



UNIVERSITÀ DEGLI STUDI DI TORINO

ID

VP35\_DIP\_BIOS

## **Visiting Professor Program Academic year 2021/2022**

**DEPARTMENT OF LIFE SCIENCES AND SYSTEMS BIOLOGY**

**TEACHING COMMITMENT: 24 hours**

### **COURSE TITLE**

**Modelling Animal Movement and Habitat Selection for Sustainability Analysis of Conservation Programs**

### **TEACHING PERIOD**

2nd term

### **SCIENTIFIC AREA**

Applied ecology, conservation biology

### **LANGUAGE USED TO TEACH**

English

### **COURSE SUMMARY**

The course aims to provide an up-to-date understanding of the core principles, topics and practical skills about the Geographical Information Systems (GIS), the utilization of the “R” statistical software and the develop of species distribution models (SDM) in relation to sustainability evaluation of conservation project.

Basic info about geographic species distribution and ecological niche – Use of models to predict species distribution – Distribution modelling – Models validation - Conservation project from a modelling point of view: 1) high compatibility area selection for rare and / or cryptic species; 2) Area selection for species reintroduction.

## **LEARNING OBJECTIVES**

The main aim is to familiarise students with the different methodologies applied to the study of the spatial and temporal distribution of natural resources when carrying out research in sustainability development.

At the end of the course, the student will have to prove to have developed the competences about:

- how to develop a geographical information system using the species presence information and the environmental variables that explain the presence of the species in the studied area;
- how to develop statistical analysis using species presence information;
- how to develop potential species distribution models;
- how set up a simple conservation project from a modelling point of view
- how to evaluate the sustainability of the project.

## **TUTORSHIP ACTIVITIES**

The Visiting Professor will be available for co-tutoring student dissertations focused on cooperation projects in developing countries.

## **LAB ACTIVITIES**

Analysis of distribution data of carnivores in the Alps

## **OTHER ACTIVITIES BESIDES THE COURSE**

The professeur will participate to:

2 seminars for PhD students

1 dissemination conference within the framework of WOLFALPS Life Project

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## **VISITING PROFESSOR PROFILE**

A conservation biologist expert in modelling biological data of natural population of mammals in relation to environmental factors, with several years' experience of teaching at University level (undergraduate and postgraduate), high-profile publications in the field of ecological modelling of wildlife in the Alps.

## **CONTACT PERSON AT THE DEPARTMENT**

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