1.	Record Nr.	UNISALENTO991003233729707536
	Autore	Del Monte, Guidobaldo, marchese <1545-1607.>
	Titolo	Le mechaniche dell'illustriss. sig. Guido Ubaldo de' marchesi del Monte / tradotte in volgare dal sig. Filippo Pigafetta ..
	Pubbl/distr/stampa	Venetia, Francesco di Franceschi, 1581
	Descrizione fisica	[16] p., 127 f. num. : ill.; 22 cm.
	Altri autori (Persone)	Pigafetta, Filippo <1533-1604>
	Lingua di pubblicazione	Italiano
	Formato	Microfilm
	Livello bibliografico	Monografia
	Note generali	Front. con fregio.
		Riproduzione in microfiche dell'originale conservato presso la Biblioteca Apostolica Vaticana
2.	Record Nr.	UNINA9910299356603321
	Autore	Platzer André
	Titolo	Logical Foundations of Cyber-Physical Systems / / by André Platzer
	Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2018
	ISBN	3-319-63588-3
	Edizione	[1st ed. 2018.]
	Descrizione fisica	1 online resource (XXXI, 639 p. 182 illus., 176 illus. in color.)
	Disciplina	006.22
	Soggetti	Logic, Symbolic and mathematical
		Artificial intelligence
		Automatic control
		Robotics
		Mechatronics
		Quality control
		Reliability
		Industrial safety
		Mathematical Logic and Formal Languages
		Artificial Intelligence
		Mathematical Logic and Foundations
		Control, Robotics, Mechatronics
		Quality Control, Reliability, Safety and Risk

Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Cyberphysical Systems: Introduction -- Differential Equations and Domains -- Choice and Control -- Safety and Contracts -- Dynamical Systems and Dynamic Axioms -- Truth and Proof -- Control Loops and Invariants -- Events and Responses -- Reactions and Delays -- Differential Equations and Differential Invariants -- Differential Equations and Proofs -- Ghosts and Differential Ghosts -- Logical Foundations and CPS -- Differential Invariants and Proof Theory -- Verified Models and Verified Runtime Validation -- Hybrid Systems and Games -- Winning Strategies and Regions -- Winning and Proving Hybrid Games -- Game Proofs and Separations -- Virtual Substitution and Real Equations -- Virtual Substitution and Real Arithmetic -- Axioms and Uniform Substitutions -- Differential Axioms and Uniform Substitutions -- Model Checking and Reachability Analysis -- Distributed Systems and Hybrid Systems.
Sommario/riassunto	Cyber-physical systems (CPSs) combine cyber capabilities, such as computation or communication, with physical capabilities, such as motion or other physical processes. Cars, aircraft, and robots are prime examples, because they move physically in space in a way that is determined by discrete computerized control algorithms. Designing these algorithms is challenging due to their tight coupling with physical behavior, while it is vital that these algorithms be correct because we rely on them for safety-critical tasks. This textbook teaches undergraduate students the core principles behind CPSs. It shows them how to develop models and controls; identify safety specifications and critical properties; reason rigorously about CPS models; leverage multi-dynamical systems compositionality to tame CPS complexity; identify required control constraints; verify CPS models of appropriate scale in logic; and develop an intuition for operational effects. The book is supported with homework exercises, lecture videos, and slides.