

Initiation au Logiciel R (INITR)	
Du 5 au 6 juin 2023 (2 jours)	Lieu des cours : Isped, Carreire université de Bordeaux
Frais de formation :	
Inscription individuelle : 200 €	Inscription institutionnelle : 600 €
Responsables :	
<ul style="list-style-type: none"> • Mélanie PRAGUE • Valérie KIEWSKY 	

Fast and efficient R code made easy (HeavyR)	
From June 05 th to June 07 th , 2023 (2.5 days)	Location : Isped, Carreire campus University of Bordeaux
Training fees :	
Individual participation: €250	Institutional participation : €750
Coordinator and instructors :	
<ul style="list-style-type: none"> • Boris HEJBLUM (Coordinator) • Robin GENUER (Instructor) 	

Module in English



Digital Public Health Graduate Program / université de BORDEAUX



Objectifs

- › Se familiariser avec le logiciel R, notamment pour la manipulation de données
- › Être capable d'effectuer des analyses descriptives et de réaliser des graphiques

Programme

- › **LES BASES DU LANGAGE**
 - R et sa documentation
 - Maintenance des sessions
 - Production, importation et exportation de données
 - Manipulation de données, création de fonctions
- › **STATISTIQUE DESCRIPTIVE**
 - Fonctions statistiques de base
 - Graphiques

Pré-requis

- › Aucun.
- › Les participants doivent se munir de leur ordinateur portable.

Objectives

- › Present and practice state-of-the-art tools for the development of fast and efficient R 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

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 that needs to
- › Easily parallelize one's code
- › Use GitHub to collaboratively develop open-source R code
- › Use GitHub actions to both perform continuous check of your code and power a companion website

Requirements

- › This course will be targeted for an audience of scientists and researchers who are not professional software developers, but want to produce performing code.
- › 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!
 Participants must bring their own laptop with admin rights.