



# Dronacharya College of Engineering

## ISSUE

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## Electronics & Communication Engineering

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### From Editor's Desk :

**"The job of a teacher is not to teach but to create an environment conducive to learning".**

The career prospects of the technocrats are wide-ranging and fulfilling. A well-trained engineering graduate will be equally competent in research and professional positions, drawing upon his analytical, practical and problem-solving skills. But we aren't just about the technology.

At **Dronacharya College of Engineering, Gurgaon** we look for, and develop creative problem solving strengths in our students; at the same time, we encourage students to grow as effective team players, with a strong set of ethics, communications skills and zeal to outshine.

Our aim is to build an effervescent community of engineers, where faculty and students are cronies in a mutually inspirational education process, engrossed in learning. This learning process would lead to the inventions and then to discoveries. We actively seek to engage our adjacent associates from research and educational institutions and industries, to contribute in the process of learning by sharing their proficiency and practices gained outside of the classroom.

We are committed to nurturing Engineering aspirants for challenges in today's globalised technology. We persuade all the students to use their time with professors and teaching staff fruitfully, to develop their own proficiency, personality and skills.



**Editor, (Dr. Sunil K. Mishra)**

From HOD's Desk :

**"EXCELLENCE is not a habit, it is an ATTITUDE"**

The department of Electronics & Communication Engineering is putting continuous efforts towards the aim of producing good technocrats, who can successfully compete in today's highly professional world after passing out from this college.

At **DCE, Gurgaon**, excellent infrastructure facilities are provided with unique academic ambience.

The faculty members and staff inspire and counsel the students to do better in academics as well as activities. Our students participate, attend and present papers in International and National in Seminars/ Workshops etc.

Besides these, Industrial visits, Guest lectures, Conferences/Seminars are being conducted as a regular feature to keep the students abreast with the latest industry scenario as well as technical advancement. Due to persistent efforts of ECE Department, the college has been designated as Nodal Center of Virtual lab of IIT Delhi. The students are being given hands on exposure on Virtual lab.

**"TRIFLES make PERFECTION but PERFECTION is no TRIFLE"**



*Head of Department, Prof. (Dr.) H. S. Dua*

Projects :

The students of ECE Deptt. are involved in project work right from third semester onwards and their work has been recognized in many competitions and exhibitions. Two best projects are listed below:

S. No.	Deptt.	Project	Guide	Students
1.	ECE	Locking and Unlocking of Theft Vehicles Using CAN	Prof. (Mrs.) A.N Mahajan	Abhinandan (Roll No.13135)  Akhay Kumar (Roll No.13139)  Akash Sethi (Roll No. 13138)  Ankit
2.	ECE	Electroencephalography (EEG)	Prof. (Mrs.) A.N Mahajan	Saniya Puri (Roll No.  Ankita Manocha (Roll No. 13147)  Bhawna (Roll No. 13157)  Avisha Kumari (Roll No. 13154)

## Outside Conferences/Seminars/Workshops :

### INUP Familiarization Workshop on “Nanofabrication Technologies” :

**Mr. Sumit Kumar**, Assistant Professor, ECE Department attended the INUP Familiarization Workshop on “Nanofabrication Technologies” held on **21st - 23rd May 2014** at CeNSE (Center for NanoScience and Engineering) Auditorium at IISc Bangalore. **Dr. Rudra Pratap**, the Chairman of the '**Centre of Nano-science and Electronics department**' explained the main ideology as to why we require all these sensors and actuators for Nanofabrication Technologies.



**Mr. Sumit Kumar, ECE Department in INUP Familiarization Workshop**

### Regional Conference on Ansys Products ‘Convergence - 2014’ :

**Mr. Bhupender** Assistant Professor of ECE Department attended a regional conference '**Convergence-2014**' on **ANSYS Products** organized by **Dell-Soft Technologies** in partnership with '**FUJITSU**', '**NVIDA**' and '**BOSTON**' at Le Meridien, Janpath, New Delhi on **22nd May 2014**. **Mr. Gaurav Handa, Head-Sales, ANSYS INDIA** introduced different types of ANSYS simulation softwares like **HFSS, Q3D, SLWAVE** etc. and exposed the advantages and simplicity of these softwares by taking few examples of basic antennas.

### ISTE Coordinators Workshop on Computer Networking :

IIT Bombay conducted a one week "**ISTE Coordinators Workshop on Computer Networking**" at IIT Bombay, from **5th to 9th May 2014** for empowering teachers of engineering colleges. This workshop is conducted under the T10KT project of IIT Bombay. **Mr. Hansraj Yadav** from CSE Deptt. got the privilege to represent **Dronacharya College of Engineering, Gurgaon** at this level.



