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	Titolo	Digital Twin – Fundamental Concepts to Applications in Advanced Manufacturing / / by Surjya Kanta Pal, Debasish Mishra, Arpan Pal, Samik Dutta, Debashish Chakravarty, Srikanta Pal
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	Descrizione fisica	1 online resource (xxxvi, 465 pages : illustrations (some colour)
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	Disciplina	670.113
	Soggetti	Industrial engineering
		Production engineering
		Manufactures
		Internet of things
		Signal processing
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		Industrial and Production Engineering
		Machines, Tools, Processes
		Internet of Things
		Signal, Speech and Image Processing
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		Includes bibliographical references.
	Nota di contenuto	Introduction -- Sensor Electronics -- Signal Acquisition and Processing -- Image Processing -- Data Communication: Cloud and Fog Computing -- Machine Learning and Decision Making -- Artificial Intelligence in Decision Making -- Digital Twin Application -- Conclusions.
	Sommario/riassunto	This book provides readers with a guide to the use of Digital Twin in manufacturing. It presents a collection of fundamental ideas about sensor electronics and data acquisition, signal and image processing techniques, seamless data communications, artificial intelligence and

machine learning for decision making, and explains their necessity for the practical application of Digital Twin in Industry. Providing case studies relevant to the manufacturing processes, systems, and sub-systems, this book is beneficial for both academics and industry professionals within the field of Industry 4.0 and digital manufacturing.