

## IMPRS UFAST Focus Course

# Introduction to Programming with Python for Computational Science

Lecturer: Hans Fangohr

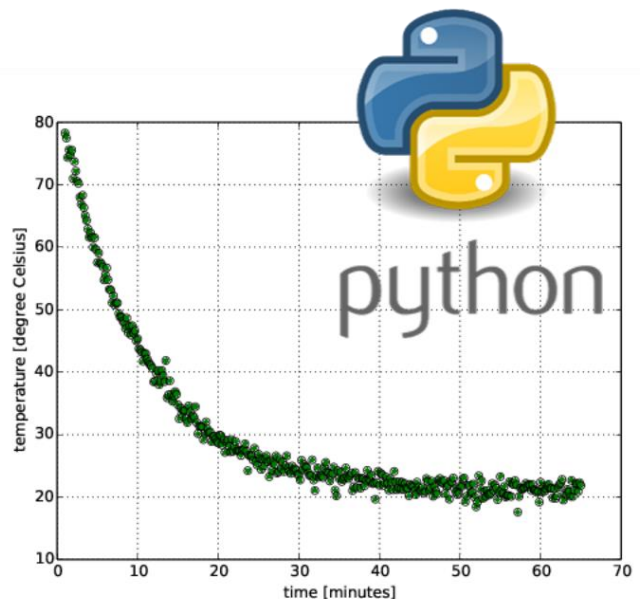
Hands-On exercises: Hans Fangohr, Henning Glawe and Heiko Appel

### Abstract:

The course has been designed for scientists and engineers to teach the practical programming skills that are relevant for modern computational science. The module does not assume prior programming knowledge of participants. The module uses hands-on activities for all participants to exercise and experiment with the taught material. The material covers a wide spectrum of skills that are advantageous for scientists who need to handle data - be it from experiment or simulation – and provides a basis for self learning or directed learning of more specialized topics at a later stage.

### Topics include:

- Introduction to data types in Python
- Control flow
- Name spaces
- Input/Output
- Higher order functions
- Main programming paradigms
- Important Python modules for computational science (numpy, scipy, pandas, sympy)
- Data visualization with matplotlib



### Online course

16<sup>th</sup> – 27<sup>st</sup> January 2023

09:30 h – 13:00 h

Register on Geventis [I-UF FC1](#)