Local heights and the strong torsion conjecture on abelian varieties

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Sakura Workshop ”Torsion of abelian schemes and rational points on moduli spaces” - I.M.B.,
January 25th - 29th, 2010

We will give in this talk some explicit bounds on the number of rational torsion points on families of abelian varieties of dimension 1 and 2. We will explain how the local height theory is involved and how one might generalize these results to larger dimensions.