

Prof. Dr. Carsten Rockstuhl

Working with MATLAB – an Introduction

08–09 October 2013, 09.00–17.00 h

MMZ, Carl-Zeiss-Str. 8, SR 216

MATLAB constitutes a powerful computational environment that allows scientists and engineers to work comfortably on tasks linked to computation, simulation and the numerical analysis of a sheer unlimited number of problems. Once some fundamental concepts on how MATLAB works are understood, it unfolds its strength, and expertise is acquired in the cause of time while constantly using it.

This course intends to provide such an introduction to MATLAB to interested doctoral candidates and early stage researchers from a generic point of view. Besides an outline of the general abilities, we discuss a fine selection of more specific functions people might wish to work with. Examples are: simple matrix operations, solving ordinary differential equations, application of Fourier transformation, data processing and visualisation as well as writing complex programs.

The course combines demonstration on the functionality of MATLAB combined with a small set of exercises to be mastered by the students. Moreover, time is allocated to discuss specific applications of MATLAB the participants of the course are interested in. Prerequisite would be basic knowledge of algebra and some affinity to work with a computer.