

A ‘liquid-solid’ phase transition in a simple model for swarming

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We consider a non-local shape optimization problem, which is motivated by a simple model for swarming and other self-assembly/aggregation models, and prove the existence of different phases. A technical key ingredient, which we establish, is that a strictly sub-harmonic function cannot be constant on a set of positive measure.

This is joint work with Rupert Frank

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