1. Record Nr. UNINA9910786510203321 Autore Graczyk Jacek Titolo The real Fatou conjecture / / by Jacek Graczyk and Grzegorz Swiatek Pubbl/distr/stampa Princeton, New Jersey:,: Princeton University Press,, 1998 {copy}1998 **ISBN** 0-691-00257-6 1-4008-6518-2 Descrizione fisica 1 online resource (158 p.) Collana Annals of Mathematics Studies: Number 144 Disciplina 516.3/62 Soggetti Geodesics (Mathematics) **Polynomials** Mappings (Mathematics) Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Front matter -- Contents -- Chapter 1. Review of Concepts -- Chapter 2. Quasiconformal Gluing -- Chapter 3. Polynomial-Like Property --Chapter 4. Linear Growth of Moduli -- Chapter 5. Quasi conformal Techniques -- Bibliography -- Index In 1920, Pierre Fatou expressed the conjecture that--except for special Sommario/riassunto cases--all critical points of a rational map of the Riemann sphere tend to periodic orbits under iteration. This conjecture remains the main open problem in the dynamics of iterated maps. For the logistic family x- ax(1-x), it can be interpreted to mean that for a dense set of parameters "a," an attracting periodic orbit exists. The same question appears naturally in science, where the logistic family is used to construct models in physics, ecology, and economics. In this book, Jacek Graczyk and Grzegorz Swiatek provide a rigorous proof of the Real Fatou Conjecture. In spite of the apparently elementary nature of the problem, its solution requires advanced tools of complex analysis. The authors have written a self-contained and complete version of the argument, accessible to someone with no knowledge of complex dynamics and only basic familiarity with interval maps. The book will

thus be useful to specialists in real dynamics as well as to graduate

students.