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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) + ~ AiU(i)(t) = 0, t ~ 0, { U(k)(O) = Uk, 0 ~ k ~ n-l. where AQ, Ab . . . , A - are linear operators in a topological vector space E. n 1 Many problems in nature can be modeled as (ACP). For example, many n 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 Ai (0 ~ i ~ 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 Ai (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 (ACPn) is important for both theoretical investigations and practical applications. Over the past half a century, (ACP) has been studied extensively.