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Sommario/riassunto	The present volume comprises survey articles on various fields of Differential-Algebraic Equations (DAEs), which have widespread applications in controlled dynamical systems, especially in mechanical and electrical engineering and a strong relation to (ordinary) differential equations. The individual chapters provide reviews, presentations of the current state of research and new concepts in - Observers for DAEs - DAEs in chemical processes - Optimal control of DAEs - DAEs from a functional-analytic viewpoint - Algebraic methods for DAEs The results are presented in an accessible style, making this book suitable not only

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for active researchers but also for graduate students (with a good knowledge of the basic principles of DAEs) for self-study.