Séminaire de physique mathématique

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Lundi 03/06/2019, 11h00-12h00

On singular solutions of LIA, the Heisenberg model and the cubic Schrödinger equation

Valeria Banica

Jacques-Louis Lions (Sorbonne)

In this talk I will first sketch the derivation of LIA (Local Induction Approximation) as a model for the dynamics of vortex filaments in 3-D fluids. Then I will describe its link with the classical continuous Heisenberg model and with the 1-D cubic Schrödinger equation. Finally I shall present some recent results on solutions generating a singularity in finite time.