

Seminario de Probabilidades de Chile

Orador: Nicolás Zaldueño

Título: Central limit theorems for structured branching processes

Resumen:

In this talk I will discuss recent progress on central limit theorems for supercritical branching Markov processes in infinite-dimensional settings. The class of processes under consideration allows for spatial dependence and branching mechanisms that need not be local. A key feature of our approach is that it only requires a fourth moment condition together with exponential convergence of the mean semigroup in a weighted total variation norm. This assumption is mild in that it does not rely on symmetry or detailed spectral information. The resulting central limit theorems capture two of the three classical regimes of convergence (the small and critical branching cases), and extend them to a broader family of processes. The proofs rely on Stein's method, which further yields quantitative rates of convergence.

This is a joint work with Bertrand Cloez (INRAE Montpellier)

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 24 de septiembre 2025 a las 16:15 horas.**

