Emotions profoundly influence cognitive processes. The mechanism of this phenomenon is a growing area of psychological research. Emotions can impact both lower order (perceptual) and higher order (executive) cognitive functions, and their effects can be either enhancing or impairing. The impact of emotions on higher level cognitive processes, such as memory, attention allocation, planning, and decision-making, has been reflected in the results of a wide range of studies. However, relatively less is known about emotion's influence on response inhibition and error monitoring. These two functions are considered to be crucial components of the human executive control system. Response inhibition refers to the ability to supress thoughts and actions that are inappropriate in a given context, whereas error monitoring is defined as the ability to automatically detect and consciously evaluate an error, which may lead to remedial actions.

The proposed project is intended to further explore cognitive-emotional interactions and provide the link between three – so far, quite unconnected – lines of research: on perceptual processing, response inhibition and error monitoring. It is designed to investigate the influence of short-duration affective states, induced by briefly presented emotional stimuli, on lower and higher level cognitive functions by means of electroencephalography. It seeks to broaden our understanding of the relationship between characteristics of emotional stimuli – valence, arousal level, discrete emotional category – and their influence on three kinds of cognitive processes, studied jointly.