

Speaker: Chien-Hsun Wang (National Taiwan Normal University)

Title: Dehn twist and monodromy in local mirror symmetry

Time: June 7 (Tu.), 3:00-4:30pm (Beijing time)

Venue: Zoom Meeting 984 962 1397 (no password required)

Abstract: Seidel in his paper [1] shows that the monodromy around a critical point of a Lefschetz fibration of an exact symplectic manifold is isotopic to the Dehn twist along a Lagrangian sphere. We follow his approach [2] to study the Dehn twist operation on Lagrangian submanifolds in the suspension of a symplectic manifold X and show that the Dehn twist on X is compatible with that on the suspension of X . Combined with [3], the categorical Dehn twist on the Fukaya category is compatible with local mirror symmetry and the mutation operation of sheaves of its mirror.

Ref:

- (1) P. Seidel, Long exact sequence of symplectic Floer homology
- (2) P. Seidel, Fukaya categories and Picard Lefschetz theory
- (3) T. Bridgeland, T-structures on some local Calabi-Yau varieties