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Title: “*Towards a Unified Theory of Brain for Automated EEG-based Diagnosis of Neurological and Psychiatric Disorders*”

Professor Hojjat Adeli
Wexner Medical Center, Ohio State University
Columbus, Ohio

Abstract: Novel algorithms are presented for data mining of time-series data and automated electroencephalogram (EEG)-based diagnosis of neurological and psychiatric disorders based on adroit integration of four different computing technologies and problem solving paradigms: neural networks, wavelets, graph theory, and the chaos theory. Examples of the research performed by the author and his associates over the past 15 years for automated diagnosis of epilepsy, the Alzheimer’s disease, Attention Deficit Hyperactivity Disorder (ADHD), autism spectrum disorder (ASD), Major Depressive Disorder (MDD), and Parkinson’s disease (PD) are reviewed. The presentation ends with the author’s research ideology and vision towards a unified theory of brain for automated EEG-based diagnosis of neurological and psychiatric disorders.