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Landau–Lifshitz (Schrödinger map) dynamics near harmonic maps

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Abstract

The Landau–Lifshitz (or Schrödinger map) equation is a basic model in ferromagnetism, as well as a geometric (and nonlinear) version of the linear Schrödinger equation. An important open question is whether or not finite energy solutions can form singularities. We describe some results for 2- D equivariant maps with energy close to the energy of harmonic maps.

This is joint work with *Kyungkeun Kang* and *Tai-Peng Tsai*.