1. Record Nr. UNISA996418264003316

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Titolo	Distributed Optimization: Advances in Theories, Methods, and Applications [[electronic resource] /] / by Huaqing Li, Qingguo Lü, Zheng Wang, Xiaofeng Liao, Tingwen Huang
Pubbl/distr/stampa	Singapore : , : Springer Singapore : , : Imprint : Springer, , 2020
ISBN	981-15-6109-5
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (XVIII, 243 p. 64 illus., 42 illus. in color.)
Disciplina	519.3
Soggetti	Control engineering Mathematical optimization Computers Control and Systems Theory Optimization Information Systems and Communication Service
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Introduction -- Convergence of Distributed Accelerated Algorithm over Unbalanced Directed Networks -- Geometrical Convergence Rate for Distributed Optimization with Time-Varying Directed Graphs and Uncoordinated Step-Sizes -- Distributed Constrained Optimization over Unbalanced Directed Networks Using Asynchronous Broadcast-Based Algorithm -- Distributed Consensus Optimization in Multi-Agent Networks with Time-Varying Directed Topologies and Quantized Communication -- Event-Triggered Communication and Data Rate Constraint for Distributed Optimization of Multi-Agent Systems -- Random Sleep Scheme Based Distributed Optimization Algorithm over Unbalanced Time-Varying Networks -- Edge-Based Stochastic Gradient Algorithm for Distributed Optimization -- Distributed Robust Algorithm for Economic Dispatch in Smart Grids over General Unbalanced Directed Networks -- Distributed Event-Triggered Scheme for Economic Dispatch in Power Systems with Uncoordinated Step-Sizes.
Sommario/riassunto	This book offers a valuable reference guide for researchers in

distributed optimization and for senior undergraduate and graduate students alike. Focusing on the natures and functions of agents, communication networks and algorithms in the context of distributed optimization for networked control systems, this book introduces readers to the background of distributed optimization; recent developments in distributed algorithms for various types of underlying communication networks; the implementation of computation-efficient and communication-efficient strategies in the execution of distributed algorithms; and the frameworks of convergence analysis and performance evaluation. On this basis, the book then thoroughly studies 1) distributed constrained optimization and the random sleep scheme, from an agent perspective; 2) asynchronous broadcast-based algorithms, event-triggered communication, quantized communication, unbalanced directed networks, and time-varying networks, from a communication network perspective; and 3) accelerated algorithms and stochastic gradient algorithms, from an algorithm perspective. Finally, the applications of distributed optimization in large-scale statistical learning, wireless sensor networks, and for optimal energy management in smart grids are discussed.