Семинар "Геометрия и комбинаторика"
6 декабря
13-30 (Внимание! Необычное время!)
14 линия, ауд 120

Rahul Gangopadhyay
Title: On the Tverberg Partition

Abstract: In 1966**,** Tverberg proved that or any set of n=(d+1)(r-1)+1 points in R^d, there is a partition of the points in r parts such that the intersection of their convex hulls is non-empty. Every such Tverberg partition induces an integer partition of n into r parts such that n=a_1+a_2+....+a_r, where a_i is the size of the i^th partition. Gerard Sierksma conjectured that for any set of (d+1)(r-1) points, the number of Tverberg r-partitions is at least (r-1)!^d. In 2017, M. White proved that for any partition of n where the size of each part is less than or equal to d+1, there exists a point set X having n points in R^d, such that every Tverberg partition of X induces the same partition on n given by a_1.....a_r. Moreover, the number of Tverberg partitions of X is exactly (r-1)!^d. We prove these results in this talk. Then, we will state some recent results on the Tverberg partition.