
SIDDARTH SANKARAN, University of Manitoba

Arithmetic Siegel-Weil formiulas for zero dimensional varieties.

The arithmetic Siegel-Weil formula is a conjectural identity, due to Kudla, that predicts relations between certain arithmetic 'special' cycles on Shimura varieties and derivatives of Eisenstein series. In the zero-dimensional case, notable examples include work of Kudla-Rapoport-Yang, Howard, and Andreatta-Goren-Howard-Madapusi; these results are ultimately proved by an explicit computation.

This talk is part of an ongoing effort to understand these results from a more conceptual point of view; after reviewing the formula in a simple case, we will place these results in a more general context, and explain how the arithmetic Siegel-Weil formula can be seen as an application of the usual Siegel-Weil formula. The main novelty is the introduction of a p-adic "Green function" in the zero-dimensional setting, mirroring a construction of Kudla at the archimedean place.