

Efficient Optimization for Autonomous Robotic Manipulation of Natural Objects -Supplementary Material-

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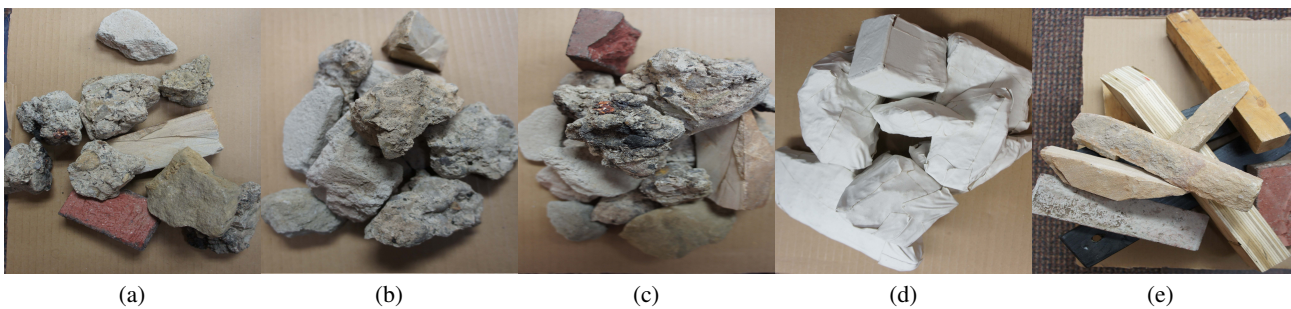


Figure 1: Rock clutters used for empirical tests

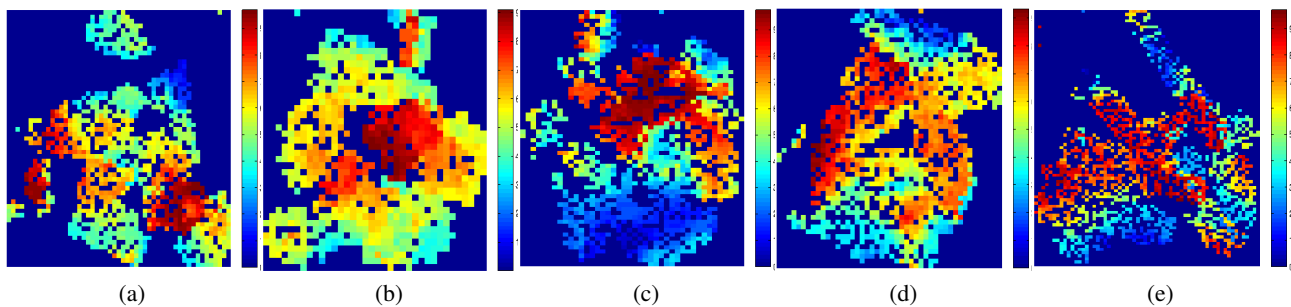


Figure 2: Learned cost maps with k -NN. A point indicates the predicted quality of a grasp centered on it.

