1. Record Nr. UNINA9910789315403321 Autore Gupta Sandeep K. S. <1966-> Titolo Body area networks: safety, security, and sustainability / / Sandeep K. S. Gupta, Arizona State University, USA, Tridib Mukherjee, Xerox Research Centre, India, Krishna Kumar Venkatasubramanian, Worcester Polytechnic Institute, USA [[electronic resource]] Cambridge:,: Cambridge University Press,, 2013 Pubbl/distr/stampa **ISBN** 1-107-23568-5 1-107-34166-3 1-107-34416-6 1-107-34900-1 1-107-34791-2 1-299-40337-9 1-139-10812-3 1-107-34541-3 1 online resource (xvi, 141 pages) : digital, PDF file(s) Descrizione fisica Disciplina 610.285/468 Soggetti Body area networks (Electronics) Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Title from publisher's bibliographic system (viewed on 05 Oct 2015). Note generali Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Introduction -- Body area networks -- BAN models and requirements -- Safety -- Security -- Sustainability -- Implementation of BANs --Epilogue. Sommario/riassunto Body area networks (BANs) are networks of wireless sensors and medical devices embedded in clothing, worn on or implanted in the body, and have the potential to revolutionize healthcare by enabling pervasive healthcare. However, due to their critical applications affecting human health, challenges arise when designing them to ensure they are safe for the user, sustainable without requiring frequent battery replacements and secure from interference and malicious attacks. This book lays the foundations of how BANs can be redesigned from a cyber-physical systems perspective (CPS) to overcome these issues. Introducing cutting-edge theoretical and

practical techniques and taking into account the unique environment-

coupled characteristics of BANs, the book examines how we can reimagine the design of safe, secure and sustainable BANs. It features real-world case studies, suggestions for further investigation and project ideas, making it invaluable for anyone involved in pervasive and mobile healthcare, telemedicine, medical apps and other cyber-physical systems.