Adaptive Control of Ill-Defined Systems // Springer Science & Business Media, 2013 // 2013 // 9781468489415 // 350 pages // Oliver G. Selfridge, Edwina L. Rissland, Michael A. Arbib

Adaptive control is no longer just an important theoretical field of study, but is also providing solutions to real-world problems. Adaptive techniques will transform the world of control. The leading world practitioners of adaptive control have contributed to this handbook which is the most important work yet in this field. Not only are techniques described in theory, but detailed control algorithms are given, making this a practical cookbook of adaptive control for both control professionals and practising engineers.The book presents the most advanced techniques and algorithms of adaptive co... A complete reference to adaptive control of systems with nonsmooth nonlinearities such as: â€¢ backlash; â€¢ dead-zonesÂ His recent research projects include adaptive control of systems with actuator and sensor non-linearities or with actuator failures, adaptive control of multivariable systems, control of sandwich non-linear systems with non-smooth non-linearities, adaptive control of teleoperation systems, and control designs for a magnetic bearing arti_cial heart pump. A control engineer should know about adaptive systems because they have useful properties, which can be profitably used to design control systems with improved performance and functionality. A Brief History. In the early 1950s there was extensive research on adaptive control in connection with the design of autopilots for high-performance aircraft (see Fig.