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Some relations between bounded below elliptic operators and stochastic analysis

We adapt Bismuth's way of the Malliavin calculus to a class of elliptic rightinvariant pseudo-differential operators on a Lie group bounded below on a Lie group. Unlike the standard Malliavin calculus for Poisson processes, there is no limitation on the size of big jumps (small values of the extra-variables in the symbol of the operator). In the second step, we establish the link of big order non-Markovian generator of Poisson type and the theory of bounded below operators by using Garding inequality.

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Biography

Rémi Léandre is Research Director at the CNRS. He has received the Rollo Davidson Prize and The Bronze Medal of CNRS for various works on hypoelliptic diffusions. He wrote about 170 papers on the two aspects of infinite dimensional analysis, that is the Malliavin calculus and white noise analysis, with applications in Analysis, Geometry and Mathematical Physics. He published with X Dai, X Ma and W Zhang two books in honor of J M Bismut in Astérisque (Société Mathématique de France).

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