1133-35-243 **Robert Pertsch Gilbert*** (gilbert@udel.edu), Robert Pertsch Gilbert, 112 Briar Lane, Newark, DE 19711, and **Michael Shoushani** (mashous86@gmail.com), Department of Mathematics, University of Western Connecticut, Danbury, CT 06810. *Effective Equations for Poro-elastc Materials.*

We extend known homogenization results for periodic geometries to the case a stationary random, scale-separated microstructure consisting of of linear elastic solid and a viscous Newtonian fluid.. The ratio $\varepsilon$ of the macroscopic length scale and a typical size of the microstructural inhomogeneity is the small parameter of the problem. We employ stochastic two-scale convergence in the mean to pass to the limit $\varepsilon \to 0$ in the governing equations. We assume that an elastic medium is randomly fissured with the associated random field being statistically homogeneous, with built-in scale separation. The effective equations are derived using the stochastic two-scale convergence in the mean. We consider also the existence theorem for the effective equations in the time-harmonic domain by using the Gårding inequality. In order to have the requisite formulae we extend the discussion of Carcione to the completely anisotropic case. (Received July 27, 2017)