

A Gross-Kohnen-Zagier Theorem for Stark-Heegner points

H. Darmon

`darmon@math.mcgill.ca`

Dept. of Mathematics & Statistics

McGill University

Burnside Hall, 805 Sherbrooke W.

Montréal, Québec H3A 2K6

CANADA

Abstract

This is a preliminary report on work in progress with Gonzalo Tornaria.

I will discuss relations between “Stark-Heegner points” and the fourier coefficients of modular forms of weight $3/2$, in the spirit of the formula of Gross, Kohnen and Zagier for classical Heegner points. The proof suggests a connection between Hida’s theory of p -adic families of modular forms and the “arithmetic theta-lifts” arising in the work of Kudla and others which are the main focus of this workshop.