1. Record Nr. UNINA9910830760503321

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Titolo	Deep reinforcement learning for wireless communications and networking : theory, applications and implementation / / Dinh Thai Hoang [and four others]
Pubbl/distr/stampa	Hoboken, New Jersey : , : John Wiley & Sons, Inc., , [2023] ©2023
ISBN	1-119-87374-6 1-119-87368-1 1-119-87373-8
Edizione	[First edition.]
Descrizione fisica	1 online resource (291 pages)
Disciplina	006.31
Soggetti	Reinforcement learning Wireless communication systems
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Cover -- Title Page -- Copyright -- Contents -- Notes on Contributors -- Foreword -- Preface -- Acknowledgments -- Acronyms -- Introduction -- Part I Fundamentals of Deep Reinforcement Learning -- Chapter 1 Deep Reinforcement Learning and Its Applications -- 1.1 Wireless Networks and Emerging Challenges -- 1.2 Machine Learning Techniques and Development of DRL -- 1.2.1 Machine Learning -- 1.2.2 Artificial Neural Network -- 1.2.3 Convolutional Neural Network -- 1.2.4 Recurrent Neural Network -- 1.2.5 Development of Deep Reinforcement Learning -- 1.3 Potentials and Applications of DRL -- 1.3.1 Benefits of DRL in Human Lives -- 1.3.2 Features and Advantages of DRL Techniques -- 1.3.3 Academic Research Activities -- 1.3.4 Applications of DRL Techniques -- 1.3.5 Applications of DRL Techniques in Wireless Networks -- 1.4 Structure of this Book and Target Readership -- 1.4.1 Motivations and Structure of this Book -- 1.4.2 Target Readership -- 1.5 Chapter Summary -- References -- Chapter 2 Markov Decision Process and Reinforcement Learning -- 2.1 Markov Decision Process -- 2.2 Partially Observable Markov Decision Process -- 2.3 Policy and Value Functions -- 2.4 Bellman Equations --

Processing Systems -- 8.3.4 Data Indexing -- 8.3.4.1 Database Index Selection -- 8.3.4.2 Index Structure Construction -- 8.3.5 Query Optimization -- 8.4 Chapter Summary -- References -- Part III Challenges, Approaches, Open Issues, and Emerging Research Topics -- Chapter 9 DRL Challenges in Wireless Networks -- 9.1 Adversarial Attacks on DRL -- 9.1.1 Attacks Perturbing the State space -- 9.1.1.1 Manipulation of Observations -- 9.1.1.2 Manipulation of Training Data -- 9.1.2 Attacks Perturbing the Reward Function -- 9.1.3 Attacks Perturbing the Action Space -- 9.2 Multiagent DRL in Dynamic Environments -- 9.2.1 Motivations -- 9.2.2 Multiagent Reinforcement Learning Models.
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Sommario/riassunto

"This book provides fundamental background on Deep Reinforcement Learning (DRL) and then studies recent advances in DRL to address practical challenges in wireless communications and networking. In particular, this book first gives a tutorial of DRL from basic concepts to advanced modelling techniques to motivate and provide fundamental knowledge for the readers. The authors then provide case studies together with implementation details to help readers better understand how to practice and apply DRL to their problems. After that, they review DRL approaches that address emerging issues in communications and networking. Finally, the authors highlight important challenges, open issues, and future research directions of applying DRL in wireless networks."--

2. Record Nr. UNINA9910337873403321

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Titolo	The Rise of the Scientist-Bureaucrat : Survival Guide for Researchers in the 21st Century / / by Jose Luis Perez Velazquez
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2019
ISBN	3-030-12326-X
Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (110 pages)
Disciplina	502.3 001.4
Soggetti	Science—Social aspects Engineering—Vocational guidance Economic policy Societal Aspects of Physics, Outreach and Education Job Careers in Science and Engineering R & D/Technology Policy
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	The Rise of the New Scientist – The Scientist-Bureaucrat -- Time is Precious Quo vadis, Creativity? -- Corporate Culture in Academia and the Current Standards of Research Appraisal -- Money Matters —Pay or Perish -- The Tragicomedy of Peer Review —The Publication Game and the Lottery of Grants -- The Scientific Olympics: the Contest Among Scientists -- The Future -- Epilogue.
Sommario/riassunto	"Perez Velazquez has written a little gem that I advise reading to anyone persuing a scientific career, as well as for the general public interested in the sociological aspects of science. It alerts the reader about the rise of a new type of scientist, buried in bureaucracy and financial issues. In contrast to past generations, this "new scientist" is sadly left with minimal time to dedicate to creative work. It studies the consequences of this state of affairs, the problems associated with peer reviewing, the dilemma of funding innovative research, the nature of corporate academic culture and the trivialization of scientific achievement by grant agencies and universities. It also provides

possible solutions for these problems. All this is magnificently exemplified and documented, including personal experiences from the author and a touch of humor illustrated in the accompanying cartoons. Despite the humor, it is a serious piece of work that would also be useful for the conscientious academic worried about the difficulties of the current research scene. " Marina Frantseva, MD, PhD Jose Luis Perez Velazquez is a Spanish biochemist/biophysicist. He has a degree in Biochemistry and a PhD in Molecular Physiology & Biophysics. His research activities are mainly in the fields of the brain-behaviour relation at a high level of description, seeking principles of biological organisation. He worked as a senior scientist at the Hospital for Sick Children in Toronto and was Professor at the University of Toronto, where he taught a graduate course on consciousness and self-awareness, which derived in part from his book The Brain-Behaviour Continuum (World Scientific). He also edited the book Coordinated Activity in the Brain (Springer), and edited special issues for The Journal of Biological Physics, Frontiers in Integrative Neuroscience and Frontiers in Computational Neuroscience. Currently he is a Research Scholar at the Ronin Institute, where he continues to investigate a possible global principle, a scheme that combines theoretical studies and experimental observations, aimed at conceptualizing how consciousness arises from the organization of matter.