



***FUDAN-SCMS ALGEBRAIC GEOMETRY SEMINAR
ZOOM MEETING SEMINAR***

***LECTURE 1:
TRIANGLE VARIETIES AND SURFACE DECOMPOSITION
OF HYPER-KÄHLER MANIFOLDS***

Speaker: Claire Voisin (Collège de France)

***Time: Thu, May 28, BJS 16:00-17:00, EST 04:00-05:00, GMT
08:00-09:00***

***LECTURE 2:
ANTISYMPLECTIC INVOLUTIONS ON PROJECTIVE
HYPERKÄHLER MANIFOLDS***

Speaker: Emanuele Macrì (Université Paris-Saclay)

***Time: Thu, May 28, BJS 17:15-18:15, EST 05:15-06:15, GMT
09:15-10:15***

Zoom Meeting Id: 996 772 71066

Password: 977240

Link: <https://zoom.com.cn/j/99677271066>



LECTURE 1

Abstract: In recent years, new constructions of complete families of polarized hyper-Kähler manifolds have been found starting from Fano geometry. These hyper-Kähler manifolds also appear as general deformations of Hilbert schemes of K3 surfaces or O'Grady manifolds. I will introduce the notion of surface decomposition for a variety X with a nontrivial Hodge structure on degree 2 cohomology. I will show that this notion is restrictive topologically, as it implies Beauville-Fujiki type relations. I will also show the existence of such a surface decomposition for the general hyper-Kähler manifolds mentioned above. This has interesting consequences on Beauville's conjecture on the Chow ring of hyper-Kähler manifolds.

LECTURE 2

Abstract: An involution of a projective hyperkähler manifold is called antisymplectic if it acts as (-1) on the space of global holomorphic 2-forms. I will present joint work in progress with Laure Flapan, Kieran O'Grady, and Giulia Saccà on antisymplectic involutions associated to polarizations of degree 2. We study the number of connected components of the fixed loci and their geometry.