

# MULTIVARIATE STATISTICS WITH R FOR BIOLOGICAL SCIENCES

## CIIMAR

### Course program

16 hours; 20 – 23 July 2020

Session 1. 10:00 – 14:00 h (break from 11:45 to 12:15h)

- 1.1 Introduction
- 1.2 Principal components analysis
- 1.3 Factor analysis

Session 2. 10:00 – 14:00 h (break from 11:45 to 12:15h)

- 2.1 Correspondence analysis
- 2.2 Canonical correlation analysis
- 2.3 Redundancy Analysis

Session 3. 10:00 – 14:00 h (break from 11:45 to 12:15h)

- 3.1 Canonical Correspondence Analysis
- 3.2 Exercises
- 3.3 Multidimensional scaling

Session 4. 10:00 – 14:00 h (break from 11:45 to 12:15h)

- 4.1 Cluster analysis
- 4.2 Discriminant analysis
- 4.3 Exercises

**Classroom:** CIIMAR, 1<sup>st</sup> floor

**Docent:** Aldo Barreiro Felpeto. CIIMAR.

**Price:** 100 € (CIIMAR/UP members) 120 €/week others.

**Registration:** after announcement, up to fill 20 available positions.

Registration, together with the payment information, is available in the CIIMAR website, through the link that is sent with the e-mail announcing the course.

Proof of payment required to book the place (send proof to [aldo.barreiro@gmail.com](mailto:aldo.barreiro@gmail.com)).

Right after affective registration, a confirmatory e-mail will be sent.

**Minimum audience required:** 5 registrations 2 weeks before the course.

#### Important additional information:

- The course will be taught in English.
- At least beginner R user level is recommended.
- Students will need to use their own laptops for the course.
- All the information and materials necessary for the development of the course (instructions to install R and R packages, pdf with lessons content, scripts with examples and exercises, data for examples and exercises) will be made available for all the participants in the course through a link to the Open Science Framework website platform.

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