



Differential Equations and Applied Math Seminar

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11am-12pm January 29th, 2021

Zoom

Title: Interface problems and nonlocal heat equations

Abstract: In this talk I will discuss free boundary problems driven by what is known as a Darcy flow. A typical circumstance is that of two immiscible fluids separated by a smooth interface, the velocity in each phase satisfying what is known as Darcy's law. Many important physical models, such as the Hele-Shaw flow, fall in this category. I will explain how the dynamics in such problems are equivalent to a nonlocal heat equation, and explain the implications of this fact.

Interested faculty and graduate students are encouraged to attend.