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	Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2015
	ISBN	3-319-10777-1
	Edizione	[1st ed. 2015.]
	Descrizione fisica	1 online resource (XII, 142 p. 34 illus., 29 illus. in color.)
	Collana	Lecture Notes in Mathematics, , 0075-8434 ; ; 2117
	Disciplina	515.352
	Soggetti	Differential equations
		Partial differential equations
		Dynamics
		Ergodic theory
		Ordinary Differential Equations
		Partial Differential Equations
		Dynamical Systems and Ergodic Theory
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Note generali	Bibliographic Level Mode of Issuance: Monograph
	Nota di contenuto	Introduction -- Methods & Concepts -- Cosymmetries -- Codimension One -- Transcritical Bifurcation -- Poincar´e-Andronov-Hopf Bifurcation -- Application: Decoupling in Networks -- Application: Oscillatory Profiles -- Codimension Two -- egenerate Transcritical Bifurcation -- egenerate Andronov-Hopf Bifurcation -- Bogdanov-Takens Bifurcation -- Zero-Hopf Bifurcation -- Double-Hopf Bifurcation -- Application: Cosmological Models -- Application: Planar Fluid Flow -- Beyond Codimension Two -- Codimension-One Manifolds of Equilibria -- Summary & Outlook.
	Sommario/riassunto	Targeted at mathematicians having at least a basic familiarity with classical bifurcation theory, this monograph provides a systematic classification and analysis of bifurcations without parameters in dynamical systems. Although the methods and concepts are briefly introduced, a prior knowledge of center-manifold reductions and normal-form calculations will help the reader to appreciate the presentation. Bifurcations without parameters occur along manifolds of equilibria, at points where normal hyperbolicity of the manifold is

violated. The general theory, illustrated by many applications, aims at a geometric understanding of the local dynamics near the bifurcation points.