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	Nota di contenuto	Novel and Innovative Interfaces for Microelectrode Array (MEA) Systems -- Deep Brain Stimulation Devices -- Optogenetics Stimulation Technologies -- Micro-Electromechanical (MEM) Systems -- Neuroimaging for Biomarkers Detection -- Information Acquisition and Processing of Data -- Signal Processing and Pattern Analysis -- Neural Computation and Classification.
	Sommario/riassunto	This book focuses on neuro-engineering and neural computing, a multi-disciplinary field of research attracting considerable attention from engineers, neuroscientists, microbiologists and material scientists. It explores a range of topics concerning the design and development of innovative neural and brain interfacing technologies, as well as novel information acquisition and processing algorithms to make sense of the acquired data. The book also highlights emerging

trends and advances regarding the applications of neuro-engineering in real-world scenarios, such as neural prostheses, diagnosis of neural degenerative diseases, deep brain stimulation, biosensors, real neural network-inspired artificial neural networks (ANNs) and the predictive modeling of information flows in neuronal networks. The book is broadly divided into three main sections including: current trends in technological developments, neural computation techniques to make sense of the neural behavioral data, and application of these technologies/techniques in the medical domain in the treatment of neural disorders.