Record Nr. UNISALENTO991001799659707536 Autore Galloni, Nino **Titolo** New Deal tra capitalismo e socialismo : contributo a un dibattito sulla storia del capitalismo americano / Nino Galloni Pubbl/distr/stampa Roma: Bulzoni, c1979 Descrizione fisica 81 p.; 21 cm Collana L'uomo e la società Disciplina 330.973 Soggetti Stati Uniti d'America Politica 1900-1936 Lingua di pubblicazione Italiano **Formato** Materiale a stampa Livello bibliografico Monografia Record Nr. UNINA9910736995303321 **Busch Paul Autore Titolo** Quantum Measurement / / by Paul Busch, Pekka Lahti, Juha-Pekka Pellonpää, Kari Ylinen Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2016 **ISBN** 3-319-43389-X Edizione [1st ed. 2016.] Descrizione fisica 1 online resource (544 p.) Collana Theoretical and Mathematical Physics, , 1864-5887 Disciplina 530.8 Soggetti Quantum theory Physics - Philosophy Mathematical physics **Spintronics** Functional analysis

Philosophical Foundations of Physics and Astronomy

Quantum Physics

Inglese

Lingua di pubblicazione

Mathematical Physics Functional Analysis **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references at the end of each chapters and index. Nota di contenuto Introduction -- Part I Mathematics -- Rudiments of Hilbert Space Theory -- Classes of Compact Operators -- Operator Integrals and Spectral Representations: the Bounded Case -- Operator Integrals and Spectral Representations: the Unbounded Case -- Miscellaneous Algebraic and Functional Analytic Techniques -- Dilation Theory --Positive Operator Measures: Examples -- Part II Elements -- States. Effects and Observables -- Measurement -- Joint Measurability --Preparation Uncertainty -- Measurement Uncertainty -- Part III Realisations -- Qubits -- Position and Momentum -- Number and Phase -- Time and Energy -- State Reconstruction -- Measurement Implementations -- Part IV Foundations -- Bell Inequalities and Incompatibility -- Measurement Limitations due to Conservation Laws -- Measurement Problem -- Axioms for Quantum Mechanics -- Index. Sommario/riassunto This is a book about the Hilbert space formulation of quantum mechanics and its measurement theory. It contains a synopsis of what became of the Mathematical Foundations of Quantum Mechanics since von Neumann's classic treatise with this title. Fundamental nonclassical features of quantum mechanics—indeterminacy and incompatibility of observables, unavoidable measurement disturbance, entanglement, nonlocality—are explicated and analysed using the tools of operational quantum theory. The book is divided into four parts: 1. Mathematics provides a systematic exposition of the Hilbert space and operator theoretic tools and relevant measure and integration theory leading to the Naimark and Stinespring dilation theorems; 2. Elements develops the basic concepts of quantum mechanics and measurement theory with a focus on the notion of approximate joint measurability; 3. Realisations offers in-depth studies of the fundamental observables of quantum mechanics and some of their measurement implementations; and 4. Foundations discusses a selection of foundational topics (quantum-classical contrast, Bell nonlocality, measurement limitations, measurement problem, operational axioms) from a measurement theoretic perspective. The book is addressed to physicists.

mathematicians and philosophers of physics with an interest in the mathematical and conceptual foundations of quantum physics, specifically from the perspective of measurement theory.