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*Rare event simulation via importance sampling for linear SPDEs.*

We develop provably efficient importance sampling methods for estimating rare events for linear stochastic partial differential equations exposed to small noise. We use a spectral method to identify a one-dimensional linear span where the rare event likely occurs and we project our change of measure onto that direction. The scheme we develop works well for a wide variety of different intensities of noise, time horizons, and finite dimensional Galerkin approximations of the infinite dimensional system. Simulations support the theoretical results. (Received August 31, 2016)