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| Nota di contenuto | Thoughts on localization / P.W. Anderson -- Anderson localization in the seventies and beyond / D. Thouless -- Intrinsic electron localization in manganites / T.V. Ramakrishnan -- Self-consistent theory of Anderson localization: general formalism and applications / P. Wolfle and D. Vollhardt -- Anderson localization and supersymmetry / K.B. Efetov -- Anderson transitions: criticality, symmetries and topologies / A.D. Mirlin, F. Evers, I.V. Gornyi and P.M. Ostrovsky -- Scaling of von Neumann entropy at the Anderson transition / S. Chakravarty -- From Anderson localization to Mesoscopic physics / M. Buttiker and M. Moskalets -- The localization transition at finite temperatures: electric and thermal transport / Y. Imry and A. Amir -- Localization and the metal-insulator transition - experimental observations / R.C. Dynes -- Weak localization and its applications as an experimental tool / G. Bergmann -- Weak localization and electron-electron interaction effects in thin metal wires and films / N. Giordano -- Inhomogeneous fixed point ensembles revisited / F.J. Wegner -- Quantum network models and classical localization problems / J. Cardy -- Mathematical aspects of Anderson localization / T. Spencer -- Finite size scaling analysis of the Anderson transition / B. Kramer, A. |

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Sommario/riassunto

In his groundbreaking paper Absence of diffusion in certain random lattices (1958), Philip W. Anderson originated, described and developed the physical principles underlying the phenomenon of the localization of quantum objects due to disorder. Anderson's 1977 Nobel Prize citation featured that paper, which was fundamental for many subsequent developments in condensed matter theory and technical applications. After more than a half century, the subject continues to be of fundamental importance. In particular, in the last 25 years, the phenomenon of localization has proved to be crucial for the