**Mr. Hanraj Yadav attending the workshop**

### IET Event: Lecture on Broadband for Sustainable Development on WTIS Day on 16th May 14 :

Lecture on **Broadband for Sustainable Development** on the eve of World Telecommunication and Information Society Day (WTISD) was organized by IET Delhi Local Network at India International Centre Annexe. **Mr. Amar Saraswat**, from CSE Deptt. represented **Dronacharya College of Engineering, Gurgaon** in the Event.

## A Seminar on “Cardinality Constrained & Probabilistically Constrained Optimization”:

**Ms. Sarita** Assistant Professor from **CSE Department** attended a Seminar on “**Cardinality Constrained & Probabilistically Constrained Optimization**” held at Department of Mathematics, IIT Delhi on **2nd Jun 14**. Seminar objective was to generate the efficient algorithm for “Mixed Integer Quadratic Problem (MIQP)”.

## Engineering & Science Innovation Summit:

Practical learning helps in understanding concepts more clearly. To help students in understanding complex topics, a summit was organized by National Instruments at Hotel Park Inn, Civil Lines Gurgaon on **4th June 2014**. **Mrs. Himanshi, Mr. Amar Saraswat, Ms. Pratibha and Ms. Sarita** of CSE Deptt. represented **Dronacharya College of Engineering, Gurgaon** in the Summit.



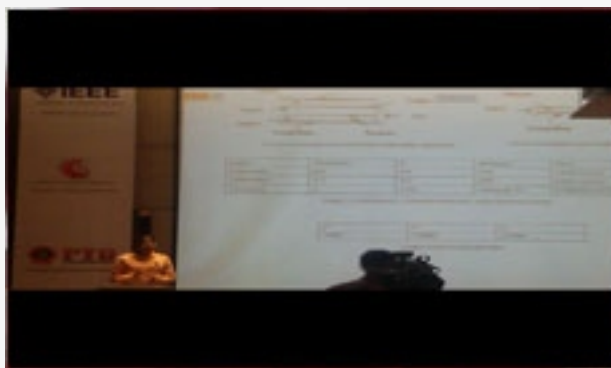
**Mr. Gautam, the trainer showing a video in which students uses various NI instruments**

## A Session on “Advances in pattern Classification Using Artificial Neural Network, Spiking Neural Network & Decision Tree:

**Ms. Sarita** Assistant Professor **CSE Deptt.** attended a session on “**Advances in pattern classification using Artificial Neural Network, Spiking Neural Network and Decision Tree**” at IIT Delhi on **6th Jun 2014**. The session was based on the theme Artificial Neural Network. In this session **Mr. Venkata Naresh Babu Kuppili**, Research Scholar at IIT Delhi presented an algorithm that constructs feed-forward neural networks with a single hidden layer for pattern classification.

## One Week Conference-Cum-Workshop “Indian Antenna Week”

**Ms. Deepti Chahar** Asst. Professor from ECE Dept. attended one week conference-cum-workshop, “**Indian Antenna Week**”, held in Chandigarh from **26th to 30th May14**. This was organized by **Professor S.S. Pattnaik**, NITTR Chandigarh in association with IEEE, IETE and PTU, Jalandhar. **Ms. Deepti Chahar** presented her paper titled, during the conference. **Ms. Deepti Chahar** presented her paper titled “**Performance Analysis Of PCMA With EBG And DGS**” during the conference.



**Ms. Deepti Chahar presenting her paper in the Conference**

## One Week Faculty Development Programme on “Mathematical Optimization Through Evolutionary Computation” from 5th - 9th May 14 :

**Mrs. Susmita Samanta** Asst. Professor from ECE Dept. had attended one week Faculty Development Programme on “**Mathematical Optimization Through Evolutionary Computation**” in **Rajiv Gandhi College of Engineering & Research, Nagpur** from **5th - 9th May 2014**. The main objective of this training programme was to promote the scope for research in Evolutionary Computing.



**Mrs. Susmita Samanta during the workshop**

- ✦ **Mrs. Poonam Singla** and **Mr. Sunil Bansal** Asst. Prof of ECE Dept. attended “**Engineering & Science Innovation Summit**” conducted by **National Instruments (NI), India**” about **NI Measurement Lab Series** held at Hotel INN, Gurgaon on **4th Jun 2014**. The experts from NI introduced NI Lab-view Software.
- ✦ **Dr. H.S Dua** HOD of ECE Dept. had attended the Inaugural Function of “**Seminar on Emerging Technologies in Telecom Sector**” on **31st May 2014** in association with BSNL on **31st May 2014** at India International Centre, Lodhi Road, New Delhi.



