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SIPo (Seminario de Investigadores Postdoctorales)

Speaker: Laura Jiménez (CMM)

Title: Statistical, mathematical, and computational methods for the advancement of ecology and climate change biology.

Abstract:

I will delve into three key topics of my research in quantitative ecology and how the outcomes contribute to understanding and preventing biodiversity loss. In each case, I will describe the ecological context, the data at hand, and the primary modeling tools used to address the problems of interest. First, I will talk about optimal survey design, which involves techniques to efficiently estimate population density by balancing sample size, spatial distribution, and survey effort. Next, I will explain how statistical calibration techniques are applied for error correction and data fusion from diverse sources to improve biomass or abundance estimates, which are then used to design management and conservation strategies for coral reef fish. Lastly, I will demonstrate the use of ecological niche models to describe where a species lives and predict its likely distribution under climate change and anthropogenic disturbances.

Date and Time: 02 December, Monday at 2.30 PM
Venue: John Von Neumann Seminar Room, CMM, Beauchef 851, North Tower, 7th Floor