Prof. Sara Collins
Theoretische Physik

Vorlesungsankündigung

Wintersemester 2024/25

Numerical Recipes

Studiengang „Computational Science" (3. Fachsemester)
Veranstaltungs-Nr. 52216 (Vorlesung), 52217 (Übung), 52218 (Computer Lab)

Lectures: Di 10-12 (PHY 7.1.21) and Mi 11-13 (PHY 9.1.11)
Tutorial: Do 12-13 (PHY 9.1.09)
Computer Lab: Do 13-16 (CIP pool PHY 1.0.02)

Start: Tuesday 15.10., 10:15 Uhr, PHY 7.1.21

 In many areas, scientific problems are solved numerically using computers.
The aim of this course is provide an introduction to a selection of numerical
algorithms that are utilised in a wide range of applications. The topics to be
covered include the solution of linear algebraic equations, interpolation and
extrapolation, numerical integration and differentiation, eigensystems, Fourier
series and transformation and the modelling of data.

In the accompanying exercises, the methods presented are put into practice for
selected problems. This includes some programming exercises. Some basic
programming experience is expected in C/C++ or Fortran.