

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

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## From quartic double solids to Gushel-Mukai threefolds through derived categories

*Monday, 13 June 2022 16:00 (1 hour)*

Quartic double solids and Gushel-Mukai threefolds are examples of prime Fano threefolds known to share many numerical properties. In the talk, I will explain how one can construct a smooth and proper over the base family of triangulated categories with special fiber the nontrivial component of the derived category of a quartic double solid and general fiber the nontrivial component of the derived category of a Gushel-Mukai threefold. As a consequence one obtains smooth families of Fano surfaces and intermediate Jacobians of these threefolds. This is a joint work in progress with Evgeny Shinder.

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