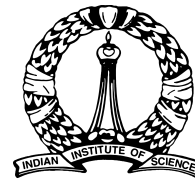




Pravega



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