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Titolo	Physics of Quantum Fluids [[electronic resource] ] : New Trends and Hot Topics in Atomic and Polariton Condensates / / edited by Alberto Bramati, Michele Modugno
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Disciplina	539
Soggetti	Solid state physics Phase transformations (Statistical physics) Condensed materials Quantum physics Phase transitions (Statistical physics) Low temperature physics Low temperatures Materials science Solid State Physics Quantum Gases and Condensates Quantum Physics Phase Transitions and Multiphase Systems Low Temperature Physics Materials Science, general
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	From the Content: Atomic condensates -- Turbulence in atomic Bose-Einstein condensates -- Superfluidity in toroidal waveguides -- Sonic Black holes and Hawking radiation in BECs -- Fermions -- Dissipative transport with disorder -- Anderson localization of non-interacting matter waves -- Two dimensional Bose fluids -- Ultracold atoms in synthetic magnetic fields -- Two dimensional Bose gases in optical lattices -- Fermi gases in optical lattices with non-Abelian gauge fields

-- Polariton quantum fluids theory -- Resonantly pumped polariton condensates -- Non resonantly pumped polariton condensates -- Quantum turbulence- Natalia Berloff -- Superconductivity in polariton systems -- Half vortices -- Superfluidity of polariton condensates -- New devices based on polariton condensates experiments -- BEC of polariton.

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## Sommario/riassunto

The study of quantum fluids, stimulated by the discovery of superfluidity in liquid helium, has experienced renewed interest after the observation of Bose-Einstein condensation (BEC) in ultra-cold atomic gases and the observation a new type of quantum fluid with specific characteristics derived from its intrinsic out-of-equilibrium nature. The main objective of this book is to take a snapshot of the state-of-the-art of this fast moving field with a special emphasis on the hot topics and new trends. Bringing together the most active specialists of the two areas (atomic and polaritonic quantum fluids), we expect that this book will facilitate the exchange and the collaboration between these two communities working on subjects with very strong analogies.

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