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Soggetti	Automatic control Mathematical optimization Artificial intelligence Manufactures Robotics Automation Control and Systems Theory Optimization Artificial Intelligence Manufacturing, Machines, Tools, Processes Robotics and Automation
Lingua di pubblicazione	Inglese
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Nota di contenuto	Introduction -- Background -- Active Robust Optimization -- Active Robust Multi-Objective Optimization -- Case Studies -- Conclusions -- Appendix: Calculation of the $q_+$ Indicator.
Sommario/riassunto	This book presents a novel framework, known as Active Robust Optimization, which provides the tools for evaluating, comparing and optimizing changeable products. Since any product that can change its configuration during normal operation may be considered a "changeable product," the framework is widely applicable. Further, the methodology enables designers to use adaptability to deal with

uncertainties and so avoid over-conservative designs. Offering a comprehensive overview of the framework, including its unique features, such as its ability to optimally respond to uncertain situations, the book also defines a new class of optimization problem and examines the effects of changes in various parameters on their solution. Lastly, it discusses innovative approaches for solving the problem and demonstrates these with two examples from different fields in engineering design: optimization of an optical table and optimization of a gearbox.

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