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Titolo	EEG Signal Processing and Feature Extraction // edited by Li Hu, Zhiguo Zhang
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ISBN	9789811391132 9811391130
Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (435 pages)
Disciplina	616.8047547
Soggetti	Biomedical engineering Neurosciences Experiential research Biomedical Engineering/Biotechnology Psychology Research
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Introduction -- EEG: origin and measurement -- Electroencephalography, Evoked potentials and event-related potentials -- ERP Experimental design -- EEG Preprocessing and denoising -- Spectral and time-frequency analysis -- Blind source separation -- Microstate analysis -- Source analysis -- Single-trial analysis -- Nonlinear neural dynamics -- Connectivity analysis -- Spatial complex brain network -- Temporal complex network analysis -- Machine learning -- Deep learning -- Statistical analysis -- Simultaneous EEG-fMRI -- EEG/ERP data analysis toolboxes -- Summary and conclusions.
Sommario/riassunto	This book presents the conceptual and mathematical basis and the implementation of both electroencephalogram (EEG) and EEG signal processing in a comprehensive, simple, and easy-to-understand manner. EEG records the electrical activity generated by the firing of neurons within human brain at the scalp. They are widely used in clinical neuroscience, psychology, and neural engineering, and a series of EEG signal-processing techniques have been developed. Intended for cognitive neuroscientists, psychologists and other interested readers, the book discusses a range of current mainstream EEG signal-

processing and feature-extraction techniques in depth, and includes chapters on the principles and implementation strategies.
