北京理工大學

数学与统计学院学术报告

Toric Fano manifolds that do not admit extremal Kähler metrics

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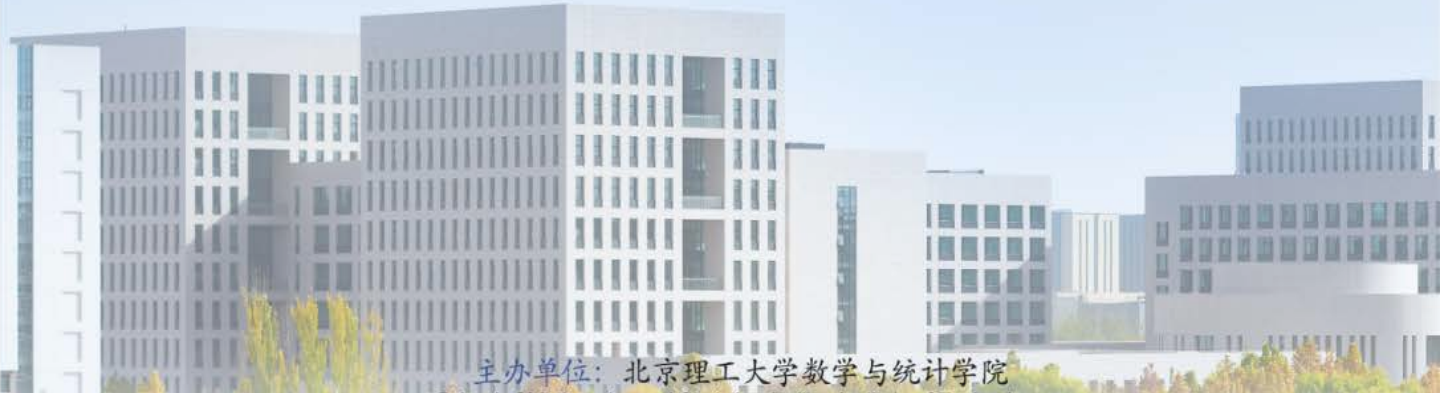
时间： 2025年9月15日10：00-12：00

地点： 文萃楼E-808（讨论室）

摘要： It was conjectured by Székelyhidi that a polarized manifold admits an extremal Kähler metric in the polarization class if and only if it is relatively K-polystable. In addition, a well-known folklore conjecture asserts that every toric Fano manifold admits an extremal Kähler metric in its first Chern class. For a given toric Fano manifold X, we construct a destabilizing convex function on the associated moment polytope, thereby demonstrating the relative K-unstability of X. Applying relative K-unstability criterion to a specific toric Fano manifold, we show that there exists a 10-dimensional toric Fano manifold that does not admit an extremal Kähler metric. This talk is based on joint work with D. S. Hwang and H. Sato.

简介： 四ッ谷直仁，日本静冈大学数学系教授。主要研究领域为代数几何。



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