

Stanford Department of Mathematics Colloquium (Tuesday)

Tuesday May 12, 4:15 p.m. Room 380-X.

Local and non-local minimal surfaces

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Abstract

Nonlocal minimal surfaces naturally appear when studying the structure of interphases that arise in classical phase field models with very long space correlations. These surfaces are boundaries of sets whose characteristic functions minimize a fractional Sobolev norm, and they generalize the classical notion of minimal surfaces in geometric measure theory. In this talk we'll explain and compare the general regularity theory for both local and non-local minimal surfaces, and discuss several recent developments and open problems.