

1. Record Nr.	UNINA9910462648103321
Autore	Haykin Simon S. <1931->
Titolo	Cognitive dynamic systems : perception--action cycle, radar, and radio // Simon Haykin [[electronic resource]]
Pubbl/distr/stampa	Cambridge : , : Cambridge University Press, , 2012
ISBN	1-107-21273-1 1-280-87888-6 1-139-12259-2 9786613720191 1-139-11468-9 0-511-81836-X 1-139-11249-X 1-139-12751-9 1-139-11685-1
Descrizione fisica	1 online resource (xii, 309 pages) : digital, PDF file(s)
Disciplina	003/.7
Soggetti	Self-organizing systems Cognitive radio networks
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Title from publisher's bibliographic system (viewed on 05 Oct 2015).
Nota di bibliografia	Includes bibliographical references (p. [297]-305) and index.
Nota di contenuto	1. Introduction -- 2. The perception-action cycle -- 3. Power-spectrum estimation for sensing the environment -- 4. Bayesian filtering for state estimation of the environment -- 5. Dynamic programming for action in the environment -- 6. Cognitive radar -- 7. Cognitive radio -- 8. Epilogue.
Sommario/riassunto	The principles of cognition are becoming increasingly important in the areas of signal processing, communications and control. In this groundbreaking book, Simon Haykin, a pioneer in the field and an award-winning researcher, educator and author, sets out the fundamental ideas of cognitive dynamic systems. Weaving together the various branches of study involved, he demonstrates the power of cognitive information processing and highlights a range of future research directions. The book begins with a discussion of core topics

such as cognition and sensing, dealing, in particular, with the perception-action cycle. Bayesian filtering, machine learning and dynamic programming are then addressed. Building on these foundations, there is detailed coverage of two important practical applications, cognitive radar and cognitive radio. Blending theory and practice, this insightful book is aimed at all graduate students and researchers looking for a thorough grounding in this fascinating field.
