronous machines and other appliances. The real time difficulties in power systems like the amount of active power consumed plus losses should always equal the active power produced were also addressed.

ACADEMIC TOPPERS

S.NO	YEAR / SEM / SEC	NAME OF THE STUDENT	GPA	POSITION
1	I / II	SARANYA.P	8.67	1
2	I / II	NITHIYASRI.R	8.00	2
3	I / II	PREETHA.E	7.85	3
4	II / IV / A	JASMINE B	8.21	1
5	II / IV / A	KOWSALYA K	8.08	2
6	II / IV / A	VIMALKUMAR S	7.92	3
7	II / IV / B	MAHAESWARI A	8.58	1

ACADEMIC TOPPERS

S.NO	YEAR / SEM / SEC	NAME OF THE STUDENT	GPA	POSITION
8	II / IV / B	YOGAPRIYA S	8.50	2
9	II / IV / B	YOGESHWARAN S	8.46	3
10	III / VI / A	ANITHA M	9.13	1
11	III / VI / A	BAWADHARANI S	8.58	2
12	III / VI / A	KANAGA PRIYA R	8.54	3
13	III / VI / A	HARINI .K	8.54	3
14	III / VI / B	ROKESH KUMAR R	8.58	1
15	III / VI / B	NAGAMANI E	8.54	2
16	III / VI / B	MYTHILI B	8.04	3
17	IV / VIII / A	BAVITHRADEVI S	9.20	1
18	IV / VIII / A	AHAMED HUSSAINY .S	9.00	2
19	IV / VIII / A	ASHA K	8.80	3
20	IV / VIII / A	GAYATHRI A M	8.80	3
21	IV / VIII / A	GAYATHRI T	8.80	3
22	IV / VIII / A	GUNASREE B	8.80	3
23	IV / VIII / B	SHOBHANA K	9.00	1
24	IV / VIII / B	RAJKUMAR T	9.00	1
25	IV / VIII / B	VENSIKA A	8.80	2
26	IV / VIII / B	SOUNDARYA N	8.80	2
27	IV / VIII / B	SANJAYKUMAR C	8.80	2
28	IV / VIII / B	YUVARAJ S S	8.80	2
29	IV / VIII / B	PRIYASUGANYA K	8.80	2
30	IV / VIII / B	PAVEENKUMAR S	8.80	2
31	IV / VIII / B	SHALINI P	8.80	2
32	IV / VIII / B	SRIDHAR S	8.80	2
33	IV / VIII / B	RAMADAS K	8.60	3
34	IV / VIII / B	SARANKUMAR R R	8.60	3
35	IV / VIII / B	SANTHIYA C	8.60	3
36	IV / VIII / B	SURESH P	8.60	3

STUDENTS PARTICIPATION

S. No	Name of the Student	Year / Sem	Name of the Event	Date	Organised By
1.	Kannan.S	III / V	Paper Presentation	30.08.17	Erode Sengunthar Engineering College / EEE
2.	Chidambaram.C	III / V			
3.	Madhumitha JS	II / III			
4.	Logeshwaran V	II / III			
5.	Mathubalan S	II / III			
6.	Navaneethan S	II / III			
7.	Kavin kumar.K	II/III	Paper Presentation	27.09.17	Mahendra Institute of Technology / BME
8.	Pravin.R	II/III			
9.	Gowsalya A	III/V			
10.	Keerthika C	III/V			
11.	Kavin kumar.K	II/III	Paper Presentation	25.09.17	Muthayammal Engineering College / CSE
12.	Pravin.R	II/III			
13.	Merlin infanta.S	II/III			
14.	Kaviya.M	II/III			
15.	Nithuyasri	II/III			
16.	Sujitha.E	II/III			
17.	Elanchezhiyan.P	III/V	Paper Presentation	07.09.17 to 09.09.17	Bannari Amman Institute of Technology
18.	Arunkumar.C	III/V			
19.	Veerakumar B	III/V			
20.	Srinivasan R	III/V			
21.	Sekar S	III/V			
22.	Rangasamy R	III/V			
23.	Harini.S	III/V	Workshop on Internet of Things	27.08.17	Coimbatore Institute of Technology / EEE
24.	Gowsalya.A	III/V			
25.	Keerthika.C	III/V			
26.	Tharun.N	III/V			
27.	Naveen kumar.S	III/V			
28.	Praveenkumar.S	III/V			
29.	Praveenkumar.B	III/V			
30.	Swathi.S	III/V			

