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Big Heegner points and special values of L-series

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In 2007, B. Howard constructed certain compatible sequences of Heegner points on modular curves, which he called Big Heegner points. This construction was extended in 2010 to definite Shimura curves. In this case, given an Hida family, it follows from the constructions that the weight 2 specializations of big Heegner points interpolate central special values of anticyclotomic L-functions of classical weight 2 modular forms in the Hida family. However, their higher weight specializations are, a priori, mysterious. In this talk, I will relate the higher weight specialization of big Heegner points to special values of certain L-functions of classical forms in the Hida family. More precisely, I will explain how to construct a 2-variable p-adic L-function interpolating anticyclotomic p-adic L-functions in families. I will also state an Iwasawa Main Conjecture in this context, and, if time permits, briefly discuss a tentative construction of Lambda-adic Euler systems to attack it.

This is a joint work with F. Castella.

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