Record Nr. UNINA9910820326103321 **Titolo** Theory of cortical plasticity / / Leon Cooper ... [et al.] New Jersey, : World Scientific, 2004 Pubbl/distr/stampa **ISBN** 1-281-87249-0 9786611872496 981-256-255-9 Edizione [1st ed.] 1 online resource (333 p.) Descrizione fisica Altri autori (Persone) CooperLeon N Disciplina 612.8/25 Neuroplasticity Soggetti Neuroplasticity - Mathematical models Cerebral cortex 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 Theory of Cortical Plasticity; Preface; Acknowledgements; Contents; The Software Package, Plasticity: Notation: Common Acronyms and Abbreviations; 1. Introduction; 2. Single Cell Theory; 3. Objective Function Formulation; 4. Cortical Network Theory; 5. Review and Analysis of Second Order Learning Rules; 6. Receptive field selectivity in a natural image environment; 7. Ocular dominance in normal and deprived cortex; 8. Networks of Interacting BCM Neurons; 9. Experimental evidence for the assumptions and consequences of the BCM theory; Bibliography In Theory of Cortical Plasticity, Nobel Laureate Leon Cooper and his Sommario/riassunto collaborators present a systematic development of the Bienenstock, Cooper and Munro (BCM) theory of synaptic plasticity, and discuss experiments that test both its assumptions and consequences. This insightful book provides an elegant analysis of theoretical structure in neuroscience research, and elucidates the role BCM theory has played in guiding research leading to our present understanding of the

mechanisms underlying cortical plasticity.