Step Sidorenko property and non-norming edge-transitive graphs

Taisa Martins[1]

[1] University of Warwick

A graph H has the step Sidorenko property if a quasirandom multipartite graph minimizes the density of H among all graphs with the same edge densities between its parts. We show that many bipartite graphs fail to have the step Sidorenko property and use our results to show the existence of a family of bipartite edge-transitive graphs that are not weakly norming, answering a question of Hatami [Israel J. Math. 175 (2010), 125–150].