**Sh. A. K Mittal addressing the gathering**

### Conferences/Seminars/Workshops/Guest Lecture at Campus :

#### ICT Based Programme on Virtual Instrumentation :

**Dronacharya College of Engineering, Gurgaon** in association with Department of Electrical Engineering, NITTTR Chandigarh conducted five days ICT Based Programme on Virtual Instrumentation from **28th Apr** to **2nd May 2014**.



**Prof (Dr.) M. N. Hussain and Prof. Vishal Bharti during Inauguration Session**



**DCE Faculties during Project using Lab VIEW session**

### ICT Based Workshop on Computer Networking Using CCNA :

Online workshops provide a platform where trainees scattered over different places can come together, learn from the experts and share views amongst other trainees. After the successful completion of the previous three ICT workshops, another ICT workshop was organized on "Computer Networking using CCNA" in association with NITTTR Chandigarh. The workshop was organized at **DCE Gurgaon** Campus from **19th to 23rd May 2014**. The faculty members of CSE and IT Deptt. Of **DCE, Gurgaon** attended the workshop.



**Prof. (Dr.) M. N. Hussain sharing the concluding views at valediction session**

### Faculty Development Programme :

The Spoken Tutorial Resource Centre in association with IIT Bombay has organized the certification programmes in various programming languages for different departments. The details are appended below.

S. No.	Date	Deptt.	Course	No. Of faculty members certified
1.	15 May 14	CSE	C	20
2.	16 May 14	IT	JAVA	17
3.	19 May 14	IT	C	17

In addition to above, practice hand on sessions on C++ and JAVA were conducted for faculty of all the departments on 21 & 22 May 2014 respectively followed by online test wherein 47, 37 and 36 faculty members obtained the certificates of "C", "C++", and Java languages.

## Two Week Workshop on “Fluid Mechanics” from 20th to 30th May 14 :

two week ISTE workshop on "**FLUID MECHANICS**" from 20 May to 30 May 2014 workshop has been organized under **National Mission on Education through ICT (MHRD, Govt of India)** conducted by **Indian Institute of Technology, Kharagpur**, for the faculty members of Mechanical Department. **Mr. Tanvir Singh, Asst. Prof. of ME deptt.** was designated as Workshop Co-Ordinator. All the faculty members of ME Deptt. enthusiastically participated in the workshop.



**IIT Kharagpur Course Coordinators addressing all Remote Centre Participants on the first day of workshop**



**Dr. Jitender Kumar, HOD (IT) and Mr. Tanvir Singh, Workshop Coordinator along with the Participants listening Lecture**

### Placement :

During the last month of **May 2014**, eleven students of ECE and twenty four students of ME have been placed in the various companies of repute including Alcatel Lucent, TCS, Flying Elephant Webitech, Kamboj Polymer, DTC, Resonance Technologies, Swastik Engineering Corporation and J K Springs.

### Webinars Attended :

Following is the list of recent webinars attended by the faculty of ECE deptt as per the topics and dates shown against each:

S. No.	Name of faculty	Name of Topic	Webinar Date
1.	<b>Prof. (Ms.) A.N Mahajan</b>	Virtual Academy: Moving Forward through Teacher Entrepreneurial Education: an Agenda for change in Technical Education	13 June 2014
2.	<b>Mr. Ajit Kumar</b>	New CCNA R&S Topics IPv6 Deep Dive and Cisco NetSpace Clinic	12 June 2014
3.	<b>Prof. (Ms.) A.N. Mahajan</b>	Virtual Academy: Publication Etiquette and Ethics, Gaurav Sharma	10 June 2014
4.	<b>Prof. (Dr.) H.S Dua</b>	Virtual Academy: An Introduction to Computational Fluid Dynamics; Atul Sharma; IIT Bombay	28 May 2014

S. No.	Name of faculty	Name of Topic	Webinar Date
5.	<b>Prof. (Dr.) K. K Saini</b> <b>Prof. (Ms.) A.N Mahajan</b>	Virtual Academy: Cell Phone/Tower Radiation Hazards and Solutions; Girish Kumar; IITB	22 May 2014
6.	<b>Prof.(Dr.) K. K Saini</b>	Virtual Academy: Introduction to Smart Grid; Prasanta Ghosh; Syracuse <b>University</b>	20 May 2014
7.	<b>Mr. Sunil Kumar Bansal</b>	3 Product Development Strategies to avoid the complexity Trap	14 May 2014

