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# Quenched local CLT for symmetric diffusions in a degenerate random environment

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## Abstract

We study a symmetric diffusion  $X$  on  $\mathbb{R}^d$  in divergence form in a stationary and ergodic environment, with measurable unbounded and degenerate coefficients. The diffusion is formally associated with  $L^\omega u = \nabla \cdot (a^\omega \nabla u)$ . We prove for  $X$  a quenched local central limit theorem, under some moment conditions on the environment; the key tool is a parabolic Harnack's inequality obtained using the celebrated Moser's iteration technique.

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