FONDAZIONE EDMUND MACH

universidade de aveiro
departamento de biologia

EUROMAMMALS

Summer School 2020

DATA MANAGEMENT IN MOVEMENT ECOLOGY

University of Aveiro, Department of Biology - Portugal
July 6th - 10th, 2020

DATES

Summer school: July 6th - 10th, 2020

Registration deadline: May 15th, 2020

Acceptance: May 30th, 2020

ORGANIZERS

Carlos Fonseca, University of Aveiro

Rita Torres, University of Aveiro

Francesca Cagnacci, Edmund Mach Foundation

TEACHERS

Ferdinando Urbano (Euromammals)

Emiel van Loon (University of Amsterdam)

Francesca Cagnacci (Edmund Mach Foundation)

Federico Ossi (University of Trento)

Paola Semenzato (DREAm - Italy)

Johannes De Groeve (University of Amsterdam)

PARTICIPATION

This course targets PhD students, but participation of post-docs, researchers, managers and motivated MSc is also fostered. There will be room for a maximum of 25 participant

FEES AND COSTS

Free for PhD students from Aveiro and Lisbon

Students: 300€

Researchers/Managers: 450€

EVALUATION AND CREDITS

ECTS credits will be assigned, after positive grades in a final exam

REGISTRATION

Send an email containing a brief description of your PhD project and of the relevance of the course to your research with a CV to Francesca Cagnacci (francesca.cagnacci@fmach.it) and Rita Torres (rita.torres@ua.pt)

Data management is increasingly becoming a necessary skill for ecologists, as has already happened with statistics and GIS. This is especially true for movement ecology that can exploit data sets of ever increasing size, frequency and resolution from tagging techniques. These data come with complex associated information related to the animal characteristics, interactions and management and to the environmental context, such as population density, weather, habitat types and vegetation indexes based on remote sensing.

This course has the objective to learn how to handle, model, store, and process in a robust and efficient way animal ecology data, and particularly the spatio-temporal information linked with movement data.

These objectives will be pursued through a hands-on, step by step approach during an intense one-week course with a mix of technical lectures and hands-on exercises to manage and manipulate ecological data typically used in Movement Ecology.

Proficiently following the course will provide participants with solid skills in management and analysis of ecological spatio-temporal data. At the end of the course the participants:

- will be able to create a (spatial) database to store their ecological data sets;
- will master SQL and spatial SQL to retrieve and process their data;
- will be able to manage advanced animal movement database;
- can use R in connection with a database to analyse their data.

PROGRAM

1) Introduction to Data Management in Animal Ecology (3 hours)
2) SQL and Spatial SQL (16 hours)
3) Cleaning and Storing an Ecological Dataset into a Database (6 hours)
4) Movement Ecology Data Management in PostgreSQL/PostGIS (6 hours)
5) Movement Ecology Data Analysis in R (6 hours)

For more information plese visit:

WWW.MIPIACITU.ORG

The training material of the course is available at:

https://github.com/feurbano/data_management_2020