PIMS / AMI Seminar

Friday, October 7, 2011
3:00 p.m.
CAB 657

"An Efficient Surface-Based Numerical Method for Flow with Soluble Surfactant"

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Abstract

We address a significant difficulty that occurs in computation of fluid interfaces with soluble surfactant in the limit of large bulk Peclet number. A transition layer develops adjacent to an interface where bulk surfactant concentration varies rapidly and this must be resolved accurately to evaluate surfactant exchange between the interface and bulk flow. A new "hybrid" numerical method is presented that incorporates a singular perturbation reduction of the transition layer into a surface-based solution of the interfacial flow problem.   This is joint work with Michael Booty (NJIT) and Qiming Wang (University of British Columbia).

Refreshments will be served in CAB 649 at 2:30 p.m.