

1. Record Nr.	UNINA9911006720403321
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Titolo	Deep Reinforcement Learning for Reconfigurable Intelligent Surfaces and UAV Empowered Smart 6G Communications
Pubbl/distr/stampa	Stevenage : , : Institution of Engineering & Technology, , 2024 ©2025
ISBN	1-83724-384-0 1-83953-642-X
Edizione	[1st ed.]
Descrizione fisica	1 online resource (270 pages)
Collana	Telecommunications Series
Altri autori (Persone)	NguyenKhoi Khac DuongTrung Q SharmaVishal
Disciplina	621.38456
Soggetti	6G mobile communication systems Artificial intelligence
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
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

wireless power transfer using deep reinforcement learning -- 15.
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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.
