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Nota di contenuto	Intro -- Preface I -- Preface II -- Advances in Fault Detection and Diagnosis Using Filtering Analysis -- Contents -- Symbol Description -- List of Figures -- List of Tables -- 1 Introduction -- 1.1 Fault Detection and Diagnosis Problem -- 1.2 Classification of Fault Detection and Diagnosis Methods -- 1.2.1 Analytical Model-Based Method -- 1.2.2 Knowledge-Based Method -- 1.2.3 Signal-Processing-Based Method -- 1.3 Fault Classification -- 1.4 An Overview of Fault Diagnosis Process -- 1.4.1 Fault Detection -- 1.4.2 Fault Isolation -- 1.4.3 Fault Identification -- 1.5 Summary of Filtering Methods -- 1.6 Motivation and Objective -- 1.7 Outlines -- References -- 2 Design of State Space Based Fault Diagnosis Filter -- 2.1 Preliminaries and Problem Formulation -- 2.2 Fault Diagnosis Based on Inverse Kalman Filter -- 2.3 Application Study -- 2.4 Concluding Remarks -- References -- 3 Design of Ellipsoid Set-Membership Based Fault Detection Filter -- 3.1 Preliminaries and Problem Formulation -- 3.2 Process of Ellipsoid Set-Membership Method -- 3.3 Finite Data Window Algorithm -- 3.4 Illustrative Simulations -- 3.5 Concluding Remarks -- References -- 4 Design of Polyhedron Set-Membership Based Fault Detection Filter -- 4.1 Preliminaries and Problem Formulation -- 4.2 Polyhedral Cone and the Vertices -- 4.3 Multi-objective Linear Programming -- 4.4 Illustrative Simulations -- 4.5 Application Study --

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