Analysis and Data Science Seminar

Hari Nathan
University of Rochester

Limits of Discrete Energy of Families of Increasing Sets

Tuesday, October 21, 2025
3:00 P.M. in Catskill 130

ABSTRACT. The Hausdorff dimension of a set can be detected using the Riesz energy. Here, we consider situations where a sequence of points, $\{x_n\}$, "fills in" a set $E \subset \mathbb{R}^d$ in an appropriate sense and investigate the degree to which the discrete analog to the Riesz energy of these sets can be used to bound the Hausdorff dimension of E. We also discuss applications to data science and Erdős/Falconer type problems.