
Paper ID: 1570942980

Paper Title: Evaluation of brain activity by fNIRS during the process of performing the experimental task

Authors: Keiko Fukuda (Tokyo Metropolitan College of Industrial Technology, Japan);
Naruse Seki and Sora Iwata (Tokyo Metropolitan Collage of Industrial Technology, Japan)

Email: fukuda@metro-cit.ac.jp

Abstract

To evaluate temporal changes in brain activity over time during a task using functional near-infrared spectroscopy (fNIRS), brain activity during a short-term memory task was measured in the left and right temporal regions and the frontal region. Brain activity during the n-back task, in which participants were asked to respond to the direction of an arrow, was analyzed in the registration and recall period. The analysis duration was 6 s for each. The group analysis (n = 10) revealed responses in the dorsolateral prefrontal cortex and frontal pole. The responses tended to be slightly higher in the frontal pole in the registration period and the dorsolateral prefrontal cortex in the recall period. The results suggest that the fNIRS may be able to provide information about the changes in brain activity as the task progresses.
