

Hamiltonicity of randomly perturbed graphs

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Abstract: In the past few years, there has been a lot of research in the area of randomly perturbed graphs (that is, graphs obtained as the union of a deterministic graph H and a random graph G). Research in this area started with Hamiltonicity when H has linear degrees and G is a binomial random graph. Since then, these results have been extended to digraphs and hypergraphs, and many properties other than Hamiltonicity have been considered, but all results assume the random graph G is binomial. In this talk, I will consider variants of this problem where the random graph G follows a different distribution. In particular, I will talk about Hamiltonicity when G is a random geometric graph or a random regular graph.