



DEPT OF EEE HAS STATRTED A IEEE SB BRANCH OF INDUSTRIAL APPLICATION SOCIETY

Electrical GNOSYS

DEPARTMENT OF EEE

Oct - Nov 2013

Message of HOD

We are happy to publish our 6th issue of the Electrical GNOSYS. Department of Electrical and Electronics Engineering is proud to inform about two outstanding achievements which may be marked as two millstones in the history of Dept of EEE.

Mr. Nikhil Valsan K, AP, Dept of EEE, has won third prize in Graduate Master thesis Contest conducted by IEEE IAS in international level. It was a great pleasure that we have bagged third prize after USA and Hungary. The presentation bestowed a plaque, a prize certificate and a cash amount of \$500. The prize also includes paid attendance at the IEEE IAS Annual Meeting to be held on Oct 6-11 at Orlando USA and

reimbursing the travel and accommodation expenses. He has been invited for the President's Banquet at and will be presenting his innovative research project at the IAS Annual Meeting.

VJEC students have achieved "IEEE Global Student Enterprise Award" on the topic "Sustainable energy management using GSM based smart energy meter" in Region 10 which includes countries from Asian and Australian continents. The award included the certificate of appreciation and prize money of worth US\$1,500. Project team includes Mithun Manohar, Joseph Sebastian, Nirmal Thomas, Dhanesh Harikumar.

VISION

To evolve as a centre of excellence, to train students in contemporary technologies, to meet the needs of global industry and to develop them into skillful engineers instilled with human values and professional ethics.

MISSION

To produce competent and disciplined engineers through delivery of quality education to meet the ongoing global challenges in alignment with technical education system and society.

A Journey to United States of America

Yet another time, the IEEE IAS society has given a chance to fly. After a splendid tour through Communist Republic of China it's a coincidence that this time its to capitalist USA. Though it has been a



very long procedure I was victorious in attainment of US visa. The travel started on 4th October 2013. This time I was lucky that I had my friends and classmates with me. The journey was along Cochin – Doha – Chicago – Orlando. We had a few hours journey to Doha and after that it was pretty bit tedious journey for more than 20 hours. The excitement started with take off from Doha airport.

For this time luckily, the flight maintained a lower altitude (probably due to turbulence and due to moving along polar side, I hope so) that each and every scene from earth was visible. It was marvellous view from the flight I had soon after the take off.

The birds eye view of deserts and Oasis of Iran and Iraq.

After a few hours of flight we crossed Caspian Sea, Black Sea, the Asian border and entered Europe though Russia via Moscow & St. Petersburg. Again in Europe it was too spectacular, the meadows and wind farms of Sweden, Norway. Now comes the most exciting and memorable, the arctic mountain ranges. Entirely dressed up with white snow and ice blocks. I felt really fortunate to have such a fantastic sight. This time I had a nice question "why the flight was taking a curved path through all these countries and why not it fly straight across Asia or Africa to reach the destination?".

The travel continued through Iceland, Greenland, Canada and finally got down at Chicago. Still we had to get another flight from Chicago to Orlando. We reached destination 4th evening and hotel Hilton Orlando, Lake Buena Vista by around night.

On 5th we were totally free and explored the areas around the hotel. It was fine to watch around the vehicles passing through. We could locate an Indian hotel nearby. The next coming days was fully scheduled for the conference and proceedings. We had almost 20+ parallel session relating different areas of electrical engineering. Also I was awarded with my plaque and certificates at the special banquet hosted by the President IEEE IAS.



On 9th was the most thrilled and excited trip. Organisers has planned a trip to Orlando Space Centre under NASA. Its impossible to make out the experiences I had there. A garden of rocket was the first attraction there. We were given virtual experience of lunching of a space shuttle. We were made to sit inside space shuttle and placed the shuttle in a vertical position.



After the countdown the aircraft started moving with extra high velocity and we were moving upside down as we were moving near to exit of earths atmosphere. We could see, touch and feel the ATLANTIS space shuttle which had

visit Hollywood studio, Animal Kingdom, Downtown Disney and Epcot. After the visit to these places I had an insight regarding to what actually a “park” refers to.

