Matlab and data analysis class

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In this course the participants will learn the **basics of programming** and in particular how to use **Matlab** for universal **data analysis**. It is a course for beginners. The aim is that participants without prior knowledge learn how to use Matlab for data analysis, statistical evaluation and presentation of results.

Target group:
MD and PhD students who want to learn a versatile program for their data analysis and want to acquire basic programming knowledge.

Prerequisites:
Basic computer skills and basic statistical knowledge. Programming knowledge is NOT a prerequisite.

Matlab is:
*   A calculator for interactive calculations
*   A programming language that also provides complex functions with one command
*   A tool for simple and complicated calculations with large amounts of data
*   A platform to summarize and automate different steps of the data evaluation (e.g. read in data, summarize, statistically evaluate, create graphics and save)
*   A Swiss Army Knife for data analysis and simulations

Course contents:
*   Interactive calculations with Matlab
*   Automation for repeated tasks, e.g. the similar analysis of several data sets
*   Fundamentals of programming: functions, loops, if statements
*   Graphical representation of data/simulations/results
*   Basic statistics with Matlab
*   Import of data from files

Structure of the course:
A few minutes of lecture, then immediately trying out what you have just learned on the computer before continuing with the next topic in the lecture. Regular small exercises for consolidation and self-control.

Course dates and location:
Four afternoons, **Tuesday, October 5; Thursday, October 7; Tuesday, October 12; Thursday, October 14, 2:00 PM to 6:00 PM** (German time) as online meeting in Microsoft Teams. The parts of the course strongly build on each other. Participation at all days is therefore absolutely necessary. All participants will need to have installed Matlab on your own computer. Access to Matlab-Licenses will be provided by Saarland University for the semester of the class. Installation instructions will follow with the confirmation of registration.

Registration instructions will follow