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Titolo	Bifurcations of planar vector fields : nilpotent singularities and Abelian integrals // Freddy Dumortier [and three others]
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Nota di contenuto	Definitions and notations -- Transformation into normal form -- Bifurcations of codimension 1 and 2 -- Elementary properties -- The central rescaling -- Conclusions and discussion of remaining problems -- Abelian integrals in unfoldings of codimension 3 singular planar vector fields.
Sommario/riassunto	The book reports on recent work by the authors on the bifurcation structure of singular points of planar vector fields whose linear parts are nilpotent. The bifurcation diagrams of the most important codimension-three cases are studied in detail. The results presented reach the limits of what is currently known on the bifurcation theory of planar vector fields. While the treatment is geometric, special analytical tools using abelian integrals are needed, and are explicitly developed. The rescaling and normalization methods are improved for application here. The reader is assumed to be familiar with the elements of Bifurcation and Dynamical Systems Theory. The book is addressed to researchers and graduate students working in Ordinary Differential Equations and Dynamical Systems, as well as anyone modelling complex multiparametric phenomena.