1. Record Nr. UNINA9910220053803321

Autore	Christian O'Reilly
Titolo	Sleep Spindles: Breaking the Methodological Wall
Pubbl/distr/stampa	Frontiers Media SA, 2017
Descrizione fisica	1 online resource (228 p.)
Collana	Frontiers Research Topics
Soggetti	Neurosciences
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia

Sommario/riassunto

In the last decade, sleep spindles have attracted steadily increasing attention. This interest is motivated by the many intriguing relationships between spindles and various diseases (e.g., schizophrenia, Parkinson, Alzheimer, autism, mental retardation), recovery processes (e.g., post brain stroke), and cognitive faculties (e. g., memory consolidation, intelligence, dream recall, sleep preservation). Nonetheless, a methodological wall has impeded the study of sleep spindles. Their investigation rests heavily on our ability to reliably and consistently identify spindle patterns from background EEG activity, a task involving many obstacles, including: a fuzzy definition of spindles, low inter-expert agreement on their scoring, lack of consensus on standard techniques for their automated detection, low reproducibility of observed characteristics and correlates, unavailability of large, standardized, high-quality databases, and inconsistencies in the methods used to evaluate the performance of automated detectors. The primary aims of this research topic were to bring together world-class researchers on a project designed to facilitate exchanges on methodological difficulties encountered in assessing sleep spindles and to promote standardized spindle-related resources. In preparing their contributions, authors were encouraged to use existing - or to propose new - publicly available resources for assessing sleep spindles. To allow fair and accurate comparison of reported results, the authors were also encouraged to validate their

tools on a common benchmark. A database containing expert spindle scoring (i.e., the Montreal Archive of Sleep Studies) was made publicly available for that purpose.