

# Supplementary Material - "Depth really Matters: Improving Visual Salient Region Detection"

## 1 Effect of Depth on Saliency

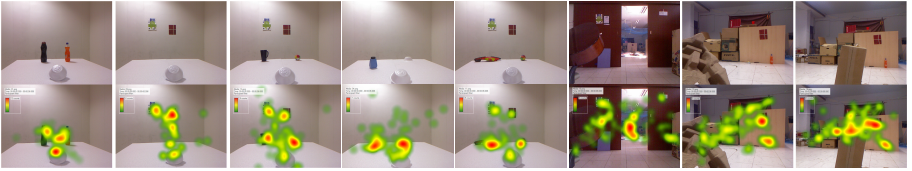


Figure 1: (Top) Images of "Competing saliency" settings, (Bottom) Human eye-fixations shown as heat maps; Human fixations happen at closer depths though the object at closer depth is low contrast with the background. The red hotspots indicate the number of fixations at the corresponding regions

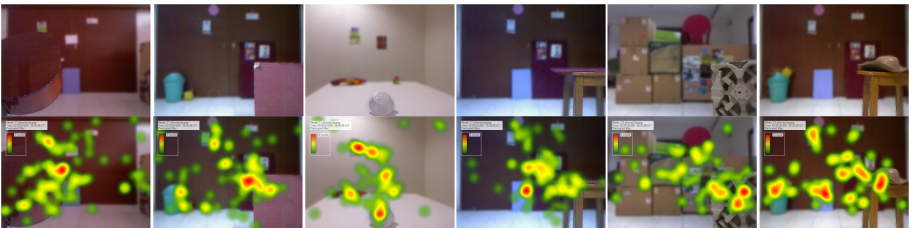


Figure 2: (Top) Images of "Blurred" category, (Bottom) Human eye-fixations shown as heat maps; Human fixations happen at closer depths though the object at closer depth is low contrast and not in contrast with the blurred background

## 2 Comparisons of all the models and their fusions

In addition to the results provided in the paper, following are the additional images and their saliency maps.

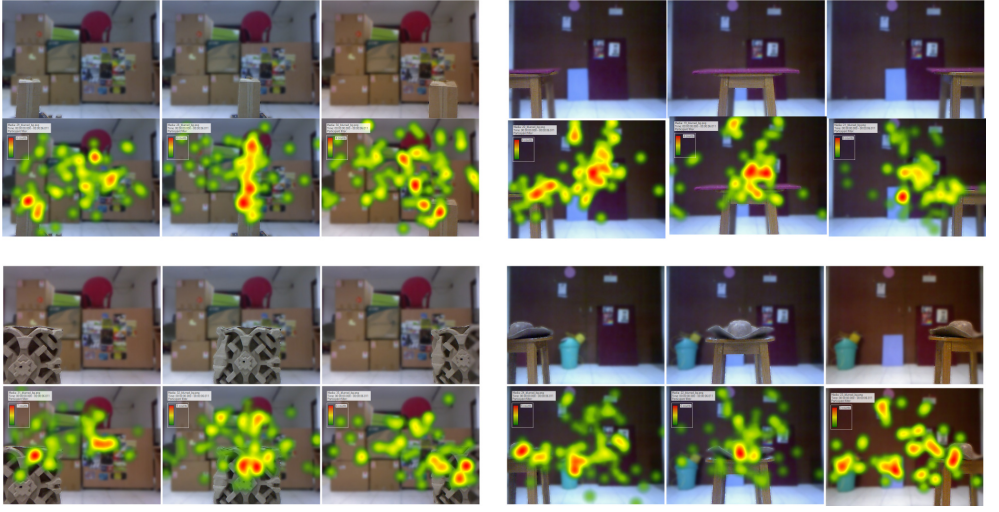


Figure 3: Four different settings of "centre bias" category are shown. In each set, (Top) Original images with object at closer depth places at different locations, (Bottom) Human eye-fixations shown as heat maps; Human fixations happen more when the foreground object is at the center than at left and right

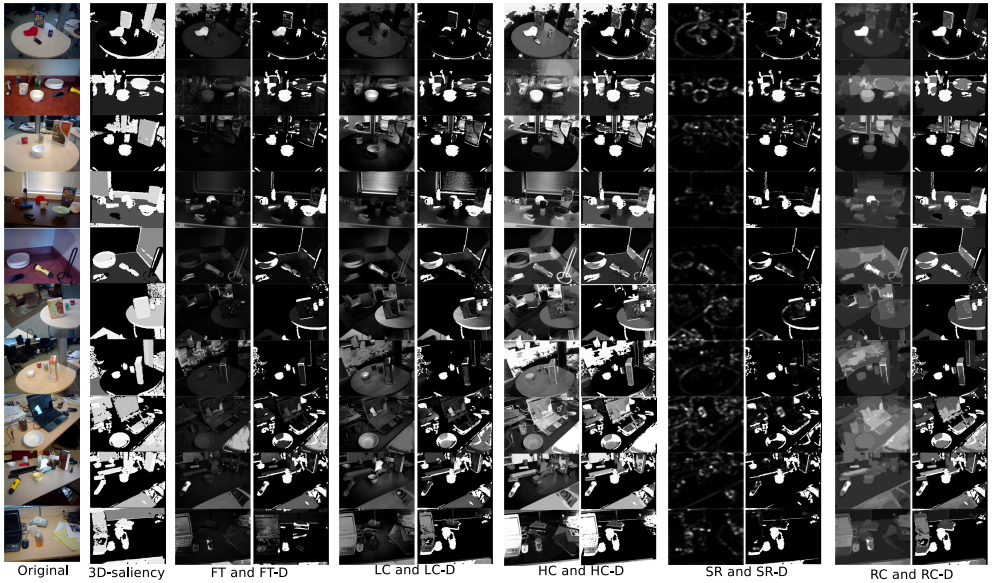


Figure 4: Images of Washington Dataset, with their 3D saliency map and saliency maps of other models along with their fused RGBD maps



