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Nota di contenuto	Introduction Superfluid Helium Superfluidity in Quantum Field Theory Relativistic Two-Fluid Formalism Fermionic Superfluidity: Cooper Pairing Meissner Effect in a Superconductor BCS-BEC Crossover Low-Energy Exitations in a Fermionic Superfluid Cooper-Pairing with Mismatched Fermi Momenta References.
Sommario/riassunto	Superfluidity – and closely related to it, superconductivity – are very general phenomena that can occur on vastly different energy scales. Their underlying theoretical mechanism of spontaneous symmetry breaking is even more general and applies to a multitude of physical systems. In these lecture notes, a pedagogical introduction to the field-theory approach to superfluidity is presented. The connection to more traditional approaches, often formulated in a different language, is carefully explained in order to provide a consistent picture that is useful for students and researchers in all fields of physics. After introducing the basic concepts, such as the two-fluid model and the

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Goldstone mode, selected topics of current research are addressed,
such as the BCS-BEC crossover and Cooper pairing with mismatched
Fermi momenta.