

Text Book

## Bio-Interfacing Devices (BID)

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### About the Book

The book addresses state-of-the-art bio-interfacing devices, bio-instrumentation and virtual technologies in order to develop prototypes of real time systems for movement analysis. It incorporates varieties of wired and wireless sensors and different vision technologies; video and optical as fundamental elements for movement analysis. We will gear to the integration of Data Acquisition (DAQ) modules to construct bio-interfacing devices together with virtual technologies as measurement tools. Interactive Graphical User Interfacing (IGUI) programming will be chosen to extract preprocessed data and signals in order to reconstruct movement models. Key features and phases involved in motion regeneration development, testing and simulation will be addressed in order to represent accurate movement in soft-real time.

### Key advantages

Unlike other movement analysis books, reader finds the integration of bio-electronic devices, bio-instrumentation and virtual technologies based on wired, wireless sensors and vision systems in near real time systems. Further, each chapter contains prototype building of specific products which are already tested in real world applications. Therefore, author also provides some challenging real world problems for the reader to do as most of the proposed problems have been proven with national athletes at sports biomechanics centre of National Sports Institute.

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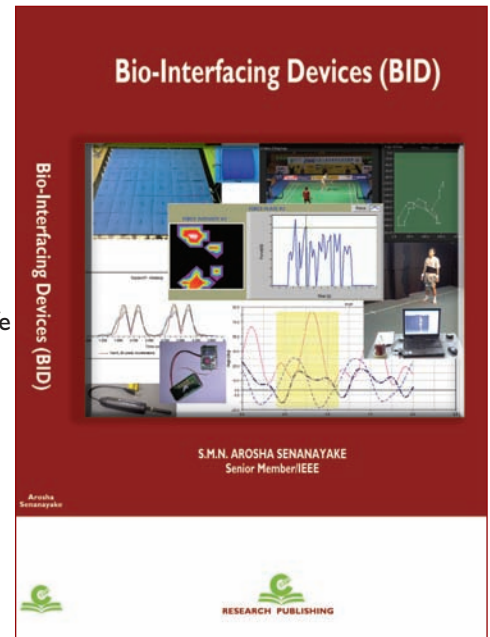
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**Readership:** This book is an essential guide for graduate students, researchers and Practitioners in the field of Biomechanics. BIDS suits for bioengineering professionals in academia and in industries who are involved in teaching, designing and developing commercial smart products in bio-instrumentation, bio-electronics, human gait analysis, bio-mechanics, sports engineering, bio-mechanical engineering, sports science.



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