1116-35-1736   **Zhongwei Shen** and **Shu Gu*** (`gushu0329@uky.edu`). *Homogenization of Stokes systems and Uniform Regularity Estimates.*

In this talk, we study the uniform regularity estimates for a family of Stokes systems with rapidly oscillating periodic coefficients. By using compactness method, we here establish interior Lipschitz estimates for velocity and L^∞ estimates for the pressure as well as a Liouville property for solutions in $\mathbb{R}^d$. We also obtain the boundary $W^{1,p}$ estimates in a bounded C^1 domain for any $1 < p < \infty$. (Received September 21, 2015)