Meeting: 1003, Atlanta, Georgia, SS 12A, AMS-SIAM Special Session on Stochastic, Large-Scale, and Hybrid Systems, I

1003-34-57 **Mark A McKibben*** (`mmckibben@goucher.edu`), 1021 Dulaney Valley Road, Baltimore, MD 21204, and **David N Keck**. *On a class of abstract McKean-Vlasov stochastic evolution equations under general growth conditions.* Preliminary report.

We investigate a class of abstract stochastic integro-differential evolution equations with variable delay in a separable Hilbert space in which the nonlinearities depend not only on the state process at time t, but also on the probability distribution of this process. A general existence and uniqueness result, various convergence results (regarding strong solutions and corresponding probability measures), stability results will be discussed, along with certain stochastic properties of the solution. Concrete examples of stochastic partial differential equations are also provided to elucidate the abstract theory. These results have been established under growth conditions weaker than the classical Lipschitz conditions. (Received July 22, 2004)