

1. Record Nr.	UNINA9910828532803321
Autore	Helfffer Bernard
Titolo	Spectral theory and its applications // Bernard Helfffer, Universite Paris-Sud [[electronic resource]]
Pubbl/distr/stampa	Cambridge : , : Cambridge University Press, , 2013
ISBN	1-107-23802-1 1-107-25498-1 1-139-61121-6 1-139-61307-3 1-139-50572-6 1-139-62609-4 1-139-61679-X 1-283-89949-3 1-139-62237-4
Descrizione fisica	1 online resource (v, 255 pages) : digital, PDF file(s)
Collana	Cambridge studies in advanced mathematics ; ; 139
Classificazione	MAT000000
Disciplina	515/.7222
Soggetti	Spectral theory (Mathematics)
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Title from publisher's bibliographic system (viewed on 05 Oct 2015).
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Machine generated contents note: 1. Introduction; 2. Unbounded operators; 3. Representation theorems; 4. Semibounded operators; 5. Compact operators; 6. Spectral theory for bounded operators; 7. Applications in physics and PDE; 8. Spectrum for self-adjoint operators; 9. Essentially self-adjoint operators; 10. Discrete spectrum, essential spectrum; 11. The max-min principle; 12. An application to fluid mechanics; 13. Pseudospectra; 14. Applications for 1D-models; 15. Applications in kinetic theory; 16. Problems; References; Index.
Sommario/riassunto	Bernard Helfffer's graduate-level introduction to the basic tools in spectral analysis is illustrated by numerous examples from the Schrodinger operator theory and various branches of physics: statistical mechanics, superconductivity, fluid mechanics and kinetic theory. The later chapters also introduce non self-adjoint operator theory with an emphasis on the role of the pseudospectra. The author's focus on

applications, along with exercises and examples, enables readers to connect theory with practice so that they develop a good understanding of how the abstract spectral theory can be applied. The final chapter provides various problems that have been the subject of active research in recent years and will challenge the reader's understanding of the material covered.
