

Bismut, Jean-Michel**Mécanique aléatoire.** (French) [Zbl 0457.60002](#)**Lecture Notes in Mathematics.** 866. Berlin-Heidelberg-New York: Springer-Verlag. XVI, 563 p. DM 59.00; \$ 26.90 (1981).For a scan of this review see the [web version](#).**MSC:**

- 60-02 Research exposition (monographs, survey articles) pertaining to probability theory
- 58J65 Diffusion processes and stochastic analysis on manifolds
- 60Hxx Stochastic analysis
- 93E20 Optimal stochastic control
- 60J60 Diffusion processes
- 60K35 Interacting random processes; statistical mechanics type models; percolation theory
- 60G35 Signal detection and filtering (aspects of stochastic processes)
- 93E11 Filtering in stochastic control theory

Cited in **6** Reviews
Cited in **61** Documents**Keywords:**

stochastic optimization problems; classical mechanics systems submitted to random perturbations; stochastic flows of diffeomorphisms of a manifold; Stokes type formula; generalized Poincare-Cartan form; random electromagnetic field; Stratonovitch calculus; problem of reversibility; geodesic polygons; geometric maximum principle

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