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	ISBN	3-030-42810-9
	Edizione	[1st edition 2020.]
	Descrizione fisica	1 online resource (xvii, 214 pages) : illustrations (some color)
	Disciplina	629.8
	Soggetti	Robotics Mechanical engineering Engineering mathematics Automatic control Digital control systems
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Note generali	Includes index.
	Nota di contenuto	Introduction and Scope of this Book -- Linear Discrete Systems and the Z-Transform -- Discrete Simulation of Continuous Systems -- Sampled Data Systems -- Design Using Transform Methods -- State-Space Analysis of Continuous Systems -- Digital Controller Design using State Space Methods -- System Identification.
	Sommario/riassunto	This textbook introduces senior undergraduate and beginning graduate students of mechanical engineering to the eld of digital control with an emphasis on applications. Both transform-based and state-variable approaches are included, with a brief introduction to system identication. The material requires some understanding of the Laplace transform and assumes that the reader has studied linear feedback control systems. Adopting an accessible, "tutorial" format, the text presents a clear and concise treatment of Linear Difference Equations, Discrete Simulation of Continuous Systems, Sampled Data Systems, Design using Laplace and Z Transforms, Introduction to Continuous State Space, Digital Control Design using State Space Methods (including state estimators), and System Identification using Least Squares.