

Department of Mathematics, BGU

AGNT

On Monday, June ,19 2023

At 12:10 – 13:10

In 101-

David Ter-Borch Gram Lilienfeldt (HUJI)

will talk about

TBA

Abstract: The Gross-Zagier formula equates (up to an explicit non-zero constant) the central value of the first derivative of the Rankin-Selberg L-function of a weight 2 eigenform and the theta series of a class group character of an imaginary quadratic field (satisfying the Heegner hypothesis) with the height of a Heegner point on the corresponding modular curve. This equality is a key ingredient in the proof of the Birch and Swinnerton-Dyer conjecture for elliptic curves over the rationals in analytic rank 0 and .1 Two important generalizations present themselves: to allow eigenforms of higher weight, and to allow Hecke characters of infinite order. The former one is due to Shou-Wu Zhang. The latter one is the subject of a joint work in progress with Ari Shnidman and requires the calculation of the Beilinson-Bloch heights of generalized Heegner cycles. In this talk, I will report on the calculation of the archimedean local heights of these cycles.