

1. Record Nr.	UNISA996464432703316
Titolo	Cognitive radio-oriented wireless networks : 15th EAI International Conference, CrownCom 2020, Rome, Italy, November 25-26, 2020, Proceedings / / Giuseppe Caso, Luca De Nardis, Liljana Gavrilovska (editors)
Pubbl/distr/stampa	Cham, Switzerland : , : Springer, , [2021] ©2021
ISBN	3-030-73423-4
Descrizione fisica	1 online resource (x, 192 pages)
Collana	Lecture notes of the Institute for Computer Sciences, Social Informatics, and Telecommunications Engineering ; ; 374
Disciplina	384.54524
Soggetti	Cognitive radio networks
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Intro -- Preface -- Conference Organization -- Contents -- Spectrum Sensing and Environment Awareness -- Active User Blind Detection Through Deep Learning -- 1 Introduction -- 2 System Model for the Massive Random Access -- 2.1 Non-coherent AUD -- 2.2 MAP Detectors -- 2.3 It-MAP Detector -- 3 A Neural Network Based Algorithm -- 3.1 The NN-MAP Estimate -- 3.2 The NN-MAP System Parameters -- 4 Results -- 5 Conclusion -- References -- Spectrum Sensing Based on Dynamic Primary User with Additive Laplacian Noise in Cognitive Radio -- 1 Introduction -- 2 System Model -- 3 Dynamic PU Modeling -- 3.1 Energy Detection -- 3.2 AVCD and i-AVCD -- 4 Results -- 5 Conclusion -- References -- Blind Source Separation for Wireless Networks: A Tool for Topology Sensing -- 1 Introduction -- 1.1 Existing Works -- 1.2 Application Scenarios -- 2 System Model and Problem Formulation -- 2.1 Data Acquisition and Channel Model -- 3 Blind Source Separation -- 3.1 Whitening and Estimation of the Number of Sources -- 3.2 Independent Component Analysis -- 3.3 Unmixed Signals Association -- 3.4 Excision Filter -- 4 Topology Inference Algorithms -- 4.1 Granger Causality -- 4.2 Transfer Entropy -- 5 Numerical Results -- 5.1 BSS Reconstruction Error -- 5.2 Topology Inference and Number of Nodes -- 5.3 Impact of Shadowing -- 6

