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Mickael Chekroun and **Eunhee Park***, 831 East 3rd St, Bloomington, IN 47405, and **Roger Temam**. *The Stampacchia maximum principle for stochastic partial differential equations and applications.*

Stochastic partial differential equations (SPDEs) 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. 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 to a certain extent, more directly applicable to concrete situations. Among the applications, boundedness results and positivity results are respectively proved for the solutions of a stochastic Boussinesq temperature equation, and of reaction-diffusion equations perturbed by a non-Lipschitz nonlinear noise. Stabilization results to a Chafee-Infante equation perturbed by a nonlinear noise are also derived. (Received January 23, 2017)