Emotional information is remembered better than neutral information and has a privileged status in human memory. This enhanced memory for emotional information is crucial to predict when something important to survival may happen in the future. The widely accepted explanation of the emotional memory enhancement is that emotional arousal activates the amygdala, which in turn facilitates the hippocampus function, resulting in enhanced memory for emotionally arousing relative to neutral information (see LaBar & Cabeza, 2006 for a review). However, it is not clear whether this simple arousal-based framework is sufficient to understand complex interactions between emotion and memory in humans. In my presentation, I will present our studies that use behavioural, computational and neuroimaging techniques to illustrate the importance of the top-down control mechanisms to determine the effects of emotion on memory.