



FACULTY DEVELOPMENT PROGRAMME

on
ROS: Training

Date: 08-06-2020 - 20-06-2020

Resource Person:
Mr. Satya Subham Dash
Project Guide, SAK Robotix

Mr. Satya Subham Dash is working as a Project associate and a designer in SAKRobotix Lab Pvt. Ltd. Bhubaneswar. He has completed his Engineering background in Electrical and Electronics Engineering. His areas of interests include Robotics, IOT, Coding etc.

No. of Participants: 20

About the FDP:

In this course, participants will learn about the technical skills of robotics. Robotics is a multidisciplinary subject comprising mechanics, electronics and coding. The program is designed to involve young minds with deep technical skills and prepare them for the 21st century workforce

RVIZ is a ROS graphical interface that allows you to visualize a lot of information, using plugins for many kinds of available topics. Rviz (short for "ROS visualization") is a 3D visualization software tool for robots, sensors, and algorithms. It enables you to see the robot's perception of its world (real or simulated).

Objective of the FDP:

The objectives of the FDP is to cover and give a basic hands-on-practice on the following points

- ROS BASIC
- ROS Intermediate
- ROS Navigation
- ROS Manipulation

Outcomes of the FDP:

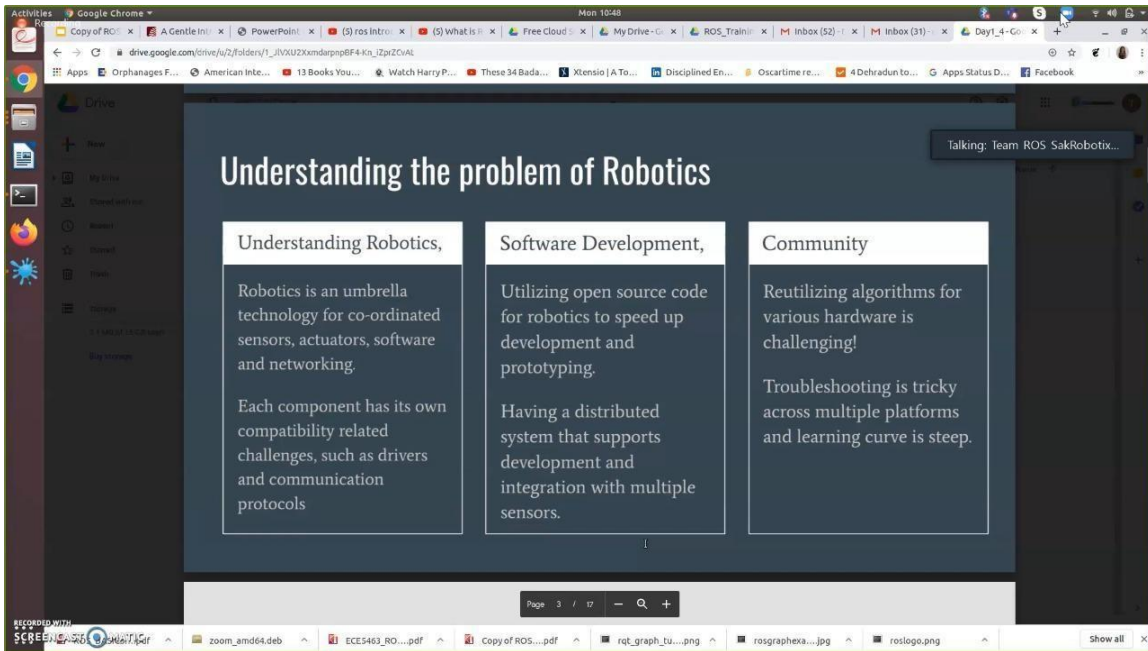
The participants will be able to know the

- Basic of Electronics components
- Basics of PCB Designing
- Basics of Sensors, Sensing & Estimation
- Coding, Basics of Algorithm and Flowchart
- Basics of Microcontroller
- Action & Motion planning models

