Record Nr. UNINA9910454283203321 Proceedings of the Highly Specialized Seminar on Symmetries in **Titolo** Nuclear Structure [[electronic resource]]: an occasion to celebrate the 60th birthday of Francesco Iachello, Erice, Italy, 23-30 March, 2003 / / editors, Andrea Vitturi and Richard F. Casten Pubbl/distr/stampa River Edge, N.J., : World Scientific, c2004 **ISBN** 1-281-89879-1 9786611898793 981-270-276-8 Descrizione fisica 1 online resource (496 p.) Collana Science and culture series. Physics: 24 Altri autori (Persone) **IachelloF** VitturiAndrea CastenR Disciplina 539.7/4 Soggetti Nuclear structure Symmetry (Physics) Electronic books. Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali The meeting was held in the Ettore Majorana Centre. Nota di bibliografia Includes bibliographical references. Nota di contenuto CONTENTS; Preface; Symmetry: the search for order in nature; 1 Symmetry: 2 Symmetry in Physics: Additional guantum numbers dynamical symmetries and degeneracies; Partial dynamical symmetry as an intermediate symmetry structure; 1 Introduction; 2 SU(3) PDS (type I) 3 O(6) PDS (type I) 4 O(5) PDS (type II); 5 O(6) PDS (type II); 6 O(6) PDS (type III); 7 Summary and Conclusions; Vector coherent state theory: a powerful tool for solving algebraic problems in physics; 1 Introduction; 2 Scalar coherent state presentations 3 Vector coherent state representations 4 VCS representations of su(3) in an su(2) basis; 5 Representation of su(3) in an so(3) basis 6 Representations of so(5) in an so(3) basis; 7 Discussion; Symmetries in stronaly deformed nuclei: 1 Introduction 2 Model space and interaction 3 Representative results; 4 Conclusions; Shape coexistence and its symmetries; 1 Introduction: the early work; 2 Quadrupole force dominance: 3 Shape coexistence and its symmetries

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Sommario/riassunto

The Highly Specialized Seminar on "Symmetries in Nuclear Structure", held in Erice, Italy, in March 2003, celebrated the career and the remarkable achievements of Francesco lachello, on the occasion of his 60th birthday. Since the development of the interacting boson model in the early 1970's, the ideas of lachello have provided a variety of frameworks for understanding collective behaviour in nuclear structure, founded on the concepts of dynamical symmetries and spectrumgenerating algebras. The original ideas, which were developed for the description of atomic nuclei, have now been successful...