-We were ready for return on 11th. It was too unfortunate that we



operated 26 years, 33 missions, carried 207 astronaut, flown 127 million miles and 306 days in space. Even though I could not explore round ISRO I felt proud of myself that I was able to visit NASA. We also had a simulation regarding the evolution of earth and had a film relating the HUBBLE at the IMAX theatre.

With the tour the conference had come to an end. Still we had some more days to rock on. 10th October had nothing to contribute due of lack of planning, we could have only some shopping and walk to nearby place. So next day we had a fine plan and decided to visit the Disneys Parks. Actually Orlando, where the conference is held is inside Disney World. The government has acquired hectares of land and handed over to Walt Diney. Inside this Disney world itself they are having different parks. Due to shortage of time we decided to

had to pay for the hotel rent for the time being. As we were not informed I had to pay for myself and my roommate. So when I was on way to return I just had 10 dollars left with me. With the cherishing memories and 10 dollars we were ready to depart. Return was through New York John F. Kennedy Airport. This is one among the largest and busiest airports in USA. By the time we could find the terminal and the gate we were late, the gate has been closed. Airport authority informed that we will be taken in the same flight next day till then we will have to wait. I was thinking about the stay at New York till the next day. The pathetic condition was

that I just had only 10 dollars with me for stay and food in skyscraper city New York.

The Qatar airways had come forward and arranged 5 star stay for all of us covering all the expenses including travel and food for one day. This is what we call as “customer care”. I had informed about the circumstance to my classmate who is residing at Edison, New jersey. The next day morning she came with her husband and we had a incredible exploration around the New York City, the city of Sky Scrapers. A portrait of the city would have straight roads with both the sides packed with high storied buildings. The roads and footpaths overflowing with pedestrians. I was informed that the same scenario will be there 24x7, the city never sleeps. The main attractions were the ruins of the world trade centre, the new world trade centre, and Brooklyn’s bridge. After the nomadic travel through New york we returned back by 14th October 2013



DEPARTMENT OF EEE

Congratulates

IEEE GLOBAL STUDENT AWARD WINNERS

VJEC students has achieved "IEEE Global Student Enterprise Award" on the topic "Sustainable energy management using GSM based smart energy meter" in Region 10 which include countries from Asian and Australian continents. The award included the certificate of appreciation and a price money of worth US\$1,500. Project team includes Mithun Manohar, Joseph Sebastian, Nirmal Thomas, Dhanesh Harikumar. Special congratulation for the achievement. Congratulations to IEEE student branch - Vimal Jyothi Engineering College.

The project focused on a wide variety of topic. Electric power is the primary utility in a modern developing environment and in near future where the whole energy sectors may have the total dependency over the electrical power system remarkably in industrial environment and automobile sector.

The present electricity networks have a technical hierarchy where energy flows from large, centralized, fully controllable power plants to more or less passive customers at the receiving end of the network. The rise in variable and distributed generation, underinvestment in transmission infrastructure, the increase in electric load, more power outages, the demand for increased reliability and power quality the factors that makes systems to opt for Smart Grid. Developing grids to "smarter" will help to eliminate many of the challenges that power systems are currently facing and that will occur with increasing frequency in the future, such as variable-output



renewable, distributed generation, electric vehicles, under-investment in grid infrastructure, and more interest in Smart Grids has skyrocketed in recent years.

The Smart Grid is an integration of five essential building blocks into the existing power system which consists of sensor systems, communication infrastructure, control units, energy metering and data management system and centralized management systems, where the centralized management systems represent the brains of the Smart Grid. A smart grid integrates over all operations in power system from the transmitting end to consumer end and controls almost all parameters related to the power system. Many power plans have been made "smart" by employ advanced SCADA and DCS systems for the better production and control.

The proposed system offers a better modeling for the development of an intelligent smart grid system with the help of user acknowledged distributed remote smart meters interfaced in a distributed controlstructure aided Supervisory

Control and Data Acquisition (SCADA) system, thus to avoid many strategies related to power systems, improving the efficiency and eliminating the fractional losses and power theft absolutely.

