

Numerical solution of balance laws for a swelling porous media

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ABSTRACT: We consider a swelling porous media in two dimensions with heterogeneous material parameters. This could represent a number of different scenarios including biological tissue, drug delivery systems, clays or food materials. We solve the balance equations for the media in two dimensions using a finite element scheme on several geometries and considering different types of heterogeneity. We will present graphical results and make comparisons.