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Titolo	Application of Biomedical Engineering in Neuroscience / / edited by Sudip Paul
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ISBN	981-13-7142-3
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Descrizione fisica	1 online resource (XIII, 490 p. 148 illus., 120 illus. in color.)
Disciplina	612.8
Soggetti	Neurosciences Biomedical engineering Human physiology Health informatics Biomedical Engineering/Biotechnology Human Physiology Health Informatics Enginyeria biomèdica Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
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Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Module 1_ Introduction to Human Physiology -- Module 2_ Neural engineering - Module 3_ Introduction to Neurodegenerative and regenerative Disorders -- Module 4_ Brain images and it`s classifications -- Module 5_ EEG, EOG and their significance -- Module 6_ Artificial Intelligence and Computer Aided diagnosis -- Module 7_ Nanomaterials involved in therapeutic strategy -- Module 8_ Emotion, Stress and other Neurological dysfunctions -- Module 9_ Emotion, Stress and other Neurological dysfunctions.
Sommario/riassunto	This book focuses on interdisciplinary research in the field of biomedical engineering and neuroscience. Biomedical engineering is a vast field, ranging from bioengineering to brain-computer interfaces. The book explores the system-level function and dysfunction of the nervous system from scientific and engineering perspectives. The initial sections introduce readers to the physiology of the brain, and to the

biomedical tools needed for diagnostics and effective therapies for various neurodegenerative and regenerative disorders. In turn, the book summarizes the biomedical interventions that are used to understand the neural mechanisms underlying empathy disorders, and reviews recent advances in biomedical engineering for rehabilitation in connection with neurodevelopmental disorders and brain injuries. Lastly, the book discusses innovations in machine learning and artificial intelligence for computer-aided disease diagnosis and treatment, as well as applications of nanotechnology in therapeutic neurology.