

# **Barbara Zwicknagl: Variational models for pattern formation: from helimagnets to shape-memory alloys**

*lundi 19 juin 2023 16:20 (50 minutes)*

We consider continuum variational models for pattern formation in helimagnetic compounds. The energy functional consists of a multi-well bulk energy regularized by a higher order interfacial energy, and arises from a frustrated spin model in the sense of Gamma-convergence. We derive the scaling law for the minimal energy in the case of incompatible boundary conditions. The scaling law indicates the formation of various branching-type patterns in certain parameter regimes. We in particular outline relations to well-studied variational models for martensitic microstructures.

This talk is based on joint works with Janusz Ginster and Melanie Koser (both Humboldt-Universität zu Berlin).