The system may have many applications for optimizing overall energy management within the house hold consumers and industries, manages the load in the grid and prevent power demand peaks with an interface between the utility-controlled smart grid and consumers. If an end user is aware of their energy usage that influences their costs, they can modify their consumption behavior by avoiding fractional losses. The energy management system (EMS) provides this information to user interface and vice versa which can be communicated through a smart monitoring device. Also many advanced systems and control structures have been implemented to make the system safer with an optimum performance cost effective energy conservation scheme.

DEPARTMENT OF EEE Organized

Inter College Techfest

AGNEYA 2013

The Department of EEE has organized Inter college Techfest AGNEYA on 27 Sept 2013. The event was organized under the coordination of Mr Naveen Samson and Ms Jyothsna P. The event was inaugurated at 9.30 Am morning. Mr, Ashish Vijayakumar, Student Coordinator has given the welcome speech. Presidential address was given by Dr Benny Joseph, Principal, Vimal Jyothi Engineering College. felicitation address was given by Administrator Fr Jinu Vadakemulanganal, Mr Sebastian Puthenpurackal (PRO) and Ms Laly James, HOD EEE. Student Coordinator Jobins PJ has expressed Vote of thanks.

As a part of the fest various events has been organized. The paper presentation "Avishakar" was organized at Bishop Valloppally Hall. The students from various engineering colleges from various parts of South India has been participated which include students from Karunya University, K Ramakrishnan College of Engineering, Coimbatore, Christ University, Bangalore, Dr Shakunthala Engineering College Chennai, Tamil Nadu College of Engineering, KSR College of Engineering, Rajagiri Schol of Tech etc.

Many other events also conducted as a part of the program which include RoboWar, Transporter, Dirtrace, Circuit Debugging, Games etc.





Congratulations

Faculty Publications

“Reduction of harmonics in induction motor drive using novel topology inverter”, IEEE IAS Annual meets by IEEE IAS held at Florida, USA – Nikhil Valsan K

“Power Quality Improvement of Grid Connected Wind Energy System Based On Statcom-Bess Control Scheme” by Ms Laly James, HOD, EEE- published in proceeding of National Conference organized in LBS Engineering College.

Student Publications

The following students of Dept of EEE have presented papers in National Conference organized in LBS Engineering College and all the papers are published in proceedings.

1. “Power Quality Improvement of Grid Connected Wind Energy System Based On

Statcom-Bess Control Scheme”, Saranya , Rose Mary.

Under the guidance of Ms Laly James, HOD, Dept of EEE

2. Intelligent Path Planning of an Autonomous Guided Vehicle - Jyothis Joseph, Derin M, Jacob, Akash Manoj, Nameer A K

3. A Robust Design and Simulation Of Efficient Micromechatronic System Using FSV Controlled Auxiliary Damped PMSLM. - Sneha Ramakrishnan P V, Keerthana T V, Athira Thomas, Sanjana S

4. Advanced 4s Image Correlation For Real-Time Quality Inspection Of Ceramic Products Using Ultrasonic Tofd Images - Darwin Joseph, Rohith T, Shejin George, Sachin Renjit

5. Advanced Converter System Based On Soft Switching Technique- Athulya Gopinath , Aleena Antony , Medha E.M .

Under the guidance of Mr Prabin James, Asst Professor, Dept of EEE

6. Guidance algorithm for Mars Aerocapture Mission - Aswini.T.O, Chaithra C.K.P, Salaka.J.K, Jyothisna.P

Under the guidance of Ms Jyothisna.P , Asst Professor, Dept of EEE

7. Electromyogram Powered Assistive Limb - Ramyasree K , Reesha K P , Megha Sasidharan.

Under the guidance of Ms Teena George, Asst Professor, Dept of EEE

8. Voltage Flicker Mitigation Using Pwm-Based Distribution Statcom - Sabna Pk Anju P Sharika Pradeep

Under the guidance of Mr Anoop BK, Asst Professor, Dept of ECE

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