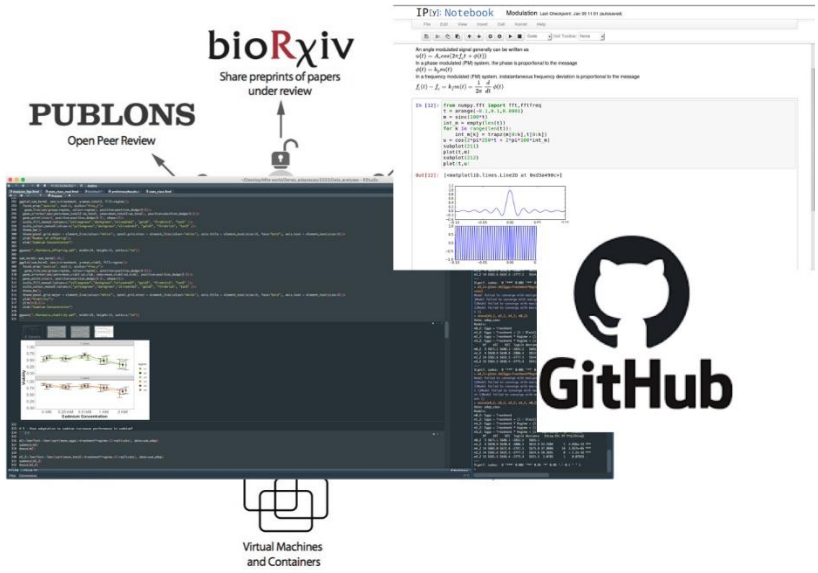

Reproducibility in Science

ONLINE EDITION

Teacher: Inês Fragata (cE3c)

Calendar: January 6 to 8 2021
Duration: 18 hours
Schedule: 9h-12h30 and 14h-17h30m, Wednesday-Thursday; 9h-13h – Friday

Objectives

Provide students with basic workflows, platforms and tools to increase reproducibility at all scientific levels

Topics:

- Why reproducibility in science is important.
- Working with Github.
- Data processing workflows to maximize reproducibility.
- Notebooks (R and Jupyter).
- Manuscript and data repositories.

Detailed Plan:

- **Why reproducibility is important:** we will go through the reason why is it important to keep our research reproducible for others and for ourselves
- **Working with Github:** students will become familiar with the use of Github as a tool to detail steps of data analysis and data processing and even manuscript writing
- **Data processing workflows to maximize reproducibility:** students will become familiar with different workflows that allow to create reproducible steps in data processing using open source tools
- **Notebooks (R and Jupyter):** using two of the most common scripting languages in biology, students will see how notebooks can be used to create fully automated and reproducible analyses
- **Manuscript and data repositories:** we will go through the different data and manuscript repositories and the advantages of sharing documents in these types of platforms.

This course can have a recognition of 3 ECTs for FCUL PhD students enrolling in it as part of their first doctoral year.

Location: Instructions with links to e-learning platforms will be sent by the teacher

Nº (min, max) students: 10 – 30

Minimum formation: - Bachelor's degree in biology or related areas. No previous knowledge is necessary.

Directed to: PhD or MSc students in Biology or related areas, and postdocs and other professionals working in related areas

Fee: free for 1st year PhD students in Doctoral programmes at FCUL (e.g. Biologia), Biodiversity, Genetics and Evolution (BIODIV UL; UP) and Biology and Ecology of Global Changes (BEAG UL, UA) when the course counts credits for their formation, in which case the delivery of a final report done after the course is mandatory; the course is also free for more advanced PhD students of the BIODIV programme (ULisboa or UPorto); 15 € for other PhD students from cE3c, 30 € for PhD students from institutions of the PEERS network (CFE); 60 € for FCUL Master students, more advanced PhD FCUL students and unemployed (not from cE3c); 80 € for BTI, BI and other PhD students; 115 € for Professional and postdocs.

Priority is given to non-paying 1st year PhD students mentioned above, being, by order of preference: 1) cE3c students; 2) BIODIV students (not from cE3c); 3) FCUL students (not from cE3c); 4) BEAG students (not from FCUL).

Deadline for applications: December 8th 2020

Candidates should send a short CV and a motivation letter to Inês Fragata (irfragata@gmail.com). The cv and letter should be named as 1st-last*NAME-CV.pdf* and 1st-last*NAME-ML.pdf* (that is *personalize the name of each file with your first and last name*).

In the email please add the following information:

Full Name:
E-mail:
Phone:
Professional activity: Professional/Postdoc, BTI, BI (or other non-post-doc research grant), PhD student (with/ without scholarship), Lic. (Bachelor)/Master student

PhD student of the 1st year of a Doctoral programme at FCUL, BIODIV (FCUL/FCUP), or BEAG (FCUL or UA)?
If yes to the above question, PhD student doing the Course to count credits for 1st year?:
PhD student of cE3c or CEF (Centro de Ecologia Funcional)?:
Name of the PhD programme: