Contribution Title: DISORDER AND CRITICAL PHENOMENA: THE
                           CASE OF THE PINNING TRANSITION
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Invited speaker: Topical session
YRS seminar: NO

I will consider (1+d)-dimensional directed polymers interacting with a defect (say, a wall) via a random potential. The question I will discuss is that of disorder relevance, i.e.: does disorder change critical point and critical exponents with respect to their "annealed" values? The answer depend on the space dimension. I will present rigorous results which confirm the Harris criterion both in the relevant and in the irrelevant disorder regime. In the "marginal" case of dimension (1+1), contradictory predictions exist in the theoretical physics literature. We solve the question showing that quenched and annealed critical point do differ for every disorder strength. (Joint work with B. Derrida, G. Giacomin, H. Lacoin)