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Note generali	"This is the first volume in a series of books on the general theme of Supersymmetric Mechanics, which are based on lectures and discussions held in 2005 and 2006 at the INFN-Laboratori Nazionali di Frascati"--Preface.
Nota di bibliografia	Includes bibliographical references and indexes.
Nota di contenuto	Black Holes and Supergravity -- Attractors and Entropy -- Attractor Mechanism in $N = 2$, $d = 4$ Maxwell—Einstein Supergravity -- Black Holes and Critical Points in Moduli Space -- Black Hole Thermodynamics and Geometry -- $N > 2$ -extended Supergravity, U-duality and the Orbits of Exceptional Lie Groups -- Microscopic Description. The Calabi–Yau Black Holes -- Macroscopic Description. Higher Derivative Terms and Black Hole Entropy -- Further Developments.
Sommario/riassunto	This is the second volume in a series of books on the general theme of Supersymmetric Mechanics; the series is based on lectures and discussions held in 2005 and 2006 at the INFN-Laboratori Nazionali di Frascati. The first volume appears as Lect. Notes Physics, Vol. 698 "Supersymmetric Mechanics , Vol .1: Supersymmetry, Noncommutativity and Matrix Models" (2006) ISBN: 3-540-33313-4. The present extensive lecture supplies a pedagogical introduction, at the non-

expert level, to the attractor mechanism in space-time singularities. In such a framework, supersymmetry seems to be related to dynamical systems with fixed points, describing the equilibrium state and the stability features of the thermodynamics of black holes. After a qualitative overview, explicit examples realizing the attractor mechanism are treated at some length; they include relevant cases of asymptotically flat, maximal and non-maximal, extended supergravities in 4 and 5 dimensions. A number of recent advances along various directions of research on the attractor mechanism are also given.
