Faculty Development Program on

Programming and Algorithm Development for Research Applications Using MATLAB

(PAD-RAM)

March 6-10, 2019

Session	Time	Topic
	Day 1, March 6, 2019 (Wednesday)	
	9:00-9:30	Registration
1.	9:30-10:00	Inaugural
2.	10:00-11:00	Programming skill required for being an effective teacher with Applications of MATLAB
	11:00-11:15	Tea Break
3.	11:15-13:15	Introduction to MATLAB as effective communication tool, MATLAB User Interface, Basic Operations, Data Format, Handling Variables
	13:15-14:15	Lunch
4.	14:15-16:15	Expressions and Matrices and
	16:15-16:30	Tea Break
5.	16:30-18:30	Exercise on basic operations and algorithm development
	Day 2, March 7, 2019 (Thursday)	
1.	9:00-11:00	Programming Basics for decision making, Conditional/logical Statement, Execution Control, Loops
	11:00-11:15	Tea Break
2.	11:15-13:15	Using MATLAB as smart Calculator
	13:15-14:15	Lunch
3.	14:15-16:15	2D Plotting Visualization Using MATLAB, 3D Plots
	16:15-16:30	Tea Break
4.	16:30-18:30	Exercise on decision making, loops, Writing Functions
	Day 3, March 8, 2019 (Friday)	
1.	9:00-11:00	Handling data in MS Excel and text file, Debugging a program
	11:00-11:15	Tea Break
2.	11:15-13:15	Modifying plots using property editor, Automating Plots using Functions
	13:15-14:15	Lunch
3.	14:15-16:15	Building Graphical User Interface (GUI)
	16:15-16:30	Tea Break
4.	16:30-18:30	Polynomials, Curve Fitting and Interpolation
	Day 4, March 9, 2019 (Saturday)	
1.	9:00-11:00	Genetic Algorithm and case Studies
	11:00-11:15	Tea Break
2.	11:15-13:15	Building GUIs with display of information, Developing GUI for Input/output functions
	13:15-14:15	Lunch
3.	14:15-16:15	Finite Element Analysis using MATLAB
	16:15-16:30	Tea Break
4.	16:30-17:30	Algorithm development and Problem formulation
5.	17:30-18:30	Quiz/Evaluation
	Day 5, March 10, 2019 (Sunday)	
1.	9:00-11:00	Machine Learning Techniques
	11:00-11:15	Tea Break
2.	11:15-13:15	Exercise on solving Truss problem and heat conduction problem
	13:15-14:15	Lunch
3.	14:15-16:15	App development in MATLAB, Generating Executable Files and Stand-Alone Applications, Case Studies
	16:30 onwards	Presentations by Participants followed by Valedictory