Department of Mathematics, University of California San Diego

Math 295 - Mathematics Colloquium

Prof. Janos Pach

Renyi Institute and EPFL

The blessing of low dimensionality

Abstract:

We discuss some notoriously hard combinatorial problems for large classes of graphs and hypergraphs arising in geometric, algebraic, and practical applications. These structures escape the curse of dimensionality: they can be embedded in a bounded-dimensional space, or have small VC-dimension, or a short algebraic description. What are the advantages of low dimensionality? I will suggest a few possible answers to this question, and illustrate them on classical examples.

Host: Andrew Suk

Thursday, March 21, 2019 4:00 PM AP&M 2402