

1. Record Nr.	UNINA9910595045203321
Autore	Erlandsson Viveka
Titolo	Mirzakhani's curve counting and geodesic currents // Viveka Erlandsson, Juan Souto, and Hugo Parlier
Pubbl/distr/stampa	Cham, Switzerland : , : Springer International Publishing, , [2022] ©2022
ISBN	3-031-08705-4
Descrizione fisica	1 online resource (233 pages)
Collana	Progress in Mathematics ; ; v.345
Disciplina	516.352
Soggetti	Curves, Algebraic Curves, Algebraic - Data processing Corbes Corbes algebriques Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Intro -- Preface -- Acknowledgments -- Contents -- Notation -- 1 Introduction -- Some Things that the Reader Will Not Find in This Book -- What the Reader Will Find Here -- A Comment on the Way This Book Is Written -- 2 Read Me -- Curves, Multicurves, and Arcs -- Intersection Number -- Geodesic Representatives -- Random Geodesics. Or Length Versus Intersections -- Space of Geodesics -- Geodesics Projecting into a Fixed Compact Set -- Laminations -- Hausdorff Limits -- Mapping Class Group -- Shortening Curves -- 3 Geodesic Currents -- Definition and Examples -- Curves as Currents -- Weighted Multicurves -- Measured Laminations -- The Space of Geodesic Currents -- Interesting Subsets of $C()$ -- Intersection Form -- Characterization of Measured Laminations -- Filling Currents -- The Mapping Class Group Action -- Mapping Class Group Action on the Set of Filling Currents -- Comments (The Liouville Current) -- 4 Train Tracks -- Train Tracks as Smoothly Embedded Complexes -- Almost Geodesic Train Tracks -- Band Complexes and Train Tracks -- Curves and Laminations Carried by Train Tracks -- Weights and Recurrence -- Switch Equations -- Thurston Measure -- First Counting Result --

Masur's Ergodicity Theorem -- An Example: The Case of the Once Punctured Torus -- Comments -- Piecewise Linear Structure -- Symplectic Structure -- Weil-Petersson Volume Form -- Other Interesting Measures on $ML(S)$ -- 5 Radallas -- Terminology -- The Game of Cars -- Almost Geodesic Radallas -- Finding Almost Geodesic Radallas -- Generic Curves -- Comments: Expected Angle of Self-Intersection -- 6 Subconvergence of Measures -- Idea of the Proof of Theorem 6.1 -- Local Map -- Global Map -- New Measures -- Comments -- 7 Approximating the Thurston Measure -- Dribbling -- Radallas Carrying the Curves in 0 -- Reducing to a Linear Algebra Problem -- Proof of Proposition 7.2. Comments -- 8 The Main Theorem -- Notation and the Constants -- The Theorem -- The Fundamental Domain -- The Meat -- The Not Ker-Invariant Case -- Comments -- 9 Counting Curves -- Main Curve Counting Theorem -- Frequencies and Relative Frequencies -- Functions on the Space of Currents -- 10 Counting Square-Tiled Surfaces -- Square-Tiled Surfaces -- Recovering Square-Tiled Surface Structures from Multicurves -- Square-Tiled Surfaces of Given Type -- Counting -- Comments -- 11 Statistics of Simple Curves -- Credit to Kasra -- Hard Data -- A Formula for $c(0)$ for Simple Curves -- Punctured Spheres -- Separating Curves in Closed Surfaces -- Non-Separating Curves in Closed Surfaces -- Combinatorial Computation -- Changing Weights -- Comments -- 12 Smörgåsbord -- Random Pants Decompositions -- Lattice Point Counting in Teichmüller Space -- Genericity of pseudo-Anosov Elements -- A Radon Measures -- Point-Set Topology -- Weak-* -Topology -- Sequential Compactness -- B Computing Thurston Volumes -- Punctured Spheres -- Separating Curves in Closed Surfaces -- Non-separating Curves in Closed Surfaces -- References -- Index.
