1. Record Nr. UNINA9910136401703321

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Titolo Feedforward and feedback processes in vision // edited by Hulusi

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Pubbl/distr/stampa Frontiers Media SA, 2015

Switzerland:,: Frontiers Media SA,, 2014

ISBN 9782889195947 (ebook)

Descrizione fisica 1 online resource (151 pages) : illustrations

Collana Frontiers Research Topics

Soggetti Visual system

Projections Feedback

Lingua di pubblicazione Inglese

Formato Materiale a stampa

Livello bibliografico Monografia

Nota di bibliografia Includes bibliographical references.

Sommario/riassunto The visual system consists of hierarchically organized distinct

anatomical areas functionally specialized for processing different aspects of a visual object (Felleman & Van Essen, 1991). These visual areas are interconnected through ascending feedforward projections. descending feedback projections, and projections from neural structures at the same hierarchical level (Lamme et al., 1998). Accumulating evidence from anatomical, functional and theoretical studies suggests that these three projections play fundamentally different roles in perception. However, their distinct functional roles in visual processing are still subject to debate (Lamme & Roelfsema, 2000). The focus of this Research Topic is the roles of feedforward and feedback projections in vision. Even though the notions of feedforward, feedback, and reentrant processing are widely accepted, it has been found difficult to distinguish their individual roles on the basis of a single criterion. We welcome empirical contributions, theoretical contributions and reviews that fit into any one (or a combination) of the following domains: 1) their functional roles for perception of specific features of a visual object 2) their contributions to the distinct modes of visual processing (e.g., pre-attentive vs. attentive, conscious vs.

unconscious) 3) recent techniques/methodologies to identify distinct functional roles of feedforward and feedback projections and corresponding neural signatures. We believe that the current Research Topic will not only provide recent information about feedforward/feedback processes in vision but also contribute to the understanding fundamental principles of cortical processing in general.