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National Institute of Technical Teachers Training and Research, Chandigarh

# Newsletter

## ACHIEVEMENTS OF POST GRADUATE STUDENTS OF NITTTR CHANDIGARH

Six Post Graduate students of Electronics and Communication Engineering and Electrical Engineering department of NITTTR, Chandigarh under the coordinatorship of Dr. Maitreyee Dutta and Dr. S.S. Dhami participated in "International Robotics Challenge and Robowars" held on 25-28 December, 2015 at IIT Bombay where more than 1.25 lakhs students from all over India participated in different techno-events. The students brought laurels to the institution by achieving third position in "International Robotics Challenge" among 35 participating teams and fourth position in "Robowars" among 80 participating teams. Besides these groups, four students of Mechanical Engineering also participated in the competition of "Nitroengine" at IIT Bombay during the same period. Students got good exposure by participating in national and international robotics event and will improve their robots by new innovative and research ideas with the help of faculty members of all the engineering departments. These students are going again to participate in the competition of Robowars and Nitroengine to be held from 22-25 January, 2016 at IIT Kharagpur. The project was undertaken under TEQIP-II.





### **ELECTRONICS AND COMMUNICATION ENGINEERING DEPARTMENT**

The department of Electronics and Communication Engineering since its establishment progressed steadfastly to its present status of being reckoned as a leader in Electronics and Communication field. The department has recently established a smart classroom with digital podium and Interactive LED Panel to teach the classroom sessions more effectively. The department is enriched with experienced faculty in the area of Digital Image Processing, VLSI Design, Embedded System Design, Wireless and Mobile Communication and Antenna Design. The wellestablished laboratories provide opportunity to students to do their research work with microcontrollers, FPGA kits, GSM kits and other high end softwares.



Dr. K.K. Talwar, Chairman, BOGs, NITTTR Chandigarh interacting with the faculty



A View of Laboratories



**Networking Lab** 

**Communication Lab** 



**DSP and Soft Computing Lab** 

**Embedded System Design Lab** 

**VLSI Lab** 

The department also has "Electronics Service Centre" which was established in 1985 as a nodal agency to cater the repair and maintenance of defective electronic equipment, power supplies, SMPS, UPS, Test and measuring instruments of Northern Polytechnic colleges. Nearly 100 students per year from engineering colleges are trained at this centre in Embedded System Design, Power Supply Fabrication and Testing, PCB Fabrication and Testing, Electronics Experiments, Fabrication and Testing etc. ME students of Electronics and Communication Engineering are also developing some projects like Power Failure buzzer, Pressure sensor based attendance system, battery charger etc. Recently, the department established a new laboratory for PCB Fabrication where the students fabricate the PCBs on their own.



**PCB Fabrication Labs** 



**Electronics Circuit designing Lab** 

The department of Electronics and Communication Engineering is going to set up a Innovation Centre where the students will work with new inventions/projects. Also the department is planning to organize a TECHSHOW in the month of March/April, 2016 from Students' Chapter ELECTROVION.

### PREPARATION OF E-CONTENT IN HINDI FOR THE POLYTECHNICS OF UTTAR PRADESH

With an initiative of Government of Uttar Pradesh, a project on generation of e-content in Hindi (Video Films, PPTs, Text etc.) for polytechnics has been undertaken by the institute so as to enable the students to learn at their own pace and in their local language. The e-content has been prepared in the following subjects:

- 1. Principles of Digital Electronics,
- 2. Microprocessor & Applications,
- 3. Electronics Devices & Circuits,
- 4. Electronics Instruments & Measurements

278 Video Films

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Applied Mathematics I and II 100 Video Films
The preparation of e-content for the subjects of Diploma in Chemical Engineering has also been initiated.



### TRAINING ABROAD



Under TEQIP-II, ten faculty members of the institute visited various universities and colleges in Canada from 21.11.2015 to 01.12.2015 to get updated about advances in the field of teaching-learning, pedagogy, curriculum development, entrepreneurship development and skill development. The faculty explored the possibilities of taking up collaborative research projects, faculty/students exchange programmes, establishment of International Centre for Skill Development, Online delivery of lectures through ICT etc.

