Record Nr. UNINA9910163881403321 Adaptive control for robotic manipulators / / edited by Dan Zhang and **Titolo** Bin Wei Pubbl/distr/stampa Boca Raton, FL:,: CRC Press,, [2017] ©2016 **ISBN** 1-351-67892-2 1-315-16605-4 1-4987-6488-6 Edizione [First edition.] Descrizione fisica 1 online resource (441 pages): illustrations Disciplina 629.8/933 Robots - Control systems Soggetti Manipulators (Mechanism) Adaptive control systems Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Includes bibliographical references at the end of each chapters and Nota di bibliografia index. Nota di contenuto From MRAC to Learning-Based MPC: The Emerging Importance of Machine Learning for Control of Robot Manipulators -- K. Soltani Naveh and -- P. R. McAree -- -- Discussion on Model Reference Adaptive Control of Robotic Manipulators -- -- Dan Zhang and -- Bin Wei -- -- Data-Based Learning for Uncertain Robotic Systems -- --Anup Parikh, Rushikesh Kamalapurkar and -- Warren E. Dixon -- ---- Reinforcement Learning of Robotic Manipulators -- -- Kei Senda and -- Yurika Tani -- -- Adaptive Control for Multi-Fingered Robot Hands -- -- Satoshi Ueki and -- Haruhisa Kawasaki -- -- --Output Feedback Adaptive Control of Uncertain Dynamical Systems with Event-Triggering -- -- Ali Albattat, Benjamin Gruenwald and --Tansel Yucelen -- -- Event Sampled Adaptive Control of Robot Manipulators and Mobile Robot Formations -- -- N. Vignesh, H. M. Guzey and -- S. Jagannathan -- -- Design, Integration and Analysis of a Hybrid Controller for Multi Degrees of Freedom Serial Mechanisms -- -- Dan Zhang and -- Bin Wei -- -- -- Adaptive Control of Modular Ankle Exoskeletons in Neurologically Disabled

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## Sommario/riassunto

The robotic mechanism and its controller make a complete system. As the robotic mechanism is reconfigured, the control system has to be adapted accordingly. The need for the reconfiguration usually arises from the changing functional requirements. This book will focus on the adaptive control of robotic manipulators to address the changed conditions. The aim of the book is to summarise and introduce the state-of-the-art technologies in the field of adaptive control of robotic manipulators in order to improve the methodologies on the adaptive control of robotic manipulators. Advances made in the past decades are described in the book, including adaptive control theories and design, and application of adaptive control to robotic manipulators.