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Nota di contenuto	Dirichlet forms and generalized Schrödinger operators -- Asymptotic properties of resonance functions and generalized eigenfunctions -- Path integrals for relativistic Schrodinger operators -- Some applications of commutation methods -- Equation de Schrödinger avec champ magnétique et équation de Harper -- Asymptotic perturbation theory for Schrödinger eigenvalue problems -- to N-body Schrödinger operators -- Nonlinear Schrödinger equations -- Random Schrödinger operators a course -- Kinetic energy bounds and their application to the stability of matter -- On the use of intertwining operators in inverse scattering -- Inverse spectral problems on compact Riemannian manifolds -- Many-body scattering problem -- Stability of relativistic Coulomb and gravitating systems.
Sommario/riassunto	Understanding quantum mechanics inevitably leads to an in-depth

study of the Schrödinger operator. This set of review lectures informs researchers and advanced students of the most recent developments in the analysis of the Schrödinger operator occurring in solid-state physics, nuclear physics, etc. The topics covered are nonlinear and random potentials, magnetic fields, and many-body problems. Inverse spectral theory is also treated. The results are mathematically rigorous and many physical implications are discussed. The book is suitable for advanced courses in mathematical physics.