Rational and holomorphic sections of abelian schemes

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Abstract

Given an abelian scheme $A \rightarrow B$ over an algebraic base B, its Mordell-Weil group is the group of rational sections $B \rightarrow A$; it is known to be discrete. In a joint work with J. Noguchi and U. Zannier, we consider instead the group of holomorphic, possibly transcendetal, sections. We prove some kinds of 'Big Picard' results, showing e.g. that transcedental sections cannot omit relatively ample divisors.

As a by-product, we introduce a Nevanlinna analogue of the theory of heights for transcendental sections, developing the theory of the Betti maps, previously investigated together with Y. André and U. Zannier.

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