CASTS TALKS

CASTS Algebraic Geometry Summer Program

Fourier-Mukai transforms

Mr. Tang-Kai Lee

2018 - 08 - 01 (Wed.)
11:30 - 12:30
103, Mathematics Research Center Building (ori. New Math. Bldg.)

In this talk, we will first introduce the notions and some properties of Fourier-Mukai transforms between derived categories of coherent sheaves. We will see the main theorem of Orlov, which states that a fully faithful exact functor admitting right and left adjoints can be represented by a Fourier-Mukai transform, and use it to get some interesting results.

After that we will study Fourier-Mukai transforms by cohomological methods, and then, as an application, showing that the derived category of a smooth curve determines the curve uniquely.

CASTS

Center for Advanced Study in Theoretical Sciences, NTU