



Non-commutative Hodge structures

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This article gives a survey of recent results on a generalization of the notion of a Hodge structure. The main example is related to the Fourier-Laplace transform of a variation of polarizable Hodge structure on the punctured affine line, like the Gauss-Manin systems of a proper or tame algebraic function on a smooth quasi-projective variety. Variations of non-commutative Hodge structures often occur on the tangent bundle of Frobenius manifolds, giving rise to a tt^* geometry.

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