Q-FRACTIONAL BROWNIAN MOTION IN INFINITE DIMENSIONS. ITÔ'S FORMULA AND ISOMETRY

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We consider a white noise calculus for fractional Brownian motion with values in a separable Hilbert space, whereby the covariance operator Q is a kernel operator (Q-fractional Brownian motion). We prove a Q-fractional version of the Itô's formula. Furthermore we introduce Malliavin derivative for Q-fractional motion, prove a Q-fractional integration by parts formula and a Q-fractional version of the Itô isometry.

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