ODTU-Bilkent Algebraic Geometry

Heights, periods, and arithmetic on curves

By

Emre Can Sertöz
(Hannover)

Abstract: The size of an explicit representation of a given rational point on an algebraic curve is captured by its canonical height. However, the canonical height is defined through the dynamics on the Jacobian and is not particularly accessible to computation. In 1984, Faltings related the canonical height to the transcendental "self-intersection" number of the point, which was recently used by van Bommel-- Holmes--Müller (2020) to give a general algorithm to compute heights. The corresponding notion for heights in higher dimensions is inaccessible to computation. We present a new method for computing heights that promises to generalize well to higher dimensions. This is joint work with Spencer Bloch and Robin de Jong.

Date: 25 March 2022, Friday
Time: 15:40 (GMT+3)
Place: Zoom

To request the event link, please send a message to sertoz@bilkent.edu.tr