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Autore	Seifert Christian
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Nota di contenuto	Introduction -- Unbounded Operators -- The Time Derivative -- Ordinary Differential Equations -- The Fourier-Laplace Transformation and Material Law Operators -- Solution Theory for Evolutionary Equations -- Examples of Evolutionary Equations -- Causality and a Theorem of Paley and Wiener -- Initial Value Problems and Extrapolation Spaces -- Differential Algebraic Equations -- Exponential Stability of Evolutionary Equations -- Boundary Value Problems and Boundary Value Spaces -- Continuous Dependence on the Coefficients I -- Continuous Dependence on the Coefficients II
Sommario/riassunto	This open access book provides a solution theory for time-dependent partial differential equations, which classically have not been accessible by a unified method. Instead of using sophisticated techniques and methods, the approach is elementary in the sense that only Hilbert space methods and some basic theory of complex analysis are required. Nevertheless, key properties of solutions can be recovered in an elegant manner. Moreover, the strength of this method is

demonstrated by a large variety of examples, showing the applicability of the approach of evolutionary equations in various fields. Additionally, a quantitative theory for evolutionary equations is developed. The text is self-contained, providing an excellent source for a first study on evolutionary equations and a decent guide to the available literature on this subject, thus bridging the gap to state-of-the-art mathematical research.
