

國立中正大學數學系
暨應用數學碩士班、統計科學碩士班
學 術 演 講

Computing global log canonical thresholds on Burniat surfaces

陳正傑 教授

Prof. Chen, Jheng-Jie

國立中央大學數學系

Department of Mathematics, National Central University

Abstract

Let D be an effective $\mathbb{Q}$ -Cartier divisor on a normal algebraic variety X with only mild singularities. The log canonical threshold of the pair (X, D) is defined by

$$\text{lct}(X, D) := \sup\{\lambda \in \mathbb{Q} \mid (X, \lambda D) \text{ is log canonical}\}.$$

For an ample divisor L on X , the global canonical threshold of (X, L) is defined as

$$\text{glct}(X, L) := \inf\{\text{lct}(X, D) \mid D \text{ is } \mathbb{Q}\text{-linearly equivalent to } L\}.$$

In the case that X is a Fano variety, $\text{glct}(X, -K_X)$ is the so-called alpha-invariant $\alpha(X)$. It is known that a Fano variety X admits a Kähler-Einstein metric when $\alpha(X)$ is large. In this talk, we consider the global log canonical threshold for Burniat surfaces. Notice that the Burniat surface S is a special kind of surface of general type. It has a self-intersection number $K_S^2 = 6, 5, 4, 3, 2$ for canonical divisor K_S . In 2020, Shin and Kim showed that $\text{glct}(S, -K_S) = \frac{1}{2}$ for Burniat surface S with $K_S^2 = 6$. We shall complete the computations of the global log canonical thresholds $\text{glct}(S, -K_S)$ for all Burniat surfaces. This is a recent joint work with YongJoo Shin and Bin Nguyen.

日期: 114 年 11 月 5 日 (星期三) 16:10~17:00

地點: 本校數學館 527 教室 (嘉義縣民雄鄉大學路 168 號)

茶會: 15:30~16:00 數學館四樓 409 室舉行

歡迎參加 敬請公佈

交通資訊及校內地圖請參閱如下網址

<https://math.ccu.edu.tw/p/404-1069-12096.php?Lang=zh-tw>