1. Record Nr. UNINA9910484135903321 Autore Wang Kehao Titolo Restless multi-armed bandit in opportunistic scheduling / / Kehao Wang, Lin Chen Pubbl/distr/stampa Cham, Switzerland: ,: Springer, , [2021] ©2021 **ISBN** 3-030-69959-5 Edizione [1st ed. 2021.] Descrizione fisica 1 online resource (XII, 151 p. 12 illus. in color.) Disciplina 621.384131 Soggetti Wireless communication systems - Mathematical models Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Introduction -- RMAB in Opportunistic Scheduling -- Optimality of Myopic Policy with Imperfect Sensing -- Whittle Index Policy with Imperfect Sensing -- Heuristic Policy with Imperfect Sensing --Optimality of Myopic Policy with Imperfect Observation -- Whittle Index Policy for Multi-State Channel Scheduling -- Conclusion. This book provides foundations for the understanding and design of Sommario/riassunto computation-efficient algorithms and protocols for those interactions with environment, i.e., wireless communication systems. The book provides a systematic treatment of the theoretical foundation and algorithmic tools necessarily in the design of computation-efficient algorithms and protocols in stochastic scheduling. The problems addressed in the book are of both fundamental and practical importance. Target readers of the book are researchers and advancedlevel engineering students interested in acquiring in-depth knowledge on the topic and on stochastic scheduling and their applications, both from theoretical and engineering perspective. Introduces Restless Multi-Armed Bandit (RMAB) and presents its relevant tools involved in machine learning and how to adapt them for application; Elaborates on research bringing the conventional decision theory and stochastic optimal technology into wireless communication applications involving machine learning: Delivers a comprehensive treatment on problems

ranging from theoretical modeling and analysis, to practical algorithm

design and optimization.