



The Hong Kong University of Science and Technology

Department of Mathematics

Seminar on Applied Mathematics

**Dynamics of a second order gradient model for
phase transitions**

by

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Abstract

We prove in a radially symmetric geometry, the convergence in the sharp interfacial limit, to motion by mean curvature of a second order gradient model for phase transition. This is in spirit similar to the classical Allen-Cahn theory of phase boundary motion. However the corresponding dynamical equation is fourth order thus creating some challenging difficulties for its analysis. A characterization and stability analysis of the optimal profile are performed which are in turn used in the proof of convergence of an asymptotic expansion.

Date: Wednesday, 18 July 2018

Time: 10:30a.m. – 11:30a.m.

**Venue: Room 2304, Academic Buildings
(Lifts 17, 18), HKUST**

All are welcome!