



Einladung zum Oberseminar Mathematik in den Naturwissenschaften

Julius-Maximilians-Universität Würzburg
Lehrstuhl für Mathematik in den Naturwissenschaften

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Chiral magnetic skyrmions and computational micromagnetism

We consider the numerical approximation of the Landau-Lifshitz-Gilbert equation (LLG), which describes the dynamics of the magnetization in ferromagnetic materials. In addition to the classical micromagnetic contributions, the energy comprises the Dzyaloshinskii-Moriya interaction (DMI), which is the most important ingredient for the enucleation and the stabilization of chiral magnetic skyrmions. Besides convergent tangent plane integrators, the talk also discusses weak-strong uniqueness of solutions as well as a reduced thin-film model, which is particularly interesting for computations.

The talk is based on joint work, in particular, with Giovanni Di Fratta, Michael Innerberger, Carl-Martin Pfeiler, and Michele Ruggeri.

Ort: Zoom video conference

Zeit: Freitag, 12.06.2020 um 13:30 Uhr

You are cordially invited to this lecture. Request the Zoom link from
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gez. Anja Schlömerkemper