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Descrizione fisica	1 online resource (xii, 391 pages) : digital, PDF file(s)
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Nota di contenuto	Introduction -- Part I. Entropy in Ergodic Theory: 1. Shannon information and entropy; 2. Dynamical entropy of a process; 3. Entropy theorems in processes; 4. Kolmogorov-Sinai entropy; 5. The Ergodic Law of Series -- Part II. Entropy in Topological Dynamics: 6. Topological entropy; 7. Dynamics in dimension zero; 8. The entropy structure; 9. Symbolic extensions; 10. A touch of smooth dynamics -- Part III. Entropy Theory for Operators: 11. Measure-theoretic entropy of stochastic operators; 12. Topological entropy of a Markov operator; 13. Open problems in operator entropy -- Appendix A. Toolbox -- Appendix B. Conditional S-M-B.
Sommario/riassunto	This comprehensive text on entropy covers three major types of dynamics: measure preserving transformations; continuous maps on compact spaces; and operators on function spaces. Part I contains

proofs of the Shannon-McMillan-Breiman Theorem, the Ornstein-Weiss Return Time Theorem, the Krieger Generator Theorem and, among the newest developments, the ergodic law of series. In Part II, after an expanded exposition of classical topological entropy, the book addresses symbolic extension entropy. It offers deep insight into the theory of entropy structure and explains the role of zero-dimensional dynamics as a bridge between measurable and topological dynamics. Part III explains how both measure-theoretic and topological entropy can be extended to operators on relevant function spaces. Intuitive explanations, examples, exercises and open problems make this an ideal text for a graduate course on entropy theory. More experienced researchers can also find inspiration for further research.
