ANTHROPOMORPHIC HAND ASSESSMENT BENCHMARK

Reference No / Version	B-AHAP-0.1
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Adopted Protocol	Anthropomorphic Hand Assessment Protocol (P-AHAP-0.1)
Scoring	The score of each grasp/task is provided by the operator. For each of the three trials of each object/task: - After completion of step 4 the hand gets 1 point (if the grasp is completed with the correct grasp type, detailed instructions to evaluate the grasping posture can be found in P-AHAP-0.1 Execution Constraints), 0.5 points (if completed with a grasping posture different to the one specified), or 0 points (if the artificial hand cannot grasp the object). - After completion of step 5 (for all the tasks except index-pressing and platform) the hand gets 1 additional point (if no visible motion of the object with respect to the hand is detected, for the object "wood blocks with rope" only the motion for the portion of the rope located in the grasping area is considered), 0.5 points (if the object moves with respect to the hand but is not dropped), or 0 points (if the object is dropped). For the index-pressing task, the hand gets 1 additional point (if completed with the correct grasp type), 0.5 points (if completed with a grasp type different to the one specified), or 0 points (if not completed in less than three seconds). For the platform task there is not additional point.
Details of Setup	Detailed information about the artificial hand and the actuation device or actuation control used (or reference that provides detailed information).
Results to Submit	- The total Grasping Ability Score (GAS): scores for all the objects/tasks are added to obtain the final score of the artificial hand and the normalized score is obtained by dividing by the maximum possible score (The maximum GAS that an anthropomorphic artificial hand could achieve (100%) corresponds to the healthy human hand. The minimum GAS of 0% describes an artificial hand unable to grasp any object.) - The partial GAS for each specific posture/task: scores for the three objects of each grasp type are added to obtain the final score for this grasping posture. Normalized scores can be obtained by dividing by the maximum possible scores Detailed comments about: - Qualitative impression of the advantages and disadvantages of the artificial hand, its control method and its actuation device - Possible reasons for the failed grasps/tasks