

On the modular height of Shimura curves

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The goal of this talk is to introduce a Gross-Zagier type formula, which relates the arithmetic self-intersection number of the Hodge bundle of a quaternionic Shimura curve over a totally real field to the logarithmic derivative of the Dedekind zeta function of the base field at 2. The proof is inspired by the previous works of Yuan, S. Zhang and W. Zhang on the Gross-Zagier formula and the averaged Colmez conjecture.