

## CASTS Algebraic Geometry Summer Program

*Derived category and canonical bundle I*

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11:30 - 12:30

103, Mathematics Research Center Building (ori. New Math. Bldg.)

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In this talk, we consider the bounded derived category of coherent sheaves of a smooth projective variety. We will introduce two important results due to Bondal and Orlov. The first one is that the smooth projective variety is unique determined by its bounded derived category of coherent sheaves under the assumption of the existence of ample canonical bundle. The second one is to determine the structure of all autoequivalences of the bounded derived category of coherent sheaves of a smooth projective variety by analyzing the ample sequences in derived categories.



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