

1. Record Nr.	UNINA9910155397103321
Autore	Raymond Nicolas
Titolo	Bound States of the Magnetic Schrödinger Operator // Nicolas Raymond
Pubbl/distr/stampa	Zuerich, Switzerland, : European Mathematical Society Publishing House, 2017
ISBN	3-03719-669-6
Descrizione fisica	1 online resource (394 pages)
Collana	EMS Tracts in Mathematics (ETM) ; 27
Classificazione	35-xx49-xx81-xx
Soggetti	Differential equations Mathematical logic Partial differential equations Calculus of variations and optimal control; optimization Quantum theory
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	This book is a synthesis of recent advances in the spectral theory of the magnetic Schrodinger operator. It can be considered a catalog of concrete examples of magnetic spectral asymptotics. Since the presentation involves many notions of spectral theory and semiclassical analysis, it begins with a concise account of concepts and methods used in the book and is illustrated by many elementary examples. Assuming various points of view (power series expansions, Feshbach-Grushin reductions, WKB constructions, coherent states decompositions, normal forms) a theory of Magnetic Harmonic Approximation is then established which allows, in particular, accurate descriptions of the magnetic eigenvalues and eigenfunctions. Some parts of this theory, such as those related to spectral reductions or waveguides, are still accessible to advanced students while others (e.g., the discussion of the Birkhoff normal form and its spectral consequences, or the results related to boundary magnetic wells in dimension three) are intended for seasoned researchers.

