

DRONACHARYA

College of Engineering

Khentawas, Farrukhnagar, Gurgaon - 123506



IEEE NEWSLETTER

SESSION JAN - JULY 2015



- Gurukul Combining Tradition with Modernity

From Editor's Desk:

Climbing to the top demands strength, whether it is to the top of Mount Everest or to the top of your career

--Dr. A.P.J. Abdul Kalam

To ascend in career and life, students need to outshine themselves, pour countless hours into projects with an all-consuming passion giving shape to ideas. It is for this progressive growth of the young sprouts — the future engineers — that Dronacharya offers its students, at every step of their academic or professional careers, opportunities to innovate, explore and branch out into full grown trees with the capability to stand unflinching.

We, at Dronacharya College of Engineering, are absolutely committed to serve the society and improve the mode of life by imparting high quality education in the field of Engineering and Management catering to the explicit and implicit needs of the students, society, humanity and industry. 'Shiksha evam Sahayata' i.e. Education and Help are the two words etched on our banner soaring higher year after year. Our goal is to continuously improve the healthy learning environment and facilities being provided to the students to achieve academic excellence for employability as world class Technocrats and Managers, apart from making them noble human beings of a nation growing from strength to strength, dispelling the darkness of ignorance and ameliorating the society by means of philanthropic endeavours.

We are about to get on these career building experiences and I hope you enjoy the present issue of our IEEE newsletter.

Editor

Ms. Monika Phulia

IEEE WIE Advisor

Assistant Prof.

Dept. of Electrical & Electronics Engineering



From Branch Counsellor's Desk:

The IEEE (Institute of Electrical and Electronics Engineers) describes itself as "the world's largest technical professional society -- promoting the development and application of electro-technology and allied sciences for the benefit of humanity, the advancement of the profession, and the well-being of our members."

Since 1991, the Indian economy has progressed by leaps and bounds due to the innovative policies adopted by our country. The augmentation of Indian industries along with a plethora of MNCs setting up in India has led to an exponential growth. However, this has also created a rise in the demand for a pool of professionally qualified talent. The Engineering sector witnessed the fastest surge not only in terms of introduction of new and sophisticated state-of-art products but also in the field of research and development.

To cater to the needs of the industries and the corporate world, our college's IEEE Student Branch lays emphasis on the best participation of each student; incorporating and implementing quality enhancement practices in all its activities. A variety of learning methods and pedagogical tools are incorporated in the teaching-learning process, making the process fully interactive. Students are encouraged to participate in a range of activities, workshops, seminars, conferences and especially project making etc. to enhance their confidence. The Robotics laboratory is periodically updated and equipped with the latest equipments so that students make the best use of the facilities provided to them.

Here, I am reminded of the words of **Hon'ble** Ex-President of India, **Dr. APJ Abdul Kalam**, "If youth can do it, nations can do it and the world can do it".

Prof. (Dr.) K. K. Singh
IEEE Student Branch Counsellor
Head
Dept. of Electrical & Electronics Engineering



EVENTS

Workshop on Personality Development:

A Personality Development workshop was organized at *J.D. Tytler School, Munirka, New Delhi on 23rd Jan 15*. Four IEEE DCE Students delivered motivational lectures to 9th class students (100 in number). They also conducted few activities for personality development. This workshop proved very useful as the school students could learn useful tips for team work, leadership qualities & verbal communication skills from our students.

IEEE Robotics Workshop at DCE, Gurgaon:

IEEE DCEG Student Branch organized *Robotics Workshop* at DCE, Gurgaon on *28th January 2015*. There were *15* students from IV Semester (IT & CSIT) who participated in the workshop. This workshop was conducted by DTU students from ECE branch. The objective was to make students aware of basic Robotics concepts and gain practical experience while working on robotics kit.

This workshop provided a technical platform for second year students to have exposure in the field of robotics and to promote robotics right from the grass roots. It consisted of fundamentals and practical concepts of basic electronics, basic mechanics, robotics and its various applications. The workshop was very interactive and informative for the students.

Event Gallery:



DTU students giving demonstration to our students



Practical session in progress

IEEE workshop on “INDUSTRIAL AUTOMATION USING PLC & SCADA”:

IEEE Student Branch of Dronacharya College of Engineering, Gurgaon in association with *CETPA INFOTECH PVT. LTD.* jointly organized a two-day workshop on “Industrial Automation Using PLC & SCADA” on *20th-21st February 2015*. The objective of this workshop was to provide technological assistance to the students. The students got an opportunity to learn and interact with *Dedicated and Experienced Experts* of the Organization.

