

**REPORT ON  
NATIONAL WORKSHOP ON RECENT TECHNOLOGIES  
ORGANIZED BY ISTE STUDENTS CHAPTER  
COLLEGE OF ENGINEERING PERUMON  
6/10/18&7/10/18**

ISTE students Chapter of College of Engineering Perumon in association with Innovation Cell of IIT BOMBAY and Robokart organized 2 day National Level Workshop on 6/10/18 & 7/10/18 in the following areas

- **SOLAR BASED CHARGER-Electronics & Communication**
- **WEBSITE DEVELOPMENT USING WORDPRESS –Computer Science**
- **CLOUD ROBOTICS-Electrical and Electronics**
- **REMOTE CONTROLLED RC DRONE-Mechanical Engineering**

The image displays four posters for a national-level workshop organized by the College of Engineering Perumon in association with IIT Bombay and Robokart. The workshop took place on October 6th and 7th, 2018. The posters are for four different tracks: Solar based Charger, Website Development using WordPress, Cloud Robotics, and Remote controlled RC Drone. Each poster lists technical details, highlights, and the student coordinators: Nabin Nazar and Sandeep S.

**Solar based Charger Poster:**

- College of Engineering, Perumon**
- Organizing 2 days National Level Workshop on Solar based Charger
- TECHNICAL DETAILS**
  - Designing a circuit for Mobile charger
  - Circuit Implementation
  - Designing of Solar tracker
  - Programming for Solar tracker.
- HIGHLIGHTS**
  - Expert Hands-on Training
  - Proven Learning session
  - Certificate from I-Cell IIT Bombay & Robokart.com
- Bring minimum 1 Laptop in a team of 5 students
- DATES : 6th & 7th October, 2018**
- Student Co-ordinator:** Nabin Nazar, Sandeep S.

**Website Development using WordPress Poster:**

- College of Engineering, Perumon**
- Organizing 2 days National Level Workshop on Website Development using WordPress
- TECHNICAL DETAILS**
  - Understanding Directory Permissions
  - Understanding the WordPress Dashboard
  - Upgrading WordPress Plugins
  - Understanding the Structure of WordPress Themes
  - Hands-on Training on the WordPress Editors
  - Hands-on Training on the New Image Editor
- HIGHLIGHTS**
  - Expert Hands-on Training
  - Proven Learning session
  - Certificate from I-Cell IIT Bombay & Robokart.com
- Bring minimum 1 Laptop in a team of 5 students
- DATES : 6th & 7th October, 2018**
- Student Co-ordinator:** Nabin Nazar, Sandeep S.

**Cloud Robotics Poster:**

- College of Engineering, Perumon**
- Organizing 2 days National Level Workshop on Cloud Robotics
- Highlights**
  - Introduction to basic of Embedded System
  - Basic Arduino Based programs for interfacing I/O Devices
  - Assembling of Robot Mechanical Structure
  - Testing of Mobile Application and Controlling Robot using Internet
  - Programming the Arduino Nano Board For Internet Based Control
- Bring 1 Laptop in a group of 5
- Date: 6th & 7th Oct 2018**
- Student Coordinator:** Nabin Nazar, Sandeep S.

**Remote controlled RC Drone Poster:**

- College of Engineering, Perumon**
- Organizing TWO DAYS NATIONAL LEVEL WORKSHOP ON BEHALF OF INDIAN SOCIETY FOR TECHNICAL EDUCATION [ISTE]
- IN ASSOCIATION WITH IIT BOMBAY AND ROBOKART
- WORKSHOPS**
  - > Remote controlled RC Drone [ME]
  - > Website development using Wordpress [CSE/IT]
  - > Cloud robotics [EEE]
  - > Solar based charger [ECE]
- OCT 6, 7 2018**
- Student coordinators:** Nabin Nazar, Sandeep S.
- Shijith K [Chairman, ISTE]**

## **WORKSHOP ON SOLAR BASED CHARGER-ELECTRONICS & COMMUNICATION**

In today's world where we are always struggling to power our cities, we need to look at alternate energy sources. Solar panels are not only a renewable resource, it is also very clean, efficient and easy to use. Solar chargers are very common today and it is a product available directly for the public for commercial and personal use but at a very high cost

With the help of supporting circuitry, a mobile phone charging system can be made that can solve all your low battery problems at the go anytime during the day with a very low cost.

