# SEMINAR

## **CEAUL & CEMAT**

### **INTRODUCTION TO EXTREMES WITH R**



Centro de Estatística e Aplicações Universidade de Lisboa

center for computational and stochastic mathematics



#### **SPEAKERS**

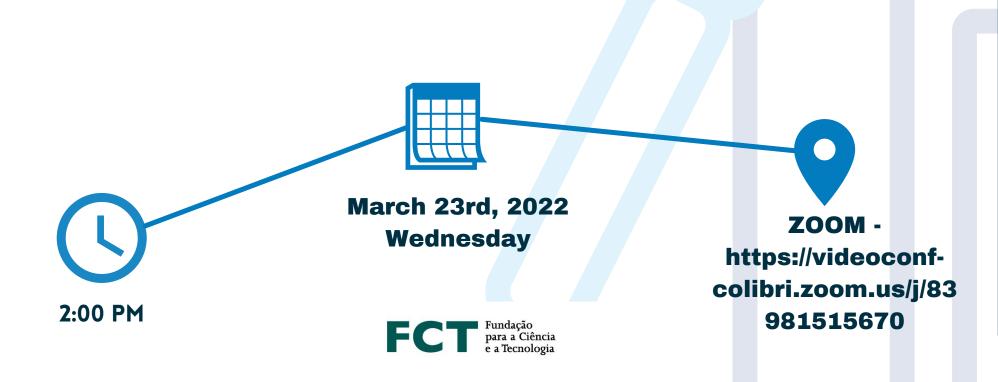
#### **Soraia Pereira** Faculty of Sciences, University of Lisbon

Soraia is an Invited Auxiliary Professor at the Department of Statistics and Operational Research of the Faculty of Sciences, University of Lisbon (FCUL). She has a PhD in Statistics from FCUL. She has experience in Spatial Statistics, Bayesian Statistics, Statistics of Extremes and Environmental Data Science. Her special interest is to develop statistical methods to answer relevant questions based on real-life data.



#### Lídia André Lancaster University

Lídia is a PhD student at Lancaster University. Her research focuses on developing dependence models that accurately fit the non-extreme observations whilst getting the behaviour at extreme observations right. She has experience in Copula modelling, Multivariate Extreme Value Theory and Bayesian Statistics.



#### **ABSTRACT:**

This workshop aims to introduce extreme value theory analysis. We will start by motivating the need for modelling extreme observations and present the most common methodologies to do so: the block maxima and the peaks over threshold approaches. We will apply these methods to real data using the most common R packages for extremes and the inference will be made under a frequentist framework. It is advised that participants install RStudio, together with the packages "ismev" and "evd", previously to the session.