CMM
Center for
Mathematical
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cmm.uchile.cl

Beauchef 851, Edificio Norte, piso 7
Santiago, CHILE
CP 837 0456

tel +56 2 2978 4870

Seminario de Probabilidades de Chile

Orador: Laurent Miclo (TSE, Francia)

Título: On fraudulent stochastic algorithms.

Resumen: We introduce and analyse the almost sure convergence of a stochastic algorithm for the global minimisation of smooth functions. This diffusion process is called fraudulent because it requires the knowledge of minimal value of the function. Nevertheless, its investigation is not without interest, since in particular it appears as the limit behaviour of non-fraudulent and time-inhomogeneous swarm mean-field algorithms for global optimisation or in stochastic gradient descent algorithms in over-parametrised deep learning applications. The talk is based on collaborations with Benaïm, Bolte and Villeneuve.

Oradora: Aurelia Deshayes (Paris-Est Créteil, Francia)

Titulo: The rightmost particle of the inherited sterility contact process.

Resumen: The contact process with inherited sterility provides a probabilistic framework for studying population control strategies inspired by the Sterile Insect Technique.
In this model, an infected particle can create a fertile infected particle (with probability p) or a sterile infected particle (with probability 1-p) which will behave like an “environment” blocking the propagation of the infection. The main challenge is that this model is not attractive (since an increase of fertile individuals potentially causes that of sterile ones). Sonia Velasco previously proved that this process can survive for p large enough. We will study the behavior of the rightmost infected particle (starting from a finite configuration of infected particles) and we will prove, for a certain regime of parameters, a law of large numbers and a central limit theorem. This is a joint work with Isabella Goncalves de Alvarenga.

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 19 de Noviembre 2025 a las 15:00 horas.