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Sommario/riassunto	The present volume develops the theory of integration in Banach spaces, martingales and UMD spaces, and culminates in a treatment of the Hilbert transform, Littlewood-Paley theory and the vector-valued Mihlin multiplier theorem. Over the past fifteen years, motivated by regularity problems in evolution equations, there has been tremendous progress in the analysis of Banach space-valued functions and processes. The contents of this extensive and powerful toolbox have

been mostly scattered around in research papers and lecture notes. Collecting this diverse body of material into a unified and accessible presentation fills a gap in the existing literature. The principal audience that we have in mind consists of researchers who need and use Analysis in Banach Spaces as a tool for studying problems in partial differential equations, harmonic analysis, and stochastic analysis. Self-contained and offering complete proofs, this work is accessible to graduate students and researchers with a background in functional analysis or related areas.