1. Record Nr. UNINA9910816804803321 Autore McMullen Curtis T. Titolo Renormalization and 3-manifolds which fiber over the circle // by Curtis T. McMullen Pubbl/distr/stampa Princeton, New Jersey:,: Princeton University Press,, 1996 ©1996 **ISBN** 0-691-01154-0 1-4008-6517-4 Descrizione fisica 1 online resource (264 p.) Collana Annals of Mathematics Studies; ; Number 142 Disciplina 514/.3 Three-manifolds (Topology) Soggetti Differentiable dynamical systems 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 -- 1 Introduction -- 2 Rigidity of hyperbolic manifolds -- 3 Three-manifolds which fiber over the circle -- 4 Quadratic maps and renormalization -- 5 Towers -- 6 Rigidity of towers -- 7 Fixed points of renormalization -- 8 Asymptotic structure in the Julia set -- 9 Geometric limits in dynamics -- 10 Conclusion --Appendix A. Quasiconformal maps and flows -- Appendix B Visual extension -- Bibliography -- Index Sommario/riassunto Many parallels between complex dynamics and hyperbolic geometry have emerged in the past decade. Building on work of Sullivan and Thurston, this book gives a unified treatment of the construction of fixed-points for renormalization and the construction of hyperbolic 3manifolds fibering over the circle. Both subjects are studied via geometric limits and rigidity. This approach shows open hyperbolic manifolds are inflexible, and yields quantitative counterparts to Mostow rigidity. In complex dynamics, it motivates the construction of towers of quadratic-like maps, and leads to a quantitative proof of

convergence of renormalization.