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| Soggetti                | Electrical engineering<br>Application software<br>Medical informatics<br>Electronics<br>Microelectronics<br>Signal processing<br>Image processing<br>Speech processing systems<br>Database management<br>Communications Engineering, Networks<br>Information Systems Applications (incl. Internet)<br>Health Informatics<br>Electronics and Microelectronics, Instrumentation<br>Signal, Image and Speech Processing<br>Database Management |
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| Livello bibliografico   | Monografia  |
| Nota di contenuto       | Introduction -- Features of wireless body sensor networks -- Emerging trends of WBSN and the present health care system -- Technology, protocols and use cases of wireless WBSN -- Literature survey on various health monitoring system -- Wireless communication protocols in health monitoring -- WBSN challenges and their solutions -- Communication protocols of implanted, wearable and nano body                                    |

sensor networks -- Interference and channel allocation -- Energy harvesting methodologies and experimentation -- Reliability analysis and fault tolerant architecture for WBSN -- Buffer management in delay tolerant and delay in tolerant monitoring -- Handling network failure during critical duration -- Trust models and digital signature concepts in wearable nodes -- Animal health monitoring system -- Physiological sensor design -- Factors affecting Sensor reusability, Sensing time and sensed state to initial state -- Conclusion.

#### Sommario/riassunto

This book provides a novel solution for existing challenges in wireless body sensor networks (WBAN) such as network lifetime, fault tolerant approaches, reliability, security, and privacy. The contributors first discuss emerging trends of WBAN in the present health care system. They then provide possible solutions to challenges inherent in WBANs. Finally, they discuss results in working environments. Topics include communication protocols of implanted, wearable and nano body sensor networks; energy harvesting methodologies and experimentation for WBAN; reliability analysis and fault tolerant architecture for WBAN; and handling network failure during critical duration. The contributors consist of researchers and practitioners in WBAN around the world.