

27th Rencontres ITZYKSON : Fluctuations far from Equilibrium



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Patricia GONÇALVES - Universal fluctuation limits in multi-species exclusion

Friday, June 2, 2023 10:15 AM (45 minutes)

In this talk, I will present a model which was introduced in [1] and consists of an exclusion process with different types of particles, let us say types A, B, and C. Depending on the interaction rate between different types of particles, the limiting fluctuations end up in different universality classes: either the fluctuations are governed by energy solutions of the stochastic Burgers equation or by the Ornstein-Uhlenbeck equation. These results match the predictions from the non-linear fluctuating hydrodynamics of Spohn, Schutz, and collaborators. (Joint with G. Cannizzaro; A. Occelli, R. Misturini.)
[1] Schuetz, Wehefritz-Kaufmann: Kardar-Parisi-Zhang modes in d-dimensional directed polymers, Phys. Rev. E 96, 032119 (2017).

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