1. Record Nr. UNINA9910254171503321

Titolo	Computational Intelligence in Wireless Sensor Networks [[electronic resource]] : Recent Advances and Future Challenges / / edited by Ajith Abraham, Rafael Falcon, Mario Koeppen
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2017
ISBN	3-319-47715-3
Edizione	[1st ed. 2017.]
Descrizione fisica	1 online resource (XV, 210 p. 91 illus.)
Collana	Studies in Computational Intelligence, , 1860-949X ; ; 676
Disciplina	006.3
Soggetti	Computational intelligence Artificial intelligence Electrical engineering Computational Intelligence Artificial Intelligence Communications Engineering, Networks
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Preface -- A Genetic Programming Approach to Cost-Sensitive Control in Resource Constrained Sensor Systems -- A Study on Performance of the Hill Climbing Heuristic Method for Router Placement in Mesh Networks -- An Automated Irrigation System Based on a Low- Cost Micro-controller for Tomato Production in South India -- Artificial-Neural-Network-based Real-Time Urban Road Traffic State Estimation Framework -- Attack Detection using Evolutionary Computation -- Computational Intelligence based Security in WSNs - Technologies and Design Challenges -- Efficient Anomaly Detection System for Video Surveillance Application in WVSN with Particle Swarm Optimization -- Planning Robust Sensor Relocation Trajectories for a Mobile Robot with Evolutionary Multi-Objective Optimization.
Sommario/riassunto	This book emphasizes the increasingly important role that Computational Intelligence (CI) methods are playing in solving a myriad of entangled Wireless Sensor Networks (WSN) related problems. The book serves as a guide for surveying several state-of-the-art WSN

scenarios in which CI approaches have been employed. The reader finds in this book how CI has contributed to solve a wide range of challenging problems, ranging from balancing the cost and accuracy of heterogeneous sensor deployments to recovering from real-time sensor failures to detecting attacks launched by malicious sensor nodes and enacting CI-based security schemes. Network managers, industry experts, academicians and practitioners alike (mostly in computer engineering, computer science or applied mathematics) benefit from the spectrum of successful applications reported in this book. Senior undergraduate or graduate students may discover in this book some problems well suited for their own research endeavors. USP: Presents recent advances and future challenges of computational intelligence (CI) in wireless sensor networks Surveys the state of the art in CI applied to challenging real-world problems in the wireless sensor networks realm Is useful for researchers, network managers, industry experts, academicians, and practitioners who all benefit from the wide spectrum of successful application domains.