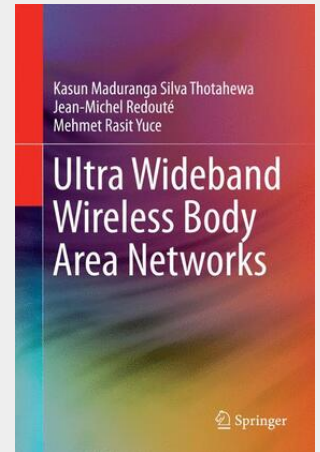


## Ultra Wideband Wireless Body Area Networks

This book explores the design of ultra wideband (UWB) technology for wireless body-area networks (WBAN). The authors describe a novel implementation of WBAN sensor nodes that use UWB for data transmission and narrow band for data reception, enabling low power sensor nodes, with high data rate capability. The discussion also includes power efficient, medium access control (MAC) protocol design for UWB based WBAN applications and the authors present a MAC protocol in which a guaranteed delivery mechanism is utilized to transfer data with high priority. Readers will also benefit from this book's feasibility analysis of the UWB technology for human implant applications through the study of electromagnetic and thermal power absorption of human tissue that is exposed to UWB signals.

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