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Titolo	New Perspectives on Approximation and Sampling Theory [[electronic resource]] : Festschrift in Honor of Paul Butzer's 85th Birthday // edited by Ahmed I. Zayed, Gerhard Schmeisser
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Collana	Applied and Numerical Harmonic Analysis, , 2296-5009
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Soggetti	Approximation theory Special functions Signal processing Image processing Speech processing systems Approximations and Expansions Special Functions Signal, Image and Speech Processing
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Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Abstract Exact and Approximate Sampling Theorems -- Sampling in Reproducing Kernel Hilbert Space -- Boas-Type Formulas and Sampling in Banach Spaces with Applications to Analysis on Manifolds -- On Window Methods in Generalized Shannon Sampling Operators -- Generalized sampling approximation for multivariate discontinuous signals and applications to image processing -- Signal and System Approximation from General Measurements -- Confirmation PROCESS -- Sparse Signal Processing -- Signal Sampling and Testing Under Noise -- Superoscillations -- General Moduli of Smoothness and Approximation by Families of Linear Polynomial Operators -- Variation and approximation in multidimensional setting for Mellin integral

operators -- The Lebesgue Constant for Sinc Approximations -- Six (Seven) problems in frame theory -- Five good reasons for complex-valued transforms in image processing -- Frequency Determination Using the Discrete Hermite Transform -- Fractional Operators, Dirichlet Averages and Splines -- A Distributional Approach to Generalized Stochastic Processes on Locally Compact Abelian Groups -- On a discrete Turán problem for L_1 radial functions.

Sommario/riassunto

Paul Butzer, who is considered the academic father and grandfather of many prominent mathematicians, has established one of the best schools in approximation and sampling theory in the world. He is one of the leading figures in approximation, sampling theory, and harmonic analysis. Although on April 15, 2013, Paul Butzer turned 85 years old, remarkably, he is still an active research mathematician. In celebration of Paul Butzer's 85th birthday, *New Perspectives on Approximation and Sampling Theory* is a collection of invited chapters on approximation, sampling, and harmonic analysis written by students, friends, colleagues, and prominent active mathematicians. Topics covered include approximation methods using wavelets, multi-scale analysis, frames, and special functions. *New Perspectives on Approximation and Sampling Theory* requires basic knowledge of mathematical analysis, but efforts were made to keep the exposition clear and the chapters self-contained. This volume will appeal to researchers and graduate students in mathematics, applied mathematics and engineering, in particular, engineers working in signal and image processing.
