SPEAKER:

Jinping Zhuge, University of Chicago

TITLE:

Large-scale regularity of nearly incompressible elasticity in non-smooth domains

ABSTRACT:

All the elastic materials are more or less compressible in practice. This talk is concerned about the large-scale regularity for the linear system of nearly incompressible elasticity. In the setting of stochastic homogenization, we develop some new techniques to establish the large-scale estimates of the displacement and the pressure, which are uniform in both the scale parameter and the incompressibility parameter, in non-smooth domains whose boundaries are smooth at large scales and bumpy at small scales.