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Nota di contenuto	Contents -- Preface -- About the authors -- Part I. Introduction to machine learning and neural networks -- 1. Artificial intelligence, machine learning, and deep learning -- 2. Deep neural networks -- Part II. Deep reinforcement learning -- 3. Markov decision process -- 4. Value function approximation for continuous state-action space -- 5. Policy search methods for reinforcement learning -- 6. Actor-critic learning -- Part III. Deep reinforcement learning in UAV-assisted 6G communication -- 7. UAV-assisted 6G communications -- 8. Distributed deep deterministic policy gradient for power allocation control in UAV-to-UAV-based communications -- 9. Non-cooperative energy-efficient power allocation game in UAV-to-UAV communication: a multi-agent deep reinforcement learning approach -- 10. Real-time energy harvesting-aided scheduling in UAV-assisted D2D networks -- 11. 3D trajectory design and data collection in UAV-assisted networks -- Part IV. Deep reinforcement learning in reconfigurable intelligent surface-empowered 6G communications -- 12. RIS-assisted 6G communications -- 13. Real-time optimisation in RIS-assisted D2D communications -- 14. RIS-assisted UAV communications for IoT with

Sommario/riassunto

This co-authored book explores the many challenges arising from real-time and autonomous decision-making for 6G by covering crucial advanced signal control and real-time decision-making methods for UAV- and RIS-assisted 6G wireless communications including the serious constraints in real-time optimisation problems.