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Complex dynamics and arithmetic equidistribution

I will explain a notion of arithmetic equidistribution that has recently found application in the study of complex dynamical systems. It was first introduced about 25 years ago, by Szpiro-Ullmo-Zhang, to analyze the geometry and arithmetic of abelian varieties. In 2011, Matt Baker and I used the theory to study periodic points of maps on \mathbb{P}^1 . In this talk, I will explain some dynamical questions that were inspired by questions about elliptic curves, and then how the dynamical results allowed us to solve problems in the original setting of abelian varieties. The new results are joint with Holly Krieger and Hexi Ye.