1. Record Nr. UNINA9910821647903321

Titolo	Cognitive communications : distributed artificial intelligence (DAI), regulatory policy & economics, implementation / / editors David Grace, Honggang Zhang
Pubbl/distr/stampa	Chichester, West Sussex : , : Wiley, , 2012 [Piscataqay, New Jersey] : , : IEEE Xplore, , [2012]
ISBN	1-118-36033-8 1-299-31471-6 1-118-36032-X 1-118-36031-1
Descrizione fisica	1 online resource (501 p.)
Classificazione	TEC041000
Altri autori (Persone)	GraceDavid <1970-> ZhangHonggang <1967->
Disciplina	621.384
Soggetti	Cognitive radio networks Distributed artificial intelligence Telecommunication policy
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	-- List of Figures xiii -- List of Tables xxv -- About the Editors xxvii -- Preface xxix -- PART I INTRODUCTION -- 1 Introduction to Cognitive Communications 3 / David Grace -- 1.1 Introduction 3 -- 1.2 A New Way of Thinking 4 -- 1.3 History of Cognitive Communications 6 -- 1.4 Key Components of Cognitive Communications 8 -- 1.5 Overview of the Rest of the Book 9 -- 1.5.1 Part 2: Wireless Communications 10 -- 1.5.2 Part 3: Application of Distributed Artificial Intelligence 11 -- 1.5.3 Part 4: Regulatory Policy and Economics 12 -- 1.5.4 Part 5: Implementation 13 -- 1.6 Summary and Conclusion 14 -- References 14 -- PART II WIRELESS COMMUNICATIONS -- 2 Cognitive Radio and Networks for Heterogeneous Networking 19 / Haesik Kim and Aarne MEammelEa -- 2.1 Introduction 19 -- 2.1.1 Historical Sketch 19 -- 2.1.2 Cognitive Radio and Networks 21 -- 2.1.3 Heterogeneous Networks 22 -- 2.2 Cognitive Radio for Heterogeneous Networks 26 -- 2.2.1 Channel Sensing and Network Sensing 26 -- 2.2.2 Interference

Crosscorrelation 461 -- 15.10 Summary and Conclusions 462 -- References 462 -- Index 465.

Sommario/riassunto

"This book discusses in-depth the concept of distributed artificial intelligence (DAI) and its application to cognitive communications In this book, the authors present an overview of cognitive communications, encompassing both cognitive radio and cognitive networks, and also other application areas such as cognitive acoustics. The book also explains the specific rationale for the integration of different forms of distributed artificial intelligence into cognitive communications, something which is often neglected in many forms of technical contributions available today. Furthermore, the chapters are divided into four disciplines: wireless communications, distributed artificial intelligence, regulatory policy and economics and implementation. The book contains contributions from leading experts (academia and industry) in the field. Key Features: Covers the broader field of cognitive communications as a whole, addressing application to communication systems in general (e.g. cognitive acoustics and Distributed Artificial Intelligence (DAI) Illustrates how different DAI based techniques can be used to self-organise the radio spectrum Explores the regulatory, policy and economic issues of cognitive communications in the context of secondary spectrum access Discusses application and implementation of cognitive communications techniques in different application areas (e.g. Cognitive Femtocell Networks (CFN) Written by experts in the field from both academia and industry Cognitive Communications will be an invaluable guide for research community (PhD students, researchers) in the areas of wireless communications, and development engineers involved in the design and development of mobile, portable and fixed wireless systems., wireless network design engineer. Undergraduate and postgraduate students on elective courses in electronic engineering or computer science, and the research and engineering community will also find this book of interest. "--