

TABLE OF CONTENTS

PREFACE

1. Low-power Wide-Area Networks: A Comparative Analysis Between LoRaWAN and NB-IoT	1
by C. Buratti, K. Mikhaylov, R. Marini, R. Verdone	
2. LoRaWAN: current status and research directions	23
by L. Vangelista, A. Zanella, M. Zorzi	
3. LoRaWAN: a Deep Dive in a Large Scale Deployment and in Radio Access Optimization Strategies	41
by G. Bianchi, F. Cuomo, D. Garlisi, P. Pisani, I. Tinnirello	
4. Wide Area Transmission Technologies for IoT	67
by A. Abrardo, G. Peruzzi, A. Pozzebon	
5. Enabling technologies for the Internet of Vehicles: standards, research and open challenges	87
by C. Campolo, A. Molinaro	
6. A Machine Learning Based Non-Orthogonal Multiple Access Scheme for IoT Communications	103
by R. Fantacci, B. Picano	
7. Resources virtualization and task offloading towards the Edge in the IoT	123
by G. Merlino, V. Pilloni	
8. Security and privacy in the IoT: how to enforce standard communication technologies with efficient and flexible mechanisms	141
by A. Suriano, D. Striccoli, G. Piro, A. Antenore, G. Boggia	
9. The Social Internet of Things: a Survey	163
by L. Atzori, A. Iera, G. Morabito	

10. Software Defined Fog/Edge Networking for Internet of Vehicles: a Services-Oriented Reference Architecture	183
by M. Bonanni, F. Chiti, R. Fantacci	
11. IoT-enabled Smart Monitoring and Optimization for Industry 4.0	207
by L. Davoli, L. Belli, G. Ferrari	
12. A Flexible Mobility System based on Small and Low-emission Vehicles for Smart and Green Mobility	227
by S. Ullo, M. Gallo, M. Di Bisceglie, C. Galdi, M. Marinelli, L. Glielmo, G. Palmieri, P. Amenta, A. Ferrara, M. Ferrucci, G. Romano, M. Russo, M. De Angelis	
13. An IoT Solution and Real-Time Detection System for Crop Protection against Ungulates	249
by M. O. Ojo, D. Adamo, S. Giordano	

