

Title: Advanced/Modern R

Instructor: David Izydorczyk

Abstract:

This course consists of two parts: Writing faster functions in R and reproducible and interactive reports with R. The first part will give a practical introduction in the topics of (micro) benchmarking, profiling, vectorization, using C++ in R, and parallelization for people new to the topics. Participants will learn to measure the timing of their code and identify potential bottlenecks, as well as how to solve those bottlenecks and speed up R functions and simulations. Participants should have worked with R before and should know how to write a for-loop.

The second part will give an introduction in writing reproducible reports with R-Markdown, writing complete papers with the papaja-package, adding interactive shiny elements, and finally building and publishing shiny web applications.