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**Moongyu Park\*** (mp0002@email.uah.edu), Department of Mathematical Sciences, University of Alabama in Huntsville, Huntsville, AL 35899. *Renormalizing Operator-Stable Lagrangian Velocities for Microbial Dynamics Simulations.*

In previous works we've developed upscaling methodologies for stable Levy Lagrangian velocities in fractal media. The renormalization tools were generalized central limit theorems which are equivalent to a renormalization group approach. Here we extend these ideas to operator-stable Lagrangian velocities and apply the results to microbial dynamics in multi-scale geologic formations. Renormalized Fokker-Planck equations are presented at each scale. (Received September 03, 2008)