

# BERNOULLIS TAFELRUNDE

GRADUATE STUDENT SEMINAR

Monday, May 6, 2024, 12:15–13:00  
Seminarraum 05.002, Spiegelgasse 5

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## An introduction to Unlikely Intersections

### ABSTRACT

We talk about “unlikely intersections” whenever we have a non-empty intersection between algebraic varieties that, for dimensional reasons, we do not expect to intersect: for example, if  $X, Y$  are varieties of dimensions  $r$  and  $s$  in a space of dimension  $n > r + s$ , we usually expect  $X \cap Y$  to be empty. This expectation is the basis of many problems in Diophantine geometry, which usually study the finiteness of the number of points satisfying some arithmetical conditions on algebraic varieties. After an overview of some problems of unlikely intersections in algebraic tori, we will focus on unlikely intersections in families of elliptic curves.