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Nota di contenuto	Cover; Half-title; Title; Copyright; Contents; Preface; CHAPTER ONE A Guide to the Book; CHAPTER TWO Neuronal Structure and Function; CHAPTER THREE From Classic Aphasia Research to Modern Neuroimaging; CHAPTER FOUR Words in the Brain; CHAPTER FIVE Regulation, Overlap, and Web Tails; CHAPTER SIX Neural Algorithms and Neural Networks; CHAPTER SEVEN Basic Syntax; CHAPTER EIGHT Synfire Chains as the Basis of Serial Order in the Brain; CHAPTER NINE Sequence Detectors; CHAPTER TEN Neuronal Grammar; CHAPTER ELEVEN Neuronal Grammar and Algorithms; CHAPTER TWELVE Refining Neuronal Grammar EXCURSUS FOUR Multiple Reverberation for Resolving Lexical Ambiguity

Sommario/riassunto

How is language organized in the human brain? The Neuroscience of Language, published in 2003, puts forth a systematic model of language to bridge the gap between linguistics and neuroscience. Neuronal models of word and serial order processing are presented in the form of a computational, connectionist neural network. The linguistic emphasis is on words and elementary syntactic rules. Introductory chapters focus on neuronal structure and function, cognitive brain processes, the basics of classical aphasia research and modern neuroimaging of language, neural network approaches to language, and the basics of syntactic theories. The essence of the work is contained in chapters on neural algorithms and networks, basic syntax, serial order mechanisms, and neuronal grammar. Throughout, excursions illustrate the functioning of brain models of language, some of which are accessible as animations on the book's accompanying web site. It will appeal to graduate students and researchers in neuroscience, psychology, linguistics, and computational modeling.