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Titolo	Intention-Controlled Hand Rehabilitation for Stroke Survivors : Motion Assistance and Haptic Stimulation / / by Min Li, Bo He
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Descrizione fisica	1 online resource (208 pages)
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Altri autori (Persone)	HeBo
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Soggetti	Automatic control
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	Automation
	Biomedical engineering
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	Medical and Health Technologies
	Biomedical Devices and Instrumentation
Lingua di pubblicazione	Inglese
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Nota di contenuto	Motor Rehabilitation after Stroke Neurophysiological Mechanisms and Human Intent-Controlled Approaches -- Revolutionizing Hand Rehabilitation Soft Wearable Hand Robots -- Bilateral Hand Rehabilitation Using a Soft Robotic Glove with Kinematics and EMG Based Control -- A Multi Segment Mechanism Based Hand Exoskeleton Motion Planning and Finger Structure Optimization -- Attention Controlled Hand and Wrist Rehabilitation Assistance with Affordable EEG Sensors Design Implementation and Preliminary Evaluation -- Leveraging Fingertip Cutaneous Haptic Stimulation to Enhance Attention in Exoskeleton based Hand Rehabilitation -- Neural and Behavioral Effects of Integrated Exoskeleton and Cutaneous Haptic Feedback in Simulated Hand Rehabilitation -- Summary and Conclusions.
Sommario/riassunto	This book explores cutting-edge approaches in stroke rehabilitation, focusing on robot-assisted active training methods controlled by human intention. It examines techniques such as wearable hand rehabilitation robots, brain-controlled devices using

electroencephalogram (EEG), and the integration of exoskeleton-assisted therapy with fingertip haptic stimulation. Featuring comprehensive analyses, theoretical foundations, and practical case studies, the book includes illustrative diagrams, experimental data, and innovative presentations to enhance understanding. Designed for researchers, clinicians, and engineers, it provides valuable insights into improving motor recovery outcomes and advancing rehabilitation technology, making it a pivotal resource for driving innovation in stroke rehabilitation.