1.	Record Nr. Autore Titolo	UNINA9910820874703321 Perret Etienne Radio frequency identification and sensors / / Etienne Perret
	Pubbl/distr/stampa	London, [England] ; ; Hoboken, New Jersey : , : ISTE Limited : , : John Wiley & Sons, , 2014 ©2014
	ISBN	1-119-05401-X 1-119-05407-9
	Descrizione fisica	1 online resource (255 p.)
	Collana	Networks and Telecommunications Series
	Disciplina	621.384192
	Soggetti	Radio frequency identification systems Radio frequency modulation
	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	Cover; Title Page; Copyright; Contents; Acknowledgments; List of Acronyms; Introduction; PART 1: Radio-Frequency Identifications; 1: Introduction to RFID; 1.1. General introduction to RFID; 1.2. The RFID market; 1.3. Issues in RFID; 1.3.1. Robustness of reading; 1.3.1.1. Description of problem; 1.3.1.2. Solution contributed; 1.3.2. Tag prices; 1.3.3. From identification toward sensor function; 1.4. Conclusion; 1.5. Bibliography; 2: Antenna Design for UHF RFID Tags; 2.1. Introduction; 2.2. Essential RFID parameters; 2.2.1. Putting into equation of reader-tag links 2.3. Discussions about the two chip impedance states Zic2.4. Rules of design for RFID antennas: classic design approach; 2.4.1. Classic antenna design approach for passive UHF RFID tags; 2.5. Robust RFID antenna design methodology; 2.5.1. Context of study; 2.5.2. Description of principle applied; 2.5.3. Principle of co-simulation; 2.5.4. Taking into account of the environment, design of robust tags; 2.5.5. Use of the cosimulation principle in the optimization process; 2.5.6. Generation of antenna forms; 2.5.7. Application of the automated design tool via an example 2.5.7.1. Manufacturing constraints2.5.7.2. Convergence of antenna form; 2.5.7.3. Results obtained; 2.5.7.4. Metal objects; 2.6. Conclusion; 2.7. Bibliography; 3: New Developments in UHF RFID; 3.1. Introduction;

	 3.2. Wireless measurement technique for antenna impedance; 3.2.1. Characterization of RFID chips and measurement of the twoimpedance states; 3.2.1.1. Introduction; 3.2.1.2. Description of measurement bench; 3.2.2. Theoretical approach to input impedance extraction from asmall antenna based on the use of an RFID chip; 3.2.2.1. Far-field reflectometry measurement technique 3.2.2.2. Principle of reflectometry applied to RFID for the measurement of antenna impedance3.3. Toward the use of RFID as a sensor; 3.3.1. Taking into account of downlink - increase of delta RCS; 3.3.2. Example of an RFID sensor; 3.4. Conclusion; 3.5. Bibliography; PART 2: Chipless RFID; 4: Introduction to Chipless RFID; 4.1. Introduction; 4.2. Operating principle of chipless RFID; 4.2.1. Description of the principle of chipless RFID; 4.3.1. Latest developments; 4.3.2. Frequential tag and temporal tag: definition 4.3.3. Applicative positioning4.4. Advantages; 4.4.1. Different ideas to take into consideration; 4.4.1.1. Quantity of information in chipless tags; 4.4.1.2. Frequency band; 4.4.1.3. Tag size; 4.4.1.4. Read range; 4.4.1.5. Sensitivity of tag to the environment; 4.5. Conclusion; 4.6. Bibliography; 5: Development of Chipless RFID; 5.1. Introduction; 5.2. Coding capacity and density of chipless RFID tags; 5.2.1. Performances of resonant patterns; 5.2.2. Information coding techniques; 5.2.3. Transmission and reception standards 5.3. Improvement of the robustness of detection of chipless RFID tags
Sommario/riassunto	This book deals with the field of identification and sensors, more precisely the possibility of collecting information remotely with RF waves (RFID). The book introduces the technology of chipless RFID starting from classical RFID and barcode, and explores the field of identification and sensors without wire, without batteries, without chip, and with tags that can even be printed on paper. A technique for automatic design of UHF RFID tags is presented , aiming at making the tags as insensitive as possible to the environment (with the ability to increase the reading range reliability), or, co