

Seminari de Geometria Algebraica 2006/2007 (UB-UPC)

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Lower bounds for the height
of subvarieties of abelian varieties

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A conjecture of Lang (for elliptic curves) generalized by Silverman to abelian varieties, predicts that the Neron-Tate height of a point in an abelian variety should grow at least like the height of the variety itself. We shall suggest higher dimensional versions of this conjecture. We shall also discuss links between this question and counting problems (uniformity in the Mordell-Lang counting problem) which generalize older uniformity conjectures generally attributed to Mazur. Specializing to the case of elliptic curves, we shall finally present some results in the direction of these conjectures.
