

Faculty Expert

Prof. H. C. Patel

21st and 31st July 2017

Time: 09:00 to 03:30



# One Day Workshop Report

## “Robotics Scope and Development of Pick and Place Robot”

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### About E - Yantra Lab:

Project e-Yantra is an initiative to spread education in Embedded Systems and Robotics by IIT Bombay sponsored by Ministry of Human Resource Development through the National Mission on Education through ICT (NMEICT). This project was conceptualized by Prof. Kavi Arya and Prof. Krithi Ramamritham of the Department of Computer Science and Engineering at IIT Bombay.

### Outcome of Project:

- Impart theoretical and programming knowledge to teachers through workshops
- Provide hands on training to teachers through regional e-Yantra Robotics Teacher Competition
- Help colleges set up their own Robotics labs.

### Workshop Contents:

- Introduction to AVR robot
  - Introduction to AVR Microcontroller and Programming environment
  - Motion control using I/O ports
  - Robot velocity control using pulse width modulation
  - Interrupt programming
  - Closed loop position control of robot using position encoders
  - Introduction to LCD interfacing
  - Display of Data Array of eight elements on LCD
  - Interfacing with white line sensors
  - Robot programming for white line following
  - Adaptive cruise control
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### Workshop Benefits and Highlights:

1. Learn & Interact with Robotics Experts and get to know basics of Robotics and its control.
  2. Receive an unparalleled education on the art of Robotics with personal one-on-one attention.
  3. PowerPoint Presentation, Live Demos, Interactive Question & Answer sessions and comprehensive material.
  4. Contents of the workshop will be very helpful to the final year students for understanding the fundamental of the subjects CAM and Manufacturing System.
  5. We welcome you to be a part of SRPEC community. Kindly get in touch with us for your confirmation with the undersigned contact.
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**Participant Venue:** Smt. S. R. Patel Engineering College, Unjha

Number of Students: 40, Computer Students

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