1. Record Nr. UNINA9910485026803321

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Titolo	Inequivalent Representations of Canonical Commutation and Anti-Commutation Relations : Representation-theoretical Viewpoint for Quantum Phenomena / / by Asao Arai
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2020
ISBN	981-15-2180-8
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (XIX, 493 p. 6 illus.)
Collana	Mathematical Physics Studies, , 2352-3905
Disciplina	530.12
Soggetti	Mathematical physics Quantum theory Functional analysis Mathematical Physics Quantum Physics Functional Analysis
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Mathematical Preliminaries -- Representations of Canonical Commutation Relations with Finite -- Aharonov–Bohm Effect and Inequivalent Representations of CCR -- Time Operators -- Representations of Canonical Anti-commutation Relations with Finite Degrees of Freedom -- Elements of the Theory of Boson Fock Spaces -- Elements of the Theory of Fermion Fock Spaces -- Representations of CCR with Infinite Degrees of Freedom -- Representations of CAR with Infinite Degrees of Freedom -- Physical Correspondences in Quantum Field Theory.
Sommario/riassunto	Canonical commutation relations (CCR) and canonical anti-commutation relations (CAR) are basic principles in quantum physics including both quantum mechanics with finite degrees of freedom and quantum field theory. From a structural viewpoint, quantum physics can be primarily understood as Hilbert space representations of CCR or CAR. There are many interesting physical phenomena which can be more clearly understood from a representation–theoretical viewpoint with CCR or CAR. This book provides an introduction to representation

theories of CCR and CAR in view of quantum physics. Particular emphases are put on the importance of inequivalent representations of CCR or CAR, which may be related to characteristic physical phenomena. The topics presented include general theories of representations of CCR and CAR with finite and infinite degrees of freedom, the Aharonov–Bohm effect, time operators, quantum field theories based on Fock spaces, Bogoliubov transformations, and relations of infinite renormalizations with inequivalent representations of CCR. This book can be used as a text for an advanced topics course in mathematical physics or mathematics.