



PIMS / AMI Seminar



Tuesday, July 8, 2014
3:30 p.m.
CAB 365

“A thin film approximation of the Muskat problem”

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Abstract

Existence of nonnegative weak solutions is shown for thin film approximations of the Muskat problem which include either gravity forces or capillary forces or both. The model describes the space-time evolution of the heights of the two fluid layers and is a fully coupled system of two second or fourth order degenerate parabolic equations in \mathbf{R}^d which can be viewed as a gradient flow for the 2-Wasserstein distance. In the absence of capillarity, a classification of self-similar solutions is given.

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