

COMBINATORICS  
SEMINAR

*The Structural Szemerédi–Trotter problem*

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**Abstract:** The Szemerédi–Trotter theorem can be considered as the fundamental theorem of geometric incidences. This combinatorial theorem has an unusually wide variety of applications, in combinatorics, theoretical computer science, harmonic analysis, number theory, model theory, and more. Surprisingly, hardly anything is known about the structural question - characterizing the cases where the theorem is tight.

In this talk, we will survey the status of the structural (or inverse) Szemerédi–Trotter problem, including several recent results. This is a basic survey talk and does not require previous knowledge of the field. Joint works with Shival Dasu, and Olivine Silier.

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Mathematics and Science Center: MSC E406

MATHEMATICS  
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