

Self-similar solutions to a thin film Muskat problem

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The thin film Muskat describes the space-time evolution of the heights of two layers of non-miscible fluids with different viscosity and density and is a second-order parabolic system featuring a diffusion matrix which is full and degenerate. A complete classification of self-similar solutions is provided and their role in the large time behaviour is investigated. Joint work with Bogdan-Vasile Matioc (Hannover).