ON THE VOLUME OF K-SEMISTABLE FANO MANIFOLDS

Speaker:Minghao Miao
Nanjing University

Time:Thu., Jan. 8th, 09:00-10:00

Venue:Room 106, SCMS

Abstract: In 2015, K. Fujita showed that for any n-dimensional K-semistable Fano manifold, the anti-canonical volume is always less than or equal to that of complex projective space (CP^n). In this talk, I will discuss my recent joint work with Chi Li on characterizing the second-largest volume. We prove that for any n-dimensional K-semistable Fano manifold X that is not isomorphic to CP^n, the volume is at most 2n^n, with the equality holds if and only if X is a smooth quadric hypersurface or CP^1 × CP^{n-1}. This result applies, in particular, to all Fano manifolds admitting Kähler－Einstein metrics. Our proof is based on a new connection between K-stability and minimal rational curves.