1014-34-426 **Gangaram S. Ladde**, Department of Mathematics, University of Texas at Arlington, Arlington, TX 76019, and **Aghalaya S Vatsala*** (`Vatsala@Louisiana.edu`), Department of Mathematics, University of Louisiana at Lafayette, Lafayette, LA 70504. *Generalized Monotone Method for Stochastic Initial Value Problems.* Preliminary report.

In this paper we develop generalized monotone method for the first order stochastic initial value problem, when the forcing function is the sum of an increasing and decreasing functions. We develop our result for four types of coupled lower and upper solutions. The iterates converge uniformly and monotonically to the mini-max coupled sample solutions of the nonlinear stochastic initial value problem. The results developed here will include the earlier monotone method as special cases. Finally, we establish results that provides an error estimates between the linear iterates of the stochastic initial value problem with the corresponding deterministic iterates. (Received September 15, 2005)