

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

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## Lagrangian fibrations by Prym varieties and their dual fibrations

*Monday, 13 June 2022 10:00 (1 hour)*

Lagrangian fibrations are fibrations of hyperkähler manifolds and orbifolds by abelian varieties. Fibrations by Prym varieties were constructed by Markushevich-Tikhomirov, Arbarello-Sacca-Ferretti, and Matteini. The 'spectral curves' of the Markushevich-Tikhomirov and Matteini systems lie in K3 double covers of del Pezzo surfaces of degree two and three, respectively.

In this talk, we consider a Prym fibration in dimension six obtained from spectral curves in a K3 double cover of a degree one del Pezzo. We construct its dual Lagrangian fibration by imitating ideas of Menet, using Pantazis's construction of dual Prym varieties. We speculate on the relation of this (new?) Lagrangian fibration to the Matteini system. This is joint work with Chen Shen.

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