**The Lang-Vojta conjecture and the moduli of smooth hypersurfaces**

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Siegel proved the finiteness of the set of solutions to the unit equation in a number ring, i.e., for a number field K with ring of integers $O$, the equation $x+y=1$ has only finitely many solutions in $O$. That is, reformulated in more algebro-geometric terms, the hyperbolic curve $P^1 - \{0, 1, \infty\}$ has only finitely many "integral points". In 1983, Faltings proved the Mordell conjecture generalizing Siegel's theorem: a hyperbolic complex algebraic curve has only finitely many "integral points". Inspired by Faltings's and Siegel's finiteness results, Lang and Vojta formulated a general finiteness conjecture for "integral points" on complex algebraic varieties: a hyperbolic complex algebraic variety has only finitely many "integral points". In this talk we will start by explaining the Lang-Vojta conjecture and then proceed to prove some of its consequences for the arithmetic of homogeneous polynomials over number fields. This is joint work with Daniel Loughran.