Bern-Fribourg Graduate Seminar

a seminar for Master and PhD students

Wednesday 29th March, 2023: 17:15 - 18:00

Room 2.73, Perolles 08, Fribourg

Alessandro Danelon

University of Bern

Cubic forms of infinite strength are well-ordered

Abstract

Infinite dimensional geometric objects enjoying a suitable amount of symmetries have found applications in diverse fields of mathematics, from algebraic statistics and theoretical computer science to commutative algebra. This motivates a further study of the infinite dimensional world.

Our story starts in the finite dimensional realm with the concept of strength of homogeneous polynomials in a finite number of variables. After constructing the infinite dimensional counterparts of homogeneous polynomials, and after getting insights from the explicit cases of quadratic and cubic forms, and we will see how infinite-strength cubic forms are well-ordered with respect to a natural equivalence relation.

Joint work with Arthur Bik and Andrew Snowden.