Record Nr. UNINA9910450051903321 Autore Steriade Mircea **Titolo** Neuronal substrates of sleep and epilepsy / / Mircea Steriade [[electronic resource]] Cambridge:,: Cambridge University Press,, 2003 Pubbl/distr/stampa **ISBN** 1-107-13477-3 1-280-15976-6 9786610159765 0-511-12088-5 0-511-04268-X 0-511-14888-7 0-511-30608-3 0-511-54171-6 0-511-05443-2 Descrizione fisica 1 online resource (xii, 522 pages) : digital, PDF file(s) Disciplina 612.8/21 Soggetti Sleep - Physiological aspects Convulsions **Neurons Neural circuitry** Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Title from publisher's bibliographic system (viewed on 05 Oct 2015). Note generali Nota di bibliografia Includes bibliographical references (p. [425]-517) and index. Nota di contenuto 1. Pioneering steps in studies on sleep and epilepsy 2. Neuronal types and circuits in sleep and epilepsy 3. Neuronal properties, network operations and behavioral signs during sleep states and wakefulness 4. Plastic changes in thalamocortical systems developing from lowfrequency sleep oscillations 5. Neuronal mechanisms of seizures. Sommario/riassunto Different states of vigilance and various paroxysmal disorders that occur during slow-wave sleep can have the same neural bases. Conventional wisdom holds that sleep is a resting state of the brain, with negligible activity of cortical neurons. Here, the author brings new

evidence favoring the idea that during this behavioral state memory traces acquired during waking are consolidated. The author focuses on

the coalescence of different sleep rhythms in interacting corticothalamic networks and on three types of paroxysmal disorders, namely spike-wave seizures as in absence epilepsy, Lennox-Gastaut seizures, and temporal-lobe epilepsy. Many physiological correlates of waking and sleep states as well as diverse types of epileptic seizures are also discussed. The book has copious illustrations with examples from in vivo, in vitro and 'in computo' studies, the majority coming from the author's own laboratory. Neuronal Substrates of Sleep and Epilepsy is essential reading for neuroscientists and clinical researchers.