

# 國立清華大學數學系學術演講

## NTHU MATH Colloquium

講題 Birational geometry of some Calabi-Yau threefolds of Picard number two

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時間 2019.4.29 (Mon.) 16:00 – 17:00

地點 4F Lecture Room B, General Building III

茶會 15:30, R707

### Abstract

Even with recent great advance in the minimal model program (after the work of Mori, Birkar-Cascini-Hacon McKernan, Birkar etc), Calabi-Yau threefolds remains mysterious in birational geometry, for example, the conjectural existence of rational curves and Morrison-Kawamata cone conjecture.

As general methods are hard to develop for CY3, many concrete examples are constructed for testing theories, such as complete intersections in toric Fano manifolds.

Joint work (in progress) with Dr. Sz-Sheng Wang (Yau Mathematical Sciences Center, Beijing), we provide a determinantal construction of some Calabi-Yau threefolds of Picard number two, which natural equips a flop over ODP's, and describe their birational models and hence the movable cones. This unifies examples studied in [Cynk-Rams'15], [Borisov-Nuer'16], and [Hosono-Takagi'17].