SEMPARIS – Séminaires en région parisienne

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Forum de Physique Statistique @ ENS

Mercredi 15 Décembre 2021, 14 :30
LPENS, L367(Please inquire guillaume.barraquand@ens.fr or xiangyu.cao@ens.fr for a zoom link)
Domaines : cond-mat.stat-mech

Titre : *The effect of disorder on pinning models : old and new results*

Orateur : **Giambattista Giacomin (DMA ENS & LPSM)**

Résumé : *Pinning models are a class of exactly solvable models that display a phase transition from a delocalized to a localized phase. They naturally appears as simplified models for DNA denaturation or for interface wetting in two dimensional systems. Much is known by now also on the disordered versions of these models. The aim of the talk is to give a review of some of the main reults in this field and to discuss generalized pinning models in which, in addition to a localization transition, another type of transition is observed (in absence of disorder). In fact, a partially localized regime may appear. In mathematical temrs the key word to have a glimpse of how the partially localized trajectories look like is « big jump ». The final aim of the talk is to explain that (and hopefully why) partial localization is incompatible with the presence of disorder. In other words, disorder smooths the partial localization transition.*