

THE UNIVERSITY



OF HONG KONG

*Institute of Mathematical Research
Department of Mathematics*

GEOMETRY SEMINAR

Homological mirror symmetry conjecture and SYZ conjecture

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Date: February 25, 2014 (Tuesday)

Time: 4:30 – 5:30pm

Venue: Room 210, Run Run Shaw Bldg., HKU

Abstract

Mirror phenomenon is originated by string theory in physics which expects certain relation between the complex geometry of a Calabi-Yau manifold and the symplectic geometry of its mirror. Homological mirror symmetry conjecture by Kontsevich suggested a formal way to explain mirror symmetry in terms of equivalence of two categories.

Instead of an algebraic setting, Strominger, Yau and Zaslow (SYZ) later conjectured that mirror symmetry is a manifestation of T -duality on a Lagrangian torus fibration, which is a more geometrical way to study mirror symmetry. In this talk, we will discuss how to study homological mirror symmetry in SYZ approach. It is a joint work with Leung and Ma.

All are welcome