

Abstract Submitted
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The Stability and Interfacial Motion of Multi-layer Radial Porous Media and Hele-Shaw Flows CRAIG GIN, University of Washington, PRABIR DARIPA, Texas AM University — In this talk, we will discuss viscous fingering instabilities of multi-layer immiscible porous media flows within the Hele-Shaw model in a radial flow geometry. We study the motion of the interfaces for flows with both constant and variable viscosity fluids. We consider the effects of using a variable injection rate on multi-layer flows. We also present a numerical approach to simulating the interface motion within linear theory using the method of eigenfunction expansion. We compare these results with fully non-linear simulations.

Craig Gin
University of Washington

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