1154-11-2560 **Murilo Zanarella*** (muriloz@mit.edu), 151 Elm Street, Unit 1, Somerville, MA 02144. *On Howard's main conjecture and the Heegner point Kolyvagin system.*

Since Kolyvagin's groundbreaking work on the proof of the Birch and Swinnerton-Dyer conjecture for analytic ranks 0 and 1, the theory of Euler systems and Kolyvagin systems has been used extensively in the study of the arithmetic of elliptic curves. For instance, they play an important role in Iwasawa theory, where extensions of Kolyvagin's arguments have been used to prove a divisibility for several main conjectures.

This talk will focus on the relation between the Kolyvagin system of Heegner points of an elliptic curve and its anticyclotomic Iwasawa main conjecture. We will discuss how one can improve Howard's treatment of such Kolyvagin system to upgrade his divisibility for the main conjecture to the full equality. We will also deduce as a consequence of such improvement that the primitivity of the Heegner point Kolyvagin system is in fact equivalent to the anticyclotomic main conjecture and the p-indivisibility of certain Tamagawa factors. (Received September 17, 2019)