Six faculty members of the institute visited Singapore Polytechnic, Singapore from 8-10 Dec.' 2015 to participate in a workshop on Advancing, Innovating and Sustaining CDIO-an abbreviation for Conceive Design Innovate and Operate aims at revamping engineering education through a comprehensive methodology. The workshop was sponsored by Temasek Foundation, Singapore. Funds for travelling and incremental expenses were provided under TEQIP-II

### **VISIT ABROAD**

Dr. Lini Mathew, Associate Professor, Electrical Engineering Department inspected Lagos Skipper Engineering Academy (LSEA), (Government Technical College), Ikotun, Lagos, Nigeria and an institute named Institute of Technology and Management, Ugep, Cross River State, Nigeria from 9-16 December, 2015. During the visit to LSEA, the need gaps were analyzed and plans were made to fill those gaps. More teachers from LSEA, Nigeria will visit NITTTR, Chandigarh for more specialized training. NITTTR, Chandigarh will be preparing instructional material and educational video films which can be used by the teachers and students of LSEA for better instruction.

After the inspection of ITM, Ugep, a report was prepared and submitted to Commissioner of Education, Cross River State, to hand it over to Governor Benedict Ayede.



### Training programmes conducted during October-December, 2015

Particulars	Number of Programmes	Number of Teachers Trained
Contact Mode	34	349
Training Programmes through ICT	10	2047



# PAPER PRESENTED

- 1. Mrs. Shimi S.L, Assistant Professor, Electrical Engineering Department presented a paper titled "Harmonic Elimination in a Solar Powered Cascaded Multilevel Inverter using Differential Evolution Optimization Technique", at the 15th ASME International Conference on International Mechanical Engineering Congress & Exposition at Houston, Texas, USA, from 13-19 November, 2015.
- 2. Er. P Sudhakar Rao, Assistant Professor, Mechanical Engineering Department presented a paper titled "Electro Chemical Honing of External Cylindrical Surfaces- An Innovative Step" in International Conference on Intelligent Manufacturing and Automation at University of ZADAR, Croatia, Europian Union from 21-24 October, 2015.
- 3. Mr. Sushil Kumar Swar, Research Scholar in Civil Engineering, under Dr. S.K. Sharma, Professor, Civil Engineering Department, NITTTR, Chandigarh presented a paper on "Structural Characteristics of HPDSP Concrete on Beams Column Joints" in the ICACE 2015: 17th International Conference on Architectural and Civil Engineering at Los Angeles, USA from 28-29, September 2015.

### FREE SOFTWARES FOR FACULTY & STUDENTS



#### 1. ANSYS

The renewable six-month product license is free and can be downloaded and used by students anywhere in the world. It provides access to versions of ANSYS Mechanical, ANSYS CFD, ANSYS Autodyn, ANSYS Workbench, ANSYS Design Modeler and ANSYS DesignXplorer that are limited only in the size of the problems that can be solved. The product can be installed on any supported MS Windows 64-bit machine.

http://www.ansys.com/Student

#### 2. AUTO DESK

Auto Desk Software is available for the students, educators and school/educational institutions around the world. All Auto Desk Softwares are available at: <a href="http://www.autodesk.com/education/free-software/all">http://www.autodesk.com/education/free-software/all</a>

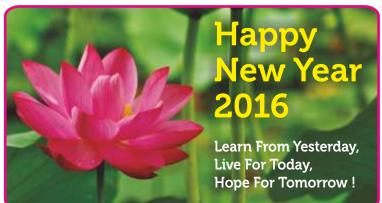
### 3. PTC

PTC Offers a free seat of PTC Creo Student Edition to any student that is part of the PTC Academic Program. - See more at: http://creo.ptc.com



### Shri Madan Paul

Section Officer superannuated on 30.11.2015.



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