



Fast and Efficient R code made easy - HEAVYR

From June 8th to June 9th, 2022 (12 hours)

Location : Carreire Campus-University of Bordeaux

Training fees :

Individual participation: €300

Institutional participation : €600

Coordinator :

• Boris HEJBLUM (Coodinator)

Objectives

The objective of this course is to present and practice state-of-the-art tools for the development of fast and efficient R code. This course will be targeted for an audience of scientists and researchers who are not professional software developers, but want to produce performing code. Learning Objectives:

- › Be able to identify computational bottlenecks in one's code.
- › Be able to optimize a function using C++ integration through Rcpp.
- › Be able to harvest multicore's speed by easy parallelization of code.
- › Be able to evaluate and compare speed-up gains of competing implementations.

Module Program

- › Brief recap on writing R packages as a useful tool for code development.
- › How to measure computation time and profile code to identify bottlenecks and compare different implementations.
- › Use Rcpp to optimize the code portion that should be.
- › Easily parallelize one's code.
- › Use GitHub to collaboratively develop open-source R code.

Requirements

A good working knowledge of R will be necessary. Participants are expected to be proficient with functional programming and be familiar with the concept of R package.

WARNING: this course is not suitable for R beginners.