

Phase-field approximation of sharp-interface energies accounting for lattice symmetry

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The talk concerns a phase field approximation for sharp interface energies, defined on partitions, as appropriate for modeling grain boundaries in polycrystals. The label takes value in $O(d)/G$, where G is the point group of a lattice. The limiting surface energy behaves for small angles as $s|\log s|$, according to the Read and Shockley law. These functionals can be used for image reconstruction of grain boundaries. Joint work with S. Conti (HCM Bonn), A. Garroni, A. Malusa (Sapienza).

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