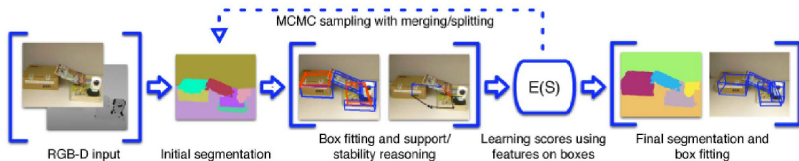# 3D-Based Reasoning with Blocks, Support, and Stability
Z. Jia, A. Gallagher, A. Saxena and T. Chen (CVPR 2013)

- 3D volumetric reasoning from RGB-D images using 3D block units
- Fit image segments with 3D blocks
- Iteratively evaluate the scene based on block interaction properties: Intersections, supportive relations and the stability of the scene given the boxes
- Joint optimization over segmentations, block fitting, supporting relations and object stability
- Evaluation on several RGB-D datasets [1] including controlled and real indoor scenarios

[1] N. Silberman, D. Hoiem, P. Kohli, and R. Fergus. Indoor segmentation and support inference from RGBD images. In ECCV, 2012.