1.	Record Nr.	UNINA9910827755503321
	Autore	Delshams Amadeu
	Titolo	A geometric mechanism for diffusion in Hamiltonian systems overcoming the large gap problem : heuristics and rigorous verification on a model / / Amadeu Delshams, Rafael de la Llave, Tere M. Seara
	Pubbl/distr/stampa	Providence, Rhode Island : , : American Mathematical Society, , 2006
	ISBN	1-4704-0445-1
	Descrizione fisica	1 online resource (158 p.)
	Collana	Memoirs of the American Mathematical Society, , 0065-9266 ; ; number 844
	Disciplina	510 s 515/.39
	Soggetti	Nonholonomic dynamical systems Mechanics Differential equations - Qualitative theory
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Note generali	"January 2006, volume 179, number 844 (third of 5 numbers)."
	Nota di bibliografia	Includes bibliographical references (pages 137-141).
	Nota di contenuto	""Contents""; ""Chapter 1. Introduction""; ""Chapter 2. Heuristic discussion of the mechanism""; ""2.1. Integrable systems, resonances, secondary tori""; ""2.2. Heuristic description of the mechanism""; ""Chapter 3. A simple model""; ""Chapter 4. Statement of rigorous results""; ""Chapter 5. Notation and definitions, resonances""; ""Chapter 6. Geometric features of the unperturbed problem""; ""Chapter 7. Persistence of the normally hyperbolic invariant manifold and its stable and unstable manifolds""; ""7.1. Explicit calculations of the perturbed invariant manifold"" ""8.5.2. Preliminary analysis of resonances of order one or two""""8.5.3. Primary and secondary tori near the first and second order resonances""; ""8.5.4. Proof of Theorem 8.30 and Corollary 8.31""; ""8.5.5. Existence of stable and unstable manifolds of periodic orbits""; ""Chapter 9. The scattering map""; ""9.1. Some generalities about the scattering map""; ""9.2. The scattering map in our model: definition and computation""; ""Chapter 10. Existence of transition chains""; ""10.1. Transition chains""; ""10.2. The scattering map and the transversality of heteroclinic intersections"" ""10.2.1. The non-resonant region and resonances of order 3 and