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Nota di contenuto

11 Singular integral operators -- 12 Dyadic operators and the T (1) theorem -- 13 The Fourier transform and multipliers -- 14 Function spaces -- 15 Bounded imaginary powers -- 16 The H-functional calculus revisited -- 17 Maximal regularity -- 18 Nonlinear parabolic evolution equations in critical spaces -- Appendix Q: Questions -- Appendix K: Semigroup theory revisited -- Appendix L: The trace method for real interpolation theory.

Sommario/riassunto

This third volume of Analysis in Banach Spaces offers a systematic treatment of Banach space-valued singular integrals, Fourier transforms, and function spaces. It further develops and ramifies the theory of functional calculus from Volume II and describes applications of these new notions and tools to the problem of maximal regularity of evolution equations. The exposition provides a unified treatment of a large body of results, much of which has previously only been available in the form of research papers. Some of the more classical topics are presented in a novel way using modern techniques amenable to a vector-valued treatment. Thanks to its accessible style with complete and detailed proofs, this book will be an invaluable reference for researchers interested in functional analysis, harmonic analysis, and the operator-theoretic approach to deterministic and stochastic evolution equations.
