High-contrast homogenization in magnetoelasticity

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June 24, 2024

Conference on Calculus of Variations in Lille – 4th edition

Abstract

Grounding on a novel extension operator tailored to manifold valued Sobolev functions on perforated domains, I present a high-contrast homogenization result for an energy functional in magnetoelasticity. The interplay between the non-local self-energy of micromagnetics and the high-contrast material leads to unexpected contributions related to the soft component in the effective limit model.