### Paper/Book Publications :

- ✦ **Vikram Singh Sandhu, Rohit Ambavta and Ashish Yadav** of **6<sup>th</sup> Semester** students (2014) Concrete Beam with Rice Husk as a partial Replacement of Cement and Bamboo as Reinforcement. A Research Paper Communicated for Research in Civil and Environmental Engineering, ISSN: 2345-3109.
- ✦ **Ms. Sakshi Gupta, Assistant Professor, Civil Engineering Department** has been listed in the panel of reviewer for "**International Journal of Engineering Research**" (IJER), ISSN: 2319-6890.
- ✦ **Prof. (Dr.) Anand Verdhien** reviewed research paper on Spatio-temporal change of potential evaporation of "**Water Resource Management**" Journal and submitted revised version of his own research paper on Snowmelt Modelling Approaches in Watershed Models: Computation Efficiency in Water Resource Management Journal.
- ✦ **Vishnu Shankar** (14592) and **Ashish Mudgil** (14542) published paper on "**Waste Water Reuse, Demolition**", JIAATA (International), April 2014, ISSN: 3347-4482.
- ✦ **Singh, Krishna Kant, Nigam, M. J., Pal, K., & Mehrotra, A.**, (2014). "**A Fuzzy Kohonen Local Information C-Means Clustering For Remote Sensing Imagery**", IETE Technical Review, Taylor and Francis (U.K.), 31 (1), pp.75-81. [SCI indexed impact Factor : 0.724].
- ✦ **Singh, Krishna Kant, Mehrotra, A., K.Pal.** (2014). "**Landslide Detection From Satellite Images Using Spectral Indices And Digital Elevation Model**", Disaster Advances, 7(6), pp.25-32. [SCI indexed impact Factor : 2.272].
- ✦ **Ms. Pratibha Bharti** Assistant Professor and **Ms. Chandra Mukherjee** Assistant Professor, E.C.E Dept has presented a research paper entitled "**An Analytical evaluation of Heart Rate Variability (HRV) and Its Implications**" in an International Conference STEER-2014 on **10th May 14** at New Delhi.
- ✦ "**Evaluation Of AODV,OLSR & ZRP In Wireless Sensor Network Using Qualnet**", authored by **Pratibha Bharti, Chandra Mukherjee, Asst Prof. ECE Dept. Dr.K.K Saini, Prof. of ECE Dept.** has been accepted by Peer Reviewers and Conference Technical Committee Members for publication and presentation in International Conference on Advancements in Engineering, Technology and Management (AETM 2014).
- ✦ "**A Comparative Analysis On QRS Peak Detection Using BIOPAC And MATLAB Software**", authored by Chandra Mukherjee, Pratibha Bharti, Himanshu Lamba, Kirti Tokas, **Dr. K.K saini** of ECE Dept. has been accepted by Peer Reviewers and Conference Technical Committee Members for publication and presentation in International Conference on Advancements in Engineering, Technology and Management (AETM 2014).
- ✦ "**Microstrip Patch Antenna With Reduced Harmonics And Improved Bandwidth**" authored by **Deepti chahar, Chandra Mukherjee Asst Prof. ECE Dept. Dr. K.K. Saini, Prof. of ECE Dept.** has been accepted by Peer Reviewers and Conference Technical Committee Members for publication and presentation in International Conference on Advancements in Engineering, Technology and Management (AETM 2014).
- ✦ "**Optimum Bandwidth Allocation Under Increasing Number Of Mobile Communication**" authored by **Chandra Mukherjee, Asst. Prof. of ECE Dept. Dr. Saini Prof. of ECE Dept.** has been accepted by Peer Reviewers and Conference Technical Committee Members for publication and presentation in International Conference on Advancements in Engineering, Technology and Management (AETM 2014).



