

## **A bottom up visual saliency map in the primary visual cortex, theory and its experimental tests**

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Given the attentional bottleneck, the visual system must select a limited aspect of inputs for detailed processing. Much of the selection is by bottom up mechanisms to direct gaze to the selected or most salient visual locations for detailed processing. While saliency has been investigated extensively in behavioral studies, its physiological basis remains controversial. I will present the theoretical proposal that the primary visual cortex (V1) creates a saliency map of the visual space, such that the receptive field location of the most responsive V1 neuron to a scene is most likely selected for attentional processing. This proposal generates non-trivial predictions, and their experimental tests will also be presented. More details are available at [www.gatsby.ucl.ac.uk/~zhaoping](http://www.gatsby.ucl.ac.uk/~zhaoping)