

Seminario de Probabilidades de Chile.

Orador: Tal Orenshtein (TU Berlin)

Título: Rough walks in random environments.

Resumen: We shall discuss functional CLTs for additive functionals of Markov processes and regenerative processes lifted to the rough path space. The limiting rough path has two levels of which the first one is a Brownian motion with a well-known covariance matrix. However, in the second level we see a new feature: it is the iterated integral of the same Brownian motion perturbed by a deterministic linear function called the area anomaly and characterized in terms of the model. With that one obtains sharper information on the limiting path. The construction of new examples for SDE approximations is an immediate application. Two prototypical classes of random walks in random environments are covered as special cases: the ballistic class and the random conductance model, both with respect to the annealed law. For the random conductance model we shall present a more delicate treatment which yields a quenched result under additional restrictions.

Based on collaborations (some still in progress) with Johannes Bäumlér, Noam Berger, Jean-Dominique Deuschel, Olga Lopusanschi, Nicolas Perkowski and Martin Slowik.

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

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MIÉRCOLES 01 DE DICIEMBRE DEL 2021 A LAS 16:15 HRS.