Title:
Stability results for the nonlocal Mullins-Sekerka and for the Hell-Shaw flow

Abstract:
We will show that any 3-d periodic configuration that is strictly stable for the area functional is exponentially stable for the Hele-Shaw flow, that is the H^{-1/2} gradient flow of the perimeter. Similarly, the 3-d periodic configurations which are strictly stable for the sharp interface Ohta-Kawasaki energy are exponentially stable for the nonlocal Mullins-Sekerka flow. Joint work with E. Acerbi, V. Julin and M. Morini.