

1. Record Nr.	UNISALENTO991003634629707536
Titolo	Geometrical themes inspired by the N-body problem [e-book] / Luis Hernández-Lamoneda, Haydeé Herrera, Rafael Herrera, editors
ISBN	9783319714288 3319714287 9783319714271 3319714279
Descrizione fisica	1 online resource (vii, 128 p. 26 illus., 7 illus. in color.)
Collana	Lecture Notes in Mathematics, 0075-8434 ; 2204
Classificazione	AMS 53-06
Altri autori (Persone)	Hernández-Lamoneda, Luisauthor Herrera, Haydeéauthor Herrera, Rafaelauthor
Disciplina	530.14
Soggetti	Geometry, Differential
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index
Sommario/riassunto	Presenting a selection of recent developments in geometrical problems inspired by the N-body problem, these lecture notes offer a variety of approaches to study them, ranging from variational to dynamical, while developing new insights, making geometrical and topological detours, and providing historical references. A. Guillot's notes aim to describe differential equations in the complex domain, motivated by the evolution of N particles moving on the plane subject to the influence of a magnetic field. Guillot studies such differential equations using different geometric structures on complex curves (in the sense of W. Thurston) in order to find isochronicity conditions. R. Montgomery's notes deal with a version of the planar Newtonian three-body equation. Namely, he investigates the problem of whether every free homotopy class is realized by a periodic geodesic. The solution involves geometry, dynamical systems, and the McGehee blow-up. A novelty of the approach is the use of energy-balance in order to motivate the McGehee transformation. A. Pedroza's notes provide a brief introduction to Lagrangian Floer homology and its relation to the

solution of the Arnol'd conjecture on the minimal number of non-degenerate fixed points of a Hamiltonian diffeomorphism

---