



## RECOGNITION OF THE STACKED OBJECTS FOR BIN PICKING

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*Submitted: Apr. 30, 2016*

*Accepted: June 14, 2016*

*Published: Sep. 1, 2016*

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*Abstract- In this paper, we propose recognition method of the stacked objects for pick-and-place motion. The situation that the objects are stacked miscellaneously in the home is assumed. In the home, the equipment to arrange the objects doesn't exist. Therefore it's necessary to recognize the stacked objects respectively. In this paper, Information on the objects are measured by a laser range finder (LRF). Those information is used as 3-D point cloud, and the objects are recognized by model-base. A local minimum problem exists in recognition of the objects. We propose the method to recognize the stacked objects statistically using multiple recognition result. Avoidance of the local minimum problem and the segmentation of each objects are performed by recognizing statistically.*

**Index terms:** Recognition, laser range finder (LRF), 3-D point cloud, bin picking, stacked objects.