1. Record Nr.   UNISA996209449203316

   Titolo   Age

   Pubbl/distr/stampa [Dordrecht], the Netherlands, : Springer, [2005]-2016

   ISSN   1574-4647

   Soggetti   Aging
                      Older people
                      Vieillissement
                      Personne agee
                      Aged
                      Periodical
                      Periodicals.
                      Ressource Internet (Descripteur de forme)
                      Periodique electronique (Descripteur de forme)

   Lingua di pubblicazione Inglese

   Formato   Materiale a stampa

   Livello bibliografico Periodico

   Note generali   Title from issue table of contents page (Springer Link, viewed Aug. 26,
                      2005).
                      Refereed/Peer-reviewed

2. Record Nr.	UNINA9910736004703321
Autore	Lutter Michael
Titolo	Inductive Biases in Machine Learning for Robotics and Control / / by Michael Lutter
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2023
ISBN	3-031-37832-6
Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (131 pages)
Collana	Springer Tracts in Advanced Robotics, , 1610-742X ; ; 156
Disciplina	629.8 629.892
Soggetti	Automatic control Robotics Automation Computational intelligence Control, Robotics, Automation Computational Intelligence Control and Systems Theory
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Introduction -- A Differentiable Newton-Euler Algorithm for Real-World Robotics -- Combining Physics and Deep Learning for Continuous-Time Dynamics Models -- Continuous-Time Fitted Value Iteration for Robust Policies -- Conclusion.
Sommario/riassunto	One important robotics problem is "How can one program a robot to perform a task"? Classical robotics solves this problem by manually engineering modules for state estimation, planning, and control. In contrast, robot learning solely relies on black-box models and data. This book shows that these two approaches of classical engineering and black-box machine learning are not mutually exclusive. To solve tasks with robots, one can transfer insights from classical robotics to deep networks and obtain better learning algorithms for robotics and control. To highlight that incorporating existing knowledge as inductive biases in machine learning algorithms improves performance, this book covers different approaches for learning dynamics models and learning robust control policies. The presented algorithms leverage the

knowledge of Newtonian Mechanics, Lagrangian Mechanics as well as the Hamilton-Jacobi-Isaacs differential equation as inductive bias and are evaluated on physical robots.