

1. Record Nr.	UNINA9910300135303321
Autore	Efendiev Messoud
Titolo	Symmetrization and Stabilization of Solutions of Nonlinear Elliptic Equations // by Messoud Efendiev
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2018
ISBN	3-319-98407-1
Edizione	[1st ed. 2018.]
Descrizione fisica	1 online resource (273 pages)
Collana	Fields Institute Monographs, , 1069-5273 ; ; 36
Disciplina	515.353
Soggetti	Partial differential equations Dynamics Ergodic theory Partial Differential Equations Dynamical Systems and Ergodic Theory
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Preface -- 1. Preliminaries -- 2. Trajectory dynamical systems and their attractors -- 3. Symmetry and attractors: the case N 3 -- 4. Symmetry and attractors: the case N 4 -- 5. Symmetry and attractors -- 6. Symmetry and attractors: arbitrary dimension -- 7. The case of p-Laplacian operator -- Bibliography. .
Sommario/riassunto	This book deals with a systematic study of a dynamical system approach to investigate the symmetrization and stabilization properties of nonnegative solutions of nonlinear elliptic problems in asymptotically symmetric unbounded domains. The usage of infinite dimensional dynamical systems methods for elliptic problems in unbounded domains as well as finite dimensional reduction of their dynamics requires new ideas and tools. To this end, both a trajectory dynamical systems approach and new Liouville type results for the solutions of some class of elliptic equations are used. The work also uses symmetry and monotonicity results for nonnegative solutions in order to characterize an asymptotic profile of solutions and compares a pure elliptic partial differential equations approach and a dynamical systems approach. The new results obtained will be particularly useful

for mathematical biologists.
