Mathematics, Statistics, and Computer Science   **@ UIC**

Mathematical Computer Science Seminar

Algorithms for #BIS-hard problems on expander graphs

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Abstract: We give an FPTAS and an efficient sampling algorithm for the high-fugacity hard-core model on bounded-degree bipartite expander graphs and the low-temperature ferromagnetic Potts model on bounded-degree expander graphs. The results apply, for example, to random (bipartite) d-regular graphs, for which no efficient algorithms were known for these problems (with the exception of the Ising model) in the non-uniqueness regime of the infinite d-regular tree. Joint work with Peter Keevash and Will Perkins.

Note the non-standard time

Monday, December 3 at 4:00 PM in 427 SEO