Lagrangian fibrations on hyperkähler manifolds

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Hyperkähler (also called irreducible holomorphic symplectic) manifolds form an important class of manifolds with trivial canonical bundle. One fundamental aspect of their structure theory is the question whether a given hyperkaehler manifold admits a Lagrangian fibration. I will report on a joint project with Christian Lehn and Soenke Rollenske investigating the following question of Beauville: if a hyperkaehler manifold contains a complex torus $T$ as a Lagrangian submanifold, does it admit a (meromorphic) Lagrangian fibration with fibre $T$?

Tuesday Apr 5th
3:00 p.m.
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