Psychophysiology Applications using a BIOPAC MP System

INSTRUCTOR RESUME

Aleksandar Dimov has worked as an application specialist at BIOPAC Systems, Inc. for four years after completing an MA in Psychology at UCSB. At UCSB, Aleksandar Dimov was an instructor for the Advanced Virtual Reality Training Institute for Social Psychology, while at BIOPAC he has conducted most of the training and seminar sessions on physiological recording and data analysis techniques at universities across the US, Europe and Asia.

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BENEFITS OF THE TUTORIAL

This hands-on tutorial will demonstrate the power and flexibility of the BIOPAC MP150 data acquisition and analysis system for typical psychophysiological applications: ANS recordings; Evoked Response Studies (VER, AER & SER); Event Related Potentials (P300); Sexual Arousal Studies; Heart Rate Variability; Startle Eye Blink Tests; plus a host of other biopotential and transducer recordings.

FEATURES

New advanced topics will be covered such as using the BIOPAC scripting language to create your own custom automated data analysis routines, how to send physiological data to other applications in real-time, and the BIOPAC fNIR optical brain imaging system for measuring neural activity and hemodynamic response in the prefrontal cortex.

Learn how to use an MP System to record a wide variety of ANS functions, including heart rate, skin conductance/resistance/temperature, muscle tension, neuronal activity, and eye movement. Display measurements (e.g., mean value and standard deviation) during or after data collection.

Perform detailed event related potential (ERP) studies using a variety of stimulus options, including virtual reality, image presentation, video clips, sound, and somatosensory stimulation. Combine physiological and psychological (self-assessment) responses. Enter equations to combine multiple physiological variables for automatic assessment, or choose from preset calculations for simplified setup. Mark events and write comments as they occur or after the fact, and easily generate presentation quality results.

An overview of the Educational tools will demonstrate how the Biopac Student Lab facilitates learning and aids in the development of analytical and critical thinking skills. Automatic calibration routines and embedded sensor technology minimize frustration. The BSL System optimizes lab time by reducing setup by up to 90% so students can focus on understanding results. We include fundamental lessons, plus we'll show how to easily create your own protocol or allow students to perform their own research projects.

AUDIENCE

This tutorial is aimed at new and existing users and other interested in adopting BIOPAC solutions for life science data acquisition and analysis for their research and education needs.