# **The practicability of multimodal data fusion for simultaneous EEG-fMRI demonstrated on a cognitive control task**

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# **List of Abbreviations**

**ACC** Anterior Cingulate Cortex

**AX-CPT** AX Continuous Performance Task

**BOLD** Blood oxygenation level dependent

**CPT** Continuous performance task

**DLPFC** Dorsolateral prefrontal cortex

**DMC** Dual Mechanisms of Cognitive Control

**DPX** Dot Pattern Expectancy Task

**EEG** Electroencephalography

**ERP** Event-Related Potential

**fMRI** Functional magnetic resonance imaging

**GLM** General Linear Model

**ICA** Independent Component Analysis

**jICA** Joint Independent Component Analysis

**pICA** Parallel Independent Component Analysis

**LFP** Local Field Potential

**MUA** Multi-unit cell activity

**PAC** Phase-amplitude coupling

**PFC** Prefrontal cortex

**PLS** Partial Least Squares

**RT** Reaction time

**WM** Working memory

# 1. Theoretical Background and aims

## 1.1 The benefits of combining EEG and fMRI

## 1.2 Multivariate analysis of fMRI and EEG data

## 1.3 Multimodal data fusion

## 1.4 Aims of this study – Is it worth the effort?

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