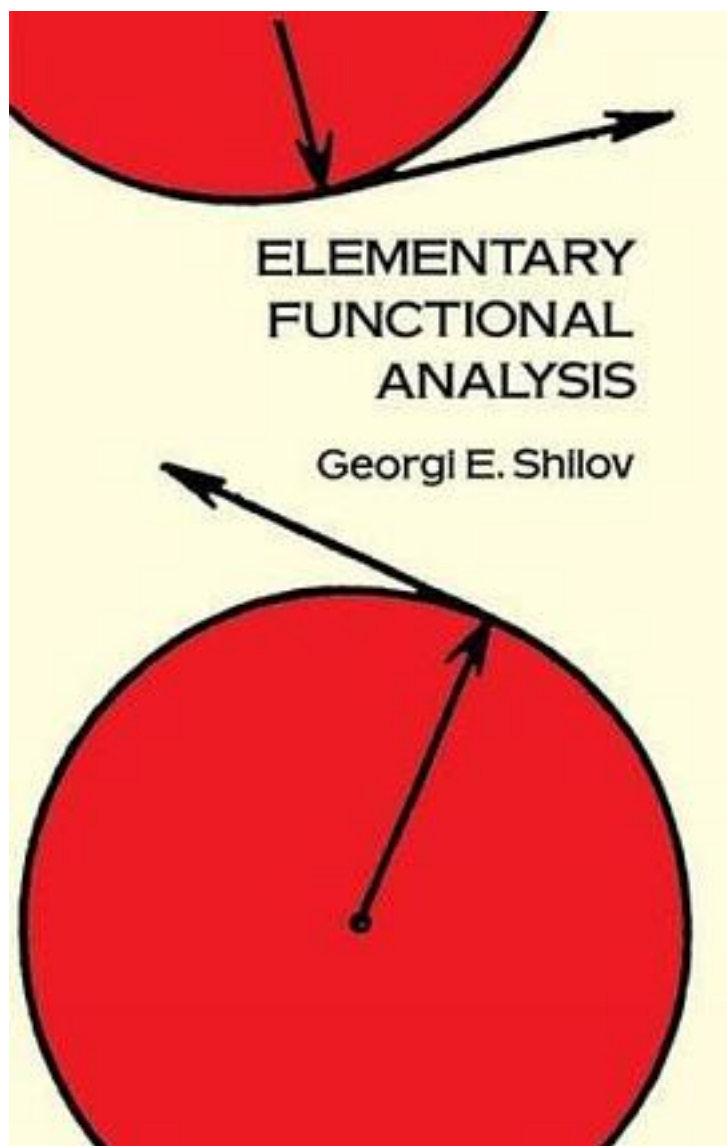


Elementary Functional Analysis



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This text is an introduction to functional analysis which requires readers to have a minimal background in linear algebra and real analysis at the first-year graduate level. Prerequisite knowledge of general topology or Lebesgue integration is not required. The book explains the principles and applications of functional analysis and explores the development of the basic properties of normed linear, inner product spaces and continuous linear operators defined in these spaces. Though Lebesgue integral is not discussed, the book offers an in-depth knowledge on the numerous applications of the abstract results of functional analysis in differential and integral equations, Banach limits, harmonic analysis, summability and numerical integration. Also covered in the book are versions of the spectral theorem for compact, symmetric operators and continuous, self adjoint operators.

Normed Linear and Banach Spaces Linear Operators Quotient Spaces Finite Dimensional Normed Spaces Inner Product and Hilbert Spaces The Hahn Banach Theorem Applications of the Hahn Banach Theorem to Normed Spaces The Uniform Boundedness Principle Weak Convergence The Open Mapping and Closed Graph Theorems Projections Schauder Basis Transpose and Adjoints of Continuous Linear Operators Compact Operators The Fredholm Alternative The Spectrum of an Operator Subdivisions of the Spectrum The Spectrum of a Compact Operator Symmetric Linear Operators The Spectral Theorem for Compact Symmetric Operators Symmetric Operators with Compact Inverse Bounded Self Adjoint Operators Orthogonal Projections Sesquilinear Functionals The Spectral Theorem for Bounded Self Adjoint Operators An Operational Calculus The Spectral Theorem for Normal Operators

作者介绍:

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标签

数学

分析

评论

还行吧，起点低，课上讲了一部分，然后结合Brezis。由于起点低，很多东西介绍得反而很繁琐，脱裤子放屁，不如直接读GTM96更利索。

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书评

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