STUDENTS PARTICIPATION					
S. No	Name of the Student	Year / Sem	Name of the Event	Date	Organised By
31.	Mounisha.S	III/V			
32.	Mahaeswari.A	III/V			
33.	Yogapriya.S	III/V			
34.	Uthira Kumar E	IV/VII			
35.	Ravindran S	IV/VII			
36.	Divyadevi.V	II/III	Workshop on Matlab in Image Processing	07.09.17 to 09.09.17	Bannari Amman Institute of Technology / EEE
37.	Iniya dharini.R	II/III			
38.	Kamali soundarya.B	II/III			
39.	Karthik T M	IV/VII			
40.	Thirumoorthi G	IV/VII			
41.	Gowtham M	IV/VII			
42.	Balachandar K R	IV/VII			
43.	Jeevaprakash.V	III/V	Workshop on Wireless Robot Design Using PIC Microcontroller	16.09.17	Government College of Technology
44.	Kokilavani	III/V			
45.	Kodeshwari.M	III/V			
46.	Srinithi.G	III/V			
47.	Moulidharan S	IV/VII			
48.	Rahul M S	IV/VII			
49.	Yuvaraj V	IV/VII			
50.	Venkateshwaran M	IV/VII			
51.	Thiyagarajan S	IV/VIII	Project Presentation	27.02.18	Mahendra Engineering College, in association with IEEE
52.	Praveen Kumar B	IV/VIII	Hand Gesture Recognition for Physically Challenged people		
53.	Soundara Kumar C	IV/VIII			

Program Outcomes (POs)

PO1	Engineering Knowledge: Apply the knowledge of mathematics, science, and engineering fundamentals to solve the complex electrical engineering problems.
PO2	Problem Analysis: Identify, formulate, review research literature, and analyze complex Electrical and Electronics Engineering problems enabling attainment of conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO3	Design/Development of Solutions: Design solutions, components or process for complex Electrical Engineering problems to meet the specified needs considering public health, safety and environmental considerations.
PO4	Conduct Investigations of complex problems: Exercise research knowledge and technical methodology for design, analysis and interpretation of data to converge to a suitable solution.
PO5	Modern Tool Usage: Use modern engineering tools, softwares and equipments to predict, analyze and model engineering problems.
PO6	The Engineer & Society: Apply reasoning skills to assess societal, health, safety, legal and cultural issues relevant to the professional engineering practice and take consequent responsibilities in the society
PO7	Environment and Sustainability: Realize the impact of the professional engineering solutions and demonstrate the knowledge for sustainable development in environmental context
PO8	Ethics: Apply and realize the professional ethics and responsibilities in Electrical engineering practice.
PO9	Individual and Team Work: Exhibit Individuality, Leadership and Team spirit in multidisciplinary settings.
PO10	Communication: Communicate, comprehend, write reports, design documentation and presentation effectively on complex engineering activities
PO11	Project Management & Finance: Demonstrate the Electrical engineering and management principles adhering to financial strategies to manage projects as a member or leader in a team
PO12	Life Long Learning: Inculcate independent and life-long learning in the broadest context of technological change.

Program Specific Outcomes (PSOs)

PSO 1: Electrical drives and control: Graduates will Analyze, design and provide Engineering solutions in the field of Power Electronics and Drives

PSO 2: Embedded system: Graduates will Simulate, experiment and solve complex problems in Embedded System.

KSR INSTITUTE FOR ENGINEERING AND TECHNOLOGY

VISION

To become a globally recognized Institution in Engineering Education, Research and Entrepreneurship.

MISSION

- ❖ Accomplish quality education through improved teaching learning process.
- ❖ Enrich technical skills with state of the art laboratories and facilities.
- ❖ Enhance research and entrepreneurship activities to meet the industrial and societal needs.

Department of EEE

VISION

To produce world class Electrical and Electronics Technocrats and Entrepreneurs with social responsibilities.

MISSION

- ❖ Impart quality education in the field of Electrical and Electronics Engineering through state of the art learning ambience.
- ❖ Enrich interdisciplinary skills and promote research through continuous learning.
- ❖ Enhance professional ethics, entrepreneurship skills and social responsibilities to serve the nation.

Editorial Board

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Sekar S III Year EEE

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