



ALGEBRA AND GEOMETRY SEMINAR

The Hong Kong University of Science and Technology
Department of Mathematics

Conic bundle and the mirror hypersurface for a toric Calabi-Yau n -folds

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We study the Hori-Vafa mirror Calabi-Yau n -fold to a toric Calabi-Yau n -orbifold. One version of homological mirror symmetry expects that the wrapped Fukaya category on the Hori-Vafa mirror is equivalent to the toric Calabi-Yau with a hypersurface removed. We use a microlocal sheaf model of this Fukaya category, and in this setting prove the statement by descent property and Orlov's semi-orthogonal decomposition. Moreover, we expect the object-level correspondence when interpreted in terms of some reasonably defined characteristic cycles, matches the integral structure correspondence from the Gamma classes. This talk is based on the joint work with Yuze Sun and Peng Zhou.

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