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Titolo	Geometric Harmonic Analysis III : Integral Representations, Calderón-Zygmund Theory, Fatou Theorems, and Applications to Scattering // by Dorina Mitrea, Irina Mitrea, Marius Mitrea
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Descrizione fisica	1 online resource (980 pages)
Collana	Developments in Mathematics, , 2197-795X ; ; 74
Disciplina	515.4
Soggetti	Mathematical analysis Integral Transforms and Operational Calculus Teoria de la mesura geomètrica Llibres electrònics
Lingua di pubblicazione	Inglese
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Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Introduction and Statement of Main Results Concerning the Divergence Theorem -- Examples, Counterexamples, and Additional Perspectives -- Tools from Geometric Measure Theory, Harmonic Analysis, and functional Analysis -- Open Sets with Locally Finite Surface Measures and Boundary Behavior -- Proofs of the Main Results Pertaining to the Divergence Theorem -- Applications to Singular Integrals, Function Spaces, Boundary Problems, and Further Results.
Sommario/riassunto	This monograph presents a comprehensive, self-contained, and novel approach to the Divergence Theorem through five progressive volumes. Its ultimate aim is to develop tools in Real and Harmonic Analysis, of geometric measure theoretic flavor, capable of treating a broad spectrum of boundary value problems formulated in rather general geometric and analytic settings. The text is intended for researchers, graduate students, and industry professionals interested in applications of harmonic analysis and geometric measure theory to complex analysis, scattering, and partial differential equations. Volume III is concerned with integral representation formulas for nullsolutions of

elliptic PDEs, Calderón-Zygmund theory for singular integral operators, Fatou type theorems for systems of elliptic PDEs, and applications to acoustic and electromagnetic scattering. Overall, this amounts to a powerful and nuanced theory developed on uniformly rectifiable sets, which builds on the work of many predecessors.
