



## IMPRS UFAST Focus Course Object Oriented Programming in Fortran and C++

## Martin Lueders and Alex Buccheri Hands-on exercises: Martin Lueders and Alex Buccheri

## Abstract:

The course has been designed for scientists and engineers to teach the practical programming skills, necessary to contribute to the development of modern scientific codes, such as Octopus, which usually are coded in modern Fortran or C++ and use concepts of object orientation to organize the code.

This course will require some basic knowledge of programming, and preferrably some knowledge of Fortran or C++ [e.g. I-UF FC1].

## **Topics include:**

- Compiling and linking codes
- Basic language features
- Control flow
- Name spaces, modules and scope
- Object orientation
  - Encapsulation
  - Classes and objects
  - Inheritance and Poymorphism
- Object oriented design
- Fortran vs C++ specifics

Online course 10<sup>th</sup> - 14<sup>th</sup> March 2025 09:00 h - 13:00 h, 14:00 h - 17:00 h Register on Geventis I-UF FC6 Registration Deadline 4<sup>th</sup> March















