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Titolo	Diagnosis, Fault Detection & Tolerant Control / / edited by Nabil Derbel, Jawhar Ghommam, Quanmin Zhu
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ISBN	981-15-1746-0
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (331 pages) : illustrations (some color)
Collana	Studies in Systems, Decision and Control, , 2198-4190 ; ; 269
Disciplina	629.8
Soggetti	Control engineering Multibody systems Vibration Mechanics, Applied Engineering mathematics Engineering—Data processing System theory Mathematics Mathematical models Control and Systems Theory Multibody Systems and Mechanical Vibrations Mathematical and Computational Engineering Applications Complex Systems Applications of Mathematics Mathematical Modeling and Industrial Mathematics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Fault diagnosis of linear switched systems based on hybrid observer -- Detection of a microstrip line defects -- Neutral time-delay system: Diagnosis and prognosis using UIO observer -- Sensor fault detection and isolation based on Variable Moving Window KPCA -- Extended Kalman Filtering for Remaining Useful Lifetime Prediction of pipeline in a Two Tank System -- Intrinsic Mode Function Selection and Statistical Information Analysis for Bearing Ball Fault Detection -- Performance investigation of animproved diagnostic method for open IGBT faults in

	VSI fed IM drives -- Fault Tolerant Control of two-timescale Systems -- Study of an HVDC link in dynamic state following commutation failures and AC fault based on modeling and real time simulation -- Reliable Control of Power Systems -- Influence of design variables on the performance of Permanent Magnet Synchronous Motor with demagnetization fault -- Active FTC of LPV system by adding virtual components -- Faults detection and localization of centrifugal gas compressor system using fuzzy logic and hybrid Kernel-SVM Methods.
Sommario/riassunto	This book focuses on unhealthy cyber-physical systems. Consisting of 14 chapters, it discusses recognizing the beginning of the fault, diagnosing the appearance of the fault, and stopping the system or switching to a special control mode known as fault-tolerant control. Each chapter includes the background, motivation, quantitative development (equations), and case studies/illustration/tutorial (simulations, experiences, curves, tables, etc.). Readers can easily tailor the techniques presented to accommodate their ad hoc applications.