

1-GAP OF R -COMPLEMENTARY THRESHOLDS ON SURFACES AND ITS APPLICATIONS

Speaker: Jihao Liu

Northwestern University

Time: Fri, Nov. 18, 14:30-15:30

Venue: Tencent Meeting ID: 353 294 624 Password: 872760

Abstract:

In this talk, I will show that the optimal 1-gap of R -complementary thresholds of surfaces is equal to $1/13$. I will provide several applications of this result, including 1) finding the optimal 1-gap of global log canonical threshold for surfaces, 2) finding the optimal lower bound of volumes of ample log surfaces with reduced boundary, and 3) finding the smallest minimal log discrepancy of klt Calabi-Yau surfaces. These results answer a question of V. Alexeev and W. Liu and a question of J. Kollár, and reprove a recent result of L. Esser, B. Totaro, and C. Wang. If time admits, I will discuss a conjecture on the 1-gap of R -complementary thresholds and the 1-gap of minimal log discrepancies in high dimensions. This is an ongoing joint work with V. V. Shokurov.