

1. Record Nr.	UNINA9910799488903321
Titolo	Sampling, Approximation, and Signal Analysis : Harmonic Analysis in the Spirit of J. Rowland Higgins // edited by Stephen D. Casey, M. Maurice Dodson, Paulo J. S. G. Ferreira, Ahmed Zayed
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Birkhäuser, , 2023
ISBN	3-031-41130-7
Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (XXXIV, 558 p. 35 illus., 31 illus. in color.)
Collana	Applied and Numerical Harmonic Analysis, , 2296-5017
Disciplina	511.4
Soggetti	Approximation theory Harmonic analysis Fourier analysis Signal processing Approximations and Expansions Abstract Harmonic Analysis Fourier Analysis Signal, Speech and Image Processing Mostreig (Estadística) Estadística matemàtica Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	PART I: Classical Sampling - Classical and approximate exponential sampling formula: their interconnections in uniform and Mellin–Lebesgue norms (Schmeisser) -- Asymptotic theorems for Durrmeyer sampling operators with respect to the L-norm (Vinti) -- On generalized Shannon sampling operators in the cosine operator function framework (Kivinukk) -- Bernstein spaces, sampling, and Riesz-Boas interpolation formulas in Mellin Analysis (Pesenson) -- The behavior of frequency band limited cardinal interpolants(Madych) -- The Balian-Low theorem for (Cq)-systems in shift-invariant spaces (owell) -- Whittaker - type derivative sampling and (p; q) - order weighted differential operator (Pogány) -- Shannon Sampling via

Poisson, Cauchy, Jacobi and Levin (Casey) -- Part (II.) Theoretical Extensions - Schoenberg's Theory of Totally Positive Functions and the Riemann Zeta Function (Gröchenig) -- Sampling via the Banach Gelfand Triple (Feichtinger) -- Part (III.) Frame Theory - A Survey of Fusion Frames in Hilbert Spaces (Köhldorfer) -- Frames of iterations and vector-valued model spaces (Cabrelli) -- A survey on frame representations and operator orbits (Christensen) -- Three proofs of the Benedetto–Fickus theorem (Mixon) -- Clifford Prolate Spheroidal Wavefunctions and Associated Shift Frames (Lakey) -- Part (IV.) Applications - Power Aware Analog To Digital Converters (Mulleti) -- Quaternionic coupled fractional Fourier transform on Boehmians (Zayed) -- Sampling : Theory and Applications – A History of the SampTA Meetings (Casey) -- Acceleration Algorithms for Iterative Methods (Marvasti).

Sommario/riassunto

During his long and distinguished career, J. Rowland Higgins (1935-2020) made a substantial impact on many mathematical fields through his work on sampling theory, his deep knowledge of its history, and his service to the community. This volume is a tribute to his work and legacy, featuring chapters written by distinguished mathematicians that explore cutting-edge research in sampling, approximation, signal analysis, and other related areas. An introductory chapter provides a biography of Higgins that explores his rich and unique life, along with a bibliography of his papers; a brief history of the SampTA meetings – of which he was a Founding Member – is also included. The remaining articles are grouped into four sections – classical sampling, theoretical extensions, frame theory, and applications of sampling theory – and explore Higgins' contributions to these areas, as well as some of the latest developments.
