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Benjamin Fehrman* (fehrman@mis.mpg.de), Inselstr. 22, 04103 Leipzig, Saxony, Germany. *A Liouville theorem for stationary and ergodic ensembles of parabolic systems.*

We will discuss a first-order Liouville theorem for random ensembles of uniformly parabolic systems under the qualitative assumptions of stationarity and ergodicity. In particular, the analysis will yield a quantitative homogenization estimate in terms of the sublinear growth of a canonical extended corrector. The sublinearity of the corrector provides the starting point for a Campanato iteration. We will use this iteration to establish, almost surely, an intrinsic large-scale $C^{1,\alpha}$ -regularity estimate for caloric functions, from which the Liouville theorem follows. (Received February 17, 2018)