

## عنوان مقاله:

Identity and Category Coding In Frontal Eye Field

## محل انتشار:

هشتمین کنگره علوم اعصاب و پایه و بالینی (سال: 1398)

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## خلاصه مقاله:

**Background and Aim :** The Frontal Eye Field (FEF) is an area of the prefrontal cortex, initially known for its role in the planning and execution of saccadic eye movements and visual-spatial selection. However, due to its widespread anatomical and functional connections with the visual system, the idea that FEF may play a more prominent role in object identification seems valid. A number of studies have shown that the FEF activity influences visual processing specifically during the period of time in which neurons in the visual cortex are processing the object to be identified. **Methods :** To address this question, we simultaneously recorded single neurons of the FEF and inferotemporal cortex (known for its role in object identification) of a monkey performing a Rapid Serial Visual Presentation task (RSVP). We applied a combination of coding and decoding methods to calculate identity and category information in the FEF and IT cortex. **Results :** The object information in both levels of individual cells and population suggests a small but significant complex feature information in the FEF cortex. **Conclusion :** Our results provide evidence for the modulatory effect of PFC on the processing of complex objects in the extrastriate cortex.

## کلمات کلیدی:

Frontal Eye Field; IT cortex; Object identity; Object category

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