

1146-60-217

Denis Bell* (dbell@unf.edu), 2160 Mayport Road, # 502, Jacksonville, FL 32233. *Limit distributions for singular stochastic integrals*. Preliminary report.

We study the limit distributions of sequences of random variables F_n defined by Skorohod integrals

$$F_n = \int_0^1 \phi_n(t) u_t \delta B_t^H.$$

Here B_t^H is fractional Brownian motion with Hurst parameter H in the range $(1/4, 1)$, and ϕ_n are a sequence of deterministic kernels defined on $[0, 1]$ converging (in a suitable sense) to a delta function based at 1. The limit distributions are shown to have the form $cu_1 Z$ where Z is a $N(0, 1)$ random variable independent of B_H . The methods are elementary and admit generalizations to higher dimensional integrals and to more general kernels. This is joint work with David Nualart and Raul Bolanos. (Received January 22, 2019)