### **About Workshop**

Students learned to interface Solar Panels with a charging circuitry to charge you phone. They will get to know to track the sunlight and position the same Solar panel. Along with that, students will create a solar tracker with the help of LDRs, Arduino, motors and a lot more

### **Workshop Outcomes:**

- Learnt & Interact with Engineer Trainer & get to know about Solar energy & All.
- Received an unparalleled education on the art of building apps & games with personal one-on-one attention
- Understood the subject with PowerPoint Presentation, Live Demos, Interactive Questions & Answer session & comprehensive material

A total of 78 students participated in this workshop

## **WORKSHOP ON WEBSITE DEVELOPMENT USING WORDPRESS – Computer Science**

Purpose of this workshop was to enable budding entrepreneurs to create Websites using WordPress technology. Workshop was arranged by IIT Bombay Innovation Cell and Robokart for educating budding entrepreneurs for new challenges. Participants of this Workshop were Corporate Employees, Startups, College Students and Teachers.

Workshop covered following key things:

1. Introduction to Twitter Bootstrap
2. Typography & Basic Elements
3. Responsive Web Development
4. Advanced Web Elements
5. Dynamic Elements using Javascript
6. Creation & Customisations
7. WordPress Installation + Introduction
8. WordPress setup with LAMP stack
9. Free Themes in WordPress
10. Blog Posts & Media
11. Pages, Widgets & Plugins
12. WordPress Shortcodes
13. Introduction to Visual Composer
14. Elements of Visual Composer
15. Customisation of Elements
16. Professional WordPress Development
17. Purchasing Themes
18. Purchasing Domain & Hosting
19. CPanel Setup for WordPress
20. Contact Form 7
21. Importing Demo Content
22. SEO Tips & Tricks

A total of 80 students participated in this workshop

## **WORKSHOP ON CLOUD ROBOTICS-Electrical and Electronics**

Cloud Robotics and Automation is attracting increased interest from academia, governments, and industry worldwide. This workshop emphasised on the potential of the “Cloud” (Internet) to enhance automation and robotics for manufacturing, healthcare, transportation, logistics, security, agriculture, and many related industries by improving performance in at least five ways:

- 1) Big Data: indexing a global library of maps and object data;
- 2) Cloud Computing: parallel grid computing on demand for automation;
- 3) Open-Source/Open-Access: humans sharing code, data, algorithms and hardware designs;
- 4) System Learning: machines sharing parameters, control policies and outcomes; and
- 5) Crowd sourcing

A total of 117 students participated in this workshop

## **WORKSHOP ON REMOTE CONTROLLED RC DRONE-MECHANICAL ENGINEERING**

This Workshop basically helped the participants to clear the concept of how an aero model flies. To get into much deeper of aero model this course thought them how to start building an quad copter, what all constitutes to make an quad copter. This workshop concentrated on all aspects of electronics, mechanics, programming and communication

A quadcopter, also called a quadrotor helicopter or quadroter, is a multicopter that is lifted and propelled by four rotors. Quadcopters are classified as rotorcraft, as opposed to fixed-wing aircraft, because their lift is generated by a set of rotors (vertically oriented propellers). This workshop teaches about designing of quadcopter as well as assembly of RC drone. This workshop includes controlling of Drone using flight control board which includes Assembly and calibration of Flight Control board.

Introduction to Controllers (ARDUINO & KK MULTICOPTER BOARD 2.1.5) and Embedded Systems Design.

- Working Principle of Quadcopter.
- Construction of Quadcopter drone
- Connection consideration of various configurations
- Introduction to Android App controlled Quadcopter
- Stability criteria for flying of drone

A total of 70 students participated in this workshop



The National Workshop was a great success with the students participation. The aim of the workshops to provide a platform for hands-on experience on state-of-the-art technologies in which people from various levels can participate, interact and share their expertise is fulfilled. Practical exposure to the subject is also provided to the participants in this workshop.

#### **COORDINATORS**



**Abhilash.R,**  
**AP in EEE**  
**College of Engineering Perumon**



**Shijith.K**  
**Chairman, ISTE Students chapter**  
**College of Engineering Perumon**