Speaker: Ye Tian

Title: Converse to a theorem of Gross-Zagier and Kolyvagin-Rubin: CM case

Abstract: Let E be an elliptic curve over the rationals and p a prime. The converse in the title refers to the assertion that

"If the $\mathbb{Z}_p$-corank of the p-Selmer group of E is one then the vanishing order of its complex L-function at the center is also one."

We prove the converse in the CM case under a certain assumption.

This is a joint work with Ashay Burungale.