

**Speaker:** Ye Tian

**Title:** On Tunnell-Gross type formulae

**Abstract:** For a weight 2 cuspidal newform  $f$ , we prove an explicit version of Waldspurger's theorem, which relates L-values of quadratic twists of  $f$  to certain ternary quadratic forms. Gross gave a geometric proof of such a formula assuming (i) the conductor of  $f$  is a prime (ii)  $L(1, f)$  is nonzero. Gross' work was generalized by Bocherer and Schulze-Pillot to square-free conductors based on their investigation of the Yoshida lift. Via a different approach, Mao generalized Gross' work only assuming (i). In this talk, we outline the proof of an explicit formula in the general case. Joint work with W. He and W. Xiong.