



**DONCEICAO RODRIGUES COLLEGE OF ENGINEERING**  
Fr. Agnel Ashram, Bandstand, Bandra (W), Mumbai - 400 050

## Report of Seminar by Mathworks on 'MATLAB and Simulink for Interactive Teaching and Research

Speaker	: Dr Pranav Lad
Date of Event	: 17/09/2022
Duration	: 5 Hours
Organised by	: IQAC and R&D Committee
Total Number of Participants	: 48
Venue	: Seminar Hall

### **Objective of Program**

Objective of the program was to create awareness about various modules available in MATLAB and Simulink which can be useful for the faculty members for interactive teaching and research.

### **Contents of the Program**

The speaker for the session was Dr. Pranav Lad, Customer Success Engineer at MathWorks.

The morning session was intended for the faculty members from all branches covering AI and machine learning tools in MATLAB. Whereas, afternoon session was mainly dedicated Simulink and Simscape for mechanical and electronics engineering domain problems.

In the morning session, Dr. Pranav Lad provided an overview of data science, AI and machine learning and demonstrated exploratory factor analysis, curve fitting, classification and regression analysis using MATLAB. He also explained how the programs can be developed to collect real-time data from sensors using hardware supported for MATLAB. He also explained that LabJack can be an economic option for collecting the sensors data in the .dat files which can then be processed using MATLAB.

He also demonstrated a feature MATLAB Grader which allows the teachers to scale assessments and automatically grade MATLAB coding assignments in any learning environment. The tool can be used for formative assessment with automated feedback and summative assessments such as quizzes and exams.

In the afternoon session, Dr. Pranav demonstrated modelling of Spring-Mass-Damper System, electronic circuits, thermal and fluid systems using Simulink and Simscape. He demonstrated how Simscape enables rapid development of physical systems within Simulink environment. He explained how to develop physical component models using components available in the library and integrate with block diagrams and other modelling paradigms.



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He also shared information about various self-paced courses made available by Mathworks which can be used to get acquainted with MATLAB, Simulink and Simscape. He also explained their Mathworks excellence in innovation portal which aids students to select their capstone projects based on real industrial problems.

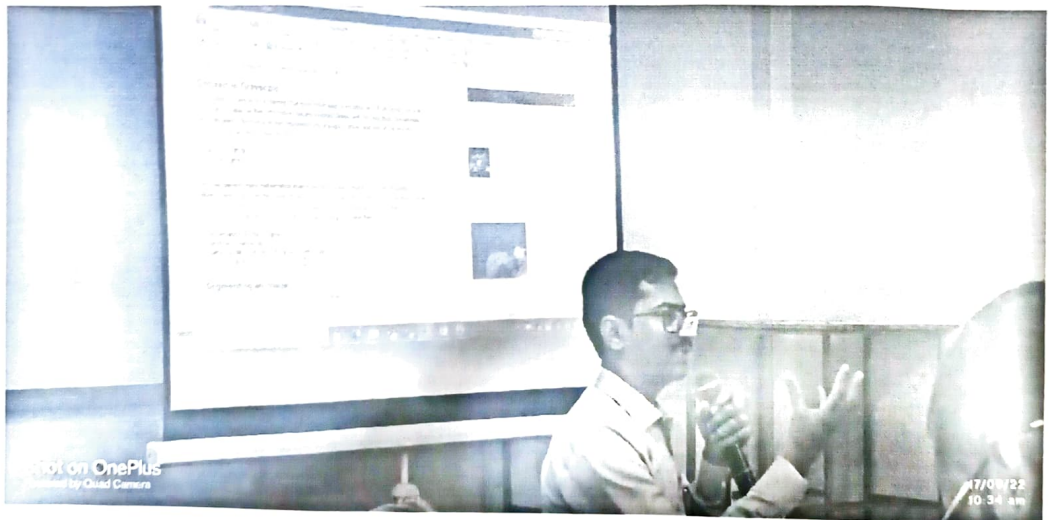
The session was truly informative and interactive in nature. The participants asked various queries related to hardware support, matlab and Simulink features.

The program was successful in developing an understanding of various modules and add-on toolboxes available with the latest version of MATLAB.

### **Outcomes**

Participants were made aware of latest modules and add-on toolboxes provided by Mathworks to the users and got their queries specific to MATLAB, Simulink and Simscape resolved by Mathworks customer success engineer.

### **Photographs of Event**





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