

Slopes of smooth curves on Fano manifolds.

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**Abstract**

Ross and Thomas introduced the concept of slope stability to study K-stability, which has conjectural relation with the existence of constant scalar curvature Kahler metric. We discuss slope stability of Fano manifolds of dimension  $n \geq 3$  with respect to smooth curves. We classify completely the cases when a polarized Fano manifold  $(X, -K_X)$  is not slope stable with respect to a smooth curve. We also show that a Fano manifold  $X$  with Picard number 1 is slope stable with respect to every smooth curve unless  $X$  is the projective space.

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\*joint work with Jun-Muk Hwang, Hosung Kim, and Yongnam Lee