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Title: Quasi-random rumor spreading

Abstract:

The classical "randomized rumor spreading" problem is the following. Given are a finite graph and one of its vertices, which knows a rumor unknown to the other vertices. The rumor is spread in the following manner: In each round, each vertex knowing the rumor contacts a randomly chosen neighbor, which then learns the rumor (provided it did not already know it). How many rounds are necessary to inform all vertices?

The beautiful concept of quasirandomness, in particular, Jim Propp's rotor router model, suggests the following variant. Here, each vertex has a cyclic list of its neighbors. Once informed, vertices inform their neighbors in the order of the list, but starting at a random position.

In the talk, I shall present some "classical" and recent results on this problem.