



Leibniz
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Hannover

Oberseminar Institut für Algebraische Geometrie

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Abundance and SYZ conjecture in families of hyperkähler manifolds

The hyperkähler SYZ conjecture predicts that a nef line bundle of vanishing BBF square on a hyperkähler manifold gives rise to a holomorphic Lagrangian fibration. In particular, such line bundle is expected to be semiample, which gives a connection of the SYZ conjecture with the generalized abundance conjecture. One can introduce a moduli space parametrizing pairs of a hyperkähler manifold and a semiample line bundle of vanishing BBF square on it, and then the SYZ conjecture predicts that an analogue of a global Torelli theorem should hold for this moduli space. I will explain how one can study the above moduli space using special families of hyperkähler manifolds called degenerate twistor deformations. Using this technique we show that an analogue of the global Torelli theorem holds for each connected component of the moduli space (in case this space is non-empty) and deduce deformation invariance of semiamplicity. The talk will be based on a joint work with Misha Verbitsky.

Donnerstag, 19.12.2024, 16:30 - 17:30, online.

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Alle Interessierten sind herzlich eingeladen.