1.	Record Nr.	UNINA9910915792103321
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	Titolo	Optimization Techniques II : Discrete and Functional Optimization
	Pubbl/distr/stampa	Les Ulis : , : EDP Sciences, , 2023 ©2023
	ISBN	2-7598-3165-5
	Edizione	[1st ed.]
	Descrizione fisica	1 online resource (478 pages)
	Collana	Current Natural Sciences Series
	Soggetti	MATHEMATICS / Applied
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Nota di contenuto	Intro -- Optimization Techniques II -- Preface -- Introduction -- Table of contents -- 1. Mixed linear programming -- 1.1 Formulation -- 1.2 Cutting methods -- 1.3 Tree methods -- 1.4 Applications -- 1.5 Quadratic problem -- 1.6 Conclusion -- 2. Discrete optimization -- 2.1 Combinatorial problem -- 2.2 Path problem -- 2.3 Scheduling problem -- 2.4 Flow problem -- 2.5 Assignment problem -- 2.6 Heuristics -- 2.7 Conclusion -- 3. Functional optimization -- 3.1 Formulation -- 3.2 Optimality conditions -- 3.3 Constraints -- 3.4 Canonical form -- 3.5 Dynamic system -- 3.6 Conclusion -- 4. Optimal control -- 4.1 Optimality conditions -- 4.2 Constraints -- 4.3 Extremals -- 4.4 Optimality conditions of second order -- 4.5 Conclusion -- 5. Numerical methods in optimal control -- 5.1 Transcription -- 5.2 Runge-Kutta methods -- 5.3 Adams methods -- 5.4 Collocation methods -- 5.5 Direct methods -- 5.6 Indirect methods -- 5.7 Conclusion -- Index -- Short bibliography.
	Sommario/riassunto	This book in two volumes provides an overview of continuous, discrete and functional optimization techniques. This second volume is devoted to discrete optimization (problems with integer variables) and functional optimization (problems where the unknown is a function). The topics covered are: • mixed linear programming: cutting methods and tree methods; • combinatorial optimization based on graphs: path, flow, assignment problems . ; • the computation of variations based on Euler-Lagrange conditions and their extensions; • optimal control

based on the Pontryaguin maximum principle and its extensions; • numerical methods: differential equations, direct and indirect methods. The emphasis is on understanding the principles rather than on mathematical rigor. Each concept or algorithm is accompanied by a detailed example to help you grasp the main ideas. This book is the result of 30 years of experience and is intended for students, researchers and engineers wishing to acquire a general knowledge in the field of optimization.