Graduate Student Combinatorics Seminar

Jason O’Neill
UCSD

The Kruskal-Katona Theorem

Abstract:

Given an \( r \)-uniform hypergraph \( A \subset X^{(r)} \), the (lower) shadow of \( A \), denoted \( \delta(A) \) is defined as \( \delta(A) := \{ B \in X^{(r-1)} : B \subset A \text{ for some } A \in A \} \). In this talk, we will explore the classical Kruskal-Katona theorem which gives a lower bound on \( |\delta(A)| \) and describe related notions of colex order and compression operators on set families.

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10:00 AM
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