

SELSIMILAR PROCESSES WITH STATIONARY INCREMENTS IN THE
SECOND WIENER CHAOS

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Abstract: We study selfsimilar processes with stationary increments in the second Wiener chaos. We show that, in contrast with the first Wiener chaos which contains only one such process (the fractional Brownian motion), there is an infinity of selfsimilar processes with stationary increments living in the Wiener chaos of order two. We prove some limit theorems which provide a mechanism to construct such processes.

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