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Autore	LeMoyne Robert
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Altri autori (Persone)	MastroianniTimothy WhitingDonald TomyczNestor
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Parkinson's disease and Essential tremor characteristics -- 8. Role of machine learning for classification of movement disorderand deep brain stimulation status -- 9. Assessment of machine learning classification strategies for the differentiation of deep brain stimulation ‘On’ and ‘Off’ status for Parkinson’s disease -- 10. New perspectives for Network Centric Therapy for the treatment of Parkinson's disease and Essential tremor -- 11. Advent of Conformal Wearables and Wireless Systems -- 12. Other Notable Innovations for Wearable and Wireless Systems -- 13. Deep Brain Stimulation with Machine Learning Classification Through Conformal Wearables -- 14. Automated Tuning and Optimization of Deep Brain Stimulation -- 15. Other Forms of Neuromodulation -- 16. Future Perspectives.

Sommario/riassunto

This book is the second edition of the one originally published in 2019. The original publication features the discovery of numerous novel applications for the use of smartphones and portable media devices for the quantification of deep brain stimulation for the treatment of movement disorders that constitute first-in-the-world applications for these devices. Since the first edition, numerous evolutions involving the domain of wearable and wireless systems for healthcare and deep brain stimulation have transpired warranting the publication of the second edition. This volume covers wearable and wireless systems for healthcare that are far more relevant to the unique requirements of the domain of deep brain stimulation. The paradigm-shifting new wearables comprising attributes of conformability and further miniaturization have been recently applied for the context of deep brain stimulation. Additionally, the subjects of automated optimization for deep brain stimulation and the rampantly expanding additional applications for deep brain stimulation are addressed. The authors expect that these significant developments make this book valuable for all readers.