

Complex dynamics, heights, and elliptic curves

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In the 1990s, Ullmo and Zhang independently proved the Bogomolov Conjecture, about the geometry of points of small canonical height on abelian varieties; a key ingredient was an equidistribution statement for these points (that they proved jointly with Szpiro). In joint work with Myrto Mavraki, we studied a related problem in the setting where A is a family of abelian varieties over a curve, and we prove an equidistribution result on the base curve. I will explain connections between this question and results in complex dynamics, inspired by the theory of bifurcations and the Mandelbrot set.