KIT GRACE Science School

MATLAB - Technical Short Course

Date: 02.-04.05.2016, 09.30-13.00

Location: KIT Campus South, Building 20.40, GIK PC-Pool (Room 039)

Lecturer: Prof. Dr. Mulhim al Doori (American University in Dubai)

Credit Points: 1

Contents

MATLAB provides an interactive environment for numerical computation, visualization, and programming. This fourth generation programming language comprises of built-in math functions and tool boxes which enable the user to explore multiple approaches and reach a solution with relative ease in comparison to other programming languages. It enables the user to analyze data, develop algorithms and create models and applications. MATLAB can be used for a range of applications, including signal processing and communications, image and video processing, control systems, test and measurement, computational finance and geodesy. More than a million engineers and scientists in industry and academia use MATLAB, the language of technical computing.

Course topics

- Analysis and Visualization with Vectors and Matrices
- Debugging, Functions and Problem Solving
- Logical Operators, Conditional Statements and Loops
- Graphics and Image Processing
- Strings and Files
- Linear and Differential Equations
- Geographic Data Import & Export
- Mapping Toolbox
- 2D & 3D Map Displays
- Terrain and Elevation Analysis
- Geometric Geodesy and Map Directions
- Data Representation and Transformations

Lecturer

Prof. Al Doori's personal and collaborative research mainly centers round developing and applying novel cognitive, computational intelligence and machine learning techniques to a range of complex real-world and multi-model application areas. More generally, he is interested in novel interdisciplinary research for mathematical modeling, analysis and control of complex systems — both in theory and applications.

Registration

Please register via online form.

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