Oberseminar Geometrie und Topologie

Wintersemester 2018/2019

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Cox rings and T-varieties

19. November 2018 – 14 Uhr
Seminarraum IGT, Raum 7.530, Pfaffenwaldring 57

Abstract: Cox rings are a rich invariant of algebraic varieties with finitely generated divisor class group. Beside their theoretical meaning they play an important role for explicit methods and algorithmic approaches in algebraic geometry. In the talk we start with a discussion of the well known example class of toric varieties. Following this we will look at torus actions of higher complexity, i.e., the dimension of the general orbit is less than the dimension of the variety. I will discuss structural properties of Cox rings of these varieties and present new combinatorial methods and their applications in the classification of Fano varieties.

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