

Seminario de Probabilidades de Chile

Orador: Kerlyns Martinez Rodriguez (Universidad de Concepción)

Título: Stochastic models with age structure under harvesting: existence, approximation and estimation.

Resumen:

In this talk, we will present the development and analysis of a mathematical model for the kelp population, which integrates ecological and sociological aspects, in particular the response of harvesters to environmental regulations through parametrised decision rules. We will begin with a heuristic derivation of the model, incorporating the uncertainty inherent in open systems. We will then address the theoretical analysis, establishing conditions for the existence and uniqueness of admissible solutions in our context, the characterisation of asymptotic extinction scenarios and the existence of invariant measures. Subsequently, we will introduce an efficient numerical scheme that preserves the essential properties of the model even with non-linear growth coefficients, which will serve as the basis for parameter estimation from observed data.

El enlace para conectarse al seminario es:

Unirse a la reunión Zoom

<https://reuna.zoom.us/j/84521834914?pwd=OTZ6Y0NWM3pYTGtTbEt3c0luTG96UT09>

ID de reunión: 845 2183 4914

Código de acceso: 997973

**Modalidad híbrida en la sala Maryam Mirzakhani, Torre Norte Piso 6, , Beauchef 851.
Miércoles 13 de Agosto 2025 a las 16:15 horas.**

