Let $E$ be an elliptic curve defined over $\mathbb{Q}$, $K$ an imaginary quadratic field, and $p$ a prime of good ordinary non-anomalous reduction. Set $\mathcal{U}$ to be the inverse limit of the points of $E$ defined over the layers of the anticyclotomic $\mathbb{Z}_p$-extension of $K$. The image of $\mathcal{U}$ under the cyclotomic $p$-adic height pairing is generated by the anticyclotomic $\Lambda$-adic regulator. If $K$ satisfies the Heegner hypothesis, the elliptic curve has analytic rank 1 over $K$, and the Heegner point defined over $K$ is not divisible by $p$, then Heegner points generate $\mathcal{U}$.

In this talk, we will describe a method that allows us to compute anticyclotomic $\Lambda$-adic regulators. We generalize results of Cohen and Watkins, and thereby compute Heegner points defined over different layers of the anticyclotomic $\mathbb{Z}_p$-extension of $K$. We also prove a connection which gives rise to an efficient way of using results of Mazur-Stein-Tate to compute $p$-adic heights. This is joint work with Jennifer Balakrishnan and William Stein. (Received September 19, 2012)