- **"Comparative Analysis Of Various Techniques And Topologies For Second Order  $\Sigma\Delta$  Modulator For Various Frequencies"** authored by **Susmita Samanta, Deepti Chahar, Asst. Prof. of ECE Dept., Dr. K.K. Saini, Prof. of ECE Dept.** has been accepted by Peer Reviewers and Conference Technical Committee Members for publication and presentation in International Conference on Advancements in Engineering, Technology and Management (AETM 2014).
- **"Performance analysis of PCMA with EBG and DGS"** authored by Deepti Chahar Asst. Prof. of ECE Dept. has been presented in the International Conference-cum-workshop "INDIAN ANTENNA WEEK" in association with IEEE,IETE and PTU from **26<sup>th</sup>-30<sup>th</sup> May 14.**
- **"The Comparative Study of PAPR reduction Techniques for LTE OFDM system and its Effect"** authored by Mrs. Poonam Singla has been presented in the International Conference on **"Recent Advances in "Electrical Engineering, Power Control, Electronics and Communication Technology (EEPCECT 2014)" organised by "Krishi Sanskriti"** in **Jawahar Lal University, New Delhi on 31<sup>st</sup> May 2014.**
- **"Need of Advanced Communication : Free Space Optical Commincation [Analytical Study]"** authored by **Anmol Goyal, Lokesh Yadav, Ms. Anshul Vats Asst. Prof of ECE Dept., Dr K.K Saini Prof. of ECE Dept.** has been accepted by Peer Reviewers and Conference Technical Committee Members for publication and presentation in International Conference on Advancements in Engineering, Technology and Management (AETM 2014).

### Book Publication :

**Krishna Kant, Singh, Khandelwal,P., B.K., & Mehrotra, A.** (2014), "Unsupervised Change Detection from Satellite images using KCN" Lap Lambert academic Publishing, Germany [ISBN:978-3-659-53807-0].

### Virtual Lab Nodal Center Activity :

**Prof.(Dr.) H.S. Dua**, HOD (ECE) accompanied by two faculty members (**Mr. Ajit and Mrs. Shailley**) visited Virtual lab at Bharti Telecom Centre of IIT Delhi on **6th Jun 2014** and had discussions with the concerned IIT staff, on adding new experiments at the Virtual Lab portal of IIT Delhi. A case for the addition of three new experiments has been sent to IIT Delhi on **10th Jun 2014.**

### Microsoft Office Specialist (77-883 Mos Powerpoint Exam) :

26 faculty members of ECE deptt. and 11 faculty members of IT Deptt. have qualified for MOS Powerpoint Exam.

### Student's Viewpoint :

"Belief in oneself is one of the most important bricks in building any successful venture". I am a Dronacharyan, presently studying in second year in the ECE Department. The world is changing rapidly in Electrical and Electronics field, so the department is focusing on latest developments. The highly qualified faculty members are expert in their own fields and are committed to provide quality education with focus on creativity, innovation, continuous change & motivating environment. The department of EEE aims at strengthening the ongoing focus by churning out skilled technocrats. With the proactive efforts of the department the students are getting upgraded knowledge in Electrical and Electronics field. The department organises guest lectures, seminars and workshops for the students. The labs are well equipped. Summarily, Dronacharya is a **Temple of Learning**. I AM PROUD TO **BE A DRONACHARYAN...!!!!**



**Swati Sharma**  
(Roll No.15796) IV Sem

**Dronacharya College of Engineering, Gurgaon** is famous for its sense of discipline, academics, placement, social activities and administration. The faculty of the college is very intellectual. It is an institution which not only takes care of the studies but also focuses on the personality development of the students. **Dronacharya College of engineering** is a platform for excellence in teaching, learning & the academic faculty of the college being so experienced, makes the college academically very strong. "This college is the best place for the technical education; the four years stay at the college transforms the life of students through the integration of teaching, research and character building".



**Kajal**  
(Roll No.14186) VI Sem

**Dronacharya College of Engineering, Gurgaon** is a place where I have got an edge for my future. It is the unique combination of quality, excellence and innovation in technical education. The campus of the college provides opportunities for developing extracurricular skills which include NSS, student chapters of IEEE, IETE, social clubs and sports & games. The strong bond between students and faculty helps the students to perform better. There is always a healthy competition between the students. It is proud privilege and delight to be a part of such great institution.



**Kanchan Gupta**  
(Roll No. 14187) VI Sem

At **DCE, Gurgaon** both education and curriculum are maintained at same level and I am having this pleasure to come in this ocean of knowledge. I am studying in Electronics and Communication Engineering branch and our HOD and all faculty members guide us on every step of our journey. I am totally inspired by our pioneer principal **Prof. (Dr.) M.N Hussain** who is a role model of sincerity and truth. In these two years of my life in this college, I have learned everything which I think I was lacking in. I am really proud to be a **Dronacharyan**.



**Nikhil**  
(Roll No. 15196) III Sem