

1. Record Nr.	UNINA9910786226303321
Autore	Longo Stefano
Titolo	Optimal and robust scheduling for networked control systems // Stefano Longo, Tingli Su, Guido Herrmann, Phil Barber
Pubbl/distr/stampa	Boca Raton, Fla. : , : CRC Press, Taylor & Francis Group, , [2013]
ISBN	1-351-83187-9 1-315-21598-5 1-4665-6955-7
Descrizione fisica	1 online resource (277 p.)
Collana	Automation and control engineering
Classificazione	TEC007000TEC009070
Altri autori (Persone)	BarberPhil HerrmannGuido SuTingli
Disciplina	629.8/95
Soggetti	Robust control Automatic control Computer networks
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.
Nota di contenuto	Front Cover; Contents; List of Figures; List of Tables; List of Acronyms; Notation and Symbols; Preface; Author Biographies; 1. Introduction; 2. Control of plants with limited communication; 3. A general framework for NCS modeling; 4. Controllability and observability; 5. Communication sequence optimization; 6. Optimal controller and schedule codesign; 7. Optimal schedule design; 8. Robust schedule design; 9. Application to an automotive control system; 10. Schedule design for nonlinear NCSs; Bibliography
Sommario/riassunto	"This book offers a tool for optimal/robust control system integration via communication networks. This work is shaped around examples and relevant standards of the automotive industry for those examples but the concepts are readily extendable to any application that uses deterministic communication protocols between system components (avionic systems, robots, etc.). The underlying idea is to use the rigorous tools from optimal and robust multivariable control theory to solve the industrial scheduling problem in a transparent manner"--

