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Titolo	The theoretical foundation of dendritic function : selected papers of Wilfrid Rall with commentaries // edited by Idan Segev, John Rinzel, and Gordon M. Shepherd
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Descrizione fisica	1 online resource (vii, 456 p.) : ill. ;
Collana	Computational neuroscience series
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Nota di bibliografia	Includes bibliographical references and index.
Sommario/riassunto	This collection of fifteen previously published papers, some of them not widely available, have been carefully chosen and annotated by Rall's colleagues and other leading neuroscientists. Wilfrid Rall was a pioneer in establishing the integrative functions of neuronal dendrites that have provided a foundation for neurobiology in general and computational neuroscience in particular. This collection of fifteen previously published papers, some of them not widely available, have been carefully chosen and annotated by Rall's colleagues and other leading neuroscientists. It brings together Rall's work over more than forty years, including his first papers extending cable theory to complex dendritic trees, his ground-breaking paper introducing compartmental analysis to computational neuroscience, and his studies of synaptic integration in motoneurons, dendrodendritic interactions, plasticity of dendritic spines, and active dendritic properties. Today it is well known that the brain's synaptic information is processed mostly in the dendrites where many of the plastic changes underlying learning and memory take place. It is particularly timely to look again at the work of a major creator of the field, to appreciate where things started and where they have led, and to correct any misinterpretations of Rall's

work. The editors' introduction highlights the major insights that were gained from Rall's studies as well as from those of his collaborators and followers. It asks the questions that Rall proposed during his scientific career and briefly summarizes the answers.
