



Localization Transition for Polymers in Poissonian Medium

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We study a model of directed polymers in random environment in dimension $1+d$, given by a Brownian motion in a Poissonian potential. We study the effect of the density and the strength of inhomogeneities, respectively the intensity parameter ν of the Poisson field and the temperature inverse β . Our results are: (i) fine information on the phase diagram, with quantitative estimates on the critical curve; (ii) pathwise localization at low temperature and/or large density; (iii) complete localization in a favourite corridor for large $\nu \beta^2$ and bounded β .

Subjects: **Probability (math.PR)**

MSC classes: Primary 60K37, secondary 60Hxx, 82A51, 82D30

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