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   Nota di contenuto   Cognitive and Computational Foundations Of Brain Science -- An Adaptive Computational Fear-Avoidance Model Applied to Genito-Pelvic Pain/Penetration Disorder -- Are We Producing Narci-nials? An Adaptive Agent Model for Parental Influence -- A Systematic Assessment of Feature Extraction Methods for Robust Prediction of Neuropsychological Scores from Functional Connectivity Data -- The Effect of Loss-Aversion on Strategic Behaviour of Players in Divergent Interest Tacit Coordination Games -- Effect of the Gamma Entrainment Frequency in Pertinence to Mood, Memory and Cognition -- Investigations of Human Information Processing Systems -- Temporal-Spatial-Spectral Investigation of Brain Network Dynamics in Human Speech Perception -- Precise estimation of Resting State Functional Connectivity Using Empirical Mode Decomposition -- 3D DenseNet Ensemble in 4-Way Classification of Alzheimer's Disease -- Dynamic Functional Connectivity Captures Individuals' Unique Brain Signatures

-- Differential Effects of Trait Empathy on Functional Network Centrality -- Classification of PTSD and non-PTSD Using Cortical Structural Measures in Machine Learning Analyses / Preliminary Study of ENIGMA-Psychiatric Genomics Consortium PTSD Workgroup -- Segmentation of Brain Tumor Tissues in Multi-Channel MRI using Convolutional Neural Networks -- Brain Big Data Analytics, Curation and Management -- Resolving Neuroscience Questions Using Ontologies and Templates -- Machine Learning in Analysing Invasively Recorded Neuronal Signals: Available Open Access Data Sources -- Automatic Detection of Epileptic Waves in Electroencephalograms Using Bag of Visual Words and Machine Learning -- UPDRS Label Assignment by Analyzing Accelerometer Sensor Data Collected from Conventional Smartphones -- Effectiveness of Employing Multimodal Signals in Removing Artifacts from Neuronal Signals: An Empirical Analysis -- A Machine Learning Based Fall Detection System for Elderly People with Neurodegenaration Disorders -- Management of Neurodegenarative Diseases using Machine Learning and Internet of Things -- Informatics Paradigms for Brain and Mental Health Research -- A Computational Model for Simultaneous Employment of Multiple Emotion Regulation Strategies -- Deep LSTM Recurrent Neural Network for Anxiety Classification from EEG in Adolescents With Autism -- Improving Alcoholism Diagnosis: Comparing Instance-based Classifiers against Neural Networks for Classifying EEG signal -- A Monitoring System for Patients of Autism Spectrum Disorder using Artificial Intelligence -- Artificial and Internet of Healthcare Things based Alzheimer Care during COVID 19 -- Towards Artificial Intelligence Driven Emotion Aware Fall Monitoring Framework Suitable for Elderly People with Neurological Disorder -- Speech emotion recognition in neurological disorders using Convolutional Neural Network -- Towards Improved Detection of Cognitive Performance using Bidirectional Multi layer Long-Short Term Memory Neural Network -- Brain-Machine Intelligence and Brain-Inspired Computing -- Comparative Study of Wet and Dry Systems on EEG-based Cognitive Tasks -- Recall performance improvement in a bio-inspired model of the mammalian hippocampus -- Canonical retina-to-cortex vision model ready for automatic differentiation -- An Optimized Self-Adjusting Model for EEG Data Analysis in Online Education Processes -- Sequence learning in Associative Neuronal-Astrocytic Networks -- EEG based Sleep-Wake Classification using JOPS Algorithm.

Sommario/riassunto	This book constitutes the refereed proceedings of the 13th International Conference on Brain Informatics, BI 2020, held in Padua, Italy, in September 2020. The conference was held virtually due to the COVID-19 pandemic. The 33 full papers were carefully reviewed and selected from 57 submissions. The papers are organized in the following topical sections: cognitive and computational foundations of brain science; investigations of human information processing systems; brain big data analytics, curation and management; informatics paradigms for brain and mental health research; and brain-machine intelligence and brain-inspired computing.