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An Introduction To Rehabilitation Engineering (Series In Medical Physics And Biomedical Engineering)





Synopsis

Answering the widespread demand for an introductory book on rehabilitation engineering (RE), Dr. Rory A. Cooper, a distinguished RE authority, and his esteemed colleagues present An Introduction to Rehabilitation Engineering. This resource introduces the fundamentals and applications of RE and assistive technologies (ATs). After providing a brief introduction, the book describes the models for AT service delivery, the design tools and principles of universal design, and various technology-transfer mechanisms, models, and principles. The text then explains the process for creating assistive device standards, followed by a review of seating biomechanics and soft tissue biomechanics. Subsequent chapters examine design and service delivery principles of wheelchairs and scooters, functional electrical stimulation and its applications, wheelchair-accessible transportation legislation, and the applications of robotics in medical rehabilitation. The book proceeds to discuss prosthetic and orthotic design and usage, visual and hearing impairment, Web-related AT, and augmentative and alternative communication (AAC) technology. It concludes with an introduction to adaptive sports and recreation. Incorporating the critical aspects of RE and AT, An Introduction to Rehabilitation Engineering focuses on the principles, modeling, standards, devices, and technologies of RE and AT. It presents a concise yet complete overview of RE to provide a solid foundation in the subject as well as to stimulate further study.

Book Information

Series: Series in Medical Physics and Biomedical Engineering Hardcover: 470 pages Publisher: CRC Press; 1 edition (December 26, 2006) Language: English ISBN-10: 0849372224 ISBN-13: 978-0849372223 Product Dimensions: 6.1 x 1 x 9.2 inches Shipping Weight: 1.7 pounds (View shipping rates and policies) Average Customer Review: 5.0 out of 5 stars Â See all reviews (1 customer review) Best Sellers Rank: #806,949 in Books (See Top 100 in Books) #26 in Books > Science & Math > Chemistry > Physical & Theoretical > Electrochemistry #105 in Books > Textbooks > Medicine & Health Sciences > Medicine > Biotechnology #242 in Books > Engineering & Transportation > Engineering > Bioengineering > Biomedical Engineering

Customer Reviews

I highly recommend this book as a great source of information regarding rehabilitation engineering. As a personal injury lawyer, I am handling a case for a 86 year old quadriplegic woman who, due to a malfunction in her wheelchair restaint system, slid out of her wheelchair while being transported in a van and sustain multiple fractures of both legs. Frankly, I had no great ideas on how to start researching the industry standards in this field. So, I bought this book and remarkably I learned everything I needed to know by reading its chapter on WHEELCHAIR TRANSPORTATION SAFETY. I even contacted one of the authors of that chapter and learned even more valuable information. This book was easy to understand (even for the layman) and contained everything I needed to know in this area.

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