"Robotics with MathWorks"

In association with MathWorks

Please tick on Program Type (✓)	
Awareness/Motivational Program	Workshop/Training
Faculty Development Program	Short Term Training Program
Seminar/Conference/webinar✓	Competition
Hackathon	Tech-Fests
Boot Camp	E-summits
Exchange Program	Exhibition of Innovative Products
Other	
Please tick on Program Theme (✓)	
Skill Development ✓	Research
Bridging the Gaps ✓	Innovation
Ethics	IPR
Soft Skill	Entrepreneurship
Personality Development	

- **Within Campus/Outside Campus (Please tick): outside Campus**
- **Level of Event/Program (College/University/State/National/International): National**
- **Academic Year: 2020-21**
- **No. of Days/Weeks/Duration: 1 Day**
- **Program Start Date: 25th June 2020**
- **Program End Date: 25th June 2020**
- **Organized by: Prof. N.D.Chaudhari**
- **Speaker/Resource Person details/information:**
  - **Debanand Singdeo** works as an Education Technical Evangelist at MathWorks India Private limited, Pune. In this role, he works closely with academic institutions for building awareness and adoption of MathWorks resources in their curriculum. He also strives to understand and support the requirements of researchers with the aim of accelerating the pace of science and engineering.

- He has prior experience in modelling and simulation of renewable energy systems such as solar photovoltaic, fuel cells and battery. He has completed M.Sc- PhD degree from the Department of Energy Science and Engineering, IIT Bombay. In previous roles, he has worked as a postdoctoral research in the Department of Energy Technology, Aalborg University, Denmark and as DST Inspire faculty at Tezpur University, Assam.

- **Contents:**

1. Introductions and Overview of Robotic Systems
2. Modelling a physical system (Robot Arm)
3. Deploying to Hardware

Pre-requisites:
Participant must complete the following self paced online training courses: -

1. MATLAB Onramp (link)
2. Simulink Onramp(link)

PS: Simulink is now available as a part of MATLAB Online (link)!

You can access MATLAB Online at https://matlab.mathworks.com/.
You can login using your MathWorks ID linked with institute email ID.
if you do not have one you can create a new one using institute email ID and login.

Objective:

- To introduce concepts of Robotics.
- To provide hands session on experience on Robotics related toolboxes of MATLAB2020b.

- **Participation details:**

Number of Internal Participants	Number of External Participants	Total
190	**25**	**215**

- **Expenditure details:**

Institute Own/Internal Fund (in Rs)	Total fees collected from Participants (inRs.)	Total Expenditure Incurred (in Rs.)
Nil	**Nil**	**Nil**

- **Analysis of the feedback forms:**
  1. Students had got hands on experiences of basic concepts in Robotics Arm Design.
  2. Students found session very useful to their project.

- **Comments on Outcome of Program:**

  Students will be able

  - To use MATLAB Toolbox™ provides functions and apps to design Robotics Application.