This workshop program was designed as per market survey to provide the technologically advanced concepts along with basics to apply fit in the hectic semester schedule. Moreover, for the benefit of student fraternity, an industrial exposure and hiring trends along with facts & figures of the industry was provided.

During the technical sessions, our guest expert **Mr. Satpal Singh (Sr. Technical Executive)** from **CETPA Infotech Pvt. Ltd.** delivered a brief lecture on Industrial Automation to the students. The workshop was divided into two sessions per day.

- Day 1: In first session, a brief demonstration about automation using PLC & SCADA was given followed by a lab session, by our expert.
- Day 2: The whole day was devoted for practice on “CETPA-INDUSTRIAL AUTOMATION Software Package” followed by a quiz competition among the students.

Event Gallery:



Students attending the workshop along with Hon'ble Principal Prof. (Dr.) B.M.K. Prasad, Academic Administrator Prof. (Dr.) Jitender Kumar and Prof. K.K. Singh



Dr. K.K. Singh (HOD EEE) presenting a bouquet to expert



Mr. Satpal Singh demonstrating about PLC & SCADA



Mr. Ranjeet delivering a lecture regarding automation process



Mr. Satpal Singh explaining the concept of working of PLC to students



Mr. Satpal Singh explaining the working of PLC to faculty members & students

IEEE Event “TECHFiesta”:

IEEE student branch of Dronacharya College of Engineering, Gurgaon organized “TECHFiesta” - a technical event on 27th Feb 2015 at DCE, Gurgaon. The following activities were conducted:

- Technical Quiz competition
- Debate competition
- Code-Debugging competition
- LAN Gaming competition.

The events in “TECHFiesta” were invited for the students. Students from every branch took part in it enthusiastically. A total of 150 students participated in various events.

- For technical quiz topics were related to
 - Current Affairs
 - Sports
 - Politics
- For debate, topics were

- “Does **Google** know too much about you”?
- “Is Modi’s **Make in India**, a reality or a dream”?
- “Does **Woman security laws** are sufficient enough or not”?

- In Code Debugging, Multiple choice questions were given to the students and they had to find errors in the programs.
- In LAN Gaming, the game given for competition was COUNTER STRIKE 1.6

Event Gallery:



Debate competition in progress



Quiz competition in progress

IEEE Event “Robosports”:

IEEE student branch of Dronacharya College of Engineering, Gurgaon organized a State-level robotics event i.e. “**Robosports**” on the occasion of Drontech-2k15 on **26th March 2015**.

The event was sponsored by Robotics Club of the college in association with **CETPA INFOTECH. Pvt. Ltd. NOIDA**. In this event, the task was to design an intelligent automatic line following ROBOT and to make it follow a particular path. Around 50 students participated in this event from various departments and from other colleges also. The winners were awarded prizes and participants were awarded certificates by CETPA INFOTECH.

Event Gallery:



Students with Line Follower Robot



Students participating in the event during Drontech-2015

IEEE Branch DCEG organized Summer School on “Robotics & Advanced Embedded Systems”:

IEEE Branch Dronacharya College of Engineering, Gurgaon organized a 4-week training program on “Robotics & Advanced Embedded Systems” from *15th June to 10th July 2015*. The objective of training program was to provide a platform for project making and technology assistance in the field of robotics and embedded systems to the students. The students got an opportunity to learn from the **Dedicated and Experienced Faculty** of the institution.

The training program “**Summer School on Robotics & Advanced Embedded Systems**” was designed as per market survey to provide the technologically advanced concepts to the students. Moreover, for the benefit of student fraternity, an industrial exposure along with facts & figures of the robotics field were provided in account of several industrial expert visits. Students were briefed about basic concepts of robotics and embedded systems. Various companies such as *SOFCON, CETPA InfoTech Pvt. Ltd, AHK Robotics, EFY* and *Digit* sponsored the summer school.

During the technical sessions, our faculty expert **Mr. Chandra Shekhar Singh (Associate Prof.)** from **EEE** Department and **Mr. Ashish Gambhir (Assistant Prof.)** from **ECE** Department conducted the theoretical & hands-on sessions on Robotics and explained its applications to the students. **Prof. (Dr.) K.K. Singh** (Head of Department, **EEE** Department) also enhanced the session by introducing the programming of Arduino board with the help of Simulink in MATLAB. This implementation helped the students for easy programming without coding.

