



Sums of squares with at most k terms

A talk by Asst. Prof. Dr. Charu Goel (Indian Institute of Information Technology, Nagpur) as part of the “Real Geometry and Algebra” seminar and the KWIM lecture series.

Friday, 25th October 2024, 13:30 in F426.

Abstract. In this talk we will present some recent results on sums of squares of forms with restricted number of terms. We consider the cones corresponding to the sums of squares of n -ary d -ic forms with at most k terms, which are closed and convex. We show that these cones are strictly nested as k increases, leading to the usual sum of squares cone. For n greater than or equal to 3, we construct indefinite irreducible n -ary d -ic forms with exactly k terms, for k greater than or equal to 2. This is a joint work with Bruce Reznick.

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