

1173-60-240

David Nualart* (nualart@ku.edu). *Convergence of densities for the stochastic heat equation.*

Consider the one-dimensional stochastic heat equation driven by a space-time white noise with constant initial condition. The purpose of this talk is to present a recent result on the uniform convergence of the density of the normalized spatial averages of the solution on an interval $[-R,R]$, as R tends to infinity, to the density of the standard normal distribution, assuming some non-degeneracy and regularity conditions on the diffusion coefficient. The proof is based on the combination of techniques from Malliavin calculus with Stein's method for normal approximations. (Received September 21, 2021)