Event gallery:



Principal addressing the attendees



Launching of Summer School CD



Prof. (Dr.) K. K. Singh starting the session



Mr. Chandra Shekhar Singh with students during lab session



Mr. Ashish Gambhir during lecture session

Various events were also conducted during Summer School which are explained below:

i. Digital India week celebration

Dronacharya College of Engineering, Gurgaon has celebrated **DIGITAL INDIA WEEK** from *1st July* to *7th July 2015*. In this context, our IEEE branch has organized an **Online Technical Quiz Contest** for the students in our college on *7th July 2015* to motivate the idea of digitalization. Quiz consisted of questions related to Basics of robotics and embedded systems.

Around 60 students were appeared in the contest. The Quiz Contest planned in Digital India Week is especially sponsored by **CDAC (Centre for Development of Advanced Computing, New Delhi – an autonomous body of Govt. of India)**.

Event gallery:



Students appearing for Online Quiz

A screenshot of a Google Forms quiz titled "DIGITAL INDIA ROBOTICS QUIZ" from Dronacharya College of Engineering. The quiz is for Digital India Week Celebration on 10th July 2015. The form includes fields for Name, Roll No., and Branch. The questions are multiple choice.

DRONACHARYA
College of Engineering

DIGITAL INDIA ROBOTICS QUIZ
DIGITAL INDIA WEEK CELEBRATION ON 10th JUL 2015 AT DRONACHARYA COLLEGE OF ENGINEERING, GURGAON

*Required

Name*

Roll No.*

Branch*

What is a Robot?

- ☐ A machine that does work on it's own
- ☐ A device that gathers information from the environment
- ☐ A machine capable of performing or extending human tasks
- ☐ All of the above

Which Microcontroller is used in Spark V robotics kit?

- ☐ Atmega160
- ☐ Atmega16
- ☐ Atmega328
- ☐ Atmega8

Which is not the major component of a robotic system?

- ☐ Microcontroller
- ☐ LCD

Snapshot showing online quiz format

ii. Robotics & Embedded System Project Competition

On the final day of *Summer School on Robotics & Advanced Embedded Systems* being organized by IEEE branch of college i.e. 10th July 2015, a project competition was conducted wherein students showcased their talent in the projects. Following projects took positions in the competition:

First winning project
Second winning project
Third winning project

- B T (Bluetooth) Boat
- Automatic home automation system
- Intelligent traffic light system



Students showcasing their projects during project competition



Judges analyzing projects during project competition

STUDENT CHAPTERS OPENED

Opened a new student branch chapter “ROBOTICS AND AUTOMATION SOCIETY”:



Our Student Branch gives students the opportunity to meet and learn from fellow students, as well as faculty members and professionals in the field. Student Branch activities offer numerous educational, technical, and professional advantages of IEEE membership through special projects, activities, meetings, tours and field trips. IEEE Student branch group of DCE Gurgaon has recently opened an entirely new chapter named **ROBOTICS AND AUTOMATION SOCIETY** on 30th April 2015. The chapter currently have strength of around 20 student members.

Chapter Advisor – Mr. Chandra Shekhar Singh (Associate Professor)

Chapter Chair – Ms. Swati Sharma (IEEE Student Member)

Opened a new student branch chapter of INDUSTRIAL ELECTRONICS SOCIETY:



IEEE Societies provide access to current information, opportunities to network with peers, and enhancement of the worldwide value of your profession. IEEE members receive special prices for Society memberships. Keeping this in mind, IEEE Student branch group of DCE, Gurgaon has recently opened an entirely new chapter named **INDUSTRIAL ELECTRONICS SOCIETY** on 15th May 2015. The chapter currently have strength of around 20 student members.

Chapter Advisor – Dr. K.K. Singh (Professor, Head of Department)

Chapter Chair – Arjit Rawat (IEEE Student Member)

NEWS/ACTIVITIES

PAPER PUBLICATIONS/PRESENTATIONS:

2nd international Conference on Computing for Sustainable Global Development (INDIACOM-2015)

An International conference is being organized by *Bhartiya Vidyapeeth, New Delhi* technically supported by IEEE Delhi Section and co supported by IETE, IET, ISTE & CSI. It was 9th *Indiacom* and 2nd *International conference* of 3 days from 11th March – 13th March, 2015. The conference focussed on **Computing for Sustainable Global Development**.

