



Mathematics and CS Seminar

Uniformity for the Number of Rational Points on a Curve

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By Faltings's Theorem, formerly known as the Mordell Conjecture, a smooth projective curve of genus at least 2 that is defined over a number field K has at most finitely many K -rational points. Vojta later gave a second proof. Many authors, including Bombieri, de Diego, Parshin, Rémond, Vojta, proved upper bounds for the number of K -rational points. I will discuss joint work with Vesselin Dimitrov and Ziyang Gao where we prove that the number of points on the curve is bounded from above as a function of K , the genus, and the rank of the Mordell-Weil group of the curve's Jacobian. We follow Vojta's approach to the Mordell Conjecture. I will explain the new feature: an inequality for the Néron-Tate height in a family of abelian varieties. It allows us to bound from above the number of points whose height is in the intermediate range.

Thursday, April 1, 2021 02:00pm - 03:00pm

<https://mathseminars.org/seminar/AGNTISTA>



This invitation is valid as a ticket for the ISTA Shuttle from and to Heiligenstadt Station.

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<https://ista.ac.at/en/campus/how-to-get-here/> The ISTA Shuttle bus is marked ISTA Shuttle (#142) and has the Institute Logo printed on the side.