Figure 5: Images of Berkeley Dataset, with their 3D saliency map and saliency maps of other models along with their fused RGBD maps

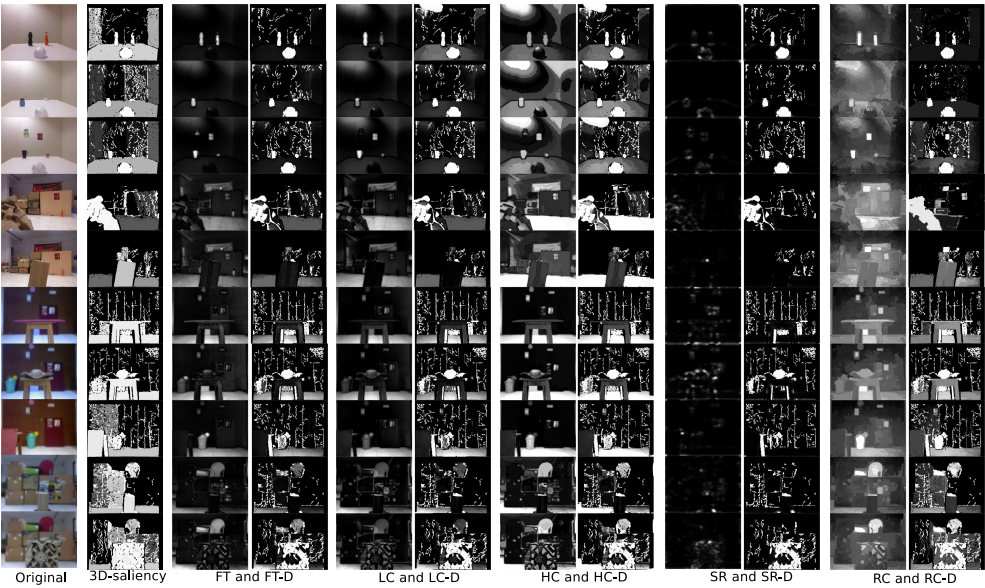


Figure 6: Images of our dataset, with their 3D saliency map and saliency maps of other models along with their fused RGBD maps

Table 1: ROC scores of saliency models on Univ of Washington dataset images

Saliency Models	RGB	D	RGB-D	% change in RGB
FT	0.6433	0.7558	0.7975	↑ 15.42
LC	0.5748	0.7558	0.7994	↑ 22.46
HC	0.5980	0.7558	0.7912	↑ 19.32
SR	0.7838	0.7558	0.8347	↑ 5.09
RC	0.7105	0.7558	0.8053	↑ 9.48

Table 2: ROC scores of saliency models on Berkeley dataset images

Saliency Models	RGB	D	RGB-D	% change in RGB
FT	0.7423	0.7518	0.8390	↑ 9.67
LC	0.7488	0.7518	0.7945	↑ 4.57
HC	0.7314	0.7518	0.8031	↑ 7.17
SR	0.8039	0.7518	0.8289	↑ 2.50
RC	0.7246	0.7518	0.8157	↑ 9.11

Table 3: ROC scores of saliency models on our dataset images

Saliency Models	RGB	D	RGB-D	% change in RGB
FT	0.6830	0.7312	0.7839	↑ 10.09
LC	0.6645	0.7312	0.7570	↑ 9.25
HC	0.6806	0.7312	0.7505	↑ 6.99
SR	0.8724	0.7312	0.8801	↑ 0.70
RC	0.7287	0.7312	0.8001	↑ 7.14

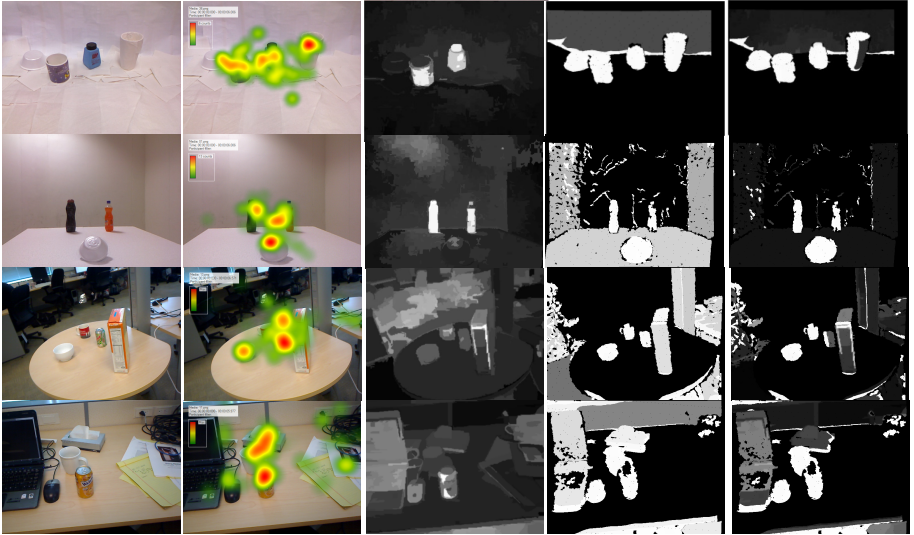


Figure 7: From left, Original images, human eye-fixations, RGB-saliency map using RC, proposed 3D-saliency map and fused RGBD-saliency map; It can be observed that saliency scores captured either by RGB-saliency or 3D-saliency are fused together to compliment themselves to result in a map that captures the regions fixated by humans.