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Topological Tverberg theorem

Tverberg's theorem states that any configuration of (d+1)(r-1)+1 points in d-dimensional Euclidean space admits a partition into r subsets whose convex hulls have a point in common. The topological Tverberg's theorem is a topological generalization of Tverberg's theorem, in which convex hulls are replaced by "flabby hulls". In this lecture, I will introduce the basic tools in algebraic topology - such as homology, spectral sequences and the classifying spaces of groups - and show how they can be combined to prove the topological Tverberg theorem. I will also discuss several further generalizations of the topological Tverberg's theorem.

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