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Nota di contenuto	700 ; honoree -- Contents -- Preface -- Fluctuations of the Wiener sausage for surfaces -- A review of recent and older results on the absolute continuity of harmonic measure -- Constructing stochastic flows: some examples -- Spectral and function theory for combinatorial Laplacians -- On deciding whether a surface is parabolic or hyperbolic -- A solvable stochastic control problem in spheres -- Brownian motion and the ends of a manifold -- On holomorphic diffusions and plurisubharmonic functions -- Leading terms in the asymptotics of the heat equation -- Probability theory and differential equations -- Brownian motion and Riemannian geometry -- First-order asymptotics of the principal eigenvalue of tubular neighborhoods -- 1. Introduction -- 2. Non-geometric expansion in the Ball -- 3. Cylindrical trace in a hypersurface -- 4. Case of a tube about a Curve in R3 -- 5. Case of a tube about a hypersurface in Rn -- Martingales on manifolds and harmonic maps -- Harmonic functions on Riemannian manifolds -- Quantitative and geometric applications of

the Malliavin calculus -- An independence property of Brownian motions -- Stochastic parallel translation for Riemannian Brownian motion conditioned to hit a fixed point of a sphere -- Probabilistic interpretation of Hadamard's variational formulas -- A counterexample for Brownian motion on manifolds -- Using random motion to study quasiregular functions -- Skew-product decompositions of Brownian motions -- Local stochastic differential geometry -- 0. Brownian motion of a manifold -- 1. Expansion of the laplacian -- 2. Exit time from small balls -- 3. Exit place from small balls -- 4. Independence of exit time and place -- 5. Principal eigenvalue of small balls -- 6. Exit time from extrinsic balls -- 7. Exit time from tubular neighborhoods -- 8. Principal eigenvalue of tubular neighborhoods -- Transience and recurrence for multidimensional diffusions: a survey and a recent result -- Semigroup domination and vanishing theorems -- The Iwasawa decomposition and the limiting behavior of Brownian motion on a symmetric space of non-compact type -- Green's function and harmonic functions on manifolds.