

Combinatorics Seminar

Planted Partitions in Random Graphs

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Abstract: In the *planted partition problem*, $n = ks$ vertices of a random graph are partitioned into k unknown “clusters,” each of size s . Edges between vertices in the same cluster and different clusters are included with constant probability p and q , respectively (where $0 \leq q < p \leq 1$). The goal is to recover the unknown clusters from the randomly generated graph. This talk will give a brief survey of results for this problem and present a simple spectral algorithm that, with high probability, recovers the partition as long as the clusters sizes are at least $\Omega(\sqrt{n})$.

Monday, October 12 at 3:00 PM in SEO 427