Leibniz Universität Hannover

Oberseminar
Institut für Algebraische Geometrie

Philip Engel
(Universität Bonn)

The non-abelian Hodge locus

Given a family of smooth projective varieties, one can consider the relative de Rham moduli space, of flat vector bundles of rank n on the fibers. The flat vector bundles which underlie a Z-polarized variation of Hodge structure form the "non-abelian Hodge locus". Simpson proved that this locus is closed and analytic, and he conjectured it is algebraic. Simpson's conjecture would imply a conjecture of Deligne that only finitely many representations of the fundamental group underlie a Z-PVHS on some fiber. I will discuss a proof of Deligne's and Simpson's conjectures, under the additional hypothesis that the Z-Zariski closure of monodromy is a cocompact arithmetic group. This is joint work with Salim Tayou.

Donnerstag, 07.12.2023, 16:30 - 17:30, B302.
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Alle Interessierten sind herzlich eingeladen.