- **Ms. Akanksha Kulshreshtha**, Assistant Professor from Electronics & Computer Engineering Department presented her paper entitled “*Crosstalk Analysis in Photonic Crystal Based Hetero structure Coupled Waveguide*” in Track 1.1 on 12th March, 2015. There were around 20 papers in each track. The papers on various streams were presented from learned authors. Few review papers were also presented by some research scholars.
- A paper titled “*Change Detection from Remotely Sensed Images Based on a Decision Theoretic Method*” by Ms. Akansha Singh, **Dr. Krishna Kant Singh** (HOD, EEE Dept. DCE, Gurgaon) and Ms. Zhikun Ren was published in the proceedings of 2nd **International Conference on Computing for Sustainable Global Development (INDIACOM-2015)** sponsored by IEEE, Delhi Section at Bharati Vidyapeeth, New Delhi (INDIA).

Secure First Position in One Day National Conference on "Recent Trends in Communication and Technology (RTCT-2015)"

Ms. Swati Sharma, student (VI Sem) from Electrical and Electronics Engineering department secure **First Position in One Day National Conference on "Recent Trends in Communication and Technology (RTCT-2015)"** in Collaboration with IEEE student branch PDMCE & IMS/EMBS(Delhi) at PDM College of Engineering, Bhadurgarh on Mar 27, 2015. The title of her paper was “**Signal Processing Circuits Using Operational Transconductance Amplifiers**”.

Lecture on Issues associated with Implementation of Embedded Generation and Microgrids:

IEEE-JMI Branch organized a *Lecture on “Issues associated with Implementation of Embedded Generation and Microgrids”* by **Prof. Akhtar Kalam**, at Jamia Millia Islamia, New Delhi on 30 January 2015. Eight students—**Kirti Sharma** (15481), **Nikhil Verma** (15494), **Birender Rawat** (16043), **Divya Singla** (15469), **Himanshi Grover** (15474),

Abhishek Singh (15448), **Kanika Jindal** (15479), **Devesh Agrawal** (15466) and **Jyoti Gahlot** (15478) from **Department of Information Technology, Dronacharya College of Engineering, Gurgaon** attended the lecture.

The speaker, **Prof. Akhtar Kalam** from **School of Engineering and Sciences, Victoria University, Melbourne, Australia** delivered the key lecture along with other rewarding presentations. The event commenced with a brief introduction to the speaker, his executive summary and publications. He also briefed the audience about the embedded grid in the networks and its high impact; and explained how these sources can be embedded anywhere in the network and wide variety of types and characteristics of distributions of generations. He also spoke about the technical issues of the Embedded Generations, how the maturity of technology affects the power supply for a nation, Role of Network design in expanding networks in the most optimum way, and protection of electricity from being stolen or used illegally. He discussed about connection cost as an issue beaming into the path of networks development.

Event Gallery:



Students during the event

Two-day workshop on Ethical Hacking & Cyber Forensic:

IEEE Hamdard Student Branch organized a two-day workshop on “*Ethical Hacking & Cyber Forensic*”, from *31st January to 1st February 2015* at *Jamia Hamdard University, New Delhi*. Twelve students from CSE Department participated in the workshop, amongst which two students **Piyush Pandey** (16112) and **Pankaj Mishra**(16111) got the Appreciation Letter and opportunity for **Internship Training Program and Project Based Summer Training without any charges at ByteCode Cyber Security Private Limited, Delhi**. Bytecode is IT certifications and training company and an authorized training center of EC-Council. Piyush and Pankaj won the Quiz Competition, which was scheduled in the end of workshop. They were also awarded with Bytecode **Certified Security Expert Certificate**, by Mr Mohit Yadav, Managing Director, BCSPL.



Pankaj Mishra(16111) CSE Department



Piyush Pandey(16112) CSE Department

IEEE International Conference on Computational Intelligence & Communication Technology:

Ms. Pratibha Bharti, Asst. Prof. *Department of EEE*, and two B.Tech. students named Komal Yadav and Nishi Parmar of First year I.T branch presented a research paper in an **IEEE INTERNATIONAL CONFERENCE ON COMPUTATIONAL INTELLIGENCE & COMMUNICATION TECHNOLOGY** held on **13-14 FEBRUARY 2015** at **ABES COLLEGE, GHAZIABAD**. Our first year I.T branch students presented a research paper titled **ANALYSIS OF NOISE ABATEMENT MAJOR SOURCE OF POLLUTION: TECHNICAL REMEDIES**. The proceedings of our paper had been published in their college magazine. The two days conference being held during 13-14 Feb 2015 featured prominent keynote speakers, paper presentation, and tutorials in parallel session.

