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| Autore | Lemmens Bas |
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| Descrizione fisica | 1 online resource (xii, 323 pages) : digital, PDF file(s) |
| Collana | Cambridge tracts in mathematics ; ; 189 |
| Classificazione | MAT007000 |
| Disciplina | 512/.5 |
| Soggetti | Non-negative matrices Eigenvalues Eigenvectors Algebras, Linear |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Note generali | Title from publisher's bibliographic system (viewed on 05 Oct 2015). |
| 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.
