1. Record Nr. UNINA9910407734203321

Autore	Li Zhen
Titolo	Event-Trigger Dynamic State Estimation for Practical WAMS Applications in Smart Grid / / by Zhen Li, Sen Li, Tyrone Fernando, Xi Chen
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2020
ISBN	3-030-45658-7
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (294 pages)
Disciplina	621.3191
Soggetti	Electronic circuits Signal processing Image processing Speech processing systems Energy systems Circuits and Systems Signal, Image and Speech Processing Energy Systems
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Introduction -- Event-trigger Design for Linear Filtering Event-trigger Strategies -- State Estimation of Doubly Fed Induction Generator (DFIG) Wind Turbine (WT) in Smart Grid -- Event-trigger Particle Filter Design under Limited Communication Bandwidth -- Event-trigger Heterogeneous Nonlinear Filter Design under Limited Computational Burden -- Event-trigger Robust Nonlinear Filter Design under Non-Gaussian Noises -- Event-trigger Robust Nonlinear Filter Design with Packet Dropout -- Discussion on Other Practical Design.
Sommario/riassunto	This book describes how dynamic state estimation application in wide-area measurement systems (WAMS) are crucial for power system reliability, to acquire precisely power system dynamics. The event trigger DSE techniques described by the authors provide a design balance between the communication rate and estimation performance, by selectively sending the innovational data. The discussion also includes practical problems for smart grid applications, such as the

non-Gaussian process/measurement noise, packet dropout, computation burden of accurate DSE, robustness to the system variation, etc. Readers will learn how the event trigger DSE can facilitate the effective reduction of communication rates, with guaranteed accuracy under a variety of practical conditions in smart grid applications. Focuses on dynamic state estimation (DSE) design for practical smart grid applications; Summarizes the event trigger strategy design for DSE.; Enables designs that reduce the communication rate and achieve balance between the bandwidth and accuracy.