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Spectral theory of ordinary differential operators. (English) Zbl 0647.47052

Lecture Notes in Mathematics, 1258. Berlin etc.: Springer-Verlag. VI, 303 p.; DM 50.00 (1987).

The author's intention is to provide a general and rather complete theory of self-adjoint ordinary differential operators of arbitrary order n operating on C^m -valued functions, m being an arbitrary natural number; and to apply this theory to Sturm-Liouville operators and Dirac systems, paying special attention to oscillation theory and absolute continuity of the spectrum. He has succeeded in producing an attractive, compact volume which is virtually self-contained and should be of considerable interest to the large number of mathematicians with interests in spectral theory ans.

MSC:

- 47E05 General theory of ordinary differential operators (should also be assigned at least one other classification number in Section 47-XX)
- 47A10 Spectrum, resolvent
- 34L99 Ordinary differential operators
- 47B40 Spectral operators, decomposable operators, well-bounded operators, etc.
- 34-02 Research exposition (monographs, survey articles) pertaining to ordinary differential equations
- 47-02 Research exposition (monographs, survey articles) pertaining to operator theory

Cited in **3** Reviews
Cited in **316** Documents

Keywords:

self-adjoint ordinary differential operators of arbitrary order; Sturm- Liouville operators; Dirac systems; oscillation theory; absolute continuity of the spectrum