

THE UNIVERSITY



OF HONG KONG

*Institute of Mathematical Research  
Department of Mathematics*

## GEOMETRY SEMINAR

### Twists and braids for general 3-fold flops

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#### **Abstract**

If a complex surface contains a  $(-2)$ -curve, this curve corresponds to a spherical object in the derived category of coherent sheaves on the surface. For suitable arrangements of such curves, Seidel and Thomas used these spherical objects to establish braid group actions on the derived category. I will explain joint work with Michael Wemyss, giving a generalisation to curves on 3-folds. This makes use of relative spherical objects over noncommutative base rings, and certain braid-type groups associated to simplicial hyperplane arrangements.

Date: August 17, 2016 (Wednesday)

Time: 4:00 – 5:00pm

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

*All are welcome*