1165-60-228 **Raluca Balan** and **Le Chen*** (le.chen@emory.edu), 400 Dowman Dr., Atlanta, GA 30322, and **Xia Chen**. *Exact asymptotics of the stochastic wave equation with time-independent noise.*

In this article, we study the stochastic wave equation in all dimensions $d \leq 3$, driven by a Gaussian noise $\dot{W}$ which does not depend on time. We assume that either the noise is white, or the covariance function of the noise satisfies a scaling property similar to the Riesz kernel. The solution is interpreted in the Skorohod sense using Malliavin calculus. We obtain the exact asymptotic behaviour of the p-th moment of the solution either when the time is large or when p is large. For the critical case, that is the case when $d = 3$ and the noise is white, we obtain the exact transition time for the second moment to be finite.

This is a joint work with Raluca Balan and Xia Chen. (Received January 18, 2021)