Pravega

EISystems™ Unconventional Ideas. Systematic Approach.

Hosted at IISc BANGALORE

Illusive Reality with Propeller Display

A two days hands-on workshop on Propeller Clock Display, Persistence of Vision & LED Display Patterns

Content Outline

SESSION 1: Starting with Physics

Illusion
- Physiological Illusions
- Pathological Illusions
- Cognitive Illusions

Persistence of Vision

Examples based on Illusion
- Motion Aftereffect Illusion
- Ebbinghaus Illusion
- Café Wall Illusion
- Checker Version
- Lilac Chaser
- Motion Illusion
- Watercolor Illusion
- Hybrid Image Illusion

SESSION 2: Introduction to Basic Electronics

Basic Electronics Components

Fundamental of Electronics Components

Resistors

Transistors

Capacitors

Diodes

SESSION 3: Basics of Electronics to Electricals

TRIAC

Voltage Regulators

Analog to Digital Convertors

Digital to Analog Convertors

Relays

Operation of Relays

Circuit Designing

SESSION 4: Introduction to Microcontrollers
What is microcontroller?
Introduction to Atmega 8 /16 microcontroller
How can we use an own microcontroller in our own circuit?
Pin description of the microcontroller
How to use I/O of the microcontroller
IR Sensors

SESSION 5: Introduction to Embedded C Programming
Embedded C Programming for the Microcontroller
Introduction to AVR Studio and Win AVR
Introduction to C , Flow Control and function
Program structure and debugging
How to program a microcontroller?

Starting with: Simple LED Blinking Program for understanding purpose.

SESSION 6: Propeller Pattern Display- 1
Writing Algorithm for Propeller Display
Coding for Propeller Display
Code Optimisation

SESSION 7: Propellor Pattern Display- 2
Vanish Text
Digital Clock
Analog Text

SESSION 8: Propellor Pattern Display- 3
Circular Rings
Flower Patterns
Display Name

Kit Contents:
Propeller Display Board 01
9-12V DC Adapter
9V DC Battery
IR Sensor Board
DC Motor(1000 RPM)
Connecting Wires