

Some recent results on nonlocal minimal surfaces

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The fractional perimeter is a geometric functional introduced in 2010 by Caffarelli, Roquejoffre & Savin in connection with phase transition and diffusion problems involving long-range interactions. Its minimizers, nonlocal minimal surfaces, have been the object of great interest in recent years.

In my talk, I will provide an introduction to nonlocal minimal surfaces, discussing some motivations for their study, the most important progresses made so far in their analysis, and several interesting questions about them that have not been answered yet.