An analogue of the Hirzebruch-Zagier theorem in Arakelov Geometry

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The theorem of Hirzebruch and Zagier states that the intersection numbers of certain special cycles in the Hilbert modular surface, are the coefficients of the Fourier expansion of a modular form. In this talk we will discuss an analogue of this theorem on the context of Arakelov geometry as well as some of the techniques needed to prove the result.