## Geometric methods in Calculus of Variations



Contribution ID: 8 Type: not specified

## Concentration Phenomena in Magnetic Lattice Models

Thursday, 10 July 2025 11:30 (1 hour)

We will gently review both classical and recent results concerning the variational analysis of energy concentration phenomena in magnetic models defined on lattices in the limit as the lattice spacing tends to zero. The discussion includes results on the classical XY model on the square lattice, when the magnetization takes values in  $S^1$ , along with some of its variants. We will then focus on recent advances in the analysis of magnetic skyrmion models, where the magnetization is  $S^2$ -valued, highlighting the crucial role of the topology of the target space.

Presenter: CICALESE, Marco (TU Munich)