

1112-35-6

Eunhee Park* (parkeh@indiana.edu), 831 East 3rd St, Bloomington, IN 47405, and **Roger Temam** and **Mickael Chekroun**. *The Stampacchia maximum principle for spdes and applications.*

Stochastic partial differential equations are considered, linear and nonlinear, for which we establish comparison theorems for the solutions, or positivity results a.e., and a.s., for suitable data. Comparison theorems for SPDEs are available in the literature and comparisons are made with our results. The originality of our approach is that it is based on the use of truncations, following the Stampacchia approach to maximum principle. We believe that our method, which does not rely too much on probability considerations, is simpler than the existing approaches and more general. As an application we also show how one can prove the existence of positive solutions for SPDEs with a quadratic nonlinearity (and possibly other nonlinearities). (Received March 04, 2015)