

The $P=W$ paradigm for compact hyperkähler manifolds

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The $P=W$ paradigm for compact hyperkähler manifolds suggests surprising relations between degenerations of these manifolds and Lagrangian fibrations on top of them. I will exemplify this principle in two instances: 1. the perverse-Hodge octahedron, i.e., a 3D enhancement of the classical Hodge diamond; 2. the ubiquity of tori as fiber of Lagrangian fibrations, vanishing cycles of type III degenerations, and now also as deeper strata of type II degenerations. This talk is based on a joint project with D. Huybrechts and an ongoing project with P. Engel.

Presenter: MAURI, Mirko (École Polytechnique, France)