1. Record Nr. UNINA9910807895403321 Autore Swanson Larry W Titolo Brain architecture [[electronic resource]]: understanding the basic plan // Larry W. Swanson Oxford;; New York,: Oxford University Press, 2003 Pubbl/distr/stampa **ISBN** 1-280-76092-3 9786610760923 0-19-802646-3 Descrizione fisica 1 online resource (xv, 263 p.): ill Disciplina 573.8/6 Soggetti Brain **Neural circuitry** Neuroanatomy Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references and index. Nota di contenuto 1. How the Brain Works: Structure and Function; 2. The Simplest Nervous Systems: Neurons, Nerve Nets, and Behaviour; 3. Centralization and Symmetry: Ganglia and Nerves; 4. The Basic Vertebrate Plan: Nervous System Topology; 5. Brain and Behaviour: A Four Systems Network Model; 6. The Motor System: Coordinating External and Internal Behaviours: 7. The Behavioural State System: Intrinsic Control of Sleep and Wakefulness: 8. The Cognitive System: Thinking and Voluntary Control of Behaviour; 9. The Sensory System: Inputs from the Environment and the Body: 10. Modifiability: Learning, Stress, Cycles, and Damage Repair; 11. Gene Networks: Relationship to Neural Networks; APPENDICES; A. DESCRIBING POSITION IN THE ANIMAL BODY; B. NAMING AND CLASSIFYING NERVOUS SYSTEM PARTS; C. METHODS FOR ANALYZING BRAIN ARCHITECTURE Sommario/riassunto This work surveys 2500 years of scientific thinking about the brain from the perspective of fundamental architectural principles. It proposes a model for the basic plan of neural systems organization based on an explosion of structural data from the neuroanatomy revolution of the 1970's.