Record Nr. UNINA9910807625303321 Autore Khare Avinash **Titolo** Fractional statistics and quantum theory / / Avinash Khare Singapore;; River Edge, N.J.,: World Scientific, 2005 Pubbl/distr/stampa **ISBN** 1-281-37251-X 9786611372514 981-256-775-5 Edizione [2nd ed.] Descrizione fisica 1 online resource (316 p.) Disciplina 530.12 Soggetti Anyons - Statistical methods Quantum theory Quantum statistics Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Preface to the Second Edition; Preface; Contents; Chapter 1 Introduction; Chapter 2 Fractional Statistics in Two Dimensions; Chapter 3 Quantum Mechanics of Anyons; Chapter 4 Statistical Mechanics of an Ideal Anyon Gas; Chapter 5 Fractional Exclusion Statistics; Chapter 6 Introduction to the Chern-Simons Term; Chapter 7 Soliton as Anyon in Field Theories: Chapter 8 Anyons as Elementary Field Quanta: Chapter 9 Anyon Superconductivity: Chapter 10 Quantum Hall Effect and Anyons; Chapter 11 Omitted Topics; Index Sommario/riassunto This book explains the subtleties of quantum statistical mechanics in lower dimensions and their possible ramifications in quantum theory. The discussion is at a pedagogical level and is addressed to both graduate students and advanced researchers with a reasonable background in quantum and statistical mechanics. Topics in the first part of the book include the flux tube model of anyons, the braid group and a detailed discussion about the various aspects of quantum and statistical mechanics of a noninteracting anyon gas. The second part of

the book includes a detailed discussion.