

# Inn'formal Probability Seminar

**Tal Orenshtein (University of Milano-Bicocca)**

“Rough walks”

## Abstract

*We shall discuss functional CLTs for families of inhomogeneous processes lifted to the rough path space. Interesting applications include ballistic random walks in random environments and random walks in random conductances. The rough path in the limit has two levels: the first one is a Brownian motion, whereas the second level contains a new quantity -- rather than obtaining the iterated integral of the Brownian motion, we observe a perturbation of it by a deterministic linear function, called the area anomaly. The results provide sharper characterization of the path in the limit and as we shall see in the talk, the area anomaly can be obtained as an "averaged antisymmetry" for these models.*

*Based on collaborations with Johannes Bäuml, Noam Berger, Jean-Dominique Deuschel, Olga Lopusanschi, Nicolas Perkowski and Martin Slowik.*

Tuesday | 07.03.2023 | 14:15  
SR 734 | civil engineer building