



Leibniz
Universität
Hannover

Oberseminar
Institut für Algebraische Geometrie

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**Motives of hyper-Kähler varieties and the
Mumford-Tate conjecture.**

Hyper-Kähler manifolds are higher dimensional analogues of $K3$ surfaces, and their theory presents remarkable similarities with that of those surfaces. In particular, the key player in studying cohomological and geometric properties of hyper-Kähler manifolds is their second singular cohomology group. I will formulate a conjecture which predicts that the motive of a hyper-Kähler variety may be reconstructed from its component in degree 2. The conjecture is proven for all known existing hyper-Kähler varieties in the realm of André motives. As main application we establish the Mumford-Tate conjecture for all known hyper-Kähler varieties.

Donnerstag, 08.07.2021

16:30 - 17:30

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Alle Interessierten sind herzlich eingeladen.