

**Two week online Faculty Development Program on  
 “MATLAB Programming for Additive Manufacturing and 3D Printing (MPAM)”  
 September 20-October 1, 2021**

**Tentative Schedule**

Session	Title	Date	Time	Speaker
1.	Being an effective teacher with Applications of MATLAB	20/9/2021	3:30pm to 5:30pm	PKJ
2.	MATLAB User Interface, Basic Operations, Data Format, Handling Variables	20/9/2021	6:00pm to 8:00pm	PKK
3.	Overview and basics of Rapid Prototyping/Additive Manufacturing/3D printing: research opportunities	21/9/2021	3:30pm to 5:30pm	PMP
4.	Formulating Expressions and Matrices	21/9/2021	6:00pm to 8:00pm	PKK
5.	AM: Classification, Materials and Variants	22/9/2021	3:30pm to 5:30pm	MS/SR
6.	Machine learning application in Additive Manufacturing using MATLAB	22/9/2021	6:00pm to 8:00pm	PKK
7.	MATLAB programming for generating customized lattice structure for Additive Manufacturing	23/9/2021	3:30pm to 5:30pm	AS
8.	Essentials of Programming for Innovative Post processing techniques in AM	23/9/2021	6:00pm to 8:00pm	MT/PKJ
9.	Building Graphical User Interface (GUI) for recursive calculations using MATLAB	24/9/2021	3:30pm to 5:30pm	PKJ
10.	Innovative Applications of Additive Manufacturing using CNC Machining Center	24/9/2021	6:00pm to 8:00pm	NK/PKJ
11.	Programming Basics for decision making, Conditional/logical Statement, Execution Control, Loops	27/9/2021	3:30pm to 5:30pm	PKK
12.	Using MATLAB as smart Calculator	27/9/2021	6:00pm to 8:00pm	PKJ
13.	Writing Functions, Handling data in MS Excel and text file, Debugging a program	28/9/2021	3:30pm to 5:30pm	PKK
14.	2D Plotting Visualization Using MATLAB	28/9/2021	6:00pm to 8:00pm	PKJ
15.	STL File Problems, STL File Manipulation and Repair Algorithms	29/9/2021	3:30pm to 5:30pm	PKJ
16.	3D Plots, Modifying plots using property editor, Automating Plots using Functions,	29/9/2021	6:00pm to 8:00pm	PKJ
17.	Algorithm development and Problem formulation for slicing/data preparation of AM	30/9/2021	3:30pm to 5:30pm	PKJ
18.	open source software for 3D printing, Machine Demonstration, Part printing	30/9/2021	6:00pm to 8:00pm	PKJ/NK
19.	STL file reading, repairing	1/10/2021	3:30pm to 5:30pm	PKJ
20.	slicing, contour generation, path planning, G&M code generation	1/10/2021	6:00pm to 8:00pm	PKJ/MT

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**Tentative list of Speakers for the Course:**

- [Dr. Pulak Mohan Pandey](#), *Professor, IIT Delhi*
- [Dr. Prashant K. Jain](#), *Professor, IIITDM Jabalpur*
- [Dr. Pavan K. Kankar](#), *Associate Professor, IIT Indore*
- [Dr. Sandeep Rathee](#), *Assistant Professor, NIT Srinagar*
- [Dr. Manu Srivastava](#), *Assistant Professor, IIITDM Jabalpur*
- [Dr. Amit Singh](#), *Assistant Professor, MNIT Jaipur*
- [Dr. Mohammad Taufik](#), *Assistant Professor, MANIT Bhopal*
- [Dr. Narendra Kumar](#), *Assistant Professor, NIT Jalandhar*