

# Moving surfaces in phase transitions

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Moving surfaces are ubiquitous in many areas of mathematics and the applied sciences. In this talk I will first introduce some well-known geometric evolution equations, and then proceed to a thermodynamically consistent Stefan problem with surface tension which models a system that can undergo phase transitions. The model is derived from fundamental principles in physics and thermodynamics. Existence of solutions and stability properties of equilibria will be investigated. It will be pointed out that all equilibria are located at the critical points of an entropy functional, and it will be shown that multiple-equilibria comprise unstable configurations.

The lecture will take place in Thackeray 704 at 3:30pm.  
Refreshments will start at 3:00pm.