Michigan Math Club

Thursday at 4pm in the Nesbitt Room
Free Pizza and Pop

Helly's Theorem: Dabbling with Discrete Geometry

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Abstract for 16 March

Proved early in the 20th Century, Helly's theorem is a fundamental result about convex sets in Euclidean space which has found numerous applications in geometry, combinatorics, and optimization. In this talk I'll present some of these applications - including the following elegant result: given a finite set of points in the plane so that any three of them are contained in a disc of radius 1, then all of them must be contained in a disk of radius 1. Along the way to understanding Helly's theorem, we'll explore convexity, Radon's theorem, and compactness.