Event Gallery:



Attending session of Conference



Presentation session of the Conference

Seminar on “CELLULAR ENERGY CONSUMPTION”:

Arjit Rawat, Viplove Kumar, Abhishek Kumar, Ujjwal Kumar students from *Department of EEE* attended one day seminar on “*Cellular Energy Consumption*” by Prof. Vijay Bhargava (Department of Electrical and Computer Engineering at University of British Columbia) at *Bharti School of Telecommunication & Management, IIT Delhi* on *13th Feb 2015*.

Glimpse of seminar:

The seminar started at 4pm at Bharti School of Telecommunication & Management, IIT Delhi. He started with brief introduction about what is the recent research area he is working on with his fellow colleagues. According to him, in today’s time most of the energy is being wasted in the power amplification for the signals. They are working for energy saving in base stations.

Power saving protocols are of two types i) Discontinuous reception (DRX mode) ii) Discontinuous transmission (DTX mode).

The seminar was extremely useful to students. They were happy because after it they got answers to many of their school life and personal life problems.

IEEE Workshop on Cyber Security & Pen Testing:

IEEE GTBIT Student branch organized a Workshop on “*Cyber Security & Pen Testing*” on *13th February 2015* at *GTBIT, New Delhi*. Five students Aditya Chhillar(15449), Abhishek Singh (15448), Anjali Kataria (15456), Ankit Saxena (15457) and Piyush Bhatia (15499) from VI Semester of *Department of Information Technology, Dronacharya College of Engineering, Gurgaon* attended the workshop.

The Speaker of the workshop was *Mr. Vivek Malik, GTBIT alumni, Chairperson of IEEE GTBIT student Branch*. Mr. Malik possesses a rich experience working as engineer with

ERTL (E), STQC, MCIT, DIT and Govt. of India and currently works with Indian Computer Emergency Response Team.

Event Gallery:



Students during the workshop

IEEE Conference on Computational Intelligence & Communication Technology (ICCICT 2015):

Three students **Nitigya Grover (15724)**, **Neelima Saini (15723)** and **Nitin Garg(15725)** and a faculty member Ms. Chandra Mukherjee, Assistant Professor from ECS Department of Dronacharya College of Engineering, Gurgaon attended a two-day *IEEE Conference On Computational Intelligence & Communication Technology (ICCICT 2015)* was held at ABES Engineering College, Ghaziabad, which was commenced on *February 13-14, 2015*. They also presented a research paper titled “*Analysis and Evaluation of Wireless Communication in Industrial Automation*” in the conference”.



Participants from DCE, Gurgaon during Conference



Paper presentation in IEEE conference

IEEE International Conference on Signal Processing and Integrated Networks (SPIN-2015):

Ms. Pratibha Bharti , Asst. Prof. *EEE Department*, presented a research paper in an *IEEE INTERNATIONAL CONFERENCE ON SIGNAL PROCESSING AND INTEGRATED NETWORKS (SPIN-2015)* held on *19-20 FEBRUARY 2015* at *AMITY UNIVERSITY NOIDA*. She had presented a research paper titled “*A Hybrid PAPR Reduction Technique based on Wavelet & PTS Scheme in OFDM System Using QPSK Modulator*”. The proceedings of paper has been published in their college magazine and the research work would be uploaded in IEEE explore digit. The conference was fully devoted to all advancements in Signal Processing and Integrated Networks. Researchers from all over the country and abroad will gather in order to introduce their recent advances in the field and thereby promote the exchange of new ideas, results and techniques. Topic For presentation were Signal Processing, Image Processing, Video Signal Processing, Speech and Audio Processing, Statistical Signal Processing, Biomedical Signal Processing, Communication Theory and Systems, Information Theory and Coding, Wireless Communication, Mobile

Communication, Sensor Networks, Optical Networking, Technologies, Signal Processing in CDMA / WCDMA.



