Graph norms and Sidorenko's conjecture

Date Tuesday, October 13

Time 3 pm

Location 622 Math

Abstract: I will prove some results in the direction of answering a question of Lovász about the norms defined by certain combinatorial structures. Inspired by the similarity of the definitions of L_p norms, trace norms, and Gowers norms, we introduce and study a wide class of norms containing these, as well as many other norms. It will be proven that every norm in this class must satisfy a Cauchy-Schwarz-Gowers type inequality. I will show an application of this inequality to a conjecture of Sidorenko about subgraph densities.