

Simon, Barry**Spectral analysis of rank one perturbations and applications.** (English) [Zbl 0824.47019](#)

Feldman, J. (ed.) et al., Mathematical quantum theory II: Schrödinger operators. Proceedings of the Canadian Mathematical Society annual seminar on mathematical quantum theory held in Vancouver, Canada, August 4-14, 1993. Providence, RI: American Mathematical Society. CRM Proc. Lect. Notes. 8, 109-149 (1995).

Summary: A review of the general theory of selfadjoint operators of the form $A + \alpha B$, where B is rank one is presented. Applications include proofs of localization for Schrödinger operators, results on inverse spectral theory, and examples of operators with singular continuous spectrum.

For the entire collection see [[Zbl 0815.00011](#)].

MSC:

- [47B15](#) Hermitian and normal operators (spectral measures, functional calculus, etc.)
- [47A10](#) Spectrum, resolvent
- [47A55](#) Perturbation theory of linear operators
- [34L05](#) General spectral theory of ordinary differential operators
- [81Q10](#) Selfadjoint operator theory in quantum theory, including spectral analysis
- [34F05](#) Ordinary differential equations and systems with randomness

Cited in 1 Review Cited in 70 Documents
--

Keywords:

selfadjoint operators; localization for Schrödinger operators; inverse spectral theory; operators with singular continuous spectrum