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	Nota di contenuto	Frontmatter -- Preface -- Contents -- 0. Introduction -- 1. Lévy processes and Itô calculus -- 2. Perturbations and properties of the probability law -- 3. Analysis of Wiener-Poisson functionals -- 4. Applications -- Appendix -- Bibliography -- List of symbols -- Index
	Sommario/riassunto	This monograph is a concise introduction to the stochastic calculus of variations (also known as Malliavin calculus) for processes with jumps. It is written for researchers and graduate students who are interested in Malliavin calculus for jump processes. In this book processes "with jumps" includes both pure jump processes and jump-diffusions. The author provides many results on this topic in a self-contained way; this also applies to stochastic differential equations (SDEs) "with jumps". The book also contains some applications of the stochastic calculus for processes with jumps to the control theory and mathematical finance. Namely, asymptotic expansions functionals related with financial assets of jump-diffusion are provided based on the theory of asymptotic expansion on the Wiener-Poisson space. Solving the Hamilton-Jacobi-Bellman (HJB) equation of integro-differential type is related with solving the classical Merton problem and the Ramsey theory. The field of jump processes is nowadays quite wide-ranging, from the Lévy processes to SDEs with jumps. Recent developments in stochastic

analysis have enabled us to express various results in a compact form.
Up to now, these topics were rarely discussed in a monograph.