

Geometric structure arising from minimal rational curves**Jun-Muk Hwang**Korea Institute for advanced study
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Abstract : This is a survey of some of my joint works with Ngaiming Mok on minimal rational curves on Fano manifolds with second Betti number 1. Fano manifolds are projective algebraic manifolds with ample anti-canonical bundles, or equivalently, compact Kaehler manifolds with positive Ricci curvature. Most important example is the complex projective space. On each Fano manifold, we have the notion of minimal rational curves, which is a natural generalization of the lines on the complex projective space. Our main philosophy is that a Fano manifold of second Betti number 1 is determined by their minimal rational curves. We study in what sense this philosophy works from various view points.