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THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY

Department of Mathematics

SEMINAR ON PDE

Singularity formation for the Landau-Lifshitz-Gilbert equation in dimension two

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Abstract

Landau-Lifshitz-Gilbert equation (LLG), which models the evolution of spin fields in continuum ferromagnetism, can be viewed as a coupling between the harmonic map heat flow and the Schrodinger map flow. In this talk, we shall report some recent gluing construction of finite-time singularities for LLG in dimension two. To overcome the difficulties caused by the dispersion, technical ingredients such as distorted Fourier transform and sub-Gaussian estimates are employed. This is based on a joint work with J. Wei and Q. Zhang.

Date: 21 April 2023 (Friday)

Time: 9:00am

Zoom Meeting: https://hkust.zoom.us/j/96851187301 (Passcode: 166862)

All are Welcome!