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Autore	Lapidus Michel L
Titolo	Fractal geometry, complex dimensions and zeta functions : geometry and spectra of fractal strings / / Michel L. Lapidus, Machiel van Frankenhuijsen
Pubbl/distr/stampa	New York, : Springer, 2013
ISBN	1-283-90955-3 1-4614-2176-4
Edizione	[2nd ed.]
Descrizione fisica	1 online resource (582 p.)
Collana	Springer monographs in mathematics, , 1439-7382
Altri autori (Persone)	FrankenhuijsenMachiel van
Disciplina	514.742
Soggetti	Fractals Functions, Zeta Geometry, Riemannian Number theory
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"With 73 illustrations."
Nota di bibliografia	Includes bibliographical references and indexes.
Nota di contenuto	Preface -- Overview -- Introduction -- 1. Complex Dimensions of Ordinary Fractal Strings -- 2. Complex Dimensions of Self-Similar Fractal Strings -- 3. Complex Dimensions of Nonlattice Self-Similar Strings -- 4. Generalized Fractal Strings Viewed as Measures -- 5. Explicit Formulas for Generalized Fractal Strings -- 6. The Geometry and the Spectrum of Fractal Strings -- 7. Periodic Orbits of Self-Similar Flows -- 8. Fractal Tube Formulas -- 9. Riemann Hypothesis and Inverse Spectral Problems -- 10. Generalized Cantor Strings and their Oscillations -- 11. Critical Zero of Zeta Functions -- 12 Fractality and Complex Dimensions -- 13. Recent Results and Perspectives -- Appendix A. Zeta Functions in Number Theory -- Appendix B. Zeta Functions of Laplacians and Spectral Asymptotics -- Appendix C. An Application of Nevanlinna Theory -- Bibliography -- Author Index -- Subject Index -- Index of Symbols -- Conventions -- Acknowledgements.
Sommario/riassunto	Number theory, spectral geometry, and fractal geometry are interlinked in this in-depth study of the vibrations of fractal strings; that is, one-dimensional drums with fractal boundary. This second edition of Fractal

Geometry, Complex Dimensions and Zeta Functions will appeal to students and researchers in number theory, fractal geometry, dynamical systems, spectral geometry, complex analysis, distribution theory, and mathematical physics. The significant studies and problems illuminated in this work may be used in a classroom setting at the graduate level. Key Features include: The Riemann hypothesis is given a natural geometric reformulation in the context of vibrating fractal strings · Complex dimensions of a fractal string are studied in detail, and used to understand the oscillations intrinsic to the corresponding fractal geometries and frequency spectra · Explicit formulas are extended to apply to the geometric, spectral, and dynamical zeta functions associated with a fractal · Examples of such explicit formulas include a Prime Orbit Theorem with error term for self-similar flows, and a geometric tube formula · The method of Diophantine approximation is used to study self-similar strings and flows · Analytical and geometric methods are used to obtain new results about the vertical distribution of zeros of number-theoretic and other zeta functions The unique viewpoint of this book culminates in the definition of fractality as the presence of nonreal complex dimensions. The final chapter (13) is new to the second edition and discusses several new topics, results obtained since the publication of the first edition, and suggestions for future developments in the field.

2. Record Nr. UNINA9910159454003321

Autore	Powell Aaron Ross
Titolo	Arguments for Liberty
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ISBN	9781944424138 194442413X
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Soggetti	Liberalism
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	Two schools of thought have long dominated libertarian discussions about ethics: utilitarianism and natural rights. Those two theories are important, but they're not the only ways people think about ethics and political philosophy. In Arguments for Liberty, you'll find a broader approach to libertarianism. In each of Arguments for Liberty's nine chapters a different political philosopher discusses how his or her preferred school of thought judges political institutions and why libertarianism best meets that standard. Though they end up in the same place, the paths they take diverge in fascinating ways. Readers will find in these pages not only an excellent introduction to libertarianism, but also a primer on some of the most important political and ethical theories. Assuming little or no training in academic philosophy, the essays guide readers through a continuous moral conversation spanning centuries and continents, from Aristotle in ancient Athens to twentieth-century philosopher John Rawls in the halls of Harvard. What's the best political system? What standards should we use to decide, and why? Arguments for Liberty is a guide to thinking about these questions. It's also a powerful, nine-fold argument for the goodness and importance of human liberty.