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Nota di contenuto	Frontmatter -- Contents -- Preface -- Notation and Conventions -- Introduction: An Overview of Some Problems of Unlikely Intersections -- Chapter 1: Unlikely Intersections in Multiplicative Groups and the Zilber Conjecture -- Chapter 2: An Arithmetical Analogue -- Chapter 3 Unlikely Intersections in Elliptic Surfaces and Problems of Masser -- Chapter 4: About the André-Oort Conjecture -- Appendix A: Distribution of Rational Points on Subanalytic Surfaces / Zannier, Umberto -- Appendix B: Uniformity in Unlikely Intersections: An Example for Lines in Three Dimensions / Masser, David -- Appendix C: Silverman's Bounded Height Theorem for Elliptic Curves: A Direct Proof / Masser, David -- Appendix D: Lower Bounds for Degrees of Torsion Points: The Transcendence Approach / Masser, David -- Appendix E: A

Transcendence Measure for a Quotient of Periods / Masser, David --
Appendix F: Counting Rational Points on Analytic Curves: A
Transcendence Approach / Masser, David -- Appendix G: Mixed
Problems: Another Approach / Masser, David -- Bibliography -- Index

Sommario/riassunto

This book considers the so-called Unlikely Intersections, a topic that embraces well-known issues, such as Lang's and Manin-Mumford's, concerning torsion points in subvarieties of tori or abelian varieties. More generally, the book considers algebraic subgroups that meet a given subvariety in a set of unlikely dimension. The book is an expansion of the Hermann Weyl Lectures delivered by Umberto Zannier at the Institute for Advanced Study in Princeton in May 2010. The book consists of four chapters and seven brief appendixes, the last six by David Masser. The first chapter considers multiplicative algebraic groups, presenting proofs of several developments, ranging from the origins to recent results, and discussing many applications and relations with other contexts. The second chapter considers an analogue in arithmetic and several applications of this. The third chapter introduces a new method for approaching some of these questions, and presents a detailed application of this (by Masser and the author) to a relative case of the Manin-Mumford issue. The fourth chapter focuses on the André-Oort conjecture (outlining work by Pila).
