

Combinatorics Seminar

Friday, February 28th, 2025

4:00-5:00 pm in Hume 321

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Delta-modular matroids

Abstract

Delta-modular matrices are integer matrices that arise in the theory of integer programming. Matroids are discrete structures that encode the combinatorics of linear independence. We show how matroids were used to find an upper bound on the maximum number of columns of a rank- r Delta-modular matrix. We assume no knowledge of matroid theory. This is joint work with Joseph Paat, Ingo Stallknecht, and Luze Xu.