

Towards a p -adic construction of Heegner points in the additive reduction case

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I will report on a *joint work in progress with M. Longo and V. Rotger*, in which we investigate a new p -adic construction of Heegner points on elliptic curves with additive reduction at a prime $p > 3$. Such elliptic curves are parametrised by Shimura curves which do not admit a p -adic uniformisation by Drinfeld’s p -adic upper half plane \mathcal{H}_p . Nevertheless, Čerednik-Drinfeld theory still provides a uniformisation for these Shimura curves at the cost of replacing \mathcal{H}_p by a suitable étale cyclic covering of it. We will see how the rigid geometry of this covering plays a fundamental role in our construction.

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