

The Ito formula for the Ito processes driven by the cylindrical Wiener process in a Banach space

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In the space of generalized random elements we consider the general Ito processes driven by the cylindrical Wiener process and prove the Ito formula for them. Afterward, from the main Ito process in a Banach space driven by the cylindrical Wiener process, we produce the generalized Ito process in the space of generalized random elements and write the Ito formula - already proven for this case. Then we check radonizability of the members of the received equality and as they turn out Banach space valued, we get the Ito formula in an arbitrary Banach space. Earlier we implemented this approach in some special cases.