

abstract

Computer Science/Discrete Mathematics Seminar II
Topic:

Speaker:

Affiliation:

Date:

Time/Room:

In this talk I will present a colored version of Tverberg's theorem about partitioning finite point sets in \mathbb{R}^d into rainbow groups whose convex hulls intersect. This settles the famous Bárány-Larman conjecture (1992) for primes minus one, and asymptotically in general. It implies some complexity estimates in computational geometry. I will also give some generalizations that connect to mass partition and center point theorems. The proofs use equivariant topology, which I will try to keep as elementary as possible. This is joint work with Pavle V.M. Blagojevic and Günter M. Ziegler. If time permits I will also talk about projective versions, which is very recent joint work with Roman Karasev, and about the topological technique in general.