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Random walk in degenerate random environments

Classical work on RWRE assumes uniform ellipticity of the environments, so the walker always has available the maximal number of directions to move in. But interesting questions arise when this condition is relaxed, adding an aspect of percolation to the analysis. I will describe a number of results for such models (joint with Mark Holmes [Melbourne]), including a recent shape theorem for the set of accessible sites in what is called the orthant model.