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Autore	Shargorodsky E (Eugene), <1966->
Titolo	Bernoulli free-boundary problems / / E. Shargorodsky, J.F. Toland
Pubbl/distr/stampa	Providence, Rhode Island : , : American Mathematical Society, , [2008] ©2008
ISBN	1-4704-0520-2
Descrizione fisica	1 online resource (86 p.)
Collana	Memoirs of the American Mathematical Society, , 0065-9266 ; ; number 914
Disciplina	515/.35
Soggetti	Nonlinear boundary value problems Fluid mechanics Pseudodifferential operators
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"November 2008, volume 195, number 914 (first of 5 numbers)."
Nota di bibliografia	Includes bibliographical references (pages 65-67) and index.
Nota di contenuto	""Contents""; ""Chapter 1. Introduction""; ""Chapter 2. Bernoulli Free Boundaries""; ""2.1. Special case: steady hydrodynamic waves""; ""2.2. General Case""; ""2.3. Notation""; ""2.4. Formulation as a Single Equation""; ""2.5. Equations""; ""2.6. Example of (2.7) with Explicit Solutions""; ""2.7. Equivalence""; ""2.8. Inequalities""; ""2.9. Duality""; ""2.10. Example of (2.7) with Explicit Solutions: Duality""; ""2.11. Self-duality""; ""Chapter 3. Type-(I) Problems""; ""3.1. Regularity""; ""3.2. Example of (2.7) with Explicit Solutions: Regularity"" ""3.3. Dimension of the Set of Stagnation Points""""""3.4. Jordan Curves""; ""3.5. Example of (2.7) with Explicit Solutions: Jordan Curves""; ""3.6. Nekrasov's Equation""; ""3.7. Nekrasov Duality""; ""3.8. Example of (2.7) with Explicit Solutions: Nekrasov Duality""; ""3.9. Morse Index of Non-singular Solutions""; ""3.10. Example of (2.7) with Explicit Solutions: Morse Index""; ""3.11. Stokes Waves""; ""Chapter 4. Proofs of Main Results""; ""4.1. Equations: proofs of Theorem 2.4 and Corollary 2.5""; ""4.2. Equivalence: proofs of Theorems 2.7, 2.8 and 2.9"" ""4.3. Inequalities: proof of Theorem 2.10""""""4.4. Duality""; ""4.5. Regularity: proofs of Theorems 3.1 and 3.3""; ""4.6. Dimension of the Set of Stagnation Points: proof of Theorem 3.4""; ""4.7. Jordan Curves: proofs of Theorem 3.5 and (3.3)""; ""4.8. Nekrasov's Equation: proof of Theorem 3.8""; ""4.9. Morse Indices""; ""4.10. Plotnikov's

		Transformation""; ""4.11. Sign of the Plotnikov Potential""; ""4.12. Constant Plotnikov Potentials: Proofs of Theorem 3.14""; ""4.13. Simple Morse-Index Estimates: Proof of Lemma 3.10""; ""4.14. Morse Index and Stagnation Points"" ""4.15. Proof of Theorem 3.13""""""Appendix A. Auxiliary results""; ""Bibliography""; ""Index""
2.	Record Nr.	UNINA9910300400603321
	Autore	Luo Albert C. J
	Titolo	Discretization and Implicit Mapping Dynamics / / by Albert C. J. Luo
	Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2015
	ISBN	3-662-47275-9
	Edizione	[1st ed. 2015.]
	Descrizione fisica	1 online resource (316 p.)
	Collana	Nonlinear Physical Science, , 1867-8459
	Disciplina	515.35
	Soggetti	Nonlinear Optics Difference equations Functional equations Multibody systems Vibration Mechanics, Applied Difference and Functional Equations Multibody Systems and Mechanical Vibrations
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Note generali	Description based upon print version of record.
	Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
	Nota di contenuto	Introduction -- Nonlinear Discrete Systems -- Discretization of Continuous Systems -- Implicit Mapping Dynamics -- Periodic Flows in Continuous Systems -- Periodic Motions to Chaos in Duffing Oscillator.
	Sommario/riassunto	This unique book presents the discretization of continuous systems and implicit mapping dynamics of periodic motions to chaos in continuous nonlinear systems. The stability and bifurcation theory of fixed points in discrete nonlinear dynamical systems is reviewed, and the explicit and implicit maps of continuous dynamical systems are

developed through the single-step and multi-step discretizations. The implicit dynamics of period-m solutions in discrete nonlinear systems are discussed. The book also offers a generalized approach to finding analytical and numerical solutions of stable and unstable periodic flows to chaos in nonlinear systems with/without time-delay. The bifurcation trees of periodic motions to chaos in the Duffing oscillator are shown as a sample problem, while the discrete Fourier series of periodic motions and chaos are also presented. The book offers a valuable resource for university students, professors, researchers and engineers in the fields of applied mathematics, physics, mechanics, control systems, and engineering.