Record Nr. UNISALENTO991003575059707536 Ergodic Theory and Negative Curvature [e-book]: CIRM Jean-Morlet **Titolo** Chair, Fall 2013 / edited by Boris Hasselblatt 9783319430591 **ISBN** 3319430599 Descrizione fisica 1 online resource (vii, 328 pages): illustrations (some color) Lecture notes in mathematics, 0075-8434; 2164 Collana Classificazione AMS 37-06 **LC QA313** Altri autori (Persone) Hasselblatt, Boris Disciplina 515.48 Soggetti Ergodic theory - Congresses **Dynamics** Lingua di pubblicazione Inglese Materiale a stampa **Formato** Livello bibliografico Monografia Sommario/riassunto Focussing on the mathematics related to the recent proof of ergodicity of the (Weil-Petersson) geodesic flow on a nonpositively curved space whose points are negatively curved metrics on surfaces, this book provides a broad introduction to an important current area of research. It offers original textbook-level material suitable for introductory or advanced courses as well as deep insights into the state of the art of the field, making it useful as a reference and for self-study. The first chapters introduce hyperbolic dynamics, ergodic theory and geodesic and horocycle flows, and include an English translation of Hadamard's original proof of the Stable-Manifold Theorem. An outline of the strategy, motivation and context behind the ergodicity proof is followed by a careful exposition of it (using the Hopf argument) and of the pertinent context of Teichmüller theory. Finally, some complementary lectures describe the deep connections between

geodesic flows in negative curvature and Diophantine approximation