

# New Perspectives on Hyperkähler Manifolds - A Celebration of Dimitri Markushevich's (60+2)nd Birthday

Contribution ID: 34

Type: **In-person Contribution Talk**

## Motives of moduli spaces and hyper-Kähler varieties

*Friday, 17 June 2022 10:30 (30 minutes)*

The best-known examples of hyper-Kähler varieties are obtained considering moduli spaces of sheaves on a K3 or abelian surface. The motive of a hyper-Kähler variety so constructed should be entirely governed by the underlying surface; more concretely, we expect to be able to give a formula for such a motive in terms of that of the surface. I will explain what is known about this problem and some related conjectures. I will then present a formula for the motive of O'Grady's six dimensional varieties obtained via the desingularization of certain moduli spaces of sheaves on an abelian surface, and discuss some consequences.

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