1. Record Nr. UNINA9910809052603321 Autore Sherman S. Murray Titolo Functional Connections of Cortical Areas: a New View from the Thalamus / / S. Murray Sherman and R.W. Guillery Pubbl/distr/stampa Cambridge, Mass., : MIT Press, ©2013 ©2013 **ISBN** 0-262-31500-9 0-262-31499-1 Descrizione fisica 1 online resource (299 p.) Altri autori (Persone) GuilleryR. W Disciplina 616.8 Thalamus - Physiology Soggetti Cerebral cortex - Physiology Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Brief Contents; Contents; Preface; Abbreviations; Chapter 1. An Introduction to Thalamocortical Pathways; 1.1 An Overall View of the Thalamus and Cortex in Relation to the Rest of the Brain; 1.2 Thalamocortical Connections; 1.3 Tracing the Message; 1.4 An Overall Summary of Some of the Major Points; Chapter 2. Cell and Synaptic Properties; 2.1 Intrinsic Cell Properties; 2.2 Synaptic Properties; Chapter 3. The Basic Organization of Cortex and Thalamus; 3.1 The Cortex; 3.2 The Thalamus; 3.3 The Thalamic Reticular Nucleus; 3.4 Outstanding Questions Chapter 4. Classification of Afferents in Thalamus and Cortex 4.1 Classifying Glutamatergic Afferents; 4.2 Nonglutamatergic Afferents; 4.3 Concluding Remarks; 4.4 Outstanding Questions; Chapter 5. First and Higher Order Thalamic Relays; 5.1 Evidence for Distinguishing First and Higher Order Thalamic Relays; 5.2 Some Differences between First and Higher Order Relays; 5.3 Developmental and Evolutionary Differences; 5.4 Role of Higher Order Relays in Corticocortical Communication; 5.5 Concluding Remarks; 5.6 Outstanding Questions; Chapter 6. The Dual Nature of the Thalamic Input to Cortex 6.1 A Brief View of the Phylogenetic Origins of Thalamocortical Inputs

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Sommario/riassunto

This study shows new ways of thinking about how the brain relates to the world, to cognition, and to behaviour. Based on foundations previously established it considers the implications of these ground rules for thalamic inputs, thalamocortical connections, and cortical outputs. The book argues that functional and structural analyses of pathways connecting thalamus and cortex point beyond these to lower centres and through them to the body and the world.