

Scarcity of periodic points for rational functions over a number field

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I will present a recent joint work with S. Vishkautsan where we provide an explicit bound on the number of periodic points of a rational function of degree at least 2 defined over a number field. The bound depends only on the number of primes of bad reduction and the degree of the function, and is linear in the degree. We show that under stronger assumptions (but not so strong) the dependence on the degree of the map in the bounds can be removed. Our results are consequences of some more general results about integral points on some varieties.