

AICTE-ISTE Approved one week STTP on “Embedded Systems & Internet of Things”

Organized by Department of Electronics & Telecommunication Engineering, SFIT on
17th -21st June, 2019

REPORT

Electronics and Telecommunication Engineering Department, had organized one week STTP on “Embedded Systems & Internet of Things” during 17-21 June, 2019. The objectives of this STTP was to provide the knowledge on IoT from an overview to in depth hands-on for designing IoT based application/small project to solve real time problems as well as to make participants familiar and proficient with the hardware and software used to make IoT based application. Also to demonstrate various embedded & IoT applications with hands-on training.

Inauguration of this STTP were commence with Prayer and Light Lamping. In this inauguration, all the HoDs, faculties were present along with participants.



Photo during Inaugural Function

Dr Gautam Shah, Head of EXTC SFIT gave opening remarks, briefed about the course contents & objective of the training program

First Day: Chief Guest and keynote speaker Dr. Maryam Shojaei Baghini, Professor in the department of Electrical Engineering at IIT, Bombay, delivered keynote address & gave introduction about Embedded Systems & Internet of Things. On the same day Mr. Gopalkrishnan Narayanan, Assistant Professor in the department of Instrumentation at Vivekananda Institute of Technology, chembur gave introduction about IoT, its architecture, application and which device to use for creating IoT enabled embedded system. He also gave brief about embedded system. He also discussed about Communication Protocols in IOT. As well as he gave brief overview of IOT Design Methodology



Key note address by Dr.Mariyam, IITB



Expert talk by Mr. Gopalkrishnan Narayanan

Second Day: Prof. (Dr.) V.S. Deshpande, Professor at Vishwakarma Institute of Technology, Pune delivered session on Quality of service and Design Challenges in IOT' and 'Research problem statements in IOT'. He discussed about Internet of Things, Wireless Sensor Networks, Quality of Service, Design Issues and solutions, Hardware Implementation, Future Research Scope. On the same day, **Dr. Prasad Joshi**, D.J. Sanghvi College of Engineering, Vile Parle (W), Mumbai delivered session on Recent Trends and Research areas in Embedded Systems. His topic for the session was Introduction to Embedded Systems, Embedded Architectures, Debug and Development tools, Web Resources for Embedded. Next session was engaged by **Dr. Dayanand Ambawade** from Sardar Patel Institute of Technology, Andheri he talked about Cyber Security in IOT. He covered following topics Introduction to IoT, Cyber Attacks and Cyber Security, The IoT Security Challenges, The IoT Security Requirements, Open Source Software (OSS) & Open Source Security Tools, Building Security using Open Source Tool.

Third & Fourth Day: Mr. Mukesh Chaudhary from Prakotechnocrat Company conducted hands on session on Raspberry pi .He gave information about when the Raspberry Pi would be suitable to use for IoT Applications. During hands-on session participants performed interfacing programs in Raspberry Pi with various hardware such as LEDs and switches, motors. In addition, he delivered session on MQTT protocol in Python , also explained different graphical interface elements for controlling LED, MOTOR through python language. He also covered hands on in google assistance.



Expert talk by **V.S. Deshpande**, Professor at VIT Pune

Lab sessions by **Mr. Mukesh Chaudhary** from Prakotechnocrat



Expert Talk by **Dr. Prasad Joshi**, D.J. Sanghvi College of Engineering

Expert talk by **Dr. Dayanand Ambawade** from SPIT

Fifth Day: Ms. Savita Kulkarni & Ms. Snehal Lopes From St. Francis Institute of Technology, Borivali (W), conducted Hands on Session on PSOC Controller and **Dr. Joanne Gomes** from St. Francis Institute of Technology, Borivali (W), delivered hands on session on ESP8266 WIFI Transceiver for IOT.



Expert Talk by Dr Joanne Gomes



Hands on session by Ms Savita kulkarni & Ms Snehal Lopes

The Valedictory function was organized to felicitate participants on successful completion of one week training program on “Embedded Systems & Internet of Things” and Training Completion Certificates were presented to the participants.



Group Photo of participants - During Valedictory Function

Patron: Bro. Jose Thuruthiyil (Director, SFIT) and Dr. Sincy George (Principal, SFIT)

Convener: Dr. Gautam Shah-Professor, Head of the Department (EXTC), SFIT

Coordinator: Ms. Snehal Lopes (Assistant Professor, SFIT) and Ms. Savita Kulkarni (Assistant Professor, SFIT)

Organizing Committee:, Mr. Kevin D’Souza ,Mr. Swapnil Chilap ,Mr. Alister D’souza ,Ms. Valentina Rani ,Ms. Olinda Braganza ,Ms. Swetta Pereira ,Ms.Pratiksha Deshmukh

Report prepared by Ms Savita Kulkarni & Ms Snehal Lopes
Coordinator, STTP