1.	Record Nr.	UNINA9910380727203321
	Titolo	Stereotactic and Functional Neurosurgery : Principles and Applications / / edited by Nader Pouratian, Sameer A. Sheth
	Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2020
	ISBN	3-030-34906-3
	Edizione	[1st ed. 2020.]
	Descrizione fisica	1 online resource (XVIII, 561 p. 111 illus., 75 illus. in color.)
	Disciplina	617.48
	Soggetti	Neurosurgery Neurology Pain medicine Neurology Pain Medicine
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Nota di bibliografia	Includes bibliographical references and index.
	Nota di contenuto	Part I: Achieving Stereotactic Precision -- Traditional and Mini-Frames -- Stereotactic Robots -- Intraoperative Magnetic Resonance Imaging and Computed Tomoraphy -- Frameless Image Guidance in Stereotactic Radiosurgery -- Part II: Defining Trajectories and Targets -- Principles of Safe Sterotactic Trajectories -- Structural Imaging and Target Visualization -- Network-Based Imaging and Connections -- Microelectrode Recording in Neurosurgical Patients -- Local Field Potentials and ECoG -- Awake Testing to Confirm Target Engagement -- Cloud-Based Stereotactic and Functional Neurosurgery and Registries -- Part III: The Biophysics of Stereotactic Therapy -- Responsive Neurostimulation -- Spinal Stimulation -- Peripheral Nerve Stimulation -- Non-Invasive Central Neuromodulation with Transcranial Magnetic Stimulation -- Ablation: Radiofrequency, Laser, and HIFU -- Radiosurgery -- Part IV: Diseases and Targets -- Parkinson's Disease: Deep Brain Stimulation -- Parkinson's Disease: Lesions -- Deep Brain Stimulation and Essential Tremor -- Essential Tremor: Lesions -- Dystonia -- Invasive Monitoring in Epilepsy Surgery -- Epilepsy: Mesial Temporal -- Neocortical Epilepsy -- Stereotactic Neurosurgery for the Management and Treatment of Pediatric Epilepsy -- Epilepsy:

Neuromodulation -- Deep Brain Stimulation for Treatment-Resistant Depression -- Deep Brain Stimulation for Obsessive Compulsive Disorder -- Stereotactic Lesion Procedures for Obsessive-Compulsive Disorder -- Deep Brain Stimulation for Gilles de la Tourette Syndrome -- Neuromodulation for Chronic Pain -- Chronic Pain: Lesion -- Deep Brain Stimulation for Cluster Headache -- Part V: The Future of Functional Neurosurgery -- Developing New Indications: Strategies and Hurdles to Discovery -- Imaging: Patient Selection, Targeting, and Outcome Biomarkers -- The Design of Clinical Studies for Neuromodulation -- Registries and Big Data.

Sommario/riassunto	This text presents a comprehensive and state-of the-art approach to stereotactic and functional neurosurgery. Overarching sections include achieving stereotactic precision, defining trajectories and targets, the biophysics of stereotactic therapies, diseases and targets, and the future of functional neurosurgery. Each section is designed to be inclusive of all relevant topics, serving as an unbiased resource to new clinicians in this field or established clinicians that are aiming to better understand complementary methods. Importantly, each section and the associated chapters can be used by basic and translational scientists as well as engineers and industry to better understand and deliver innovation to the field. Chapters within each section methodically analyze traditional and recently emerging concepts and techniques; address underlying principles with examples drawn from specific diseases and applications; and cover patient selection, target selection, available stereotactic methods, nuanced surgical methods, and clinical evidence across treatment options. Written by experts in each area, Stereotactic and Functional Neurosurgery is a definitive guide to the latest developments in stereotactic targeting, electrode implantation, surgical treatment of neurological and psychiatric disorders, the renaissance of stereotactic lesions, and the frontier of restorative neurosurgery for a variety of disorders that have no other therapeutic options.