

1. Record Nr.	UNINA9910299483303321
Titolo	Control theory of digitally networked dynamic systems // Jan Lunze, editor
Pubbl/distr/stampa	Cham [Switzerland] ; ; New York, : Springer, 2014
ISBN	3-319-01131-6
Edizione	[1st ed. 2014.]
Descrizione fisica	1 online resource (xv, 394 pages) : illustrations (some color)
Collana	Gale eBooks
Altri autori (Persone)	LunzeJan <1942->
Disciplina	003.5 519 620 629.8
Soggetti	Control theory System theory
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction to networked control systems -- Analysis of networked systems -- Distributed estimation and control -- Distributed and networked model predictive control -- Event-based control -- Multi-agent systems -- Wireless networking for control.
Sommario/riassunto	The book gives an introduction to networked control systems and describes new modeling paradigms, analysis methods for event-driven, digitally networked systems, and design methods for distributed estimation and control. Networked model predictive control is developed as a means to tolerate time delays and packet loss brought about by the communication network. In event-based control the traditional periodic sampling is replaced by state-dependent triggering schemes. Novel methods for multi-agent systems ensure complete or clustered synchrony of agents with identical or with individual dynamics. The book includes numerous references to the most recent literature. Many methods are illustrated by numerical examples or experimental results. .