

# Hodge index theorem for adelic line bundles

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**Abstract :** The Hodge index theorem of Faltings and Hriljac asserts that the Neron–Tate height pairing on a projective curve over a number field is equal to certain intersection pairing in the setting of Arakelov geometry. In the talk, I will present an extension of the result to adelic line bundles on higher dimensional varieties over finitely generated fields. Then we will talk about its relation to the non-archimedean Calabi–Yau theorem and the its application to algebraic dynamics. This is a joint work with Shou-Wu Zhang.