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		Differential geometry
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		Operator theory
		Harmonic analysis
		Nonassociative rings
		Rings (Algebra)
		Functions of a Complex Variable
		Differential Geometry
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		Abstract Harmonic Analysis
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	Nota di contenuto	Lebesgue Spaces of Matrix Functions -- Matrix Convolution Operators -- Convolution Semigroups.
	Sommario/riassunto	In the last decade, convolution operators of matrix functions have received unusual attention due to their diverse applications. This monograph presents some new developments in the spectral theory of these operators. The setting is the Lp spaces of matrix-valued functions on locally compact groups. The focus is on the spectra and eigenspaces of convolution operators on these spaces, defined by matrix-valued measures. Among various spectral results, the L2-

spectrum of such an operator is completely determined and as an application, the spectrum of a discrete Laplacian on a homogeneous graph is computed using this result. The contractivity properties of matrix convolution semigroups are studied and applications to harmonic functions on Lie groups and Riemannian symmetric spaces are discussed. An interesting feature is the presence of Jordan algebraic structures in matrix-harmonic functions.