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On the Equivariant Tamagawa Number conjecture for modular forms

The Equivariant Tamagawa Number Conjecture was formulated by Bloch and Kato in 1990, and can be seen as a generalisation to motives of the Birch and Swinnerton-Dyer Conjecture for elliptic curves. In the latter case, the validity of the p-part of the Birch and Swinnerton-Dyer Conjecture for ordinary primes p is known when the analytic rank of the rational elliptic curve $E/\mathbb{Q}$ is equal to 1. We prove a similar result for the p-part of the Bloch-Kato conjecture for motives attached to newforms. For this, we prove a version of Kolyvagin's Conjecture for modular forms, from which we deduce the p-part of the Tamagawa Number Conjecture. This is a work in collaboration with Stefano Vigni.