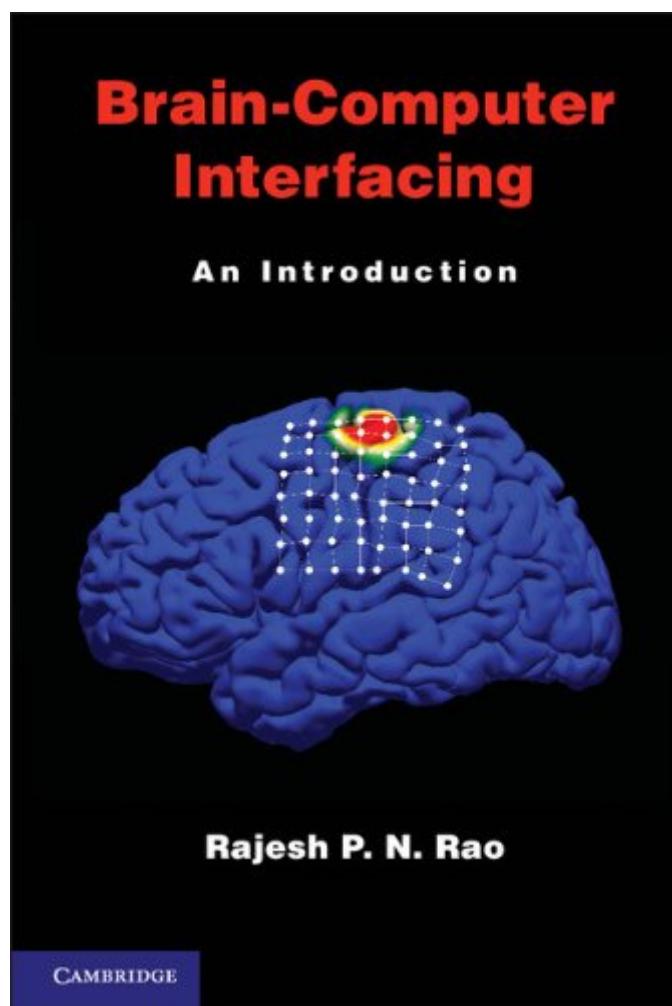


The book was found

Brain-Computer Interfacing



Synopsis

The idea of interfacing minds with machines has long captured the human imagination. Recent advances in neuroscience and engineering are making this a reality, opening the door to restoring and potentially augmenting human physical and mental capabilities. Medical applications such as cochlear implants for the deaf and deep brain stimulation for Parkinson's disease are becoming increasingly commonplace. Brain-computer interfaces (BCIs) (also known as brain-machine interfaces or BMIs) are now being explored in applications as diverse as security, lie detection, alertness monitoring, telepresence, gaming, education, art, and human augmentation. This introduction to the field is designed as a textbook for upper-level undergraduate and first-year graduate courses in neural engineering or brain-computer interfacing for students from a wide range of disciplines. It can also be used for self-study and as a reference by neuroscientists, computer scientists, engineers, and medical practitioners. Key features include:

- Essential background in neuroscience, brain recording and stimulation technologies, signal processing and machine learning
- Detailed description of the major types of BCIs in animals and humans, including invasive, semi-invasive, noninvasive, stimulating and bidirectional BCIs
- In-depth discussion of BCI applications and BCI ethics
- Questions and exercises in each chapter
- Supporting website with annotated list of book-related links.

Book Information

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Customer Reviews

I just picked up a copy Rajesh Rao's new book Brain-Computer Interfacing. Rao received his PhD from UR working under Dana Ballard, and has lately been much in the news for his work on -- what else -- brain-computer interfaces. Even if you don't care about brain interfaces, however, the book turns out to include an excellent concise summary of signal processing and machine learning -- in about 50 pages covering practically everything a beginning researcher needs to know. All the various techniques and algorithms are tied together by running examples of interpreting neural data, making for an unusually coherent and readable summary. Highly recommended!

Rao's book on BCI is the best introductory material on this field, and the best as a quick reference and starting point. It is absolutely great if you need it to organize workshops or lectures because it contains a lot of "Teaching material" within the book (Questions and exercises at the end of each chapter). Complex issues and "oceans of papers" are very well summarized and clarified in this book.

Great book on Basic BCI. Lost one star because many of the equations in the kindle version was deformed and unreadable.

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