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Autore	Blondin Maude Josee
Titolo	Controller Tuning Optimization Methods for Multi-Constraints and Nonlinear Systems : A Metaheuristic Approach / / by Maude Josée Blondin
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Collana	SpringerBriefs in Optimization, , 2191-575X
Disciplina	519.4
Soggetti	Mathematical optimization Calculus of variations Control engineering Numerical analysis Differential equations Calculus of Variations and Optimization Control and Systems Theory Numerical Analysis Differential Equations
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Nota di contenuto	1 Optimization algorithms in control systems -- 2 Controller tuning by metaheuristics optimization -- 3 Case studies -- 4 Future direction and research trends.
Sommario/riassunto	This book covers controller tuning techniques from conventional to new optimization methods for diverse control engineering applications. Classical controller tuning approaches are presented with real-world challenges faced in control engineering. Current developments in applying optimization techniques to controller tuning are explained. Case studies of optimization algorithms applied to controller tuning dealing with nonlinearities and limitations like the inverted pendulum and the automatic voltage regulator are presented with performance comparisons. Students and researchers in engineering and optimization interested in optimization methods for controller tuning will utilize this

book to apply optimization algorithms to controller tuning, to choose the most suitable optimization algorithm for a specific application, and to develop new optimization techniques for controller tuning.

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