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Kaoru Sano* (kaosano@mail.doshisha.ac.jp), 1-3 tataramiyakodani, kyotrabe-shi, kyoto, 610-0394, Japan. *Zariski density of rational points with the maximal arithmetic degree.*

For an algebraic dynamical system defined over a number field, it is a natural question that how quickly does the Weil height of rational points grow? On this question, Kawaguchi-Silverman introduced the arithmetic degree, which measures the exponential growth rate of the Weil height of rational points. On the other hand, the dynamical degree, a classical invariant of algebraic dynamics, measures the geometric complexity of the dynamical system. Kawaguchi-Silverman conjectured that the arithmetic degree at a point with Zariski dense orbit is equal to the dynamical degree. Matsuzawa proved that the arithmetic degree is always less or equal to the dynamical degree. Recently, we proved that there is a Zariski dense set of a rational point with the maximal arithmetic degree, which has disjoint orbits for any surjective endomorphisms on a projective variety. Moreover, we proved the same thing over a number field when the variety is potentially dense. In this talk, I will introduce these problems and explain the idea of the proof. This is joint work with Takahiro Shibata. (Received September 10, 2020)