

東北大学理学部数学科 東北大学大学院理学研究科数学専攻 Mathematical Institute, Tohoku University

セミナー情報

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## 代数セミナー(15:30--17:00【会場:数学棟201室】)

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題目: On the arithmetic Kähler package

概要:

The Kähler package, which includes the hard Lefschetz property and the Hodge--Riemann relations, plays a relevant role in several areas of mathematics, from differential and algebraic geometry to combinatorics.

In the context of Arakelov geometry, an arithmetic version of these properties can be formulated for hermitian metrized line bundles; strongly related to them, the arithmetic analogue of Grothendieck's standard conjectures has been proposed by Gillet and Soulé. In this talk, based on a joint ongoing work with Paolo Dolce and Riccardo Pengo, we will show how the validity of the arithmetic Kähler package is linked to certain positivity conditions of the involved hermitian line bundle, and we will mention some implications of these observations in the case of projective spaces.

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