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Titolo	New Trends in Applied Harmonic Analysis, Volume 2 : Harmonic Analysis, Geometric Measure Theory, and Applications // edited by Akram Aldroubi, Carlos Cabrelli, Stéphane Jaffard, Ursula Molter
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Descrizione fisica	1 online resource (335 pages)
Collana	Applied and Numerical Harmonic Analysis, , 2296-5009
Disciplina	515.2433
Soggetti	Fourier analysis Harmonic analysis Measure theory Signal processing Image processing Speech processing systems Computer science—Mathematics Computer mathematics Fourier Analysis Abstract Harmonic Analysis Measure and Integration Signal, Image and Speech Processing Mathematical Applications in Computer Science
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	CAZAC sequences and Haagerup's characterization of cyclic N-roots -- Hardy spaces with variable exponents -- Regularity of maximal operators: recent progress and some open problems -- Gabor Frames: Characterizations and Coarse Structure -- On the approximate unit distance problem -- Hausdorff dimension, projections, intersections, and Besicovitch sets -- Dyadic harmonic analysis and weighted inequalities: the sparse revolution -- Sharp quantitative weighted BMO estimates and a new proof of the Harboure-Macías-Segovia's

extrapolation theorem --  $L_q$  dimensions of self-similar measures, and applications: a survey -- Sample paths properties of the set-indexed fractional Brownian motion. .

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## Sommario/riassunto

This contributed volume collects papers based on courses and talks given at the 2017 CIMPA school Harmonic Analysis, Geometric Measure Theory and Applications, which took place at the University of Buenos Aires in August 2017. These articles highlight recent breakthroughs in both harmonic analysis and geometric measure theory, particularly focusing on their impact on image and signal processing. The wide range of expertise present in these articles will help readers contextualize how these breakthroughs have been instrumental in resolving deep theoretical problems. Some topics covered include: Gabor frames Falconer distance problem Hausdorff dimension Sparse inequalities Fractional Brownian motion Fourier analysis in geometric measure theory This volume is ideal for applied and pure mathematicians interested in the areas of image and signal processing. Electrical engineers and statisticians studying these fields will also find this to be a valuable resource.

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