1. Record Nr. UNINA9910299707103321

Titolo Emerging therapies in neurorehabilitation / / Jose L. Pons, Diego

Torricelli, editors

Pubbl/distr/stampa Berlin; ; Heidelberg, : Springer-Verlag, 2014

ISBN 3-642-38556-7

Edizione [1st ed. 2014.]

Descrizione fisica 1 online resource (x, 345 pages) : illustrations (some color)

Collana Biosystems & biorobotics

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Disciplina 610.28

Soggetti Nervous system - Diseases - Patients - Rehabilitation

Nervous system - Wounds and injuries - Rehabilitation

Lingua di pubblicazione Inglese

Formato Materiale a stampa

Livello bibliografico Monografia

Note generali "ISSN: 2195-3562."

"ISSN: 2195-3570 (electronic)."

Nota di bibliografia Includes bibliographical references.

Nota di contenuto part I. Central neurological impairments -- part II. Spinal and brain

plasticity -- part III. Emerging technologies -- part IV. Hands-on

guides.

Sommario/riassunto This book reports on the latest technological and clinical advances in

the field of neurorehabilitation. It is, however, much more than a conventional survey of the state-of-the-art in neurorehabilitation technologies and therapies. It was formed on the basis of a week of lively discussions between curious PhD students and leading research experts during the summer school on neurorehabilitation (SSNR2012), September 16-21 in Nuévalos, Zaragoza (Spain). Its unconventional format makes it a perfect guide for all PhD students, researchers and professionals interested in gaining a multidisciplinary perspective on current and future neurorehabilitation scenarios. The book covers various aspects of neurorehabilitation research and practice, organized into different parts. The first part discusses a selection of common impairments affecting brain function, such as stroke, cerebral palsy and Parkinson's disease: the second deals with both spinal cord and brain plasticity. The third part covers the most recent rehabilitation and diagnostics technologies, including robotics, neuroprostheses, brainmachine interfaces and electromyography systems. Practical examples

and case studies related to the application of some of the latest techniques in realistic clinical scenarios are covered in the fourth part.