

Triangle factors and squares of Hamilton cycles in randomly perturbed graphs

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We study the model of randomly perturbed dense graphs, which is the union of any n -vertex graph G_b with minimum degree at least bn for b between 0 and 1 and the binomial random graph $G(n, p)$. In this talk, I will survey what is known about small and large subgraphs in this model and then concentrate on our new results concerning triangle factors (i.e. a spanning collection of vertex disjoint triangles) and squares of Hamilton cycles. I will also point out a number of interesting questions that remain open.

Joint work with Olaf Parczyk, Amedeo Sgueglia and Jozef Skokan.