

Report on

One week STTP/Workshop on

Unmanned Aerial Robotics

The STTP/Workshop event conducted during on 24th-28th March, 2017. The event was inaugurated in the presence of Hon. Director Dr. L. M. Waghmare, TEQIP-II Coordinator Dr. A. B. Gonde, Prof. M. V. Bhalerao, Prof Pankaj Wakhradkar. Faculty coordinator provided the gathering with a brief report on “**Unmanned Aerial Robotics**”. Early in the morning all the participants have registered themselves for the five day sttp/workshop.

Mr. Atul Kumar Gupta from Robokriti.India,Jabalur took over the charge as a resource person for this sttp/workshop. For five days, the technical things related to the **Quadcopter designing and its applications** were taught by the speaker. Also towards the closing of the event the participants were divided into groups and were a given all the required components to make a quadcopter. All the groups designed the quadcopters and tested its performance on institute ground. All of them had a very nice experience of successful flight and landing of the quadcopter. During this designing and testing process, students came up with many new ideas to implement and they will be guided and motivated further.

The one week sttp/workshop on **Unmanned Aerial Robotics** was designed in such a way to cover the all the basics of Embedded system, Robotics, Need of aerial robots etc. Along with the theoretical aspects the workshop will be covering the practical sessions on controllers, sensors, communication, Monitoring etc

This one week workshop was focused on the basics of robotics and the second year B.Tech students have got the guidelines to learn robotics.

Workshop Outline

Day 1

- Orientation
- Quadcopter basics
- Uses, advantages, types
- Overall structure and parts

Day 2

- Frame types
- CAD softwares
- BLDC motors
- Controlling BLDC motors
- PWM
- Propellers

Day 3

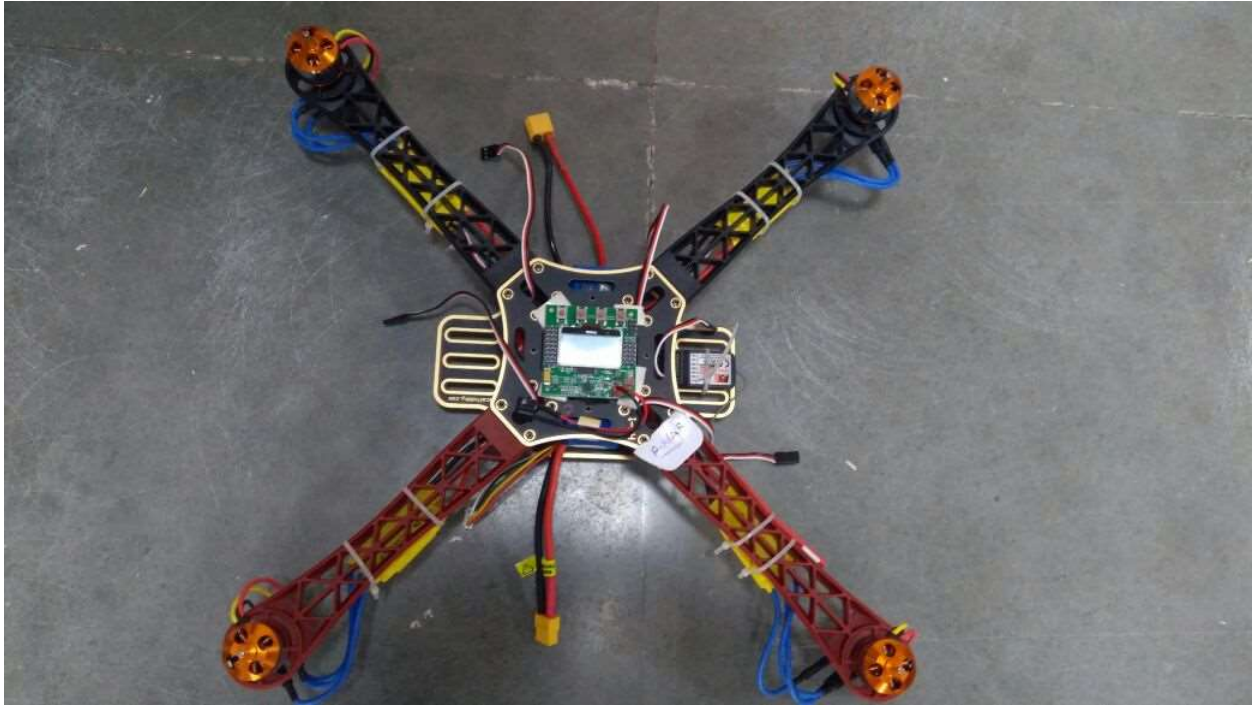
- ESC
- LiPO battery
- LiPo charger
- Basics of IMU
- Accelerometers
- Gyroscope
- GPS
- Reading data from sensors
- Thrust of propellers

Day 4

- Flight controller
- Receiver
- Wireless controller

Day 5

- DIY Drone flying!



The Complete Assembled Drone (Quadcopters)



All the groups with their assembled Drones



Coordinator Prof Milind Bhalerao with Students, Expert & Faculty.



Prof. Milind Bhalerao

Coordinator