

SPEAKER:

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TITLE:

Large-Scale Boundary Regularity Estimates in Periodic Homogenization

ABSTRACT:

In this talk I will discuss some of recent progress on boundary regularity at large scale in homogenization of second-order elliptic systems in divergence form with rapidly oscillating periodic coefficients. Here we are interested in the estimates, due to homogenization, for operators with bounded measurable coefficients. These large-scale estimates, combined with the small-scale estimates obtained by rescaling, lead to the sharp regularity estimates at all scales. In particular, the cases of the Rellich estimates in Lipschitz domains and the Lipschitz estimates in $C^{1,\alpha}$ domains will be presented.