

Homogenization of Non-Divergence Type Equation with Oscillating Coefficients Defined on a Highly Oscillating Obstacles.

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Abstract

In this talk, we discuss the homogenization of a highly oscillating obstacle problem using the viscosity method. The equation we deal with is a non-divergence type equation with oscillating coefficients. To analyze the behavior of solutions in the obstacle problem, we construct a corrector function, periodic function when the obstacle is given as 1. By utilizing this corrector, we identify the so-called "strange term behavior" when the size of the domain where the obstacle is defined reaches a critical value. We then modify the corrector for critical size and analyze the solution's behavior when the size of the obstacle is either larger or smaller than the critical value.