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Nota di contenuto	Usability Validation of a Parallel Bar Device with Vibrating Stimulus for Neuropathologies Treatment -- Microphysicaltherapy as a Novel Adjunctive Nonpharmacological Treatment for Refractory Temporal Lobe Epilepsy: A Prospective Observational Study -- Proximal Fibular Osteotomy Vs High Tibial Osteotomy: An In-silico Finite Element Study -- Estimation of Pathological Gait Asymmetry of Lower-limb Prosthetic Users at High and Low Walking Speeds -- A Usability Evaluation Protocol for a Hybrid Brain-computer Interface Aimed at Attention-deficit Disorder Rehabilitation -- Augmented Reality for Gait Rehabilitation: A Scoping Review -- Computational Modeling of the

Pendulum Test to Simulate Spasticity in the Elbow Joint -- Evidence of Cortical Activation Alterations of Paraplegics with Pelvic Nerves Stimulation on Resting State: A Case Series -- A Possible Molecular Basis of the Change in Load Sharing Between Synergistic Muscles Characterised by Elastography -- Performance Comparison of Different Classifiers to Detect Motor Intention in EEG-based BCI -- Biofeedback Analysis in Upper Limb Prostheses: A Literature Review -- Slippage Classification in Prosthetic Hands with a Spiking Neural Network -- Evaluation of the Impact of Different Types of Floors on Equine Therapy with Accelerometry: A Pilot Study -- Joint Coordination to Maintain Postural Balance Differs Between Preferred and Non-preferred Lower Limbs -- Convolutional Neural Networks Approach Comparison in EEG-based BCIS.

Sommario/riassunto

This book reports on the latest research and developments in Biomedical Engineering, with a special emphasis on topics of interest and findings achieved in Latin America. This third volume of a 4-volume set covers advances in biomechanical analysis and modeling, neural network based methods for medical diagnosis and therapy, and robots and human-machine interface for rehabilitation. Throughout the book, a special emphasis is given to low-cost technologies and to their development for and applications in clinical settings. Based on the IX Latin American Conference on Biomedical Engineering (CLAIB 2022) and the XXVIII Brazilian Congress on Biomedical Engineering (CBEB 2022), held jointly, and virtually on October 24-28, 2022, from Florianópolis, Brazil, this book provides researchers and professionals in the biomedical engineering field with extensive information on new technologies and current challenges for their clinical applications.
