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		Partial Differential Equations
		Integral Transforms, Operational Calculus
		Functional Analysis
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	Nota di contenuto	Introduction -- I. Distributions and Fundamental Solutions -- II. General Principles for Fundamental Solutions -- III. Parameter Integration -- IV. Quasihyperbolic Systems -- V. Fundamental Matrices of Homogeneous Systems -- Appendix: Table of Operators/Systems with References to Fundamental Solutions/Matrices -- References -- Index.
	Sommario/riassunto	This monograph provides the theoretical foundations needed for the construction of fundamental solutions and fundamental matrices of (systems of) linear partial differential equations. Many illustrative examples also show techniques for finding such solutions in terms of integrals. Particular attention is given to developing the fundamentals of distribution theory, accompanied by calculations of fundamental solutions. The main part of the book deals with existence theorems and uniqueness criteria, the method of parameter integration, the investigation of quasihyperbolic systems by means of Fourier and Laplace transforms, and the representation of fundamental solutions of

homogeneous elliptic operators with the help of Abelian integrals. In addition to rigorous distributional derivations and verifications of fundamental solutions, the book also shows how to construct fundamental solutions (matrices) of many physically relevant operators (systems), in elasticity, thermoelasticity, hexagonal/cubic elastodynamics, for Maxwell's system and others. The book mainly addresses researchers and lecturers who work with partial differential equations. However, it also offers a valuable resource for students with a solid background in vector calculus, complex analysis and functional analysis.