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Arithmetic special cycles and Jacobi forms

Kudla's conjectural program predicts relations between certain (arithmetic) "special" cycles on Shimura varieties and the Fourier coefficients of automorphic forms. In this talk, I'll focus on the case of a compact orthogonal Shimura variety X ; by augmenting the special cycles with appropriate choices of Green currents, we obtain classes in the arithmetic Chow group of X (viewed as a variety over its reflex field). After reviewing these notions, I'll describe a modularity result identifying generating series built from these special cycles as Jacobi forms, yielding evidence for Kudla's conjectures in this setting.