



PIMS / AMI Seminar

Tuesday, February 22, 2011
3:30 p.m.
CAB 657

Applied
Mathematics
Institute



... the backbone of science!

“Curved interfaces for the perturbed 2D Allen-Cahn Equation”

David Iron
Department of Mathematics and Statistics
Dalhousie University

Abstract

The Allen-Cahn equations are used to study the formation and dynamics of fronts. Originally the system modeled the formation of an interface separating two alloys. In the unperturbed system the interface will act to reduce its length. I will present some classical results for the unperturbed system then show how a small perturbation can lead to the formation of a curved interface. I will use perturbation methods and curvilinear coordinates to derive expressions for the equilibrium solution, dynamics and stability of interfaces.

Refreshments will be served in CAB 649 at 3:00 p.m.