Pictures covering 19 Feb 2015 attending session of the Conference

A Talk by Prof. Dipankar Nagchoudhuri at IIT Delhi, Hauz Khas:

IEEE CAS-CS Delhi Section organized “A Talk by Prof. Dipankar Nagchoudhuri” at IIT Delhi, Hauz Khas, New Delhi on 20th February 2015. Five students (Himanshi Lamba (15036), Lakshay Gupta(15052), Shubham Chhabra(16150), Sahil Bali(16140) and Piyush Pandey (16112)) from CSE Department attended the lecture.



Prof. Dipankar Nagchoudhuri during his Lecture



Students from CSE Department at the Venue

IEEE CAS-CS Delhi Section Lecture:

Sachin Pathania, Student of IT VI Semester attended the IEEE CAS-CS Delhi Section Lecture at IIT Delhi on 20th February 2015. The address was conveyed by Prof. Dipankar Nagchoudhuri (Professor at DA-IICT). He imparted his informed perspectives on "Microelectronics in India" about how microelectronics started to be and about Integrated Circuits and his Era's. He underscored on Electronic Age (I think there is a world business sector for perhaps five PCs), The Computer Age (Every home must have a PC) and The Information Age (Every Individual needs in any event a cell telephone).

He gave a short portrayal on Characteristics of Microelectronics, advancement in Microelectronics furthermore the Social Impact of Microelectronics.



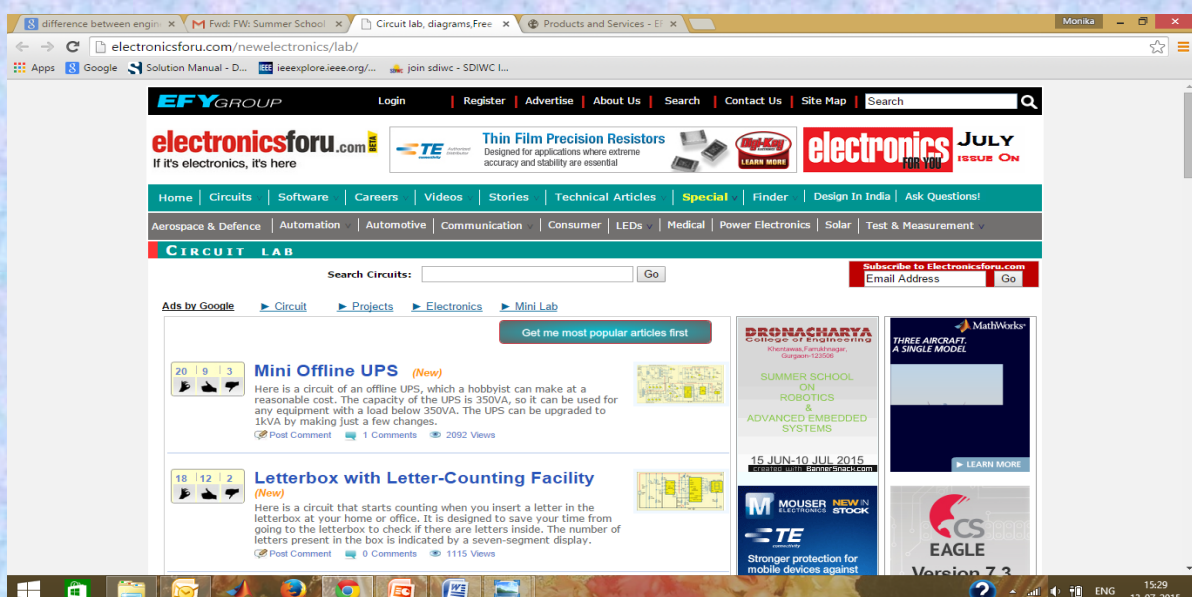
Prof. Dipankar Nagchoudhuri with colleagues & students

IEEE Publications by students:

Deepak Kumar Vashisth & Himanshu Sharma (IT Students) have got indexed in *IEEE explorer* with paper entitled “*Breaking into the social nervous system: Architecture for reality mining*”.

IEEE Sponsored Summer School web banner uploaded on EFY Official website:

IEEE Branch of college has organized a training program named **Summer School on “Robotics & Advanced Embedded Systems”** from **15th June – 10th July 2015**. Various sponsors were associated with the training program viz. **SOFCON, CETPA InfoTech Pvt. Ltd, AHK Robotics, EFY** and **Digit**. In this context, **EFY** which was one of the sponsors associated with Summer School has posted Summer School web banner on their official website.



Summer School web banner on EFY website