

Seminar of Probability and Stochastic Process

Friday, 18th January, from 14h15 to 15h00

[MA A1 12](#), EPFL, Ecublens

[Prof. Alejandro Ramírez](#)

Pontificia Universidad Católica de Chile

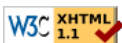
Ellipticity criteria for ballistic behavior of random walks in random environment

Abstract:

We introduce new ellipticity criteria for random walks in i.i.d. random environments under which we can extend the ballisticity conditions and some of their consequences originally defined for uniformly elliptic environments. We prove under these ellipticity criteria the equivalence of Sznitman's (T') condition with the polynomial effective criterion $(P)_M$, for M large enough, recently introduced by Berger, Drewitz and Ramírez. We furthermore give ellipticity criteria under which a random walk satisfying the polynomial effective criterion, is ballistic, satisfies the annealed central limit theorem or the quenched central limit theorem.

This talk is based on a joint work with David Campos.

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