Record Nr. UNINA9910674032503321 Brain-computer interfaces for human augmentation / / special issue **Titolo** editors, Riccardo Poli, Davide Valeriani, Caterina Cinel Pubbl/distr/stampa MDPI - Multidisciplinary Digital Publishing Institute, 2019 **ISBN** 3-03921-907-3 Descrizione fisica 1 electronic resource (128 p.) 612.80285 Disciplina Soggetti Neuroergonomics Brain-computer interfaces Self-help devices for people with disabilities Lingua di pubblicazione Inglese **Formato** Materiale a stampa Monografia Livello bibliografico The field of Brain-Computer Interfaces (BCIs) has grown rapidly in the Sommario/riassunto last few decades, allowing the development of faster and more reliable assistive technologies based on direct links between the brain and an external device. Novel applications of BCIs have also been proposed, especially in the area of human augmentation, i.e., enabling people to go beyond human limitations in sensory, cognitive and motor tasks. Brain-imaging techniques, such as electroencephalography, have been used to extract neural correlates of various brain processes and transform them, via machine learning, into commands for external devices. Brain stimulation technology has allowed to trigger the activation of specific brain areas to enhance the cognitive processes associated to the task at hand, hence improving performance. BCIs have therefore extended their scope from assistive technologies for people with disabilities to neuro-tools for human enhancement. This Special Issue aims at showing the recent advances in BCIs for human augmentation, highlighting new results on both traditional and novel applications. These include, but are not limited to, control of external devices, communication, cognitive enhancement, decision making and

entertainment.