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| Nota di contenuto | Ground Reaction Forces in Parkinson's Disease OFF and ON States Reflect Changes in Muscle Synergies: A Pilot Study -- Predictive Simulation Model of Stepping in Place in Parkinson's Disease: The Effect of Muscle Strength and Muscle Tone -- Towards Data Augmentation for Parkinson's Disease Gait Data Using Neuromusculoskeletal Simulations -- The Role of Depth for Human Motion Assessment with a Single RGB-D Camera: Preliminary Findings. |
| Sommario/riassunto | The book reports on advanced topics in the areas of neurorehabilitation research and practice. It focuses on new methods for interfacing the human nervous system with electronic and mechatronic systems to |

restore or compensate impaired neural functions. Importantly, the book merges different perspectives, such as the clinical, neurophysiological, and bioengineering ones, to promote, feed and encourage collaborations between clinicians, neuroscientists and engineers. Based on the 2024 International Conference on Neurorehabilitation (ICNR2024) held in La Granja, Spain on November 5-8, 2024, this book covers various aspects of neurorehabilitation research and practice, including new insights into biomechanics, brain physiology, neuroplasticity, and brain damages and diseases, as well as innovative methods and technologies for studying and/or recovering brain function, from data mining to interface technologies and neuroprosthetics. In this way, it offers a concise, yet comprehensive reference guide to neurosurgeons, rehabilitation physicians, neurologists, and bioengineers. Moreover, by highlighting current challenges in understanding brain diseases as well as in the available technologies and their implementation, the book is also expected to foster new collaborations between the different groups, thus stimulating new ideas and research directions.