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Oleksandr Misiats* (omisiats@vcu.edu), 1015 Floyd Ave, Richmond, VA 23284, Oleksandr Stanzhytskyi, Volodymyrska 60, Kyiv, Ukraine, and Ihsan Topaloglu, 1015 Floyd Ave, Richmond, VA 23284-9000. On Global Existence and Blowup of Solutions of Stochastic Keller-Segel Type Equation.

This talk is devoted to stochastic Keller-Segel type equation, perturbed with random noise. I will start with showing that for special types of random pertubations (i.e. in a divergence form), the equation has a global weak solution for small initial data. This result is consistent with the deterministic case. However, surprisingly enough, if the noise is not in a divergence form, we show that the solution has a fi nite time blowup with nonzero probability for any nonzero initial data, resulting in a drastic difference from the deterministic case. (Received August 20, 2021)