



PhD Program in Plant Sciences - Digital Skills: Scientific Visualisations using R

Lecturer: Dr. Jan Wunder
Location: ETH center, CLA J1
Dates: November 29th & December 13th, 2024
Time: 9:00 – 17:00
Credit Points: 1 ECTS

Course Objectives

Visualisations can decide about the success of scientific lectures, poster presentations or journal articles. In this course you will get a very brief introduction into general design principles and guidelines for data visualisations. Based on this theoretical framework we will spend most of the course time to learn how to use R as a powerful graphical software to create a wide range of customised graphics that include - but are not limited to - traditional scatter plots, bar plots, mosaic plots, box plots, density plots, violin plots, and interactive graphics as well as grid-based geographic maps and state-of-the-art multipanel conditioning plots (and many more).

You will learn about the two pillars of the R graphics systems, i.e. Traditional and Grid graphics. The course focuses on the latter system and more recent developments such as ggplot2 and other advanced packages based on the “The grammar of graphics”-concept. Depending on the course progress, there will be scope for students to work on small projects and / or their own data sets.

Prior Knowledge:

Basic knowledge of R / attendance of the course “Introduction to R”

Number of Participants: Participation is limited to 16.

Students are required to bring their own Reading:

- Murrell, Paul 2018. R Graphics. John Wiley and Sons
- Free online sources

Individual Performance and Assessment:

Attendance and active participation during the course days (14 hours).

In order to obtain the credit points, participants are required to hand in an assignment to be carried out at home (preparation work of 14 hours). The details will be explained during the course. The assignment is due no later than one week after the course has ended.