Unbounded self-adjoint operators on Hilbert space

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Abstrak

The book is a graduate text on unbounded self-adjoint operators on Hilbert space and their spectral theory with the emphasis on applications in mathematical physics (especially, Schrödinger operators) and analysis (Dirichlet and Neumann Laplacians, Sturm-Liouville operators, Hamburger moment problem) . Among others, a number of advanced special topics are treated on a text book level accompanied by numerous illustrating examples and exercises. The main themes of the book are the following, spectral integrals and spectral decompositions of self-adjoint and normal operators, perturbations of self-adjointness and of spectra of self-adjoint operators, forms and operators, and self-adjoint extension theory :boundary triplets, Krein-Birman-Vishik theory of positive self-adjoint extension.