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Descrizione fisica	1 online resource (xii, 323 pages) : digital, PDF file(s)
Collana	Cambridge tracts in mathematics ; ; 189
Classificazione	MAT007000
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Soggetti	Non-negative matrices Eigenvalues Eigenvectors Algebras, Linear
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Nota di bibliografia	Includes bibliographical references (p. [307]-318) and index.
Nota di contenuto	Preface -- What is nonlinear Perron-Frobenius theory? -- Non-expansiveness and nonlinear Perron-Frobenius theory -- Dynamics of non-expansive maps -- Sup-norm non-expansive maps -- Eigenvectors and eigenvalues of nonlinear cone maps -- Eigenvectors in the interior of the cone -- Applications to matrix scaling problems -- Dynamics of subhomogeneous maps -- Dynamics of integral-preserving maps -- Appendix A. The Birkhoff-Hopf theorem -- Appendix B. Classical Perron-Frobenius theory.
Sommario/riassunto	In the past several decades the classical Perron-Frobenius theory for nonnegative matrices has been extended to obtain remarkably precise and beautiful results for classes of nonlinear maps. This nonlinear

Perron-Frobenius theory has found significant uses in computer science, mathematical biology, game theory and the study of dynamical systems. This is the first comprehensive and unified introduction to nonlinear Perron-Frobenius theory suitable for graduate students and researchers entering the field for the first time. It acquaints the reader with recent developments and provides a guide to challenging open problems. To enhance accessibility, the focus is on finite dimensional nonlinear Perron-Frobenius theory, but pointers are provided to infinite dimensional results. Prerequisites are little more than basic real analysis and topology.
