Leibniz Universität Hannover

Oberseminar Institut für Algebraische Geometrie

Eyal Markman

(University of Massachusetts Amherst)

Rational Hodge isometries of hyper-Kahler varieties of K3[n]-type are algebraic.

Let X and Y be compact hyper-Kahler manifolds deformation equivalence to the Hilbert scheme of length n subschemes of a K3 surface. A cohomology class in their product $X \times Y$ is an analytic correspondence, if it belongs to the subalgebra generated by Chern classes of coherent analytic sheaves. Let f be a Hodge isometry of the second rational cohomologies of X and Y with respect to the Beauville-Bogomolov-Fujiki pairings. We prove that f is induced by an analytic correspondence. We furthermore lift f to an analytic correspondence F between their total rational cohomologies, which is a Hodge isometry with respect to the Mukai pairings, and which preserves the gradings up to sign. When X and Y are projective the correspondences f and F are algebraic.

Donnerstag, 14.07.2022

16:00 - 17:00, online

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Alle Interessierten sind herzlich eingeladen.