

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

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On algebraically coisotropic submanifolds

Monday, 13 June 2022 14:30 (1 hour)

This is joint work with F. Campana. Recall that a submanifold X in a holomorphic symplectic manifold M is said to be coisotropic if the corank of the restriction of the holomorphic symplectic form s is maximal possible, that is equal to the codimension of X . In particular a hypersurface is always coisotropic. The kernel of the restriction of s defines a foliation on X ; if it is a fibration, X is said to be algebraically coisotropic. A few years ago we proved that a non-uniruled algebraically coisotropic hypersurface $X \subset M$ is a finite étale quotient of $C \times Y \subset S \times Y$, where $C \subset S$ is a curve in a holomorphic symplectic surface, and Y is arbitrary holomorphic symplectic. We prove some partial results on the higher-codimensional analogue of this, with emphasis on the abelian case.

Primary author: AMERIK, Ekaterina (Université de Paris-Saclay, France)

Presenter: AMERIK, Ekaterina (Université de Paris-Saclay, France)