

abstract

COMPUTER SCIENCE/DISCRETE MATH SEMINAR, II
Topic:

Speaker:

Affiliation:

Date:

Time/Room:

A classical method for proving geometric inequalities in which the Euclidean ball is the extremal case, is that of symmetrization. The idea is basically to perform a simple operation on a given convex body in n -dimensional space, which makes it more symmetric in a sense, and to analyze the effect of this symmetrization on various geometric parameters.

After many consecutive symmetrizations the body becomes close to a Euclidean ball, and we might hope to compare the geometric parameters of the original body we started with, with those of the Euclidean ball.

In this talk we will investigate the minimal number of symmetrizations that is needed in order to transform any n -dimensional body into a shape which is close to a Euclidean ball. We will consider Steiner and Minkowski symmetrizations, and survey most of the known results in this direction. We will discuss in detail some of the proofs which are more of combinatorial nature.