Calabi Yau metrics and Optimal Transport

Freid Tong

University of Toronto

In the late 80s and early 90s, Tian and Yau constructed an intriguing class of Calabi-Yau metrics on the complement of smooth divisors on Fano manifolds. They proposed that these should occur in broader generality, and recent works have shed light on the role of these metrics in the study of degenerations of Kahler-Einstein manifolds. I will discuss the recent advances on this problem and connection between this problem and the theory of optimal transport. This is based on joint work with T. Collins and S.-T. Yau.

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