1046-93-1307 **Gangaram S. Ladde*** (gladde@cas.usf.edu), Department of Mathematics and Statistics, University of South Florida, 4202 East Fowler Avenue, PHY 114, Tampa, FL 33620-5700.
HYBRID DYNAMIC INEQUALITIES UNDER RANDOM PERTURBATIONS AND APPLICATIONS. Preliminary report.

In this work, a mathematical model for interconnected stochastic dynamic phenomenon evolving under different measure chains with state dependent discrete events is formulated. By introducing an arbritrary pair of functionals of a pair of flows, a composite system of dynamic inequalities with corresponding comparison hybrid dynamic system is outlined. The byproduct of this provides an estimate for these pair of functionals. Furthermore, by employing vector Lyapunov/energy like functions as functionals of hybrid dynamic flows, several results are developed. The obtained results extend and generalize the existing results in a systematic way. (Received September 15, 2008)