Bernoullis Tafelrunde

Graduate Student Seminar

Monday, 23 October 2023, 12:15–13:00
Seminarraum 05.002, Spiegelgasse 5

Ana Marija Vego

ETH

Kolyvagin's Euler System and Heegner Points

Abstract

Classical theorems by Gross-Zagier and Kolyvagin on the Birch and Swinnerton-Dyer conjecture in analytic rank ≤ 1 were a major step towards proving the BSD conjecture. We will introduce Heegner points and explain how these were used by Kolyvagin to construct an anticyclotomic Euler system. Our goal is to illustrate the use of Euler systems in general through the example of Heegner points. Further, (if time permits) we introduce generalized Heegner cycles in motivic cohomology for modular forms of weight greater than 2 and show norm relations for them.