



Leibniz
Universität
Hannover

Oberseminar Institut für Algebraische Geometrie

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Hyperkähler manifolds of $K3^{[n]}$ -type admitting symplectic birational maps

Motivated by the existence of birational involutions on projective hyperkähler manifolds which are deformation equivalent to Hilbert schemes of n points of $K3$ surfaces, we show that such hyperkähler manifolds are always birational to moduli spaces of (twisted) stable coherent sheaves on a $K3$ surface, when they admit a symplectic birational map of finite order with a non-trivial action on its discriminant group. Passing via Bridgeland stability, one can show these hyperkähler manifolds are itself moduli spaces of stable objects on a (possibly different) $K3$ surface. In the second part of this talk, we deduce properties regarding the existence of birational involutions via wall-crossing and the birational geometry of these moduli spaces. This is a work in progress with Yajnaseni Dutta and Dominique Mattei.

Mittwoch, 02.03.2022

14:00 - 15:00, B302

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Alle Interessierten sind herzlich eingeladen.