



Advanced Course: Data Analysis Using R

September 9th to 13th

General information

This course aims at introducing the attendees to the R environment and language as well as improving your data analysis skills. You will be equipped with tools to understand not only the examples presented, but also to face new challenges that are specific to your future analyses.

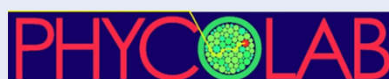
Attendees should expect to learn the very basics of R, data manipulation tools, and analysis of several data types using different packages.

The course has the duration of 40 h (Advanced Course) and is comprised of 10 blocks which are detailed in the following pages. Evaluation will consider attendance, overall interest and participation. A certificate will be provided at the end of the course.

Don't forget: Bring your own laptop!



POCI-01-0145-FEDER-028751





Advanced Course: Data Analysis Using R

Room 7.2.218



Universidade de Aveiro

Campus de Santiago

Departamento de Ambiente
e Ordenamento

Building number: 7

Floor: 2

Room: 218

GPS: 40.63262, -8.659039

Detailed program

Monday September 9 th	09:00	Welcome reception	<i>Cátia Fidalgo</i>
	09:30-12:30	Introductory session about R and R Studio	
		Objects and Operations in R	<i>Eduardo Batista</i>
	14:00-18:30	Data input from different sources	<i>Cátia Fidalgo</i>
		Data manipulation using <i>Tidyverse</i>	
Tuesday September 10 th	09:00-12:30	Exploratory Data Analysis and Univariate analysis	<i>Cátia Fidalgo</i>
	14:00-18:30	Curve-fitting: simple and multiple regressions	<i>Rafael Félix</i>
Wednesday September 11 th	09:00-12:30	Data visualization: graphing in R	<i>Rafael Félix</i>
	14:00-18:30	EDA and Multivariate analysis	<i>Cátia Fidalgo</i>
Thursday September 12 th	09:00-12:30	Hands on session on the analysis of data from mass spectrometry-based metabolomics	<i>Paulo Cardoso</i>
	14:00-18:30	pRocessomics: a new bioinformatic tool for integrative multiomics analysis	<i>Laura Lamelas</i>
Friday September 13 th	09:00-12:30	Can Big Data save the world?	<i>Eduardo Batista</i>
	14:00-18:30	Sequence analysis (Bioconductor)	<i>Cátia Fidalgo</i>
		Wrap-up session	

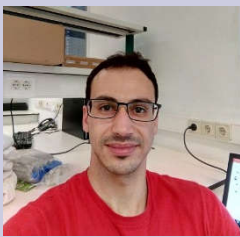


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Lecturers



Cátia Fidalgo, PhD in Biology
Department of Biology & CESAM, University of Aveiro



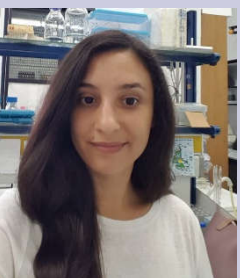
Paulo Cardoso, PhD in Biology and Ecology of Global Changes
Department of Biology & CESAM, University of Aveiro



Eduardo Batista, MSc in Nature and Forest Conservation
Department of Biology & CESAM, University of Aveiro



Rafael Félix, MSc in Molecular Biotechnology
MARE-Politécnico de Leiria, REQUIMTE-FFUP



Laura Lamelas, MSc in Biotechnology
Department of Organisms and Systems Biology, University of Oviedo