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Electrophysiological Approach Chapter 6: Towards Adaptive Automation: A Neuroergonomic Approach to Measuring Workload During a Command and Control Task; Chapter 7: A Predictive Model of Cognitive Performance Under Acceleration Stress; Chapter 8: Static and Dynamic Discriminations in Vigilance: Effects on Cerebral Hemodynamics and Workload; Section II: Models and Measurement in Neuroergonomics; Chapter 9: 4th Dimensional Interactive Design For Dynamic Environments

Chapter 10: Developing Methods for Utilizing Physiological Measures Chapter 11: Methods from Neuroscience for Measuring User Experience in Work Environments; Chapter 12: Subjective and Objective Measures of Operator State in Automated Systems; Chapter 13: Brain Power: Implementing Powerful Neurally-Inspired Mechanisms in Computational Models of Complex Tasks; Chapter 14: ESP2: A Platform for Experimental Design in Cognitive Ergonomics; Chapter 15: Modeling Sleep-Related Activities from Experimental Observations - Initial Computational Frameworks for Understanding Sleep Function(s)

Chapter 16: Physiological Day-to-Day Variability Effects on Workload Estimation for Adaptive Aiding Chapter 17: Challenges of Using Physiological Measures for Augmenting Human Performance; Chapter 18: Infrasonic Analysis of Human Speech: An Index of Workload; Section III: Neuroergonomics and Human Performance; Chapter 19: Real-Time Classification of Neural Signals Corresponding to the Detection of Targets in Video Imagery; Chapter 20: Understanding Brain Arousal and Sleep Quality Using a Neuroergonomic Smart Phone Application

Chapter 21: A Neuroergonomic Perspective on Human-Automation Etiquette and Trust Chapter 22: Neuroethics: Protecting the Private Brain; Chapter 23: Activity of Alerting, Orienting and Executive Neuronal Network Due to Sustained Attention Task - Diurnal fMRI Study; Chapter 24: Characteristic Changes in Oxygenated Hemoglobin Levels Measured by Near-Infrared Spectroscopy (NIRS) During "Aha" Experiences; Chapter 25: Performance Under Pressure: A Cognitive Neuroscience Approach to Emotion Regulation, Psychomotor Performance and Stress

Chapter 26: A Framework for Improving Situation Awareness of the UAS Operator through Integration of Tactile Cues

Sommario/riassunto

Combining emerging concepts, theories, and applications of human factors knowledge, this volume focuses on discovery and understanding of human performance issues in complex systems, including recent advances in neural basis of human behavior at work (i. e. neuroergonomics), training, and universal design. The book is organized into ten sections that focus on the following subject matters: I: Neuroergonomics: Workload Assessment II: Models and Measurement in Neuroergonomics III: Neuroergonomics and Human Performance IV: Neuroergonomics and Training Issues V: Trainees: Designing for Those in Tra
