

## WHAT THE FUTURE HOLDS FOR THE STUDY OF SACCADES

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### **Abstract**

Here we review the state of the art using saccadic eye movements as windows to the function of the normal brain and of the abnormal brain plagued by disease or trauma. By combining sophisticated behavioral paradigms with rigorous mathematical analysis and the latest imaging techniques one can use saccades as biomarkers of the highest level decision making to the lowest level basic machinery that generates premotor saccade commands. As technology advances saccades will become even more useful as immediate monitors of the state of the brain in disease and trauma and as a way to evaluate therapies.

**Keywords:** saccades, eye movements, superior colliculus, frontal eye fields