ICM 1998, Berlin, Aug. 18–27

Abstracts of Short Communications and Posters

Section:

13. Combinatorics

1991 MS Classification: 05D99, 05C35
Kündgen, André, University of Illinois, Urbana, IL, USA. Füredi, Zoltán, University of Illinois and Mathematical Institue of the Hungarian Academy, Budapest.

Turán problems for weighted graphs

What is the maximal number of edges in a multigraph on n vertices if every k-set spans at most r edges? We asymptotically determine the maximum possible weight of such (k, r)-dense graphs for almost all k and r as n tends to infinity, thus giving a generalization of Turán's theorem. We find exact answers in many cases, even when negative integer weights are also allowed.