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Parisa Fatheddin* (parisa.fatheddin@afit.edu), 2950 Hobson Way, WPAFB, OH 45433, **P. Sundar** (sundar@math.lsu.edu), Louisiana State University, Baton Rouge, LA 7080, and **Jie Xiong** (jiexiong@umac.mo), University of Macau, Macau, Peoples Rep of China. *Asymptotic Behavior of a Class of SPDEs.*

We will introduce a class of stochastic PDEs that is used to characterize two commonly studied population models: super-Brownian motion and Fleming-Viot process. Super-Brownian motion is the continuous version of a branching process and Fleming-Viot is the continuous version of step-wise mutation model related to Wright-Fisher model. We begin by providing some background on these and then discuss our results on proving four fundamental limit theorems for the class of SPDEs and population models. Namely, we present their large and moderate deviations, central limit theorem, and law of the iterated logarithm, where tightness of the process plays a major role. These results are from joint work with P.Sundar and Jie Xiong. (Received July 03, 2017)