1. Record Nr. UNINA9910823746803321 Autore Neeman Yuval **Titolo** Matter particled [[electronic resource]]: patterns, structure and dynamics: selected research papers of Yuval Ne'eman / / editors, Remo Ruffini, Yosef Verbin London, : Imperial College Press Pubbl/distr/stampa Singapore; ; Hackensack, N.J., : World Scientific, c2006 **ISBN** 1-281-91925-X 9786611919252 981-277-403-3 Descrizione fisica 1 online resource (896 p.) Collana World Scientific series in 20th century physics;; v. 38 Altri autori (Persone) RuffiniRemo VerbinYosef Disciplina 530.01 Soggetti **Astrophysics Physics** Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Includes bibliographical references. Nota di bibliografia **CONTENTS** Nota di contenuto : Preface ; Introduction and Biographical Notes ; Chapter 1: SU(3). Quarks and Symmetry Breaking ; 1.1 The Classification and Structure of Hadrons ; 1.2 Derivation of Strong Interactions from a Gauge Invariance ; 1.3 Baryon Charge and R-Inversion in the Octet Model 1.4 Protonium Two-Mesons Annihilation 1.5 The Fifth Interaction: Origins of the Mass Breaking Asymmetry ; 1.6 The Symmetry Breaking Interaction 1.7 Rare Decays as Clues to the Understanding of the Fifth Interaction (Generating the Generations) : 1.8 Primitive Particle Model Chapter 2: Algebraic Theory of Particle Physics and Spectrum Generating Algebras ; 2.2 Role of 2.1 Current-Generated Algebras Non-Compact Groups ; 2.3 Series of Hadron Energy Levels as Representations of Non-Compact Groups

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Sommario/riassunto

This unique volume contains a selection of more than 80 of Yuval Ne'eman's papers, which represent his huge contribution to a large number of aspects of theoretical physics. The works span more than four decades, from unitary symmetry and quarks to questions of complexity in biological systems and evolution of scientific theories. In keeping with the major role Ne'eman has played in theoretical physics over the last 40 years, a collaboration of very distinguished scientists enthusiastically took part in this volume. Their commentary supplies a clear framework and background for appreciating