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Nota di contenuto	Cognitive and Computational Foundations of Brain Science: Fusing Structural and Functional Connectivity using Disentangled VAE for Detecting MCI -- Modulation of Beta Power as a Function of Attachment Style and Feedback Valence -- Harnessing the Potential of EEG in Neuromarketing with Deep Learning and Riemannian Geometry -- A Model of the Contribution of Interneuron Diversity to Recurrent Network Oscillation Generation and Information Coding -- Measuring Stimulus-Related Redundant and Synergistic Functional Connectivity with Single Cell Resolution in Auditory Cortex -- Fusing Simultaneously Acquired EEG and fMRI via Hierarchical Deep Transcoding -- Investigations of Human Information Processing Systems: Decoding Emotion Dimensions Arousal and Valence Elicited on EEG Responses to Videos and Images: A Comparative Evaluation -- Stabilize Sequential Data Representation via Attractor Module -- Investigating the

Generative Dynamics of Energy-Based Neural Networks -- Exploring Deep Transfer Learning Ensemble for Improved Diagnosis and Classification of Alzheimer's Disease -- Brain Big Data Analytics, Curation and Management: Effects of EEG Electrode Numbers on Deep Learning-Based Source Imaging -- Graph Diffusion Reconstruction Model for Addictive Brain-Network Computing -- MR Image Super-Resolution using Wavelet Diffusion for Predicting Alzheimer's Disease -- Classification of Event-Related Potential Signals with a Variant of UNet Algorithm using a Large P300 Dataset -- Dyslexia Data Consortium Repository: A Data Sharing and Delivery Platform for Research -- Conversion from Mild Cognitive Impairment to Alzheimer's Disease: A Comparison of Tree-based Machine Learning Algorithms for Survival Analysis -- Predicting Individual Differences from Brain Responses to Music: A Comparison of Functional Connectivity Measure -- Multiplex Temporal Networks for Rapid Mental Workload Classification -- Super-Resolution MRH Reconstruction for Mouse Models -- Bayesian Time Series Classifier for Decoding Simple Visual Stimuli from Intracranial Activity -- Variability of Non-parametric HRF in Interconnectedness and its Association in Deriving Resting State Network -- BrainSegNeT: A Lightweight Brain Tumor Segmentation Model based on U-Net and Progressive Neuron Expansion -- Improving Prediction Quality of Face Image Preference using Combinatorial Fusion Algorithm -- MMDF-ESI: Multi-Modal Deep Fusion of EEG and MEG for Brain Source Imaging -- Rejuvenating Classical Source Localization Methods with Spatial Graph Filters -- Prediction of Cannabis Addictive Patients with Graph Neural Networks -- Unsupervised Sparse-view Backprojection via Convolutional and Spatial Transformer Networks -- Latent Neural Source Recovery via Transcoding of Simultaneous EEG-fMRI -- Informatics Paradigms for Brain and Mental Health Research: Increasing the Power of Two-Sample T-Tests in Health Psychology using a Compositional Data Approach -- Estimating Dynamic Posttraumatic Stress Symptom Trajectories with Functional Data Analysis -- Comparison Between Explainable AI Algorithms for Alzheimer's Disease Prediction Using EfficientNet Models -- Social and Non-social Reward Learning Contexts for Detection of Major Depressive Disorder using EEG: A Machine Learning Approach -- Transfer Learning-Assisted DementiaNet: A Four Layer Deep CNN for Accurate Alzheimer's Disease Detection from MRI Images -- Multimodal Approaches for Alzheimer's Detection Using Patients' Speech and Transcript -- Brain-Machine Intelligence and Brain-Inspired Computing -- Exploiting Approximate Joint Diagonalization for Covariance Estimation in Imagined Speech Decoding -- Automatic Sleep-Wake Scoring with Optimally Selected EEG Channels from High-Density EEG -- EEG Source Imaging of Hand Movement-Related Areas: An Evaluation of the Reconstruction Accuracy with Optimized Channels -- Bagging the Best: A Hybrid SVM-KNN Ensemble for Accurate and Early Detection of Alzheimer's and Parkinson's Diseases -- Roe: A Computational-Efficient Anti-Hallucination Fine-Tuning Technology for Large Language Model Inspired by Human Learning Process -- The 5th International Workshop on Cognitive Neuroscience of Thinking and Reasoning: Brain Intervention Therapy Dilemma: Functional Recovery versus Identity.

Sommario/riassunto

This book constitutes the proceedings of the 16th International Conference on Brain Informatics, BI 2023, which was held in Hoboken, NJ, USA, during August 1–3, 2023. The 40 full papers presented in this book were carefully reviewed and selected from 101 submissions. The papers are divided into 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; brain-machine intelligence and brain-inspired computing; and the 5th international workshop on cognitive neuroscience of thinking and reasoning.