1. Record Nr. UNINA9910728928803321

Autore	Flandrin Patrick
Titolo	Theoretical Physics, Wavelets, Analysis, Genomics : An Indisciplinary Tribute to Alex Grossmann / / edited by Patrick Flandrin, Stéphane Jaffard, Thierry Paul, Bruno Torresani
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Birkhäuser, , 2023
ISBN	3-030-45847-4
Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (650 pages)
Collana	Applied and Numerical Harmonic Analysis, , 2296-5017
Altri autori (Persone)	JaffardStéphane PaulThierry TorresaniBruno
Disciplina	530
Soggetti	Functional analysis Harmonic analysis Signal processing Mathematical physics Genetics Functional Analysis Abstract Harmonic Analysis Digital and Analog Signal Processing Mathematical Physics Mathematical Methods in Physics Genetics and Genomics Física Anàlisi harmònica Ondetes (Matemàtica) Genòmica Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Grossmann, M., The Making of a Physicist -- Paul, T., Alex Grossmann, a Rinascimento Multidisciplinary Man -- Dash, J. W., Grossmann, A.,

Paul, T., Generalized Affine Signal Analysis with Time-Delay Threshold -- Paul, T., Dash, J. W., Introductory Note on the Draft Paper "Generalized affine signal analysis with time-delay thresholds" by J.W. Dash, A. Grossmann, and T. Paul -- Grossmann, A., Alex Grossmann's PhD Thesis: Covariant Functions of Quantum Fields -- Part I: Quantum Mechanics and Theoretical Physics -- Antoine, J.-P., Alex Grossmann, from Nested Hilbert Spaces to Partial Inner Product Spaces and Wavelets -- Zak, J. Combining Quantum Mechanical Languages (A Tribute to Alex Grossmann) -- Tsun Wu, T., Alex Grossmann, Scattering Amplitude, Fermi Pseudopotential, and Particle Physics -- de Rafael, E., Sixty Years of Hadronic Vaccuum Polarization -- Korthals Altes, C. P., Standard Model, and its Standard Problems -- Coqueraux, R., SU(3) Higher Roots and Their Lattices -- Juarez-Aubry, B. A., Weder, R., Quantum Field Theory with Dynamical Boundary Conditions and the Casimir Effect -- Avron, Y., Where is a Photon in an Interferometer?- Bardos, C., Besse, N., About the Derivation of the Quasilinear Approximation in Plasma Physics -- Bentosela, F., Analysing the Scattering of Electromagnetic Ultra Wide Band Pulses from Large Scale Objects by the Use of Wavelets -- Paul, T., Species of Spaces -- Part II: Wavelets and Mathematical Analysis -- Meyer, Y., Curved Model Sets and Crystalline Measures -- Shan, S., Daubechies, I., Diffusing Maps: Using the Semigroup Property for Parameter Tuning -- Mallat, S., Rochette, G., Zhang, S., Wavelet Phase Harmonics -- Coifman, R. R., Peyriere, J., Multiscale Decompositions of Hardy Spaces -- Benedetto, J. J., Koprowski, P. J., Nolan, J. S., A Generalization of Gleason's Frame Function for Quantum Measurement -- Flandrin, P., Post-Fourier Frequencies: Variations and Paradoxes -- Jaffard, S., Krim, H., The Unreasonable Effectiveness of Haar Frames -- Part III: Genomics and Biology -- A. Guillet, A. Arneodo, P. Argoul, and F. ArgoulQuantifying the Rationality of Rhythmic Signals -- Didier, G., Landes, C., Henaut, A., Torresani, B., Four Billion Years: The Story of an Ancient Protein Family -- Landes, C., Diaz-Lazcoz, Y., Henaut, A., Torresani, B., Pseudo-Rate Matrices, Beyond Dayhoff's Model.

Sommario/riassunto

Over the course of a scientific career spanning more than fifty years, Alex Grossmann (1930-2019) made many important contributions to a wide range of areas including, among others, mathematics, numerical analysis, physics, genetics, and biology. His lasting influence can be seen not only in his research and numerous publications, but also through the relationships he cultivated with his collaborators and students. This edited volume features chapters written by some of these colleagues, as well as researchers whom Grossmann’s work and way of thinking has impacted in a decisive way. Reflecting the diversity of his interests and their interdisciplinary nature, these chapters explore a variety of current topics in quantum mechanics, elementary particles, and theoretical physics; wavelets and mathematical analysis; and genomics and biology. A scientific biography of Grossmann, along with a more personal biography written by his son, serve as an introduction. Also included are the introduction to his PhD thesis and an unpublished paper coauthored by him. Researchers working in any of the fields listed above will find this volume to be an insightful and informative work.