

Effective Pila--Wilkie bounds for Pfaffian sets with some diophantine applications

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I will discuss an effective, uniform version of the Pila--Wilkie Theorem and a number of effective applications to diophantine geometry, including an effective, uniform Manin--Mumford statement for products of elliptic curves with complex multiplication (all joint work with Binyamini, Jones and Schmidt). Time permitting, I will also indicate how a new perspective on effective applications of o-minimality (due to Binyamini, Novikov and Zak) has arisen from this line of work, leading in particular to improved counting bounds.