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#### Processing of Shape, Binocular Disparity, and Surfaces in Inferior Temporal Cortex

Neurons in the monkey inferior temporal cortex (IT) have been shown to respond to shapes or surface characteristics of objects such as texture or color. We recently found that many IT neurons also respond to binocular disparity, and some of them encode the 3-D surface structure of objects derived from interaction between shape and binocular disparity information. Further, activity of some IT neurons correlates well with the monkey's perceptual judgement of "far" or "near" distances in a stereoacuity task. The results lead to a new view that the IT is involved in various aspects of stereopsis. Together with the results presented in the preceding talk by Dr. DeAngelis, the results indicate that binocular disparity information is processed in many visual cortical areas which have not been implicated before, and that a major research focus in years to come will be to determine the functional role of these areas in stereopsis.