1. Record Nr. UNINA9910366588703321

Autore	Zhang Rongrong
Titolo	Energy-Efficient Algorithms and Protocols for Wireless Body Sensor Networks / / by Rongrong Zhang, Jihong Yu
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2020
ISBN	3-030-28580-4
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (141 pages)
Disciplina	004.678
Soggetti	Electrical engineering Electronics Microelectronics Medical informatics User interfaces (Computer systems) Signal processing Image processing Speech processing systems Communications Engineering, Networks Electronics and Microelectronics, Instrumentation Health Informatics User Interfaces and Human Computer Interaction Signal, Image and Speech Processing
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Introduction -- Reliable and energy-efficient leader election algorithms for WBSNs -- Medium access for concurrent traffic in WBSNs: protocol design and analysis -- On multi-channel broadcast in WBSNs with asynchronous duty cycles: theoretical foundation and algorithm design -- Energy-efficient sleep scheduling in WBSNs: from the perspective of minimum dominating set -- Conclusion.
Sommario/riassunto	This book provides a systematic treatment of the theoretical foundation and algorithmic tools necessary in the design of energy-efficient algorithms and protocols in wireless body sensor networks (WBSNs).

These problems addressed in the book are of both fundamental and practical importance. Specifically, the book delivers a comprehensive treatment on the following problems ranging from theoretical modeling and analysis, to practical algorithm design and optimization: energy-efficient clustering-based leader election algorithms in WBSNs; MAC protocol for duty-cycling WBSNs with concurrent traffic; multi-channel broadcast algorithms in duty-cycling WBSNs; and energy-efficient sleep scheduling algorithms in WBSNs. Target readers of the book are researchers and advanced-level engineering students interested in acquiring in-depth knowledge on the topic and on WBSNs and their applications, both from theoretical and engineering perspective. Provides foundations for the design of energy-efficient algorithms and protocols for WBSNs Presents a variety of tools and how they can be adapted and applied in the energy-limited WBSNs Includes research on conventional graph theory and channel hopping technology into the emerging applications of WBSNs.