



# ODTU-Bilkent Algebraic Geometry

## Rational curves on del Pezzo surfaces

By

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**Abstract:** In this talk, we explore the connection between the enumerative geometry of rational curves on del Pezzo surfaces over a field  $k$  and the arithmetic properties of  $k$ . In particular, we classify the number of  $k$ -rational lines and conic families that can occur on del Pezzo surfaces of degrees 3 through 9 in terms of the Galois theory of  $k$ , and we give partial results in degrees 1 and 2. Our results generalize well-known theorems in the setting of smooth cubic surfaces. This is joint work in progress with Stephen McKean, Sam Streeter and Harkaran Uppal.

**Date:** 1 November 2024, Friday

**Time:** 15:40 (GMT+3)

**Place:** Zoom

To request the event link, please send a message to [sertoz@bilkent.edu.tr](mailto:sertoz@bilkent.edu.tr)