

Abstract

Looking at a coupled system of PDEs with coefficients depending on both the coefficients of the initial PDEs system and choice of heterogeneity (perforations) of the medium. To fix ideas, I consider a coupling between the Stokes system and reaction-diffusion equations (modeling the interplay between flow and active chemical species) for which I perform a formal two-scale asymptotic expansion. After proving the well-posedness of the system in x -dependent Bochner spaces, I state corrector estimates (for concen