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G. S. Ladde, Department of Mathematics, University of South Florida, Tampa, FL , and **M. Sambandham*** (msambandham@yahoo.com), Department of Mathematics, Morehouse College, Atlanta, GA 30314. *Convergence and Stability Analysis of Stochastic Large-Scale Approximation Scheme*. Preliminary report.

Variational comparison theorems for a class of stochastic hybrid systems are developed. These comparison results are applied to study the convergence and relative stability analysis of stochastic large-scale approximation schemes for an initial value problem in the framework of the stochastic hybrid system. Suitable examples are given to illustrate the results. (Received September 20, 2012)