

## **VIEW-BASED HUMAN 3-D OBJECTION RECOGNITION**

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### **Abstract**

We describe a novel approach based on ideal observer's analysis, for matching the ability of human observers to use image information for 3-Dimensional object perception through Human Visual System (HVS). Understanding how biological visual systems perform 3-D object recognition is one of ultimate goal in computational neuroscience. Psychophysical studies have shown that human actively exploits temporal information such as contiguity to learn extensible representations of Objects on line. This paper presents a model of 3D object recognition based on HVS and performs well both on real world and synthetic data show robustness under illumination changes. In this paper, we present a result that compares the proposed representation against the sample image based representation of same complexity using MMDC and SVM classifier. Recognition results for all classifier show a large improvement with temporal in formation and it is feasible 3-Dimensional Object Recognition.

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**Keywords:** 3D Object Recognition, Model Indexing, Ideal Observers, MMD Classifier, SVM Classifier, Feature matching, View-based approach.