

# STATISTICS WITH R FOR BIOLOGICAL SCIENCES

CIIMAR, 2, 3 and 5, 6 of March 2020

Session 1. 10:00 – 14:00 h, 2<sup>nd</sup> March 2020

- 1.1 Descriptive statistics and distributions.
- 1.2 Linear regression.
- 1.3 Exercises.
- 1.4 Non-linear regression.

Session 2. 10:00 – 14:00 h 3<sup>d</sup> March 2020

- 2.1 Non-parametric regression.
- 2.2 Exercises.
- 2.3 The frequentist statistical framework.
- 2.4 Tests for contrast of hypothesis.

Session 3. 10:00 – 14:00 h 5<sup>th</sup> March 2020

- 3.1 General linear model.
- 3.2 Exercises.
- 3.3 Mixed effects models.
- 3.4 Exercises.

Session 4. 10:00 – 14:00 h 6<sup>th</sup> March 2020

- 4.1 Generalized linear models
- 4.2 GAM models.
- 4.3 Exercises.
- 4.4 Exercises

**Course location:** CIIMAR;

**Classroom:** Conference room, first floor.

**Map:**

[https://www.google.pt/maps/place/CIIMAR+\(Centro+Interdisciplinar+de+Investiga%C3%A7%C3%A3o+Marinha+e+Ambiental\)/@41.1773922,-8.7030936,17z/data=!3m1!4b1!4m5!3m4!1s0xd246f26d34bd3bd:0xe0698a62c9827ed7!8m2!3d41.1773922!4d-8.7009049?hl=gl](https://www.google.pt/maps/place/CIIMAR+(Centro+Interdisciplinar+de+Investiga%C3%A7%C3%A3o+Marinha+e+Ambiental)/@41.1773922,-8.7030936,17z/data=!3m1!4b1!4m5!3m4!1s0xd246f26d34bd3bd:0xe0698a62c9827ed7!8m2!3d41.1773922!4d-8.7009049?hl=gl)

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

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

After sending the proof of payment, a confirmatory e-mail for the registration will be sent.

**Important additional information:**

- The course will be taught in English.
- At least a beginner's background in R programming is required.
- 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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