

**SPEAKER:**

Chase Russell, University of Kentucky

**TITLE:**

Homogenization In Perforated Domains

**ABSTRACT:**

In this qualifying talk we discuss homogenization of the system of linear elasticity with rapidly oscillating periodic coefficients in perforated domains. We present existence and uniqueness results for solutions in perforated domains and quantitative estimates on the  $H^1$ -“convergence” rates of both the mixed boundary value and Neumann problems. Prior to discussing these estimates, we provide some background on the system of linear elasticity in perforated domains.