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	Nota di contenuto	Introduction -- Finite and Instantaneous Screw Theory -- Topology and Performance Modeling of Robotic Mechanisms -- Type Synthesis Method and Procedures of Robotic Mechanisms -- Type Synthesis of Mechanisms with Invariable Rotation Axes -- Type Synthesis of Mechanisms with Variable Rotation Axes -- Kinematic Modeling and Analysis of Robotic Mechanisms -- Static Modeling and Analysis of Robotic Mechanisms -- Dynamic Modeling and Analysis of Robotic Mechanisms -- Optimal Design of Robotic Mechanisms -- Synthesis, Analysis and Design of typical robotic mechanisms -- Kinematic Calibration of Robotic Mechanisms -- References.
	Sommario/riassunto	This book presents a finite and instantaneous screw theory for the development of robotic mechanisms. It addresses the analytical description and algebraic computation of finite motion, resulting in a generalized type synthesis approach. It then discusses the direct connection between topology and performance models, leading to an integrated performance analysis and design framework. The book then explores parameter uncertainty and multiple performance requirements for reliable, optimal design methods, and describes the error

accumulation principle and parameter identification algorithm, to increase robot accuracy. It proposes a unified and generic methodology, and applies to the invention, analysis, design, and calibration of robotic mechanisms. The book is intended for researchers, graduate students and engineers in the fields of robotic mechanism and robot design and applications.