Conclusion -- References -- Resource Management and Optimization
-- Efficient Clustering Schemes Towards Information Collection -- 1
Introduction -- 2 Energy Efficiency in Cooperative Spectrum Sensing --
3 Clustering Algorithms -- 4 Simulation Results -- 5 Conclusions --
References -- A Non-zero Sum Power Control Game with Uncertainty
-- 1 Introduction -- 2 Communication Model -- 2.1 Auxiliary
Notations and Results -- 2.2 Equilibrium Strategies -- 3 Stackelberg
Game -- 3.1 Auxiliary Notations and Results -- 3.2 Stackelberg
Equilibrium Strategies.
4 Discussion of the Results -- 5 Conclusions -- References --
Demonstrating Spectrally Efficient Asynchronous Coexistence for
Machine Type Communication: A Software Defined Radio Approach -- 1
Introduction -- 2 Background -- 2.1 Related Work -- 3 Asynchronous
Coexistence -- 4 SDR Approach for Coexistence Studies -- 4.1
Workflow -- 4.2 F-OFDM Filter Implementation -- 4.3 An Automated
Test Framework for EVM and BER Measurements -- 5 Results -- 5.1
Simulations -- 5.2 Hardware Experiments -- 6 Conclusions and Future
Work -- References -- Verticals and Applications -- Distance
Estimation for Database-Assisted Autonomous Platooning -- 1
Introduction -- 2 Negative Impact of Distance Measurement Errors --
2.1 Impact on Distance-Related Entries in Databases -- 2.2 Impact on
Pathloss Modelling -- 2.3 Combined Distance Measurement Scheme --
3 Pathloss Measurements - Conducted Experiment -- 4 Proposed UWB
and GPS-Based Distance Measurements Fusion -- 5 Conclusions --
References -- A Priced-Deferred Acceptance (p-DA) Technique for D2D
Communication in Factories of the Future -- 1 Introduction -- 2
System Model -- 3 The Resource Allocation Problem -- 3.1 QoS
Admission and Power Allocation -- 3.2 Priced Deferred Acceptance
Game Solution -- 4 Example Case Studies, Simulation Results
and Discussion -- 5 Conclusions -- References -- Data-Driven
Intelligent Management of Energy Constrained Autonomous Vehicles in
Smart Cities -- 1 Introduction -- 1.1 Motivation -- 1.2 Related Work
and Contributions -- 2 Electric Taxis Dataset and System Model -- 2.1
Dataset Description -- 2.2 EAV Flow Model -- 2.3 Energy Models for
EAV -- 3 Intelligent Management System -- 3.1 Energy-Aware
Passenger Requests Scheduling -- 3.2 Grid Load-Aware Charging
Scheduling -- 4 Simulation Results and Analysis -- 4.1 The Supply and
Optimal Demand of EAVs -- 4.2 Energy-Aware EAV Scheduling.
5 Conclusion -- References -- A Primer on Large Intelligent Surface
(LIS) for Wireless Sensing in an Industrial Setting -- 1 Introduction -- 2
Problem Formulation -- 3 Holographic Sensing -- 4 Machine Learning
for Holographic Sensing -- 4.1 Model Description -- 4.2 Dataset
Format -- 5 Model Validation -- 5.1 Simulated Scenario -- 5.2
Received Power and Noise Modeling -- 5.3 Noise Averaging Strategy --
5.4 Performance Metrics -- 6 Numerical Results and Discussion -- 6.1
Impact of Sampling and Noise Averaging -- 6.2 Impact of Antenna
Spacing -- 6.3 LIS Aperture Comparisons -- 7 Conclusions --
References -- Business Models and Spectrum Management --
Scalability and Replicability of Spectrum for Private 5G Network
Business: Insights into Radio Authorization Policies -- 1 Introduction --
2 Theoretical Foundation and Key Concepts -- 2.1 Business Model
Framework -- 2.2 Private 5G Network Spectrum Requirements -- 2.3
Radio Equipment Authorization -- 3 Analysis of Radio Authorization
Frameworks -- 3.1 European Radio Authorization Framework -- 3.2 US
Radio Equipment Authorization Framework -- 3.3 Comparison of FCC
and EU Radio Product Authorization Processes -- 3.4 Radio
Authorization Frameworks in Selected Countries -- 3.5 Discussion -- 4
Conclusions -- References -- Novel Spectrum Administration

and Management Approaches Transform 5G Towards Open Ecosystemic Business Models -- 1 Introduction -- 2 Theoretical Foundation -- 2.1 Business Model Value Configuration -- 2.2 Spectrum Management Archetypes -- 3 The Business Perspective of Spectrum Administration and Management Enablers -- 3.1 Market Based Mechanism -- 3.2 Administrative Assignment -- 3.3 Spectrum Commons -- 3.4 Open Ecosystemic Business Antecedents -- 4 Conclusions -- References -- Moving from 5G in Verticals to Sustainable 6G: Business, Regulatory and Technical Research Prospects -- 1 Introduction. 2 State of the Art of 5G in Verticals -- 2.1 Business Perspective -- 2.2 Regulation Perspective -- 2.3 Technology Perspective -- 3 Towards Sustainable 6G -- 3.1 Role of UN SDGs in 6G -- 3.2 Business, Regulation and Technology Perspectives -- 4 Business Scenarios and Strategic Options for 6G -- 4.1 Methodology -- 4.2 6G Business Scenarios -- 4.3 Strategic Options for 6G as Simple Rules -- 5 Future Outlook and Conclusions -- References -- Author Index.