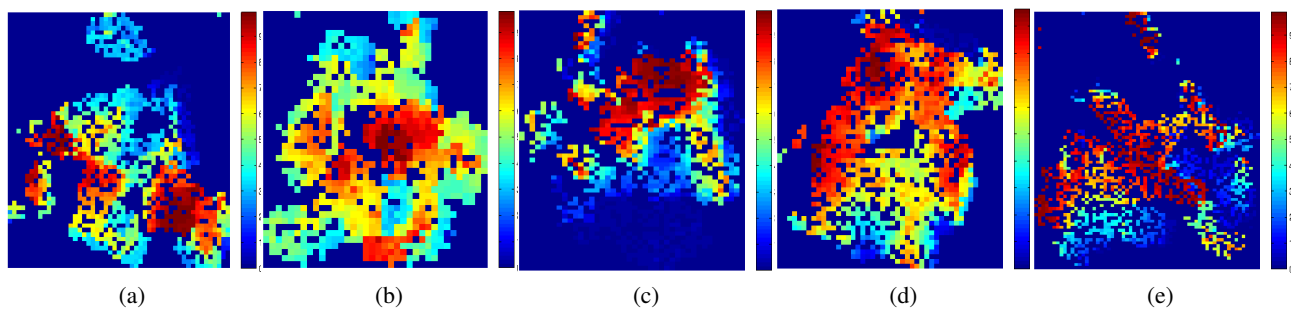


Figure 3: Ground truth

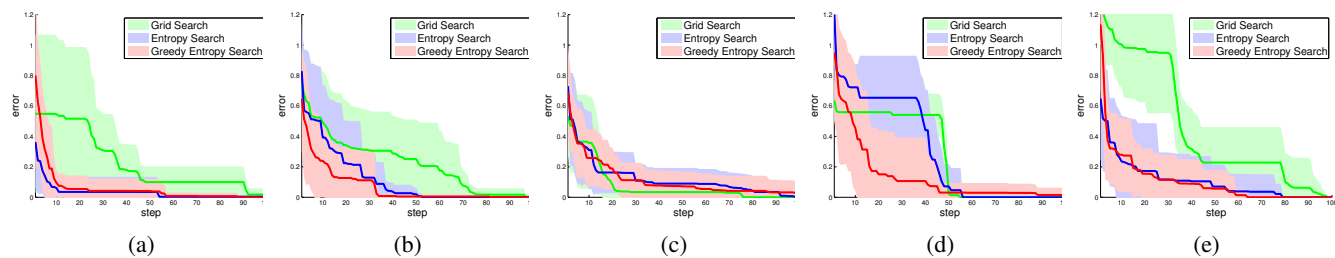


Figure 4: Optimization error as a function of the number of evaluations

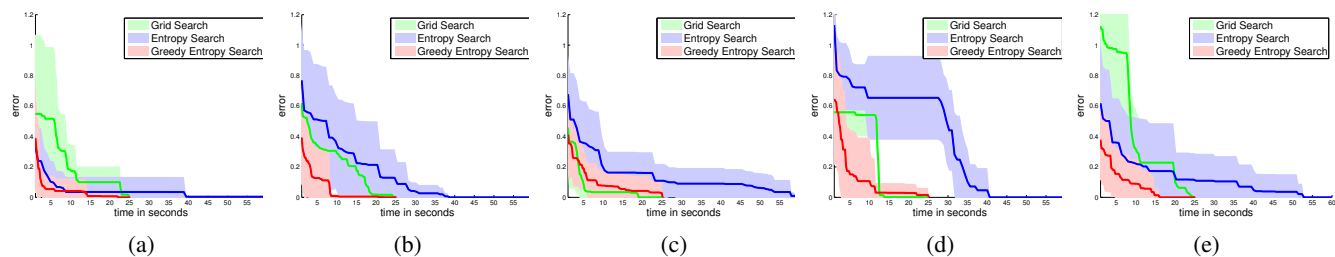


Figure 5: Optimization error as a function of time in seconds

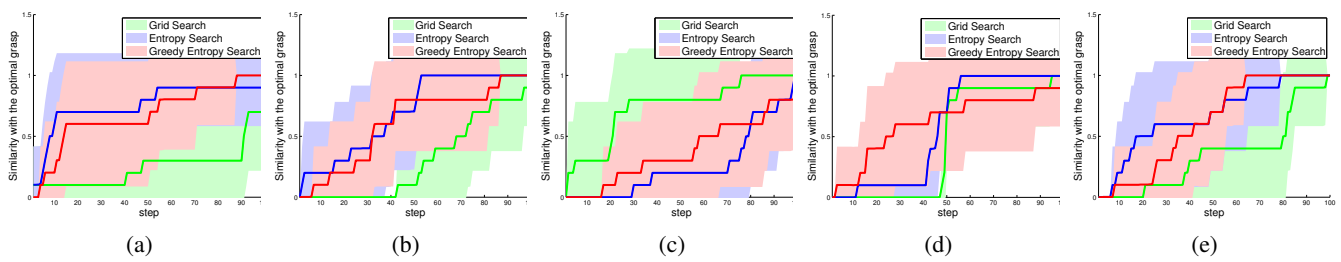


Figure 6: Similarity between the predicted best grasp x and the actual best grasp x^* , measured as $\exp(-\|x - x^*\|_2)$