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Nota di bibliografia	Includes bibliographical references (pages [269]-297) and index.
Nota di contenuto	Laplace transforms and operator families in locally convex spaces -- Wellposedness and solvability -- Generalized wellposedness -- Analyticity and parabolicity -- Exponential growth bound and exponential stability -- Differentiability and norm continuity -- Almost periodicity -- Appendices: A1 Fractional powers of non-negative operators -- A2 Strongly continuous semigroups and cosine functions -- Bibliography -- Index -- Symbols.
Sommario/riassunto	The main purpose of this book is to present the basic theory and some recent de- velopments concerning the Cauchy problem for higher order abstract differential equations $u^{(n)}(t) + \sum_{i=1}^{n-1} A_i u^{(i)}(t) = 0, t \geq 0, \{ U^{(k)}(0) = U_k, 0 \leq k \leq n-1. \}$ where A_0, A_1, \dots, A_{n-1} are linear operators in a topological vector space E . Many problems in nature can be modeled as (ACP). For example, many initial value or initial- boundary value problems for partial differential equations, stemmed from mechanics, physics, engineering, control theory, etc. , can be trans- lated into this form by regarding the partial differential operators in the space variables as operators $A_i (0 \leq i \leq n-1)$ in some function space E and letting the boundary conditions (if any) be absorbed into the definition of the space E or of the domain of A_i (this idea of treating initial value or initial-boundary value problems was discovered independently by E. Hille and K. Yosida in the forties). The theory of (ACP) is closely connected with many other branches of n

mathematics. Therefore, the study of (ACP_n) is important for both theoretical investigations and practical applications. Over the past half a century, (ACP) has been studied extensively.