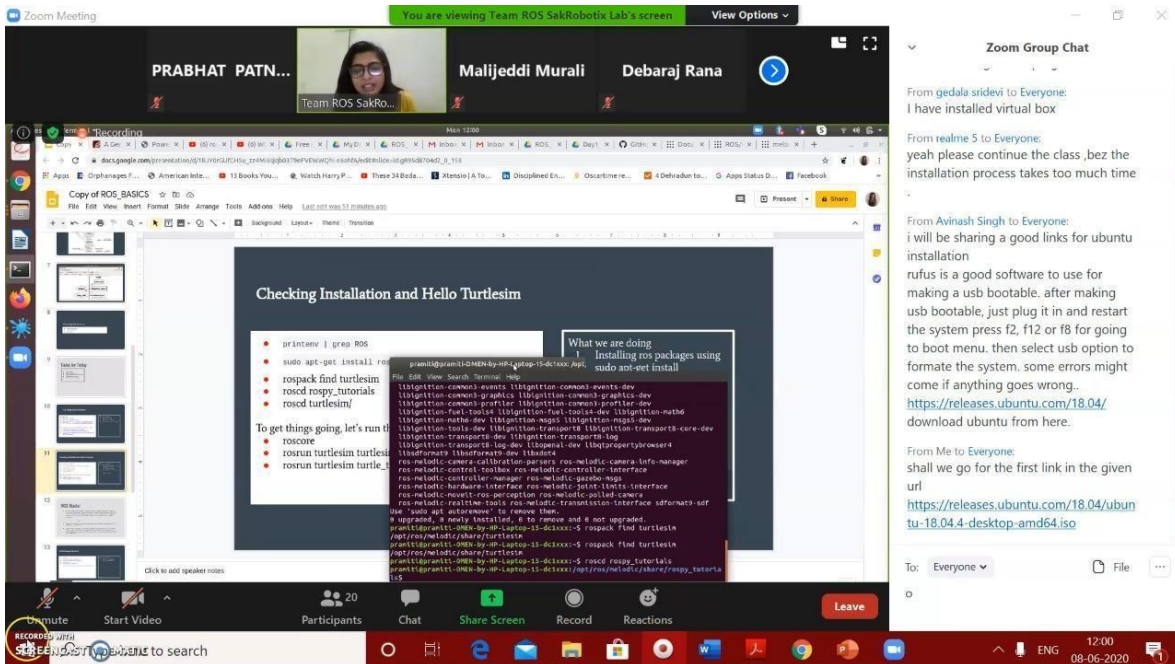
The schedule of the FDP:

Module	No. of Hours	Sub-Modules	
ROS BASIC	15 Hours	<ul style="list-style-type: none">● Ros installation● File System● Nodes● Topics	<ul style="list-style-type: none">● Services● Parameters● Roslaunch
ROS Intermediate	12 Hours	<ul style="list-style-type: none">● Publisher● Subscriber● Service● Client	<ul style="list-style-type: none">● ROSBag● Message● LaserScan
ROS Navigation	24 Hours	<ul style="list-style-type: none">● URDF● TF● Mapping● Localization● Odometry● MoveBase	<ul style="list-style-type: none">● Path Planning● Global Planner● Local Planner● TEB, DWA
ROS Manipulation	9 Hours	<ul style="list-style-type: none">● Robot Manipulator● Soft Robotics● Legged Robots	

Photographs of the FDP:



Screenshot of the on-going concepts of robotics



Screenshot of the on-going FDP on robotics

List of Participants:

1	Dr. Ashish Ranjan Dash	Associate Professor
2	Ms. N. Jeebaratnam	Assistant Professor
3	Mr. Sandipan Pine	Associate Professor
4	Mr. Satyanarayan Padhy	Assistant Professor
5	Mr. Rajesh Kumar Mishra	Assistant Professor
6	Mr. Prabhat Kumar Patnaik	Assistant Professor
7	Dr. Prafulla Kumar Panda	Assistant Professor
8	Dr. Rajib Kumar Majhi	Assistant Professor
9	Mr. Vishal Kumar Singh	Assistant Professor
10	Dr. P. Srinivasa Rao	Professor
11	Mr. Mir Sadat Ali	Associate Professor
12	Dr. Vijay. Muditana	Associate Professor
13	Dr. N. B. Karthik Babu	Assistant Professor
14	Dr. Nagesh Kolagani	Professor
15	Ms. A. Abhilasha	Assistant Professor
16	Mr. Debendra Maharana	Assistant Professor
17	Mr. Md. Sameen Chishti	Assistant Professor
18	Mr. Abinash Panda	Assistant Professor
19	Nandakishore Ray	Asst. Professor
20	Smita Jana	Asst. Professor

Brochure of the FDP:

ROS TRAINING

Organized by:

**Centurion University
Collaboration with
SAK Robotix**

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**JOIN US IN THE 20
DAYS PROGRAM
WITH SAK
ROBOTIX**

Dt: 08-06-2020 to 20-06-2020

SAK ROBOTIX



**CENTURION
UNIVERSITY**



JOIN OUR WORKSHOP WITH



PROF. GAUTAM MODAK
FDP coordinator
Mobile No. : 7980747524



MR. SATYA SUBHAM DASH
Project Guide, SAK Robotix

Prof. KVD Prakash
Dean - IIE & HRD

Dr. Prasanta Ku. Mohanty
Dean Academic